DUYUŞSAL MİZAÇ VE DİĞER FAKTÖRLERİN TÜRKİYE'DEKİ BİR GRUP LİSE SON SINIF ÖĞRENCİSİ ERGENİN MESLEK SEÇİMİNE ETKİLERİ: Bir Betimleyici, Kesitsel Alan Çalışması

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AFFECTIVE TEMPERAMENT AND OTHER FACTORS AS INFLUENCES ON VOCATIONAL CHOICE IN A GROUP OF SENIOR YEAR HIGH SCHOOL ADOLESCENTS IN TURKEY: A Descriptive, Cross-sectional Field Study

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THESIS ABSTRACT

AFFECTIVE TEMPERAMENT AND OTHER FACTORS AS INFLUENCES ON VOCATIONAL CHOICE IN A GROUP OF SENIOR YEAR HIGH SCHOOL ADOLESCENTS IN TURKEY: A Descriptive, Cross-sectional Field Study

Cem Malakcıoğlu

The purpose of this study is providing useful data about factors affecting vocational choice of adolescents for both professional helpers and students. Mainly due to the lack of satisfactory technical and psychological support by professionals in the field, large numbers of senior year high school students experience serious psychosocial problems during process of vocational choice in Turkey. In this respect, this descriptive study can be accepted as a part of preventive psychological intervention related to these potential problems.The sample of the present study consists of 694 senior year high school students from different districts of İstanbul. Turkish version of "Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire" (TEMPS-A) was administered in order to assess the affective temperament types of the subjects. According to the opinions of subjects, their interests and abilities are the most influential factors on their vocational choices. On the contrary, parents' opinions are considered as the least important factor. Owing to the development of self-identity and autonomy during adolescence, these findings were expected. It was also found that there are significant relationships between vocational choices and some sociodemographic characteristics of the subjects: gender, study field in the high school, number of siblings, parents' level of education, mothers' work status, and socioeconomic status. Furthermore, hyperthymic temperament is

found to be significantly related to “Administrative Fields and Trade” as a vocational choice; similarly both depressive and hyperthymic temperaments are related to “Medicine and Related Fields”; besides subjects who chose “Architecture and Design Fields” had significantly higher irritable and anxious temperament scores than others. Additionally, “Engineering” is found to be related to both hyperthymic and anxious temperaments.

TEZ ÖZETİ

DUYUŞSAL MİZAÇ VE DİĞER FAKTÖRLERİN TÜRKİYE'DEKİ BİR GRUP LİSE SON SINIF ÖĞRENCİSİ ERGENİN MESLEK SEÇİMİNE ETKİLERİ:
Bir Betimleyici, Kesitsel Alan Çalışması

Cem Malakcıoğlu

Bu çalışmanın amacı meslek seçimine etki eden faktörler hakkında alanda çalışan uzmanlara ve lise öğrencilerine gerekli bilgileri sunmaktır. Temelde yeterli düzeyde teknik ve psikolojik destek alamamaları nedeniyle, Türkiye'de çok sayıda lise son sınıf öğrencisi ergen, meslek seçimi sürecinde ciddi psikososyal sorunlar yaşamaktadır. Bu açıdan çalışmamız konuyla ilgili sorunlara ilişkin bir çeşit koruyucu ruh sağlığı müdahelesi olarak kabul edilebilir. Araştırma örneklemi İstanbul'un değişik bölgelerinde öğrenim görmekte olan 694 adet lise son sınıf öğrencisi ergenden oluşmaktadır. Mizaç Değerlendirme Ölçeği (TEMPS-A) isimli ölçme aracı katılımcıların duyuşsal mizaç türlerini değerlendirmek amacıyla uygulanmıştır. Katılımcıların büyük çoğunluğu kendi ilgi ve yeteneklerini meslek seçimlerine etki eden en önemli faktör olarak belirtmiştir. Öte yandan, anne ve babaların meslek seçimi hakkındaki düşünce ve önerileri en etkisiz faktör olarak saptanmıştır. Ergenlik döneminin kimlik ve özerklik gelişimi açısından ne kadar önemli olduğu düşünüldüğünde bu bulgular şaşırtıcı değildir. Araştırma sonucunda ayrıca katılımcıların meslek seçimleri ile bazı sosyodemografik özellikleri arasında anlamlı ilişkiler bulunmuştur. Bu sosyodemografik özellikler şu şekilde sıralanabilir: Cinsiyet, lisedeki öğrenim alanı, kardeş sayısı, anne babanın eğitim seviyesi, annenin çalışma durumu ve sosyoekonomik düzey. Ayrıca hipertimik mizaç özellikleri ile "İktisadi,İdari

Alanlar” mesleki seçimi arasında anlamlı ilişki saptanmıştır. Benzer şekilde depresif ve hipertimk mizaç özellikleri ile “Tıp ve Benzeri Alanlar” arasında da anlamlı ilişkiler vardır. Bunun yanında, “Mimari ve Tasarım Alanları” mesleki seçimini yapan katılımcıların irritabl ve anksiyöz mizaca ilişkin alt ölçek puanları diğer katılımcılara göre oldukça yüksek çıkmıştır. Ek olarak, “Mühendislik” mesleki seçimi ile hipertimik ve anksiyöz mizaç özellikleri arasında anlamlı ilişkiler bulunmuştur.

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1. INTRODUCTION

Adolescence is the developmental transition period between childhood and adulthood. During this transitional period, great number of changes related to adolescents' identity development occurs. Considering and making decisions about future professional careers is also part of their identity development. However, making decisions about their future life is not easy for high school adolescents. In case, there are several factors affecting vocational choices of adolescents. Besides their sociodemographic characteristics, such as gender, socioeconomic status, educational level of parents, psychological health status may be related to vocational choice process. Also, as a relatively stable substructure of personality, temperament, is supposed to have significant relationship with vocational choice of the adolescent. However, it is necessary to investigate the nature of this relationship due to the lack of satisfactory level of information about this relation. For this respect, affective temperament is going to be introduced in terms of vocational choice process of the adolescents.

Each year, most of the senior year high school students experiences serious psychosocial problems in their undergraduate program choice, or vocational choice, process in Turkey. Students need to have professional support, both technically and psychologically during this process. For preventing these problems before occurring, first of all, there needs awareness about the problem in the society. Then, there will be developed more functional and effective preventive intervention programs for the problems related to vocational choices of the adolescents. Professionals, like vocational psychologists, career counselors, guidance counselors, etc., who are working in this field also need to

have more sources in order to help adolescents during this process. It seems that there are a few studies related to vocational choice of the adolescents in Turkey. In this part of the study, some of the main factors affecting vocational choices of adolescents will be introduced. In order to understand the rationale for investigating the relationship between affective temperament and vocational choices of the adolescents, after all, it is necessary to explain some of other factors which affect vocational choices of the adolescents. Firstly, the general structure of the vocational choice process in Turkey is going to be introduced in order to have a better understanding of the problem.

1.1. INTRODUCTION TO THE PROCESS OF VOCATIONAL CHOICE AFTER COMLETING HIGH SCHOOL IN TURKEY

Vocational choice is a long and complicated process. Preparing young individuals for adult life is one of the main goals of the educational system in a country. Each country has a different educational system, even though there are some similarities between these educational systems. Educational system in Turkey is composed of four fundamental steps: preschool education, basic education, secondary education and higher education. “Each child at 6 years old must go to primary school” is stated as a compulsory rule in constitution. Also, basic education, 1st through 8th grades, is compulsory in Turkey.

After completing this compulsory step, students may continue their education in secondary level. Secondary education consists of both “vocational and technical high schools” and “high schools” (regular high schools). Most of the students continue their secondary education, especially students who live in

bigger cities like İstanbul, Ankara, İzmir, Bursa, etc.; however, in rural areas, especially in eastern part of Turkey, the rate of girls who continue their secondary education is lower than that of boys (Kuzgun, 2003). After secondary level of education, there is higher education level in Turkey. General structure of the Turkish Educational System is given in the figure 1.1.

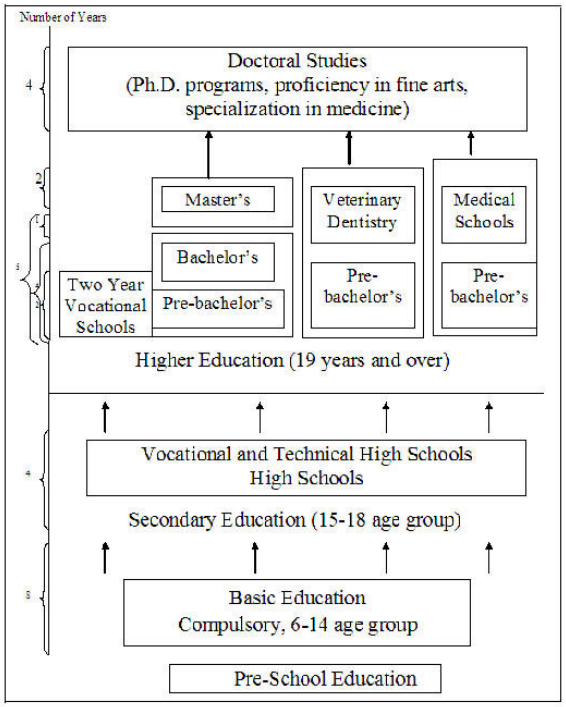

Figure 1.1. General Structure of the Turkish Educational System (www.yok.gov.tr)

"Vocational and Technical High Schools" are founded in order to provide vocational and technical education in Turkey. If a student chooses to have education in a "vocational or technical high school", s/he chooses also his or her future professional career before starting their secondary education at approximately the age of 14. This vocational decision is generally made by families, not by the adolescents themselves. It could hardly be expected for fourteen or fifteen years old adolescents to make sound decisions about their

future professions without the help of their parents, or any other significant adults like school teachers, counselors, first degree relatives, etc.

Some students are guided to choose these vocational and technical high schools, and generally they have lower academic achievement (Kuzgun, 2000). Families of these children have serious concerns about their academic future, and they consider sending their children to “vocational or technical high schools” as a solution (Kuzgun, 2000). In addition, some families give more importance to have vocational and technical education in earlier ages. They want their children to be “carpenters”, “welders”, “electronical technicians”, etc.; because they think that there need to be some individuals who do these jobs in the society. Generally, this type of thinking is actually caused by necessities. Most of these families want their children to have better jobs by completing higher levels of education. However, they know that completing vocational and technical high schools is an easier way for their children to earn money and afford the expenses of life. Vocational and technical high schools and institutions are necessary, but placement of students in these schools needs to be discussed in detail more. Problems related to these students, and their families are out of the scope in this study.

After graduating from secondary education level, continuing higher education in universities is an option. Students may continue their higher education after high school if they want to, and if they have opportunities for having higher level of education. The definition of higher education is given in the “Higher Education Council” (Yüksek Öğrenim Kurumu) website as: “The purpose of higher education is to train manpower within a system of contemporary educational and training principles to meet the needs of the

country. It provides high level specialized education in various fields for students who have completed secondary education. The Higher Education Law (Law no. 2547) which went into effect in 1981, covers all higher education institutions and regulates their organization and functions. Universities comprising several units are established by the state and by law as public corporations having autonomy in teaching and research. Furthermore, institutions of higher education, under the supervision and control of the state, can also be established by private foundations in accordance with procedures and principles set forth in the law provided that they are non-profit in nature."

Higher educational institutions are accepting students via a central placement system. Students apply for the university entrance examination which is administered once in a year. Then, if only they are successful in this examination, they could make their undergraduate program choices according to their exam scores. Most of the academic disciplines like medicine, law, engineering, economics, etc. accept students through this central selection and placement system while some programs in specialized areas as fine arts and sports further ask for success in specific competency in some skills and talent.

University entrance exams are norm-referenced and highly selective exams. After the results of the exam are announced, students need to prepare a preference list of undergraduate programs according to their wishes in priority. Selections and placements to the undergraduate programs are made according to the ranking of the individuals' scores and their preference lists. The higher score has the priority in the selection and placement procedure. The preparation of undergraduate program choice list is usually an anxiety provoking task. Students may have difficulty in deciding which academic

program is more appropriate for them and may get confused because of different, and sometimes very contradictory information related to the undergraduate programs. Today, students bombarded with information from various sources, especially from media and promotional materials of the universities. They are in serious need of trustworthy and well-prepared sources of knowledge.

Sometimes students could not decide which undergraduate program is more appropriate for them. They may be indecisive even when it is nearly the last day of sending their preference list. Moreover, sometimes they feel regretful after sending their lists. However, it is not possible to make changes after submitting their lists. Another source of difficulty is that students do not only decide on which undergraduate program that they want, but also which university, and/or city that they could go. Generally, families, friends, relatives, teachers, guidance counselors and many others are involved in this decision making process. They make comments and even sometimes dictations about vocational choices of the students (Kuzgun, 2000). During this decision making process, most of the students do not feel free of external effects, even pressures. They usually complain about directive behaviors of their parents, in most of the cases, they give up resisting against the pressures and over intrusive behaviors of their parents. As a result, these students accept to choose the undergraduate programs which are suggested by their parents.

Students generally need to have professional help to decide which undergraduate program or programs are more appropriate for themselves, especially when they hesitate to choose among options. In order to make a sound decision, students need to have reliable and comprehensive knowledge

about the vocational choices. In addition, they need to know their own personal characteristics. A sound decision will occur if these two main sources of knowledge are combined in accord. If an individual has sufficient amount of self-awareness, it will be easier to decide what s/he wants to be in the future (Kuzgun, 2003; Roger, 1959). Without doubt, self-awareness is necessary for making decisions about future professional life. The person who is more open to self-discovery will have more opportunity to develop a deep insight about oneself, and as being expected, this individual will make better decisions about himself or herself.

Developmental trajectory of human-being comes across with a sharp edge when the individual faces with the problem of vocational choice. In spite of the necessity of making decisions about the future life, most of the adolescents think that they are not able to make sound decisions about their own future by themselves. Adolescents in high school need to have orientation programs related to decision making on vocational choices, and undergraduate program choices. Difficulties and problems in decision making for higher level of education is a neglected, but a very critical issue. This study aims to contribute increasing the awareness for the problem of senior year high school students' vocational choice in Turkey.

1.2. VOCATIONAL CHOICE

Making decision among vocations which are considered as future career possibilities is defined as vocational choice process; also all of the struggles to get prepared for the chosen vocation are included in this process (Kuzgun,

2000). While some vocations can be learnt vicariously by observing and experiencing, such as: jewelrymaking, dressmaking, shoemaking, etc.; some vocations require formal education in order to be included in these vocational fields, such as: engineering, medicine, law, etc. These kinds of vocations are named also as “professions” in career counseling literature.

Modern social life needs people to have different vocations in order to provide an efficient structural organization of society (Giddens, 2001). There are several areas of work in modern life, people need to have professions in order to be more efficient and develop themselves in particular fields of work. It is not possible to be competent with multiple professions in today’s’ globalized and technological world. According to Giddens (2001), today’s’ tremendously competitive society forces people to be more specialized in their professions, however, they also need to be flexible to change their professions in order to adapt themselves in new conditions of job market. This dilemma contributes to produce high amount of stress, people need to have more psychological help for problems related to demands of the world of work.

It is undeniable that work is a crucial element of social life of human beings. Society affects vocational choices of individuals by several different ways. Individuals observe each other and have ideas about the functions of different vocations in the society. Children observe their parents and other adults in their work environments, and have ideas about adults’ world of work. These observations and ideas affect individuals’ interests in vocations, and shape their occupational schemas and goals.

Historically, the social construction of gender and cultural identities has been subject to the needs of the work world (Chung, 2001). Changes in the

workplaces have contributed to, and have been influenced by, new social definitions and expectations concerning gender roles and cultural identity (Gysbers, Heppner & Johnson, 2003). Increases toward equality in the workplace have led to more sharing of roles and functions in the household, which in turn has led to changes in family compositions and increased work-family conflicts (Capuzzi & Stauffer, 2006).

Gender stereotyping is a predominant influence in individuals' career decisions. The changing world of work also presents new challenges for career counselors and vocational psychologists as they attempt to address concerns of aging clients who are working longer, the interruption of careers for child rearing, and more unemployment, underemployment, and midlife career changes (Capuzzi & Stauffer, 2006). It can be added that appearance of new and more complicated work fields and more demanding requirements for higher level educations are attached to all of these difficulties and challenges.

Media and experts in the career development field emphasize the increased trend in "multiple careers" during the life-span. According to the experts, "multiple careers" concept becomes the new norm. "Multiple careers" mean more decision-making throughout years while still working in any career field. In the future, clinical and counseling psychologists is expected to come across more psychological adaptation problems related to the fast career and work changes which happen continuously. Some examples of these problems: "anger management problems because of adaptation difficulties in new career options", "chronic stress due to being incapable, or struggle for being capable of certain skills in new work environments" or "workaholic behaviors", etc.

In the future, people will need more professional support for utilizing skills in stress reduction, conflict resolution, environmental and social adaptation, etc. Moreover, they will need to have more motivation, energy and investment for additional training and counseling to address and afford these needs in the future. Hansen (2003) emphasized that the increasingly globalized world of work has additional implications for international career opportunities. These new opportunities are also subject to new problems for vocational decision making and there will need for more support in overcoming these problems in the future.

Today's world of work is evolving very fast, and emerging new professions is at the core of this evolution. Our world of work is very different from our parents' and grandparents' world of work. In today's' work world, losing a job becomes easier and more frequent. Furthermore, technological advancements and globalization in work fields accelerate changes in jobs and work opportunities. Liptak (2001) asserted that there are many factors contribute to the today's complications in making vocational choices and career planning of individuals, such as: changes in jobs and industries, rapid technological advancements, changes in occupational structure, decreases in job benefits, interdependent global economy, international labor competition, changing sociodemographic characteristics, increased self-employment, etc.

While these evolutions take place, young people need to have more professional support. Adolescents are primarily under the risk of negative effects of fast changing world of work. In the future, it is expected that there will still exist some main vocational categories, such as: "Engineering", "Medicine", "Law" or "Education", etc. However, there will be more specialized options in

these occupational disciplines. Most of the adolescents are confused about which vocational category is more appropriate for themselves. Young individuals are more open to changes and new experiences (Lerner, 2002). Adolescents accept the idea of changing their careers in the future, but they want to have “a good start”. It important to emphasize it here again: The only possibility of “a good start” is on the intersection of sufficient amount of self-awareness and adequate knowledge about vocational options.

1.3. ADOLESCENCE

Adolescence is the developmental transition period between childhood and adulthood. During this transitional period, a great number of changes related to adolescents’ identity development take place. During adolescence, the young person must move from dependence to independence, autonomy and maturity (Lerner, 2002); the young person moves from being part of a family group to being part of a peer group and to standing alone as an adult (Mabey & Sorensen, 1995).

According to Lerner (2002), the early stage of adolescence approximately extends from the age of 11 to 14 years. Most of the bodily changes occur at this stage. The later stage of adolescence occurs typically between 15 and 19 years (Lerner, 2002). For some individuals, this time interval will be shorter or longer due to several physiological and environmental factors (Lerner, 2002). The early and the later stages are differentiated by competency differences in cognitive, moral and social thinking (Dacey and Kenny, 1997).

Both biological and cognitive changes occur together during the whole adolescence period. Through this period, the young person develops a capacity for abstract thinking and discovers how to think about relationship issues. Adolescent discerns new ways of processing information creatively and as a result of different experiences, also the young individual discovers to think critically (Dacey and Kenny, 1997). Adolescents learn taking responsibilities, taking initiatives and having several sociocultural and moral values while coming across with challenging events under difficult situations.

Adolescence period is not only a transition period, but also a period of experimentation for “try and fail” experiences. The adolescent boy or girl becomes to be challenged by both fields: the development of new and elaborated cognitive skills and the use of these skills. Adolescents are trying new skills, sometimes they gain success, and however, sometimes they fail and lose their self-esteem. Learning through success and failure is the characteristic structure of the cognitive challenges during adolescence (Dacey and Kenny, 1997). Especially during early years of adolescence, there are more regrettable and proudest experiences. Late adolescence is a calmer period due to the better impulse control, but there will be more cognitive challenges in spite of less behavioral challenges. Vocational decision making is an outstanding example for the adolescent’s cognitive challenges.

Through adolescence, boys and girls learn to think better and also develop the ability to think about other people (Lerner, 2002). This is a very critical issue for their survival and this enables them to make decisions about how to interact with others. Several social values and skills which are very important in adult life are learnt through adolescence period, especially in the

later stages of adolescence (Steinberg, 1999). Adolescence is also a period for first trials of “walking in other people’s shoes”. Adolescent boys and girls imitate other people; they imagine themselves in other roles and positions by mostly observing their peers and adults. Curiosity and open-mindedness are the main characteristics of this developmental period due to their critical value for developing a multidimensional self-identity (Lerner, 2002).

Adolescence has a vulnerable nature, because paradoxically adolescents may have the idea that they are both unique and invulnerable. Sometimes they may think that they are omnipotent, and so, they cannot be hurt. This is the developmental outcome of the need for independence (Lerner, 2002). However, from time to time, failures and troubles will take them into turmoil. Late adolescents tend to behave more experienced than younger adolescents while dealing with complex situations, the reason is that late adolescents have more complex level of information-processing. They are able to recognize and define more elaborate problems, gather information form tentative conclusions and evaluate this information to make decisions (Pierce, Lemke & Smith, 1988).

The increase in ability to think creatively is another developmental gain of adolescence. Creative thinking involves divergent thinking, flexibility, originality, the consideration of remote possibilities and the ability to consider a variety of solutions to the same problem (Dacey & Kenny, 1997). Late adolescents are considerably better in creative thinking than younger adolescents. This type of thinking is very useful for complex decision making processes, for example: creative ideas about future professions will help the adolescent to make better

vocational choices. When the adolescent has different and new ideas about a particular vocation, s/he may become more interested in this vocation.

Both biological and cognitive changes in adolescence produce some developmental challenges, and sometimes, these challenges may cause some serious long-lasting psychological problems. The adolescent is no longer a child; his or her identity needs to evolve to get prepared for adult life. Forming a new and functional ego and self-identity is the most difficult psychological task for the adolescent because of its complex, comprehensive and many-faceted nature (Steinberg, 1999). There is a strong and apparent relationship between ego strength and psychological wellbeing of the adolescent (Horstmanshof, Punch & Creed, 2008). During adolescence, development of ego strength is facilitated by broadening of intellectual capabilities and developing emotional self-regulation. These changes provide new ways of thinking about problems, values and interpersonal relationships; these changes also enable them to think about themselves in new ways (Steinberg, 1999).

As stated by Kroger (1996), major psychoanalytic theorists including Erikson, Blos, Kohlberg, Loevinger and Kegan, they all seem to agree that 'personal identity' should be defined in terms of what is considered to be 'self' in contrast to what is considered to be 'other'. Differentiating oneself from others is central to the experience of personal identity. This differentiation process requires a conscious sense of feeling oneself different and unique (Steinberg, 1999). Adolescents travel towards adulthood as their personal identities develop over time; this process is called as 'maturation'. Making personal choices is also part of this maturation process, because adolescents feel themselves unique when they make appropriate and satisfactory choices.

Adams and Marshall (1996) asserted the following list of five common functions of personal identities. These functions indicate that personal identity can be altered through increased self-awareness. Throughout life, there are some critical periods when the individual becomes more focused on the self. Self-focusing and self-awareness, in relation to the identity formation, is accelerated through adolescence period. According to Adams and Marshall (1996), a good enough identity formation in adolescence has these five fundamental functions:

1- Providing the structure for understanding who one is.
2- Providing meaning and direction through commitment, values and goals.
3- Providing a sense of personal control and free will.
4- Enabling consistency, coherence and harmony between values, beliefs and commitments.
5- Enabling the recognition of potential through a sense of future possibilities and alternative choices.

According to the Erikson's theoretical framework for human development, adolescence is accepted as the period of "Identity vs. Identity confusion" (Steinberg, 1999). Erik Erikson described this period as "From among all possible and imaginable relations, (the young person) must make a series of ever-narrowing selections of personal, occupational, sexual, and ideological commitments" (Erikson, 1968, p.245). According to Erikson (1968), identity formation is both a social and cognitive process. The adolescents' identity is the result of a mutual recognition between the young person and society (Erikson,

1968). In other words, the adolescent creates a self-identity in accordance with the society, but at the same time society identifies the adolescent.

According to some theories about human development, adolescence is also a critical developmental period for independence, or autonomy. As Erikson (1968) stated that autonomy is the central issue of toddlerhood, just like identity is the central issue of adolescence. Young children begin to explore their surroundings on their own and assert their desire to do as they wish. Unresolved issues of autonomy and new issues about independence take place during early adolescence period. Late adolescence is also an intensive period in terms of autonomy, however establishing and maintaining a healthy sense of autonomy is a lifelong concern (Steinberg, 1999).

The intensity of problems related to issue of independence increases during early adolescence, and continues thorough late adolescence and young adulthood. The cognitive changes of adolescence play an important role in this psychological arousal. Changes in social roles and cognitive abilities during adolescence are bound to raise concerns about independence, as the adolescent moves into new positions that demand increasing degree of responsibility and self-reliance (Steinberg, 1999). Being able to work, to marry, to drive a car, to drink alcohol, to vote, etc., all of these require the ability to manage oneself responsibly in the absence of observing by parents, teachers, or other adults as Lerner (2002) stated.

In addition, the relationship between young individual with his or her parents changes in adolescence. During this developmental period, the adolescent moves away from parents in order to become a separate individual. The process of individuation involves the relative independence from family

relationships, the weakening of bonds to the objects who are important for the individual before (Lerner, 2002). While the child is more dependent on his or her parents, the adolescent starts fighting against the parental dependence. Therefore, individuation provides an increased capacity to become a member of adult society (Adams and Marshall, 1996).

Vocational choice is also an important part of this individuation process; adolescents have important steps towards independence by making decisions about their vocational choices. These decisions also contribute to the weakening of bonds to their parents. When they become capable of being successful in work, they also become autonomous and more independent from their families. Moreover, they start to think about themselves seriously in adult roles when they make choices about their future. Hence, they become more prepared to the lives of adults.

1.4. ADOLESCENCE AND VOCATIONAL CHOICE

To decide among vocations which are considered as future career possibilities is defined as “vocational choice” process and this process includes taking responsibility for all of the struggles to get prepared for the chosen vocation (Kuzgun, 2000). While some vocations are learnt vicariously by observing and experiencing, some vocations or professions, such as: engineering, medicine, law, etc. require formal education in order to be included in these vocational fields. In such vocational fields, firstly adolescents need to be placed in the related undergraduate program in university, and then the requirements of the training need to be completed successfully. Therefore,

undergraduate program choice is an important part of the vocational choice process for adolescents.

In some studies, it was found that some adolescents perceive a vocation, or a profession, only as a way of earning money (Kuzgun, 2000). Certainly, vocation, or a profession, is an activity field in order to earn money, however earning money could not be the only factor for involvement in a vocational field. Having a vocation provides also independence, respect, guarantee to continue living standards, being part of a social group, and many other social necessities and benefits (Kuzgun, 2000). In fact, having a vocation is related to the goals of human life, such as working for a purpose, producing and being proud of the outcomes of one's efforts.

While working, individuals develop their skills by experiencing new events and struggling with new problems about their work. All of work experiences which provide them to develop their skills and perspectives, also provide them pleasure and power of life (Lerner, 2002). Thus, people earn not only money, but more invaluable benefits from experiences while working in a vocational field (Kuzgun, 2003). Finally, vocation becomes the core part of the human identity, and shapes the style of life and directs most of the other choices in life.

Individuals generally make choices which are appropriate to their identities. Professionals may also make choices which are corresponding to their vocations, for example a mechanical engineer may like to construct model airplanes or automobiles while a psychologist like to watch and collect drama films which have serious psychological themes. An architect may want to travel around historical cities in order to see different buildings; however a biologist

may want to go to forests in order to observe natural habitats of the insects. It is obvious to see that vocational choice shapes the life style of the individuals, so that, vocational choices may affect the other choices of individuals in their lives.

Nowadays, the increasing variety of vocations causes difficulty in vocational decision making for young people. As Kuzgun (2003) stated, it is not possible to gather information via experiences for all vocations that an individual is interested in. Young individuals need more vocational counseling support, especially in high schools. Students need to ask questions due to their confusions about vocations. Vocational fields are changing quickly: the innovations and developments in science, technology and social life bring about new vocational fields, or cause changes in existing vocational fields (Capuzzi & Stauffer, 2006). For adolescents, it becomes more difficult to have adequate level of knowledge in order to make sound vocational decisions, besides it seems like that it will be even more difficult in the future.

Need for independence and individuation play important roles in vocational choice. Independence is an important necessity for achieving "self-realization" goal as stated in Abraham Maslow's hierarchical needs pyramid (Lerner, 2002). According to Lerner (2002), individuation is an important concept in terms of individual's self-realization. The process of individuation, which begins during infancy and continues until the end of late adolescence, involves a gradual success in one's sense of self as autonomous, competent, and separate individual (Lerner, 2002). The adolescent starts to think about different choices and wants to be independent in order to be a unique individual. Adolescents need to try to exert their independence for individuation, even though there are many conflicts with their social environment (Lerner, 2002).

Decision making about vocational choice, similar to other significant choices, requires the adequate sense of independence for the adolescent individual.

As Kuzgun (2000) stated, in order to use independence in making vocational choices effectively, the adolescent individual must know why s/he wants this or that vocation, and what sort of physical, cognitive and economic opportunities will be required in later stages of this vocational choice. In other words, an effective vocational choice requires adequate level of knowledge about the vocations and the self. If the adolescent individual has adequate level of self-awareness and also has sufficient amount of knowledge about the vocations that s/he wants to choose, there will happen a better decision making process for the vocational choice.

1.5. FACTORS WHICH AFFECT VOCATIONAL CHOICE OF THE ADOLESCENT

Making a vocational choice is a very complicated and complex process. There are several factors which affect this process. Some factors are detected by making a review of research studies in similar fields. Also, some media sources, such as, web sites, newspapers, magazines, etc. are reviewed in order to collect relevant information. In this section, some of these factors affecting vocational choices of adolescents which are considered as mostly related to the context of this study are discussed.

1.5.1. ABILITY AND INTEREST

Ability, or aptitude, is defined as a tendency, or capacity that is inherited or is the result of environment and life experiences (Zunker & Osborn, 2002). Ability also comprehends the readiness of this capacity for new experiences. In order to be accepted as having ability in a particular field, it is required to be aware of this ability (Kuzgun, 2000; Schraf, 1970). According to Kuzgun (2000), if there is an objective and reliable data source about someone's ability in a particular field, it is possible to have an idea about the most beneficial vocational training for this individual. Moreover, knowledge about abilities provides better predictions for degree of success in the future. Undoubtedly, being aware of own tendencies and capacities will help individuals to make sound vocational choices.

Abilities of individuals vary according to their amounts of existence (Kuzgun, 2000). Each individual usually has many different abilities in diverse areas. When multiple abilities are considered, it becomes more difficult to decide which field is more suitable for the individual. In addition, some individuals learn some skills more easily, while some skills may be very difficult to learn. So, the speed and quality of learning is also very important sign of the individuals' level of ability (Harrington & Schafer, 1996).

For some vocational fields like medicine, engineering, law, etc., a long lasting, continuous and extended training is needed, because of that most of these vocational fields require higher level of specific abilities. Individuals who decided to choose a particular vocational field are expected to have higher level of required abilities relevant to this vocation, while they have a limited amount of

abilities related to other vocations (Kuzgun, 2000). In other words, individuals are expected to have capacities and tendencies towards small numbers of specific vocational fields among several options. For example: If an individual has higher level of abilities relevant to “Medicine” profession, it is not expected for this individual to have higher level of appropriate abilities related to professions like “Mechanical Engineering”, “Architecture”, “Law”, etc.

Sometimes, adolescents ask questions such as: “What if I won’t be satisfied in that job in the future?”, “I have concerns about my competencies in order to be successful in this profession, will I learn everything required for this profession in the university?“ or “I want to choose this vocation, but will I be successful in that vocation?” These questions are not easy to have a clear answer. However, the relationship between the amount of ability and satisfaction level in a particular vocation is not always expected to be high. According to Kuzgun (2000), in general, this relationship is found to be at the medium level. The probable reason is that there are many factors affecting the level of satisfaction and amount of ability.

In order to be satisfied with particular vocational field, it may not be necessary to have all of the higher level of abilities which are required (Kuzgun, 2000). Also, a total satisfaction is not possible in fact. Satisfaction level in a vocation, or in a work environment, is changeable and difficult to totally agree on its level of existence. Sometimes work conditions interfere with the vocational characteristics. Therefore, it is difficult to have objective definitions for degree of satisfaction and degree of abilities (Kuzgun, 2000).

Success and satisfaction are very context dependent and vague concepts. Moreover, in order to be successful in a vocational field, there may be

a need to have more than vocation-specific abilities. Thus, there may be a need for some particular personal characteristics, benefits of social network or opportunities to have personal development, etc. in order to be successful and satisfied in a work and/or particular vocational field (Kuzgun, 2003).

Kuzgun (2000) also stated that if an individual has more than required abilities for any particular vocational field, this individual may become bored and unsatisfied easily. On the contrary, if an individual has low possibility for reaching success in a particular job, this individual will want to quit or will be fired from his or her job easily due to possible results of underachievement in work. Thus, awareness about own capabilities and insufficiencies will protect the individual from negative outcomes in the work life (Scharf, 2002; Scharf, 1970).

An important factor in vocational decision making is the concept of interest. Interest is generally defined as a set of beliefs or attitudes towards a given activity. Interest is also linked to motivation to engage in similar kinds of activities (Drummond & Ryan, 1995). Scharf (1970) stated that interest in a particular field is defined as the degree of satisfaction while working in that particular field. If an individual thinks that s/he will be satisfied in a particular job, this will lead this individual to choose the vocational field related to this particular job. So, the degree of interest and the degree of satisfaction are both signals for each others. It is expected to exist a very strong relationship between these two concepts.

In the context of vocational choice, concepts of interest and ability can be considered as a combined concept. Since the ability is defined as having adequate level of capacity and tendency towards achieving a job, awareness of

the abilities can be realized only if the individual feel himself or herself satisfied while working in real life, or while imagining himself or herself working in that job (Kuzgun, 2003). Without being aware of the particular kind of ability, it is not possible to make choices which are in strong relationships with this ability.

It is also possible to think in the reverse way: The required capacity for any vocation will find the chance to be realized and to become developed, only when the individual is satisfied with this particular vocation while working in that field. In a similar way, if an individual imagines himself or herself satisfied with a particular vocation while working in that particular work field, his or her tendency towards this vocation will become “interest”, more than “curiosity” (Kuzgun, 2000). Interest was defined as the satisfaction level while working in reality, or at least, while having realistic imaginations about vocational conditions. So, from this point of view, it is not possible to think of being interested in a field which is out of our ability’s scope, but we may have curiosity without having any related ability. That is to say, curiosity and interest are different concepts, and real interest could develop more as individuals get more knowledge about their own capacities and tendencies.

If somebody has ability in a particular field and has also awareness about his or her ability, but s/he is not interested in that field, it means that s/he does not want to use this ability. According to Kuzgun (2003), interests are areas of usage for abilities. It is well-known that interests which are not based on strong abilities will disappear easily, the reverse is also true: Even though an individual has ability related to a particular field, his or her ability will become useless and may disappear when s/he becomes less interested in this field. From this point

of view, the increasing degree of harmony between interest and ability is directly related to the success and satisfaction in the related fields of work.

Interest is also a complicated concept like “ability”. Kuzgun (2003) stated that we can only talk about being interested in an object when we are aware of the existence of this object. If we are aware of the object and we are ready to move towards that object, we can say that we are interested in that object (Kuzgun, 2003). Similarly, if we do not want to get involved with any object, it means that we are not interested in that object. In this regard, interest is a kind of tropism (Scharf, 1970).

How does an individual become aware of his or her interests? According to Scharf (1970), if an inner impulse, a wish or a desire, triggers some behaviors, and if, these behaviors become continuous, individuals will be used to behave in that manner. The degree of pleasure may reinforce this behavior, or this behavior will become extinct in time due to the insufficient intensity of the required impulses. Sometimes, a person may accidentally encounter an experience and may become wishful to be involved in similar kind of experiences more. Or the reverse is also possible that s/he may not want to experience the similar kind of incidents again, and so, there will not develop an interest towards that incident.

Zytowski (1970) asserted that if any wish towards a phenomenon lasts for short amount of time, this wish is named as “Attending”. If the wish lasts for long amount of time, it is named as “Interest”. However, Zytowski (1970) also added that both of these concepts (Attending and Interest) are welded in each other in daily usage and they have been used in the place of each other. However, it can be concluded that the concept of interest is supposed to be as

a long-lasting and permanent tendency, while concept of attending is a short-lived and temporary tendency towards anything.

According to Kuzgun (2003), interest and motivation are also very close concepts. Motivation is defined as wishing to act in a particular way (Reeve, 2005). Likewise motivation, interest is also changeable according to inner or external factors. It is a well-known fact that, interests are changeable according to age, for example children like to watch cartoon films about animals, while most of the adults do not like to watch these cartoon films. This is an expected change because of the differences between developmental needs and characteristics of the individuals at different ages. However, some changes, especially the rapid and frequent changes which are not related to developmental necessities, cannot be considered in planning of the individual's future. In order to make plans about somebody's future, it is necessary to have relatively stable characteristics, like temperament. Hence, one of the main research questions of this study is about the relationship between vocational choice and temperament. Temperament is going to be discussed in detail in section 1.6.

Interests are more likely to change in younger ages (Kuzgun, 2003). When the interests in younger ages are taken into account, it is more possible to make mistakes in planning future of the individual. Some children and adolescents have very diverse interest fields. For these individuals, it is difficult to have an idea about possible consequences of their interests in the future. In that case, is there any period of time when the interests become more separated and crystallized? According to Ginzberg (1972), individuals become

more involved in certain interest fields, while they become less interested in some other interest fields when they are between 10 to 12 years old.

According to Capuzzi and Stauffer (2006), children and adolescents become more involved with particular interest fields, when they gain more awareness about their own capacities and tendencies by having experiences through life. Early adolescence (11 to 15 years old) seems to be a very critical time period in this respect. Some research studies showed that there is an increased continuity in interests during early adolescence (Steinberg, 1999). In other words, when the adolescent becomes older, his or her interests also become continuous. It is quite expected that younger ages are more open to diverse experiences for having more knowledge about oneself and the world, but a sound vocational choice requires an individual to be relatively sure about oneself (Kuzgun, 2003). Regarding this matter, late adolescence, ages between 15 and 19, is more appropriate time period for making decisions about vocational choices. However, it does not mean that these young individuals are totally capable of making serious decisions about their vocational choices. If the adolescent experiences difficulties about his or her vocational choice, s/he will need to be supported by professionals, such as school psychologists, or vocational counselors.

Having conversations about interests and abilities with professional helpers is an effective way of gaining awareness about oneself. In addition to this, there are many psychological assessment tools and inventories for interests and abilities (Capuzzi & Stauffer, 2006), such as: Strong Interest Inventory (SII), Vocational Preferences Inventory (VPI), Career Attitudes and Strategic Inventory (CASI), Kuder Occupational Interest Survey (KOIS), My

Vocational Situation (MVS), etc. From standardized to qualitative tests, and from computer-assisted to paper-based, several occupational, and vocational, assessment instruments are available. However, no one type is superior; each has its own advantages and limitations (Capuzzi & Stauffer, 2006).

Another useful way of being aware of own abilities and interests is giving more importance to the self-discovery through diverse experiences. Some parents, especially those who are well-educated and belong to higher socioeconomic status, pay more attention to providing their children various opportunities to develop their self-awareness (Kuzgun, 2000). Children of these parents have chance to make sound vocational choices.

Finally, in terms of vocational abilities and interests, there is another very important, but usually neglected, source of knowledge which provides information about abilities and interests: personality. Personality is also very complicated and multi-faceted construct. Indeed, it is very difficult to have a clear definition of personality. There are a few number of research studies about relationship between personality and abilities – interests. In that case, it is required to investigate the relationship between interests, and abilities, and substructures of personality.

According to Kuzgun (2000), especially for individuals who assert that abilities and interests are the most influential factor in their vocational choice, it is quite expected that there are strong relationships between vocational choices and substructures of personality. However, it is difficult to investigate the relationships between several personality constructs and vocational interests. As a relatively stable substructure of personality, temperament is expected to have a significant relationship with vocational choice of the adolescent.

1.5.2. VOCATIONAL VALUES

The social environment, which we are living in, determines the boundaries of our needs. Not only the needs, but also their priorities are determined by the social rules and structures (Lerner, 2002). Social rules and priorities produce some values in our minds, and these values become fundamental components of our cognitive structures. According to Kuzgun (2000), social values are symbolic structures which guide our choices and decisions through our lives. These social values reinforce us to sustain some of our needs and pleasures, while suppressing some of them.

Vocational values have two facets: they are representations of personal and societal expectations from the related vocations (Kuzgun, 2000). Each vocation may have several and diverse vocational values. Society may attribute different values to different vocations. In this way, some vocations become more valuable than others. There are several factors affect these attributions, such as: demands of job market, dominant ideologies, geopolitical conditions of the country, etc. (Giddens, 2001). Some social values also directly affect these attributions, for example: if “art” is very valuable in a society, vocations related to art will be praised more in that society. Thus, individuals may become inclined to choose socially accepted vocations (Kuzgun, 2000).

According to Kuzgun (2000), personal expectations are also influential on vocational choice. For example, “creativity” is a vocational value: If someone gives more importance to be creative, s/he will be more inclined to choose vocations in which “creativity” is a vocational value. Another example will be “leadership”: If someone is aware of his or her characteristics related to

leadership, s/he will tend to choose vocations in which he or she will be praised while sustaining his or her “leadership” needs.

From another perspective, creativity, leadership, competitiveness, or cooperativeness, etc. is common personality characteristics. Thus, our personality structure directs our vocational choices to some extent through vocational values. The most common definition of personality is that: “the dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations” (Ryckman, 2000, p.5). To put it another way, the reflections of each individual’s unique ways of responding to his or her physical, social and cultural environments are accepted as his or her personality (Reeve, 2005). It is expected that an individual will choose a particular vocation if this individual has one or a group of required personality characteristics for this vocation in that socio-cultural environment. Hence, when the vocational values and personality characteristics of the individual correspond with each other, individual may become more inclined to choose this particular vocation.

It is also important to notice that while some values are more related to the vocation, some values will be related more to the conditions of the work, these are named as “work values” (Kuzgun, 2000). Sometimes, it becomes harder to make a clear distinction among vocational values and work values, but usually vocational values are more comprehensive. Conditions of work are included in vocational values. An individual may have difficulty in understanding which values are related to vocations, and which values are related to the conditions of the work. However, it is easy to have an idea about work conditions for some vocational fields, for example: hospitals have standardized

work conditions in general, so that it is easier to have an idea about vocational characteristics of people who are working in the vocational field of “medicine”.

Work conditions are more changeable than the vocational characteristics, but they are interdependent. The technological developments dominantly contribute to fast changes in work conditions, and in addition, today’s globalized job market creates fast changes in work conditions for most of the vocational fields (Kuzgun, 2000). These changes directly affect the vocational values.

Adolescents are influenced especially by physical conditions of the work environments. They may develop prejudices towards some vocational fields due to negative observations related to work environments of these vocations. Also, they may get easily attracted by beautiful, or comfortable physical conditions of work, even though normally they are not interested in these fields. Expectations of adolescents from vocations may change according to their sociodemographic characteristics, such as: gender, age, socioeconomic status, number of siblings, parental status, educational level and work status of parents, etc. It is expected that there will be different expectations of individuals from different vocations. For example, while someone in the lower socioeconomic status may expect to gain money from a vocation, someone in the higher socioeconomic level may expect to have interesting experiences in this vocational field.

Moreover, vocations may have different satisfaction channels which are based on inner or outer sources for values (Kuzgun, 2000). While “creativity” is related to satisfaction channel based on inner sources, “appreciation” or “money” is related to outer sources of satisfaction. Kuzgun (2000) stated that, by giving examples from some research studies, while males give more importance to outer sources of satisfaction, girls give more importance to inner

sources of satisfaction. That is to say, gender is found to be a very important factor in making decisions about vocational choice.

In summary, in terms of vocational values, the adolescent need to have realistic opinions about vocations in order to be able to imagine himself or herself as if s/he will work in that vocational field. If the adolescent individual considers that the vocational values correspond with his or her own expectations from the particular vocation, the probability of choosing this vocation will increase.

1.5.3. OTHER FACTORS

According to the related literature and personal experience in the vocational psychology field, commonly accepted factors which are mostly influential on vocational choice of adolescents are considered as: “Abilities”, “Interests” and “Vocational Values”. As it was discussed before, these factors are more related to personal characteristics of the individual. However, there are also several environmental factors which affect the vocational choices of the adolescents, such as: “Academic Content of the Undergraduate Program”, “Academic Status of the Individual”, “Economic Conditions of the Country”, “Media Sources”, “Name of the University”, “Opinions of Parents”, “Socioeconomic Status of the Individual”, “Parent’s Vocations”, etc. These factors are more related to outer sources, they are not directly related to personality characteristics of the individual. Some of these factors which are supposed to be effective on vocational choices of adolescents are going to be discussed in subsequent sections.

"Academic status of the individual" is considered as a factor which affects the vocational choice of the adolescent; this is also a context dependent factor. A student may not be successful due to insufficient environmental opportunities. However, s/he may think or behave differently under different circumstances. Other individuals may have positive or negative ideas about this person with respect to his or her academic status, but the self-perception about own academic competencies is more important than the opinions of others (Pajares & Urdan, 2002).

Academic status is a very important source of data related to academic competencies of the individual. Academic status can be perceived differently due to both the individual differences and contextual differences (Kuzgun, 2000). Because of being in the lower academic achievement level, an adolescent may be developing low self-esteem about academic issues. Underachievement in high school affects "academic-self for higher level of education" negatively (Pajares & Urdan, 2002). In addition, academic status in high school is also a very valuable source of information for making predictions about academic future of the individual. For example: if an individual has low grades in "biology" in high school, vocational choice like "medicine" or "molecular biology and genetics" is not expected for this individual. Apparently, academic status is expected to affect vocational choice of the individual.

Academic content of the undergraduate program is expected to affect vocational choices of adolescents. The content of the undergraduate program includes important signs about the vocational field. Students generally investigate the organization of undergraduate programs in order to have an idea about the vocational field that they are considering. They ask some questions

about the content of the program, such as: “Are there some courses about mathematics in this undergraduate program?”, “How many hours of laboratory work are required for this course?” or “Will there be any interdisciplinary course in this program?”, etc. Interests in academic disciplines can be understood from their questions about the content of the undergraduate programs.

If the adolescent individual does not want to study “Physics” at the university, it will mean that s/he does not want to have knowledge about “physical rules and applications”. Normally, this individual will not choose any undergraduate program related to vocational fields in which knowledge about “physical rules and applications” are required. So, academic content of the undergraduate program is expected to affect adolescents’ vocational choices. If s/he is sufficiently aware of his or her “academic-self”, which means capabilities and incompetency in particular academic subjects, the adolescent individual will make more appropriate vocational choices. So that, vocational choice process includes having perseverance and responsibility in order to complete the requirements of this choice.

In Turkey, adolescents give a tremendous importance to the name and reputation of the university in their vocational choices. Sometimes, they make such comments: “This university is better than that one in this vocational training, there are more laboratories, materials etc.”, “There are more international exchange opportunities in this university”, etc. If the adolescent makes comparisons between universities in terms of the same or similar academic programs because of their wishes to have a better training and higher level of educational standards, their efforts really need to be appreciated. However, they generally compare universities according to “prestige” criteria.

They generally think like that: “The name of the university is more important than the name of the department. If I will have a diploma from that university, I will easily find a job, or I will find a better job.” Even though, this may be true in reality, this type of thinking generally causes problematic vocational choices. Furthermore, it is not possible to accept this type of choice as “vocational choice”, because this is the choice of “prestige” (Kuzgun, 2000).

The reason for adolescents to choose the “university” in spite of the “undergraduate program” may be caused by the minimum scores for undergraduate programs. Students may think that they will not enter the particular undergraduate program in a particular university because of the higher levels of minimum scores. These minimum scores are determined according to the choices of students who took the university entrance exams in the previous year. Minimum scores of placements are announced each year by “Student Selection and Placement Center (ÖSYM)“ in order to help students to make their preference lists of undergraduate program. If a student does not have adequate exam scores which are necessary for particular academic programs, they may change their minds. Mostly, they choose “the best university” that they have a reasonable chance to enter.

Both of these two factors: “Name of the university” and “Minimum scores for undergraduate programs” generally generates more problematic consequences in terms of adolescent’s vocational choice, because these factors cause the adolescent to change his or her mind for the sake of giving up his or her vocational interest and abilities. According to Kuzgun (2000), if an adolescent gives tremendous importance to both of these factors, it will mean that his or her vocational choice may be under risk of potential problems in the

future. In this study, this source of problem is also investigated by asking individuals about their opinions about these factors in terms of influence on their vocational choices.

In today's society, media sources are very influential in many areas of choice. It is expected that media will also affect undergraduate program choice of the adolescent individuals. Media sources include magazines, newspapers, television channels, World Wide Web (internet) and so on. Media presents a charming and comprehensive source of knowledge. Adolescent individuals are directly or indirectly affected by these sources. They are watching various movies and series on television, or internet. They observe film characters who are doctors, engineers, teachers, lawyers, etc. These characters are representations of professional jobs. Adolescent individuals usually identify and imagine themselves in the place of these characters (Kuzgun, 2000). In this way, there happen very powerful effects of television, films, newspapers, magazines, etc. on vocational choice of the adolescents. However, some characters and events in these media sources do not really represent the vocational characteristics of related profession. Moreover, some of the media products are very misleading. These problems may bring about serious negative influence on adolescent boys or girls.

Furthermore, adolescent individuals collect some information about vocations, undergraduate programs, and universities from several media sources, especially from internet, due to its usefulness and availability. Internet is an interactive and comprehensive source of knowledge; also adolescents are good at use of internet for a variety of purposes (Lerner, 2002). The internet has various websites which include information about undergraduate programs and

vocational fields. However, some websites are very sophistical, confusing and deceitful. False or incomplete knowledge may cause unwise decision making, or even failures.

The powerful effects of media on vocational choice calls for more responsibility in terms of correct and explicit presentations of vocational fields. In today's society, when fast technological developments and innovations in communication are considered, media is expected to be the main source of information for many domains of modern life. The effective and efficient use of media in making choices is inevitable; however there is a need for professional and well-designed materials and projects related to the presentation of vocations in media.

Both of "Economic Conditions of the Country" and "Socioeconomic Status of the Individual" are also supposed to be influential on vocational choices of the adolescents. These factors are naturally related to the economic conditions of country and family. It is well-known that socioeconomic status of the individual is a very important factor in vocational choices of the individuals (Kuzgun, 2000). If an individual belongs to lower socioeconomic status, s/he will give more importance to external benefits of the job, like money; but if s/he belongs to higher socioeconomic status, intrinsic benefits of the job will be more important, like competitiveness, or leadership (Kuzgun, 2000). Being in lower socioeconomic status causes individuals to become more anxious about their future (Giddens, 2001).

In addition, worse economic conditions of the country may produce anxiety about the future in society. It is expected that adolescent individual may be affected by any serious negative condition in society in terms of their

vocational choices (Kuzgun, 2000). However, economic problems in the country are expected to be more influential on vocational choice, the possible reason for this is that vocational life is closely related to the economic life of a country.

While economic conditions of the country become worse, individuals may get more interested in some vocations which have higher economic value, such as: engineering, medicine, economics, business administration, etc. These vocations are perceived as work-guaranteed with high salaries. This is an expected outcome, because wealthy people in society belong mostly to these vocational communities. People who are engineers, doctors, economists, bankers, etc. are mostly in higher socioeconomic status.

On the other hand, some vocational fields like education, science and letters etc. lose their popularity, especially during economic crises. Because the economic benefits of people belonging to these vocational communities are decreasing in economically developing or underdeveloped countries (Giddens, 2001), like Turkey. Most of the adolescent individuals, especially those who belong to lower socioeconomic status, are aware of these economic distinctions. For young people, economic conditions of the country provide a knowledge base in order to make predictions and plans about their future lives (Kuzgun, 2000). So, economic conditions of the country are expected to be very influential in vocational choices of adolescents.

In every society, there are groups of individuals from different socioeconomic backgrounds. One of the most important variables which create these socioeconomic distinctions is the individual's level of education (Kuzgun, 2000). If an individual belongs to "low socioeconomic status", this individual is not expected to have adequate level of education in a modern society. Higher

level of education can be provided by having sufficient amount of economic sources and opportunities. Also, higher level of socioeconomic status predicts acceptance and achievement in higher education (Giddens, 2001). Thus, there is a mutual relationship between level of education and socioeconomic status.

Kuzgun (2000) stated that, even though the higher education in public universities is almost free in Turkey, individuals from “low socioeconomic status” cannot afford the expenses including basic needs as accommodation, transportation, etc. for higher education. Also, there are more children in families who are belonging to “low socioeconomic status”. So, in these families, the limited economic sources of the family have to be divided among more numbers of children. Furthermore, the quality of parental care decreases for each individual child, when there are more children (Kuzgun, 2000). For these outstanding reasons, it becomes more difficult to continue higher education for individuals in “low socioeconomic status”. In spite of these negative conditions, nearly all of the families in Turkey, including who are in “low socioeconomic status”, want their children to have higher education in order to have better living standards in the future.

Opinions of family members, especially opinions of parents, are considered to be a factor on vocational choice of the adolescent. Safe and secure relationships in the family promote sound curiosity and exploratory activity for the adolescent child (Steinberg, 1999). Parental awareness of their children’s’ needs and realistic expectations from their children are typical characteristics of authoritative parents. Adolescents from authoritative families tend to be responsible, self-reliant, adaptable, creative, assertive, and socially

competent (Steinberg, 1999). These adolescent individuals are expected to make better choices for their future lives.

However, adolescents from authoritarian families have more difficulties during vocational choice periods. These parents want to direct their children's' vocational choices, however, their adolescent children normally want to have more democratic and non-directive parents (Kuzgun, 2000). These parents may deny their actual thoughts and assert the opposite opinions, such as: "I am not interfering with his or her choices, on the contrary, I support my Childs' future plans, and I want him or her to be happier". They may also say to their adolescent child that: "Ok, make your own vocational choice, but make a good choice!" They may seem like democratic and non-directive parents, however they generally define very strict criteria for their adolescent children's' vocational choices.

In general, the common parental manner towards adolescent child's vocational choice is very directive in Turkey (Kuzgun, 2000). Parents generally have higher expectations from their children. They want their children to have higher education in a particular field of study, and this parental rigidity will cause conflicts in the family. Most of the children want their parents to be less involved in their vocational choice process. Some parental behavior is much sound, which is to say, authoritative parents give importance to "self-exploratory" behaviors of their children. They leave the decision to their adolescent children, but they stand by support (Steinberg, 1999). In terms of vocational choice, opinions and suggestions of parents affect responses of their adolescent children in different ways. The influence of parents' opinion on vocational

choices of their adolescent children is expected to be low, because of the effects and necessities of individuation process (Steinberg, 1999).

Opinions of other adults, like relatives, teachers, or even school counselors are sometimes very directive. They make suggestions in accordance with the social values and expectations. Unfortunately, teachers and school counselors generally behave in an authoritarian manner (Kuzgun, 2000); however, adolescent individual wants to be self-competent in decision making issues directly related to his or her own future (Lerner, 2002). Teachers may have also higher level of expectations from their students, but sometimes they may have negative opinions of their students' academic and psychosocial competencies. Both of the extremes are not accepted well by the adolescent individual. It is also very important to note that adolescent individuals give importance to opinions of their favorite teachers. Teachers and school counselors need to be more democratic and open-minded individuals in order to be more effective and good role-models for adolescents. Adolescent individuals need good role-models, especially in order to become competent in overcoming cognitive challenges for better decision-making processes.

Experience in the peer group is also very necessary for the development of autonomy in adolescence (Steinberg, 1999). Developing more mature and independent relationship with parents is accompanied by the establishment of more mature relationships with peers, during adolescence. The peer group provides a context for adolescents to test out decision-making skills in an environment where there is no adult presence to control their choices (Steinberg, 1999). However, peers are not generally references for serious decisions about the future. Activities with friends are typically organized around

having a good time; these times are not for serious decision-making sessions. Especially during the late adolescence period, peers start to lose their influence on decision-making processes (Steinberg, 1999), so that, opinions of peers related to the future are mostly considered as changeable and untrustworthy by the adolescent individuals.

Normally, adolescent's developmental need for autonomy shapes their behaviors in the vocational decision making process. Non-directive supports and opinions from adults and peers are generally appraised favorably by the adolescents. If an adolescent individual is cognitively competent, s/he collects data from several sources, and makes a good combination of all knowledge. For this reason, effectiveness of non-directive opinions and supports from others are expected to be at moderate level.

According to Sandis (1970), there is a significant relationship between educational level of parents and the vocational choices of the adolescent individuals. Also, Kuzgun (2003) stated that educational level of parents is directly related to their children's' interest in higher level of education. Especially mothers' educational level is an important predictor of children's tendencies towards higher level of education (Sandis, 1970). Moreover, it was found that there is significant relationship between scores of university entrance exam and educational level of mothers in Turkey (ÖSYM, 1992). Thus, educational level of parents is expected to be influential on vocational choices of adolescents.

In spite of developmental conflict between parents and the adolescent children due to the value of autonomy, parents are role-models for adolescent children for adult life. Adolescent children observe their parents in order to acquire gender roles in the society (Giddens, 2001). Issues related to

interpersonal relationships and gender become challenging and complicated during adolescence, adolescent individual overcome these difficulties by observing their parents. Additionally, parents are also role models in work environments (Steinberg, 1999). Even though they do not choose the same vocations as their parents, they may become interested in their parents' vocational fields, or similar ones. Sometimes, the opportunities and availability of information related to these vocations may lead some of the adolescents to think to choose the same vocations as their parents.

1.6. TEMPERAMENT

The knowledge on temperament developed gradually throughout history. The concept of temperament has its roots in the thought of ancient Greek philosophers and physicians. The father of medicine, Hippocrates (4th century B.C.) developed a theory of humors to explain the states of health and illness, and his follower, Galen (2nd century A.D.) contributed to this theory with a psychological interpretation (Strelau, 1998). As Strelau (1998) stated Hippocrates gave place to the Empedocles's primary elements of universe (earth, air, fire and water) in his famous work: "On the nature of man". In this famous work, Hippocrates deduced four main qualities: warmth, cold, moisture, and dryness, as well as four fluids (humors) of the organism. The concept of temperament has been popular from the beginning of this century. In 1899, Kraeplin was the first one who formally introduced the concept of temperament (Strelau, 1998).

Temperament is considered as main emotional substructure of human personality (Strelau, 1998). There are several theories which explain the temperament in the scientific literature of personality. Each theoretical background has its own definitions and constructs about temperament. According to Frick (2004), there are three main agreement points of several theorists on temperament as: “(1) temperament is typically viewed as being inherited or at least constitutional (i.e., directly related to biological processes) in nature, (2) temperament is viewed as being evident early years in life, (3) temperament is viewed as being stable across human development.” These facets of temperament are important for distinguishing temperamental traits from other individual differences.

There are also ongoing debates about the common definition of temperament. Some theorists believe that no behavioral trait is determined purely by genetics, or biological processes (Frick, 2004). According to Thomas and Chess (1977), from the time of a child’s birth, his or her behavior is shaped by an interaction between biological predispositions and environmental influences. Similarly, all traits are subject to change across development, including those often considered to be indicative of temperament (Strelau, 1998).

It is not clear what degree of continuity is required for considering a trait as temperament, there are also several disagreements related to this point. Thomas and Chess (1977) stated that: “Temperament is a phenomenological term in which the categorization of any individual is derived from the constellation of behaviors exhibited at any age-period. These behaviors are the result of all the influences, past and present, which shape and modify these

behaviors in a constellation in an individual over time, therefore may require stability in these interactional forces, such as environmental influences, motivations and abilities. Continuity and predictability can thus not be assumed for a specific attribute or pattern of the child, whether it is temperament, intellectual functioning, motivational attributes, or psychodynamic defenses. What is predictable is the process of organism-environment interaction. Consistency in development will come from continuity over time in the organism and significant features of the environment. Discontinuity will result from changes in one or the other which make for modification and change in development" (p.143). In sum, continuity of the interaction between individual-environment in the similar kind of conditions, and the predictability of this interaction is considered as stability in terms of temperament.

Another important difficulty in conceptualizing temperament has been an increasing divergence about the most important dimensions of temperament (Frick, 2004). Strelau (1998) stated that the most classification systems focus on individual differences in emotional processing, furthermore most systems focus on both emotional reactivity and the affect regulation. According to Frick (2004), emotional reactivity refers to individual differences in typical emotional experiences. Reactivity can vary in valence of the emotion (i.e., anger, sadness, happiness) typically experienced by the individual and in the dynamics of this experience in terms of its intensity, range, liability, latency, and persistence (Thomas & Chess, 1986). In contrast to reactivity, affective regulation focuses on the processes used to modulate the emotional experience, such as: approach, avoidance, and attention control (Rothbart & Jones, 1998).

According to Thomas and Chess (1986), common dimensions of temperamental categories which are the main components of emotional reactivity are defined as: “Reactivity (or intensity of reaction)”, “Rhythmicity (or regularity)”, “Activity level”, “Threshold of responsiveness”, “Persistence”; and main components of affect regulation are defined as: “Approach or withdrawal”, “Attention span”, “Adaptability”, “Distractibility” and “Quality of mood”. All of these temperamental dimensions are constructed in studies which are primarily on observations of infants, toddlers and early childhood. However, due to relative stability of temperamental characteristics, these components may be present in varying combinations in adolescent individuals. The importance of temperamental individuality has to do with the interactions between the developmental characteristics of adolescence period and the particular environmental conditions (Thomas & Chess, 1986).

Although methods for classifying temperament are inclined to focus on both emotional reactivity and affect regulation, some differences related to aspects of these components are included in these classifications. Most of the methods include some dimensions which focus on an individual’s susceptibility to negative affect (Strelau, 1998). According to Strelau (1998), different classifications vary on whether negative affect is viewed as a global dimension, or broken into discrete types of affect, such as fear, anger, anxiety, depression, irritability, etc. Five types of affective temperament which are defined by Akiskal in 1998, is an example of this type of temperament classification.

Furthermore, the definitions vary according to whether a tendency to experience positive emotions is considered as a separate temperament dimension (Thomas & Chess, 1986). Although most classification systems

emphasize individual differences in the individual's emotional responsiveness, many systems also include dimensions focusing on a child's social relatedness (Buss, 1995). Akiskal (1998) also included the socially adaptive traits in his own theoretical deduction of affective temperament.

In several temperament theories the main assumption is that temperament plays an important role in moderating stress (Strelau, 1998). The functional significance of temperamental characteristics becomes very important when the individual is confronted with difficult situations and extreme demands. Kagan (1983) has described "inhibited and uninhibited temperament" as representing different vulnerability to experienced stress, particularly involving situations of unexpected or unpredictable events.

Strelau (1987) stated the three main dynamics of relationship between stress and temperament as: "Temperament firstly refers to some characteristics that penetrate all kinds of behavior, whatever the content or direction of this behavior. So, these behaviors interact with a variety of stress phenomena. Secondly, by being connected mainly with energetic and temporal characteristics of behavior, temperament characteristics act as moderators in all stress phenomena that may be characterized by energy and time. Thirdly, temperamental traits are related to emotions, as expressed in an individual-specific tendency to generate emotional processes (Kagan, 1983), especially in the domain of negative emotions. As commonly accepted, emotions are one of the core constructs in the state of stress" (p.164). Thus, both emotional reactivity and affect regulation components contribute to functional significance of temperament in coping with psychological stress.

Psychological stress is understood here as a state characterized by strong negative emotions, such as: fear, anxiety, anger, irritability, or other emotional states evoking distress (Strelau, 1998). Strelau (1998) stated that such emotional states are accompanied by physiological and biochemical changes that evidently exceed a baseline level of arousal. For example, neuroendocrine changes are inherent attributes of emotions (Strelau, 1998; Zuckerman, 1991), and so, they cannot be ignored as components of psychological stress. Strelau (1998) asserted that each state of stress is caused by the lack of equilibrium, occurrence of discrepancy between demands and the individual's capability or, in another sense, capacity to cope with them.

When considering the consequences of stress and temperament for the development of psychopathology, it is often difficult to identify the specific role of temperament as a moderator in the chain of stress phenomena: stressor, state of stress, and consequences of stress (Strelau, 1998). Especially, in the case of affective disorders, excessive or chronic states of stress could be essential risk factors. If so, it is expected that temperamental characteristics which are based on the construct of arousal and/or linked to emotional characteristics should be related to affective disorders. The importance of temperament in the understanding of affective disorders has been underlined by Akiskal (1994) who has proposed a temperament-based classification of mood disorders. Temperament can be viewed as the simple forms of socioemotional behavior that appear relatively early in life and provide the developmental foundations for more complex and differentiated behavioral forms which range from adaptive personality to severe psychopathology (Akiskal, 1998).

There are number of methods through which temperament is assessed. By far, the most widely used method of temperament assessment is the questionnaire in which either parents rate their children or individuals rate themselves. Supporters of this type of assessment point to several advantages over observational or laboratory procedures, including: (1) the ability of the informant to rate an individuals' usual temperament style across time, (2) ease of administration, (3) good psychometric properties of the technique (Strelau, 1998). Some questionnaires use a true/false format for items, whereas others employ a Likert scale in which informants rate their degree of agreement with the statement (Strelau, 1998). The names, main temperament dimensions, and formats of some questionnaires which are commonly used in temperament assessment of adolescents (who are older than 16 years old) and adults are listed in table 1.6. Another system of assessment utilizes standardized observation or laboratory measures in which children are guided through different procedures and their behavior is coded by trained observers (Strelau, 1998).

There is a significant diversity with regard to both the core temperament dimensions and the methods for temperament assessment. Questionnaires continue to represent the major method of temperament assessment. While most of temperament researchers agree on the existence of a few core dimensions, such as, vulnerability to negative emotions and levels of approach behavior, these are several definitions for dimensions of temperament. In this study, the Akiskal and Mallaya's (1987) definition for affective temperament is considered. This definition is going to be elaborately explained in section 1.7.

Table 1.6. Questionnaires aimed at assessing temperament in (older than 16 years old) adolescents and adults

Name of the Questionnaire	Main temperament dimensions	Format
Affect Intensity Scale (AIM)	Affect Intensity	40 items, 6-point scale
Arousal Predisposition Scale (APS)	Arousability	12 items, 5-point scale
Barratt Impulsiveness Scale (BIS-10)	Motor Impulsiveness Cognitive Impulsiveness Non-planning Impulsiveness	34 items, 4-point scale
EAS Temperament Survey (EAS-TS)	Distress Fearfulness Anger Activity Sociability	20 items, 5-point scale
Eysenck Personality Questionnaire (EPQ-R)	Psychoticism Extraversion Neuroticism Lie Scale	100 items, Yes/No Format Short Scale EPQ-R (48 items)
Formal Characteristics of Behavior-Temperament Inventory (FCB-TI)	Briskness Perseveration Sensory Sensitivity Emotional Reactivity Endurance Activity	120 items, Yes/No Format
17 Impulsiveness Questionnaire (17)	Impulsiveness Venturesomeness Empathy	54 items, Yes/No Format
Pavlovian Temperament Survey (PTS)	Strength of excitation Strength of inhibition Mobility of nervous processes	66 items, 4-point scale
Pleasure-Arousal-Dominance Scales (PAD)	Trait-pleasure Trait-arousal Trait-dominance	47 pairs of adjectives, 9-point scale
Reactivity Scale (RS)	Reactivity	24 items, 5-point scale
Structure of Temperament Questionnaire (STQ)	Ergonicity (Object-related/Social) Plasticity (Object-related/Social) Tempo (Object-related/Social) Emotionality (Object-related/Social)	105 items, Yes/No Format
Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A)	Depressive Cyclothymic Hyperthymic Irritable Anxious	100 items, Yes/No Format

To sum, temperament is defined basically as the core substructure of human personality. Temperamental characteristics are predictors of future personalities of children and adolescents. According to the Strelaus' (1998) individual difference perspective, temperamental characteristics represent raw material that will be modified to generate the noticeable features of mature human personality. Several theorists simply define temperament as early developing individual differences in tendencies to experience and express emotions, including their regulatory aspects. In the subsequent section, affective temperament is going to be discussed.

1.7. AFFECTIVE TEMPERAMENT

Kraeplin was the first one who formally introduced the concept of temperament into the scientific body of knowledge of psychology and psychiatry in 1899. According to Kraeplin, temperament is believed to be "heritable" and relatively stable throughout life. The revival of interest in temperament in contemporary clinical psychology and psychiatry is relatively recent with the efforts of Hagop Akiskal (Vahip, Kesebir, Alkan, Yazıcı, Akiskal & Akiskal, 2005). Hagop Akiskal operationalized the depressive, hyperthymic, irritable, cyclothymic (Akiskal & Mallaya, 1987) and anxious (Akiskal, 1998) affective temperament. As it was postulated in Akiskal's (1998) study, the substructures of affective temperament types are listed in table 1.7.1. Each affective temperament type has its own distinctive characteristics.

Table 1.7.1. Substructures of affective temperament types

Depressive Temperament	Cyclothymic Temperament	Hyperthymic Temperament	Irritable Temperament	Anxious Temperament
Introversion Low Self-esteem Pessimism Sensitivity Altruism	Variability Cyclicity Instability Intensity	Fun loving High self-esteem Narcissistic Risk-taking Adventuresome Sociable	Restlessness Aggresivity Critical of others Dysphoric Emotionality Complaining	Worrying about kin Inability to relax Somatic anxiety Fear-prone Autonomic anxiety

According to Akiskal and Mallaya (1987), individuals who have depressive temperamental characteristics are more pessimistic, hopeless and distrustful. Depressive traits are expected to serve to the sensitivity for other people and other members of the species. They may have low self-esteem, but they are also conscientious, self-controlled, suspicious and criticizing about unexpected outcomes. On the other hand, these individuals are also supposed to be altruistic, generous and unselfish. They are sensitive about problems of human beings and nature. Thus, depressive temperament has both negative and positive, mainly introverted characteristics. These individuals tend to be more silent and calm-tempered. They give more importance to self-discipline; they may punish themselves harshly when they are faulty, or unsuccessful.

As Akiskal and Mallaya (1987) stated the main theme of cyclothymic temperamental characteristics is fluctuations between emotional and cognitive extremes. These individuals fluctuate between pessimism and optimism, cognitive confusion and creative thinking, introversion and extroversion, etc. They may get sad easily, but they will start to laugh in a short time. “Falling in and out of love” is a major characteristic of these individuals. Cyclothymic traits, with their capriciousness, would make the individual more difficult to attain for

lovemaking (Akiskal, 1998). Creative productivity in poetry, music, painting, or acting is the most significant gift for them.

Hyperthymic temperament is characterized by overenergetic, exuberant, upbeat, and overconfident lifelong traits (Akiskal & Mallaya, 1987). According to Akiskal (1998), individuals with hyperthymic temperament have more tendencies to experience hypomania and they sleep less than others. These people tend to behave in enthusiastic, excited and impulsive manner. They may have extremely high self-esteem and they are easily noticed due to their prominent narcissistic characteristics. Generally, they are controlling and tend to interrupt other people. Also, they are more boastful, omnipotent and egocentric in decision-making. They do not want to be under pressure, they may easily become sarcastic and irritable when they feel themselves under pressure. Hyperthymic individuals are very sociable; they are also fun-loving and adventuresome individuals.

Akiskal and Mallaya (1987) asserted that individuals with irritable temperament are more inclined to think deeply and they criticize both themselves and others severely. These individuals complain a lot, and they are dissatisfied by nature. Moreover, they have high impulsivity, but they suppress their impulses due to intolerance for possible faults. They may have very intense and unpleasant sexual drives, so that, they may get disturbed due to their own sexual wishes. They cannot stand their jealousy, may become skeptical easily. Individuals with irritable temperament may make irritating jokes, especially if they are disturbed by others. On the other hand, they generally like to tease people, they snap at people and their biting humor may take them into trouble. They may insist on their wishes, sometimes they may become

unbearable. If they think that they are deceived, they may become very aggressive and will start fighting with closed eyes. Sometimes, their aggression comes out without any apparent reason.

Akiskal (1998) stated that main characteristics of anxious temperament are hypersensitivity and not being able to relax. Anxious temperament was called “generalized anxious temperament” formerly, because of intense and chronic worry, somatic and autonomic anxiety of these Individuals. However, their chronic and intense presence is not necessary in all individuals with anxious temperament. Individuals with anxious temperament may have somatic complaints like having an upset stomach, diarrhea, irritable bowel syndrome, etc. When they get stressed, they may easily have headaches, their hands start tremble or their mind may go blank. Under stressful circumstances, they may lose their sense of control. They are fearful and restless individuals, and generally they feel insecure. They may get easily hurt due to their sensitivity, especially when they are criticized.

Akiskal (1992) asserted that affective temperaments are the behavioral representations in the premorbid course of affective disorders (Akiskal, 1992; Akiskal & Mallaya, 1987). According to Akiskal (1998), affective temperament represents the subclinical foundations of affective disorders, and also affective temperament represents an early clue for a recurrent mood, pre-bipolar disorder (Akiskal, 1995). So, affective temperamental characteristics can be used in identification and classification of psychopathological conditions.

Some psychiatrists, In collaboration with clinical psychologists, and primary care physicians, subsequently in Memphis, Pisa, Paris, and San Diego, developed affective temperaments into an interview (TEMPS-I) during the early

1990s (von Zerssen & Akiskal, 1998), and eventually into a self-administered Autoquestionnaire which is named as “Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire” (TEMPS-A). TEMPS-A consists of five subscales: Depressive, Cylothymic, Hyperthymic, Irritable, and Anxious Temperament. Each of the subscales consists of affect-loaded items which also include socially adaptive traits (Vahip et al., 2005; Akiskal, 1998). TEMPS-A is a self-report instrument consisting of five subscales, and original version has 110 number of items in total. The use of the TEMPS-A is appropriate for both clinical and non-clinical populations.

Vahip et al. (2005) in collaboration with Hagop Akiskal and Knarig Akiskal, made the standardization study of “Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire” (TEMPS-A) in Turkey. Turkish version of the instrument includes 100 items, 10 items in the original version were deleted due to lower rate of factor loading ($p<.20$). The questionnaire was administered to 658 clinically-well subjects in a Turkish university circle by the researchers (Vahip et al., 2005). They found a good to excellent test-retest reliability (0,73 – 0,91), and internal consistency (0,77 – 0,85). So, the Turkish version of TEMPS-A is a reliable and valid instrument that is suitable for research studies in Turkey.

If an individual has higher subscale scores in TEMPS-A, these individuals are considered as having “dominant affective temperaments”. In the Vahip et al. study (2005), cut-off points of the five dominant affective temperament subscales were determined according to their z-scores distribution. The scores which are two SD above the mean of each subscale were accepted as the cut-off points. Subjects who had higher scores than these

cut-off points were considered as having the specified dominant affective temperaments.

In the Vahip et al.'s study (2005), the relationship between temperament and gender was assessed with respect to the scores above the cut-off points that are obtained for each affective temperament. The comparison of affective temperament scores according to gender in this study is illustrated in table 1.7.2. As it is apparent in the table, males had significantly higher scores than females for the hyperthymic temperament (p=0,012), while anxious temperament subscale scores are significantly higher in females (p=0,025). There was no statistically significant gender difference according to dominant depressive, cyclothymic, and irritable temperaments (Vahip et al., 2005).

Table1.7.2. The comparison of temperament scores according to gender in the study of Vahip et al. (2005)

	M (Male)	**M** (Female)	**p***
Depressive Temperament	13,9	14,8	0,073
Cyclothymic Temperament	18,8	18,7	0,643
Hyperthymic Temperament	19,7	17,6	0,012
Irritable Temperament	21,4	20,6	0,501
Anxious Temperament	20,6	22,3	0,025

* Mann-Whitney U.

Prevalence of the dominant temperaments, for all subjects of the study, is as follows: 3.1% for depressive temperament, 1.7% for cyclothymic temperament, 2.2% for hyperthymic temperament, 3.7% for irritable temperament, and 3.7% for the anxious temperament. No significant difference was found among age groups (age under 30, between 31 and 40 and over 41) in terms of dominant affective temperaments. However, as the age increased, the temperament scores tended to decrease (Vahip et al., 2005), but this finding is not statistically significant.

As far as we know, TEMPS-A has not been used in any study related to vocational choice in Turkey, or in the world. Most of the uses of this instrument are related to clinical studies of mood disorders. For example: Işık (2007) made a research study about the relationship between affective temperament and personality characteristics of subjects who are outpatients diagnosed as having alcohol addiction problems in Ankara, Turkey. Researcher compared the Minnesota Multiphasic Personality Inventory (MMPI) subscale scores with the TEMPS-A subscale scores of the subjects. It was found that there is significant relationship between "hypochondriasis", "paranoia", "depression" and "psychopathic deviate" subscale scores and cyclothymic, irritable and anxious dominant affective temperament subscale scores of the alcohol addicted outpatient subjects of the study (Işık, 2007).

1.8. AIMS OF THE STUDY AND RESEARCH QUESTIONS

Adolescent individuals come across with a decision making process about vocational choice when they are senior year high school students. The vocational choice process is not only important for the adolescents themselves, but also for the society. For the well-being of both individual and society, there needs for an appropriate match between characteristics of vocations and individuals' needs and expectations from these vocations. Society is composed of different subsystems like family, religion, educational systems, etc. Bronfenbrenner's ecological systems theory (1979) is a good explanation for composition of subsystems in the social life.

According to Bronfenbrenner's ecological systems theory (1979), each individual is in a continuous interaction with several systems in society throughout life. Any behavior of the individual is supposed to affect other sytems. For example: Vocational choice process affects all of the societal systems: microsystems, exosystems, macrosytems as illustrated in figure 1.8. When there is an increase of demand in the society for any vocation, the number of schools (exosystems) which give this vocational training will also increase, and then it may cause some political decisions about educational systems (macrosystems) for the future. Families may need to move to other cities due to their children's' vocational choices (microsystem). In order to make sound vocational choices, adolescent individuals need more self-awareness for which vocations are more appropriate for their personal characteristics.

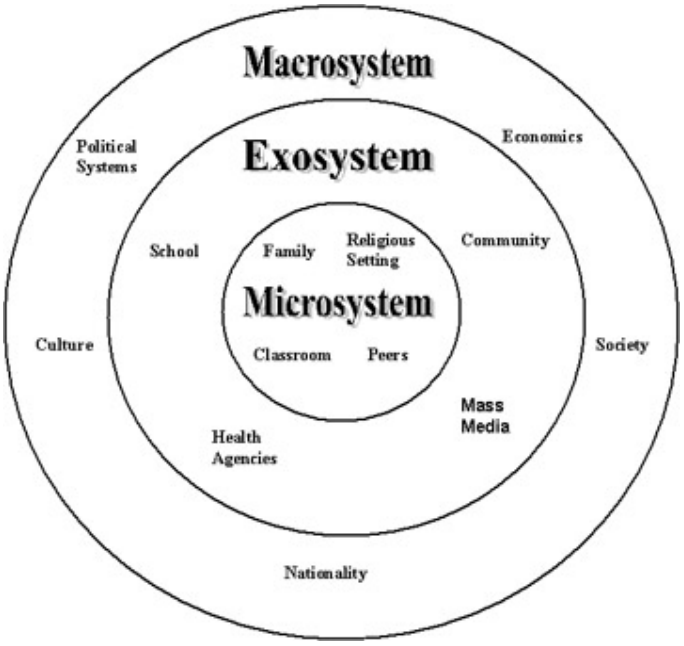

Figure 1.8. Bronfenbrenner's ecological systems

Some of the senior year high school students experience serious psychosocial problem related to their vocational choices due to the lack of

satisfactory knowledge about both their personal characteristics and the vocational options. These adolescents need professional support during this process. The professionals, like school psychologists, vocational counselors, etc., who are working in this field need to have appropriate information about the factors affecting vocational choice in order to help better these individuals.

As far as we know, there is no any study about the relationship between temperament and vocational choices of adolescents. However, there are some studies about the factors which affect vocational choice of adolescents (Kuzgun, 2000), but temperament is not included in any of these studies. There are many factors which are known as influential on vocational choices of adolescents, such as, gender, socioeconomic status, parents' level of education, etc. However, it is necessary to investigate these factors in a well-organized and comprehensive framework. This study aims to provide information for the professionals who work in the vocational counseling field. It is expected that the information included in this study will increase the quality of preventive interventions which is developed and applied by the professionals in this field.

The primary aim of this study is to investigate the relationships between vocational choices and some factors which are thought to be influential on vocational choices of a group of adolescents in Turkey. In addition to several well-known factors, such as gender, socioeconomic status, etc., which affect the vocational choice of these adolescents, it is thought that there may be other personal factors which may be influential on adolescent's vocational aspirations. Temperament is considered as a personal factor which may be related to vocational choice of the adolescents. From a different and new perspective, this

study also aims at investigating relationship between vocational choices of adolescents and their temperamental characteristics.

In order to understand the vocational choice of the adolescents better, there are five main research questions in this study:

1- Are there significant relationships between sociodemographic characteristics (such as gender, socioeconomic status, parents' level of education, etc.) and the vocational choices of the subjects?

2- Is there a significant relationship between self-reported psychological health status (i.e. poor, normal, and good) and the vocational choice of the subjects?

3- What are the rates for self-reported opinions of subjects on factors which affect their vocational choices? Also, is there a significant difference between adolescent males and females in terms of these opinions?

4- What are the significant relationships between affective temperament (depressive, hyperthymic, cyclothymic, irritable, and anxious) subscale scores and the adolescents' vocational choices?

5- For participants who are classified as having a dominant affective temperament, is there a significant relationship between the type of dominant temperament and the vocational choice?

2- METHOD

2.1. PARTICIPANTS

Sample of this study was chosen from senior year high school students who are between the ages of 17 and 20. During application period, 786 subjects participated in the study, but 92 of them are excluded because of incomplete or unreliable responses. Finally, the sample of the study consists of 694 senior year high school students who are currently registered in the 14 branches of "Fen Bilimleri Dershanesi" which is a preparatory course institution for university entrance examinations. All of the subjects had official seminars about vocational fields in Turkey. During these seminars, they were given sufficient information about the content and possible work opportunities of the vocational fields. The sample of the study was chosen according to convenience of the application, so it does not represent the population between related ages in Turkey. Subjects participated voluntarily in the research, after they were informed about the aim and scope of the research.

All of the subjects are senior year high school students in this study. In Turkey, high schools give four year long education. High school ages are normally between ages 15 and 19. Senior year high school students are supposed to be between 17-19 years old. Most of the subjects are 17 (35,2%) and 18 years old (53,5%), and there are a few number subjects who are 20 years old (1,7%). Number of subjects in each gender category is nearly equal to each other: There are 338 males (48,7%) and 356 females (51,3%).

According to Turkey's educational system, students make a study field choice when they finish their 9^{th} grade in high school. There are four main study

fields in general high schools of Turkey, these fields are: Science, Mathematics-Literature, Social Sciences and Language. Here we have students only from two out of these four categories: “Science” and “Mathematics-Literature”. Because the institution (“Fen Bilimleri Dershanesi”) where the application was administered has students who are only from these two fields of study. In this study, subjects who are studying in the “science” field are more numerous than subjects studying in “mathematics-literature” field. It was aimed to equate the number subjects in the beginning of the research, but most of the excluded data from the study was composed of “mathematics-literature” students. Thus, we have more subjects who study science in high school. There are 391 (56,3%) subjects who are studying in the “science” field in high school and 303 of them (43,7%) are studying in the “mathematics-literature” field.

In this study, subjects were asked how many siblings that they have. There are 543 (77,9%) subjects who have one or more siblings. Most of them have only one sibling (57,1%), and 151 (21,8%) subjects have no sibling at all. Parental living status of the subjects is an important sociodemographic data which gives idea about the characteristics of the subjects. There are eight (1,2%) subjects whose mother is not alive and 33 (4,8%) subjects whose father is not alive. Also, two of these subjects do not have both of parents alive. This means that 39 (5,6%) subjects have not at least one of his or her parents in total. Also, parents of 64 (9,2%) subjects are not living together, while parents of 591 (85,2%) subjects are living together.

Parents’ level of education was asked to the subjects of this study. There are nine level of education and subjects chose one of them according to their parents’ level of education which is completed, the rates are illustrated in table

2.1.1. Fathers of 295 (42,5%) subjects have higher level of education, 216 (30,8 %) fathers have a high school degree. On the other hand, 253 (36,5%) mothers have “high school” level of education, while 226 (32,6%) mothers have higher level of education. Also, 192 (27,7%) mothers have “primary” or “secondary” level of education and 15 (2,2%) mothers did not go to school, but they are literate and three of them is illiterate.

Table 2.1.1. Parents’ level of education

	Father		Mother	
Parents' Level of Education	**n**	**%**	**n**	**%**
parent is not alive	33	4,8	8	1,2
illiterate	1	0,1	3	0,4
literate	1	0,1	12	1,7
primary school	74	10,7	113	16,3
secondary school	76	11	79	11,4
high school	216	30,8	253	36,5
college	49	7,1	45	6,5
undergraduate	188	27,1	147	21,2
master	39	5,6	24	3,5
doctarate	19	2,7	10	1,4
Total	694	100	694	100

Subjects of the study were asked about their parents’ work status. They chose from one of three options: “Never worked”, “worked past, not now”, “working”, the rates are illustrated in table 2.1.2. It was found that five (0,7%) fathers never worked and not working now, 90 (12,9%) fathers worked in the past, but they are not working now. However, most of the fathers (81,6%) are still working. On the other hand, 221 (31,8%) mothers never worked and not working now, 255 (36,7%) mothers worked in the past, but they are not working now, and 210 (30,3%) mothers are still working.

Table 2.1.2. Parents' work status

	Father		Mother	
Parents' Work Status	**n**	**%**	**n**	**%**
parent is not alive	33	4,8	8	1,2
never worked	5	0,7	221	31,8
worked past, not now	90	12,9	255	36,7
working	566	81,6	210	30,3
Total	694	100	694	100

Socioeconomic status (SES) is a very important descriptive characteristic of participants of this study; it reflects the societal nature of the sample. Participants of this study were asked about their SES, they make a choice from five categories as "Low", "Lower middle", "Medium", "Upper middle" and "High". No one stated himself or herself as "Low" in this study, over half of the subjects (55,3%) are in the "lower middle" or "medium" level of SES. Rates of socioeconomic status of the subjects are listed in the table 2.1.3.

Table 2.1.3. Socioeconomic status of the subjects

Socioeconomic Status	**n**	**%**	**cumulative %**
Low	-	-	-
Lower middle	34	4,9	4,9
Medium	350	50,4	55,3
Upper middle	274	39,5	94,8
High	36	5,2	100
Total	694	100	

There are 34 (4,9%) subjects who stated themselves as "Lower middle", 350 (50,4%) subjects stated themselves as "Medium", 274 (39,5%) subjects stated themselves as "Upper middle", and 36 (5,2%) subjects stated themselves as "High" in this study.

2.2. INSTRUMENTS

Three different instruments were used in order to collect data about subjects. Two of them: “Sociodemographic Information Questionnaire” and “Vocational Choice Questionnaire” were developed for this study by the researcher. Turkish version of “Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire” (TEMPS-A) was also applied in order to assess the affective temperament of the subjects.

2.2.1.SOCIODEMOGRAPHIC INFORMATION QUESTIONNAIRE

For this study, a sociodemographic questionnaire was developed in order to collect demographic data, self-reported information about psychological health status and self-reported opinions about the factors that may affect vocational choices of the subjects. This questionnaire is placed in the first part of the Appendix. There are seventeen questions in the questionnaire and they consist of open-ended and multiple choice questions. Questions are about: age, gender, number of siblings, fathers’ and mothers’ educational status, fathers’ and mothers’ work status, parental status, socioeconomic status, psychological health status of the subjects. Also, subjects’ opinions about the factors which are effective on their vocational choice are asked in this questionnaire (see the instrument in appendix).

2.2.2.VOCATIONAL CHOICE QUESTIONNAIRE

Vocational choice questionnaire consists of only one question which asks the most preferred undergraduate program of the subject (see the instrument in appendix). There is supplemented a list of undergraduate programs in Turkish universities, the list consisted of 237 undergraduate programs. These undergraduate programs are listed alphabetically in a table. Participants of the study were asked to choose only one of these undergraduate programs as they wish, without any limitation.

In the framework of this study, a limited number of vocational options such as: engineering, medicine, law, etc. are considered. These vocational fields, or professions, require at least an undergraduate level of education. In other words, in order to be included in these vocational fields, the undergraduate program choice and completing the requirements of the related training is necessary. Therefore, in order to understand the vocational choices of the adolescent subjects, their undergraduate program choices were asked.

2.2.3.TEMPERAMENT EVALUATION OF MEMPHIS, PISA, PARIS AND SAN DIEGO AUTOQUESTIONNAIRE (TEMPS-A)

In order to assess affective traits which could be stable over the lifespan, Akiskal and his colleagues studied subthreshold mood and neurotic disorders, leading to the delineation (Akiskal, 1989) and operationalization (Akiskal & Mallaya, 1987) of affective temperaments that could be useful in clinical

practice. Subsequently, in collaboration with psychiatrists and primary care physicians in Memphis, Pisa, Paris and San Diego during the early 1990s, they developed these temperaments into an interview (TEMPS-I) (von Zerssen & Akiskal, 1998) and eventually into a self-administered Autoquestionnaire (TEMPS-A) format consisting of five subscales (von Zerssen & Akiskal, 1998) Each of the subscales consist of affect-loaded items, as well as socially adaptive traits (Akiskal & Akiskal, 1992). There are 110 questions in the original version of TEMPS-A. This autoquestionnaire was also used in many studies around the world, for both clinical and non-clinical studies.

The translation and reliability analysis of the Turkish version of the self-report TEMPS-A was made by Simavi Vahip and a group of psychiatrists in the Affective Disorder Unit, Department of Psychiatry in Ege University in İzmir, Turkey (Vahip et al., 2005). As it can be seen from table 2.2.3, Cronbach alpha analyses serves to indicate high internal consistency in both Vahip et al.'s (2005) study and this study (2009). High test-retest correlation values (0.73-0.91) in this table indicate high reliability for the use of this instrument. All of the related coefficients for each subscale in TEMPS-A are illustrated in table 2.2.3.

Table.2.2.3. The results on reliability and internal consistency for Turkish version of TEMPS-A

	Test-Retest Correlations (Vahip et al., 2005)	**Cronbach-Alpha Coefficients (Vahip et al., 2005)**	**Cronbach-Alpha Coefficients (This study, 2009)**
Depressive Temperament Subscale	0,91	0,77	0,76
Cyclothymic Temperament Subscale	0,81	0,85	0,79
Hyperthymic Temperament Subscale	0,93	0,80	0,77
Irritable Temperament Subscale	0,76	0,82	0,80
Anxious Temperament Subscale	0,73	0,84	0,81

Standardization of the instrument in Turkey was completed by the 658 clinically-well subjects in a Turkish University Circle. The construct validity of the scale was studied using exploratory factor analysis by the researchers. Researchers deleted 10 items with low factor loading (<.20). As a result, Turkish version of the instrument consists of 100 items. Factor analysis of all items produced five main factors: depressive, cyclothmic, hyperthymic, irritable, anxious. Factor loadings of depressive and anxious (cognitive) items overlapped significantly and formed a "cluster" (Vahip et al., 2005). Cyclothymic, irritable and hyperthymic temperaments formed largely independent factors (Vahip et al., 2005). In order to obtain additional support for the validity of the component traits of each temperament (Akiskal and Mallaya, 1987), factor analysis for each temperament type was also performed (Vahip et al., 2005). The factors obtained in the Vahip et al.'s study (2005) are essentially compatible with the original Akiskal and Mallaya (1987) for each of the "classic" four temperaments: depressive, cyclothymic, hyperthymic, irritable, as well as to the subsequently added generalized anxious (Akiskal,1998) temperament.

2.3. PROCEDURES

Administration of instruments was implemented in 14 branches of "Fen Bilimleri Dershanesi" which is a preparatory course institution for university entrance exams. "Fen Bilimleri Dershanesi" was established in 1964 in the city of İstanbul. There are 18 branches of the institution around the city. 14 out of 18 branches are chosen for application. These branches are from different districts of İstanbul, these districts are: Acarkent, Avcılar, Bahçeşehir, Beşiktaş,

Beylikdüzü, Çekmeköy, Feneryolu, Florya, Gaziosmanpaşa, Kadıköy, Kartal, Kemerburgaz, Suadiye, Ümraniye.

These districts in İstanbul are composed of a large socioeconomic diversity and colorful and rich sociocultural structure which represents many subcultures of Turkey. (İstanbul is an overpopulated city, the population of the city was reported as 12,697,164 by Turkish Statistical Institute in 29 January 2009. It means that 17,8 % of Turkey's population is living in İstanbul). It was aimed to include nearly equal number of male and female students from diverse socioeconomic status (SES) and different high school types. Eligible participants for this study were identified as: Senior year high school students who would take university exams and make a vocational choice in 2009 summer.

Fourteen guidance counselors who are working in the branches of "Fen Bilimleri Dershanesi" volunteered to administer the questionnaires to their students. Three instruments were placed in one 10 page-booklet and an informed consent page on the cover. The cover page on the booklet gave brief information about the study. Confidentiality principles were assured on the cover. Researcher gave information to the guidance counselors about the research in a short conference in January of 2009. In this conference, a demo-application took place and the application lasted for approximately 20 minutes.

Guidance counselors administered the booklet in February, 2009. All of the subjects completed answering questions in the booklet during the single administration session and submitted this booklet to the guidance counselors immediately after completing their answers. Duration of the each session was between 20 to 25 minutes. Guidance counselors collected the booklets after

application and checked for incomplete or insufficient answers. They sent these booklets back to the researcher at the end of February, 2009. After receiving all the booklets, researcher and two volunteer guidance counselors checked booklets and entered the data in computer via Statistical Package for Social Sciences (SPSS) during March, 2009.

2.4. DATA ANALYSES

Several statistical testing methods were used in order to figure out the relationship between dependent variables (Vocational choices) and independent variables, such as age, gender, socioeconomic status, self-reported psychological health status, etc. Thirteenth edition of Statistical Package for Social Sciences (SPSS) was used for data analyses. Chi-square tests were applied in order to investigate the significance of relationships between categorical variables as “vocational choice by gender”, “vocational choice by parents’ work status”, “vocational choice by socioeconomic status”.

Independent samples t-test was applied in order to investigate the difference between males and females in terms of nine factors that affect vocational choice as subjectively validated by the subjects.

Multiple analysis of variance (MANOVA) was used in order to investigate the differences between subjects who chose each of six vocational categories in terms of mean scores of five affective temperament subscales in TEMPS-A.

3- RESULTS

In this study, the collected data from the subjects by applying three instruments are arranged under the descriptive characteristics of subjects and results of analyses headings in the consecutive sections of this part.

3.1. DESCRIPTIVE CHRACTERISTICS OF THE SUBJECTS

Descriptive characteristics such as, current self-reported psychological health status, current self-reported psychological treatment, self-reported past psychopathology and vocational choices of the subjects are placed in this section. Descriptive statistics for opinions of subjects on factors which affect their vocational choices, and also descriptive statistical data for affective temperament subscale scores of the subjects are placed at the end of this section.

3.1.1. SELF-REPORTED CURRENT PSYCHOLOGICAL HEALTH STATUS OF THE SUBJECTS

There are five psychological health status defined as from “very poor” to “very good”. Rates of current self-reported psychological health status of the subjects can be seen in table 3.1.1.

Table 3.1.1. Current psychological health status of the subjects

Current Psychological Health Status	n	%	cumulative %
Very poor	67	9,7	9,7
Poor	132	19	28,7
Normal	266	38,3	67
Good	166	23,9	90,9
Very good	63	9,1	100
Total	694	100	

Over one third of the subjects (38,3%) stated themselves as “Normal” in terms of psychological health status, 67 (9,7%) subjects stated themselves as “Very poor”, 132 (19%) subjects stated themselves “Poor”, 166 (23,9%) who stated themselves as “Good”, and 63 (9,1%) subjects stated themselves as “Very good”.

3.1.2. SELF-REPORTED CURRENT PSYCHOLOGICAL TREATMENT STATUS OF THE SUBJECTS

Subjects of this study were asked if they have current psychological treatment or not. They replied this question by choosing “yes” or “no”. 26 (3,7%) subjects stated that they have current psychological treatment, and 668 (96,3%) subjects stated that they have not. Therefore, most of the subjects stated that they have no current psychological treatment.

3.1.3. SELF-REPORTED PAST PSYCHOPATHOLOGICAL STATUS OF THE SUBJECTS

Subjects of this study were also asked if they have past psychopathology or not. They replied to this question by choosing “yes” or “no”. There was not

any question related to characteristics of the psychopathology in this study. 75 (10,8%) subjects stated that they had past psychopathology, while 619 (89,2%) subjects stated that they had no past psychopathological status. This means that, in the past, nearly one tenth of the subjects had some kind of psychopathological problem.

3.1.4. SELF-REPORTED VOCATIONAL CHOICE EFFECT ON PSYCHOLOGICAL HEALTH OF THE SUBJECTS

Vocational choice is a very critical period of time in the human life; this process may have negative effects on psychological wellbeing of the adolescents. Subjects' opinion on the vocational choice effect on their psychological health is given as "negative" or "not negative". 258 (37,2%) subjects stated that "vocational choice process has negative effects on my psychological health status" and 436 (62,8%) subjects stated that "vocational choice process has no negative effects on my psychological health status". Accordingly, vocational choice process is perceived to have negative effects on nearly one third of the subjects.

3.1.5. VOCATIONAL CHOICES OF THE SUBJECTS

Vocational choices of subjects were asked through "Vocational Choice Questionnaire" (see in the Appendix). Subjects were given a list of undergraduate programs which consists of 237 programs. Subjects made their most preferred choice from this list without any kind of constraints. Undergraduate program choices of subjects are accepted as their vocational

choice, the reason is that, in order to be able to work in the “Medicine” work field, it is a must to complete at least undergraduate level of education in academic program “Medicine” in the university.

Undergraduate program choices of the subjects were shown in table 3.1.5a. Subjects of the study make choices as 74 out of 237 undergradute programs, the names of these programs and the number of subjects who chose each program is listed in table 3.1.5a. For example, 110 (15,9%) subjects chose “Medicine”, this is the highest rank in the list. Second one is “Law” chosen by 66 (9,5%) subjects, and third one is “Architecture” chosen by 41 (5,9%) subjects.

There are some programs which were not chosen by any subject, such as: Geophysics Engineering, Teaching Chemistry, Cinema and Television or Comparative Literature, etc. Some of these programs belong to two study fields which are not included in this study: “Social Sciences” and “Language”. So, it is expected that these undergraduate programs normally could not be chosen by the subjects of this study. In addition, some programs were chosen by only one subject, such as: Anthropology, Landscape Architecture, Preschool Education, European Union Relations, Geological Engineering, etc.

These 74 numbers of undergraduate programs are classified into seven vocational categories in order to have meaningful statistical results. These seven vocational categories were: “Engineering”, “Medicine and Related Fields”, “Administrative Fields & Trade”, “Architecture and Design Fields”, “Law”, “Science and Letters” and “Education”. However, there are 45 subjects in “Science and Letters” category and only 19 subjects in “Education” category. These two categories are the two smallest ones. Consequently, these are

combined in the name of “Science and Letters & Education” as the 6th category. Rates of these final six categories are shown in table 3.1.5b.

Table 3.1.5a. Undergraduate program choices of the subjects

	Undergraduate Program	n		Undergraduate Program	n
1	Medicine	110	**38**	Management and Economics	4
2	Law	66	**39**	Public Administration	4
3	Architecture	41	**40**	Sociology	4
4	Industrial Engineering	36	**41**	Veterinary	4
5	Management	34	**42**	Automobile Engineering	3
6	Computer Engineering	25	**43**	Bioengineering	3
7	Dentistry	23	**44**	Biology	3
8	International Trade	18	**45**	Nutrition and Diet	3
9	Mechanical Engineering	18	**46**	Philosophy	3
10	Civil Engineering	15	**47**	Physics	3
11	Food Engineering	15	**48**	Banking and Finance	2
12	Interior Architecture	15	**49**	Chemistry	2
13	Psychology	14	**50**	Electrical Engineering	2
14	Economics	13	**51**	Electronical Engineering	2
15	Electrical-Electronical Engineering	13	**52**	Environmental Engineering	2
16	Aeronautics Engineering	12	**53**	Marine Engineering	2
17	Chemical Engineering	12	**54**	Teaching Geography	2
18	Pharmacy	12	**55**	Teaching Turkish and Turkish Literature	2
19	Politics and International relations	12	**56**	Telecomunication Engineering	2
20	Industrial Design	11	**57**	Tourism Administration	2
21	International Relations	9	**58**	Anthropology	1
22	Mathematics	9	**59**	Archaelogy	1
23	Banking	8	**60**	Business and Informations Systems	1
24	Econometrics	8	**61**	Chemical-Biological Engineering	1
25	Management Science and Engineering	8	**62**	Child Development	1
26	Mathematics Engineering	8	**63**	Electronical and Communication Eng.	1
27	Naval Architecture and Engineering	8	**64**	European Union Relations	1
28	Mechatronics Engineering	6	**65**	Geological Engineering	1
29	Guidance and Psychological Counseling	5	**66**	Global and International Relations	1
30	Interior Architecture and Design	5	**67**	International Relations and European Un.	1
31	International Logistics	5	**68**	Landscape Architecture	1
32	Marine Business and Administration	5	**69**	Ocean Engineering	1
33	Molecular Biology and Genetics	5	**70**	Preschool Education	1
34	Physical Health and Rehabilitation	5	**71**	Teaching Mathematics in Primary Sch.	1
35	Politics	5	**72**	Teaching Physics	1
36	Teaching Mathematics	5	**73**	Teaching Turkish in Primary Schools	1
37	Genetics and Bioengineering	4	**74**	Work Economy and Industrial Relations	1

Table 3.1.5b. Vocational choice categories of the subjects

Vocational Choice Categories	n	%
Engineering	200	28,9
Medicine and Related Fields	157	22,6
Administrative Fields & Trade	134	19,3
Architecture and Design	73	10,5
Law	66	9,5
Science and Letters & Education	64	9,2
Total	694	100

There are 200 (28,9%) subjects who chose undergraduate programs which are included in “Engineering” category. Undergraduate programs in this category are listed in table 3.1.5c.

There are 157 (22,6%) subjects who chose undergraduate programs which are included in “Medicine and Related Fields” category. Undergraduate programs in this category are listed in the table 3.1.5d.

There are 134 (19,3%) subjects who chose undergraduate programs which are included in “Administrative Fields & Trade” category. Undergraduate programs in this category are listed in the table 3.1.5e.

There are 73 (10,5%) subjects who chose undergraduate programs which are included in “Architecture and Design” category. Undergraduate programs in this category are listed in the table 3.1.5f.

There are 66 (9,5%) subjects who chose undergraduate program of law. “Law” category consists of only one undergraduate program: “Law” itself.

There are 64 (9,2%) subjects who chose undergraduate programs which are included in “Science and Letters & Education” category. Undergraduate programs in this category are listed in the table 3.1.5f.

In “Engineering” category, there are 24 undergraduate programs. “Industrial Engineering” has the highest rank for choice: 36 (18%) subjects

chose this program in “Engineering” category. It is followed by “Computer Engineering” (12,5%) and “Mechanical Engineering” (9%) in order. Rates of these 24 programs in this category can be seen in table 3.1.5c.

Table 3.1.5c. Vocational choice of the subjects in “Engineering”

	Engineering	n	%
1	Industrial Engineering	36	18
2	Computer Engineering	25	12,5
3	Mechanical Engineering	18	9
4	Civil Engineering	15	7,5
5	Food Engineering	15	7,5
6	Electrical-Electronical Engineering	13	6,5
7	Chemical Engineering	12	6
8	Aeronautics Engineering	12	6
9	Mathematics Engineering	8	4
10	Management Science and Engineering	8	4
11	Naval Architecture and Engineering	8	4
12	Mechatronics Engineering	6	3
13	Genetics and Bioengineering	4	2
14	Automobile Engineering	3	1,5
15	Bioengineering	3	1,5
16	Electrical Engineering	2	1
17	Electronical Engineering	2	1
18	Environmental Engineering	2	1
19	Marine Engineering	2	1
20	Telecomunication Engineering	2	1
21	Chemical-Biological Engineering	1	0,5
22	Electronical and Communication Engineering	1	0,5
23	Geological Engineering	1	0,5
24	Ocean Engineering	1	0,5
	Total	200	100

In “Medicine and Related Fields” category, there are six undergraduate programs. “Medicine” has the highest rank for choice: 110 (70%) subjects chose this undergraduate program in “Medicine and Related Fields“ category. It is followed by “Dentistry” (14,7%) and “Pharmacy” (7,6%) in order. Rates of these six programs in this category can be seen in table 3.1.5d.

Table 3.1.5d. Vocational choice of the subjects in "Medicine and Related Fields"

	Medicine and Related Fields	n	%
1	Medicine	110	70
2	Dentistry	23	14,7
3	Pharmacy	12	7,6
4	Physical Health and Rehabilitation	5	3,3
5	Veterinary	4	2,5
6	Nutrition and Diet	3	1,9
	Total	157	100

In "Administrative Fields and Trade" category, there are 19 undergraduate programs. "Management" has the highest rank for choice: 34 (25%) subjects chose this undergraduate program in this vocational category. It is followed by "International Trade" (13,2%) and "Economics" (9,6%) in order. Rates of these 19 programs in this category can be seen in table 3.1.5e.

Table 3.1.5e. Vocational choice of the subjects in "Administrative Fields and Trade"

	Administrative Fields and Trade	n	%
1	Management	34	25
2	International Trade	18	13,2
3	Economics	13	9,6
4	Politics and International Relations	12	8,8
5	International Relations	9	6,6
6	Econometrics	8	5,9
7	Banking	8	5,9
8	International Logistics	5	3,7
9	Marine Business and Administration	5	3,7
10	Politics	5	3,7
11	Management and Economics	4	3
12	Public Administration	4	3
13	Banking and Finance	2	1,5
14	Tourism Administration	2	1,5
15	Business and Informations Systems	1	0,7
16	European Union Relations	1	0,7
17	Global and International Relations	1	0,7
18	International Relations and European Union	1	0,7
19	Work Economy and Industrial Relations	1	0,7
	Total	136	100

In “Architecture and Design” category, there are five undergraduate programs. “Architecture” has the highest rank for choice: 41 (56%) subjects chose this undergraduate program in “Architecture and Design”. Rates of five programs in this category can be seen in table 3.1.5f.

Table 3.1.5f. Vocational choice of the subjects in “Architecture and Design”

	Architecture and Design	n	%
1	Architecture	41	56
2	Interior Architecture	15	20,4
3	Industrial Design	11	15,4
4	Interior Architecture and Design	5	6,8
5	Landscape Architecture	1	1,4
	Total	73	100

Table 3.1.5g. Vocational choice of the subjects in “Science and Letters & Education”

	Science and Letters & Education	n	%
1	Psychology	14	21,9
2	Mathematics	9	13,9
3	Guidance and Psychological Counseling	5	7,8
4	Molecular Biology and Genetics	5	7,8
5	Teaching Mathematics	5	7,8
6	Sociology	4	6,3
7	Biology	3	4,8
8	Philosophy	3	4,8
9	Physics	3	4,8
10	Chemistry	2	3,2
11	Teaching Geography	2	3,2
12	Teaching Turkish and Turkish Literature	2	3,2
13	Anthropology	1	1,5
14	Archaelogy	1	1,5
15	Child Development	1	1,5
16	Preschool Education	1	1,5
17	Teaching Mathematics in Primary Schools	1	1,5
18	Teaching Physics	1	1,5
19	Teaching Turkish in Primary Schools	1	1,5
	Total	64	100

In “Science and Letters & Education” category, there are 19 undergraduate programs. “Psychology” has the highest rank for choice: 14 (21,9%) subjects chose this undergraduate program in “Science and Letters & Education” category. It is followed by “Mathematics” (13,9%) and “Guidance and Psychological Counseling” (9,6%) in order. There are seven undergraduate programs which were chosen by only one subject. Rates of 19 programs in this category can be seen in table 3.1.5g.

3.1.6. OPINION OF SUBJECTS ON FACTORS AFFECTING VOCATIONAL CHOICE

According to Kuzgun (2000), there are several factors which affect, or expected to affect, vocational choice of adolescents. In the literature review, it was seen as some factors are discussed more, for example: Interest and Ability, Vocational Value, Counseling Services, Parents’ opinions, etc. Thus, 18 factors are listed in this study. Subjects were asked about what they think about the effects of these factors on their own vocational choice. They gave each of these factors a value of importance by choosing a number in 0 to 5 scale. “0” means “no effect”, and “5” means “the highest effect” on their own vocational choice. Means and Standard Deviations of responses given to these 18 factors by male, female and all of the subjects are listed in the table 3.1.6.

Table 3.1.6. Opinion of subjects on factors that affect their vocational choice

	Males (n=338)		**Females** (n=356)		**All** (N=694)	
Factors	**M**	**SD**	**M**	**SD**	**M**	**SD**
Interest and Ability	4,39	0,919	4,24	1,078	4,31	1,006
Vocational Value	3,79	1,512	4,12	1,155	3,96	1,350
Name of the University	3,74	1,455	4,02	1,246	3,88	1,358
Media	3,56	1,403	3,63	1,381	3,59	1,391
Academic Status	3,34	1,426	3,52	1,462	3,43	1,447
Undergraduate Program Content	3,25	1,544	3,50	1,407	3,38	1,480
Economic Conditions of the Country	3,23	1,625	3,49	1,590	3,36	1,611
Socioeconomc Status	3,20	1,665	3,14	1,652	3,17	1,657
Minimum Scores for Undergraduate Programs	2,88	1,750	2,99	1,730	2,94	1,739
Mothers' Vocation	2,59	1,714	2,74	1,666	2,67	1,690
Fathers' Vocation	2,84	1,761	2,71	1,702	2,78	1,731
Counseling Services in the Prepatory Course	2,59	1,784	2,56	1,767	2,57	1,774
Friends' Opinion	2,36	1,711	2,30	1,601	2,33	1,655
Teachers' Opinion	2,16	1,735	2,27	1,700	2,22	1,717
Counseling Services in the High School	1,94	1,746	1,73	1,805	1,83	1,778
Relatives' Opinion	1,91	1,712	1,70	1,748	1,80	1,732
Fathers' Opinion	1,69	1,857	1,05	1,657	1,36	1,785
Mothers' Opinion	0,75	1,424	0,58	1,236	0,66	1,333

As can be seen from the table 3.1.6, the most influential factor according to opinion of all subjects is "Interest and Ability" on their vocational choice *(M=4,31)*, and the "Mother" has the lowest effect *(M=0,66)* on vocational choice according to the opinion of subjects in this study. It was considered that subjects gave more importance to nine factors which have a mean score above the mean of means *(M=2,79)*: "Interest and Ability", "Vocational Value", "Name of the University", "Media", "Academic Status", "Undergraduate Program Content", "Economic Conditions of the Country", "Socioeconomic Status" and "Minimum Scores for Undergraduate Programs".

3.1.7. TEMPERAMENT

Turkish version of “Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire” (TEMPS-A) was applied in order to assess the affective temperament of the subjects. The subscale results of this instrument are placed in this section.

3.1.7.1. AFFECTIVE TEMPERAMENT SUBSCALE RESULTS

There are five subscales in TEMPS-A: Depressive, Cyclothymic, Hyperthymic, Irritable, and Anxious Affective Temperament subscales. According to the results of TEMPS-A, minimum and maximum scores, means and standard deviations of these subscale scores for five affective temperaments are listed in table 3.1.7.1.

Table 3.1.7.1. Affective temperament subscale scores of the subjects (N=694)

	Min. Score	Max. Score	M	SD
Depressive Temperament	0	15	5,25	3,111
Cyclothymic Temperament	0	19	9,70	4,348
Hyperthymic Temperament	0	20	11,56	4,183
Irritable Temperament	0	17	5,05	3,671
AnxiousTemperament	0	24	5,96	4,761

3.1.7.2. DOMINANT AFFECTIVE TEMPERAMENT

Subjects who have subscale scores which are 2 SD above the mean are defined as having a dominant affective temperament (Vahip et al., 2005; Akiskal, 1998). There are 82 (11,8%) subjects who have dominant affective

temperament and 13 (1,8 %) subjects who have more than one dominant affective temperament type. Rates of subjects in each dominant affective temperament by gender can be seen in table 3.1.7.2a.

Table 3.1.7.2a. Rates of dominant affective temperament of the subjects by gender (N=694)

	Male		Female		Total	
Dominant Temperament Type	**N**	**%**	**n**	**%**	**n**	**%**
Depressive	9	1,3	13	1,8	22	3,1
Cyclothymic	6	0,86	8	1,14	14	2
Hyperthymic	11	1,58	4	0,62	15	2,2
Irritable	13	1,8	10	1,5	23	3,3
Anxious	7	1	16	2,3	23	3,3

As it can be seen from table 3.1.7.2a, when the subjects who have any dominant temperament type are classified under each affective temperament type: there are 22 (3,17%) subjects who have dominant depressive affective temperament, 14 (2,01%) subjects who have dominant cyclothymic affective temperament, 15 (2,16%) subjects who have dominant hyperthymic affective temperament, 23 (3,31%) subjects who have dominant irritable affective temperament and 23 (3,31%) subjects who have dominant anxious affective temperament. Five dominant affective temperaments and combinations of these dominant temperaments by gender are listed in table 3.1.7.2b.

As it can be seen from table 3.1.7.2b, there are 13 (1,8%) subjects who have more than one dominant affective temperament type. Eleven of these combinations are either depressive or anxious. Also, two of these subjects have three dominant temperament types, and both of them are dominantly depressive and anxious.

Table 3.1.7.2b. Dominant affective temperament type compositions of the subjects (n=82)

Dominant Affective Temperament Type	Males	Females	Total
Depressive	6	7	13
Cyclothymic	5	6	11
Hyperthymic	10	3	13
Irritable	9	7	16
Anxious	5	11	16
Depressive, Cyclothymic	-	1	1
Depressive, Irritable	1	2	3
Depressive, Anxious	1	2	3
Depressive, Cyclothymic, Anxious	-	1	1
Depressive, Irritable, Anxious	1	-	1
Cyclothymic, Irritable	1	-	1
Hyperthymic, Irritable	1	-	1
Hyperthymic, Anxious	-	1	1
Irritable, Anxious	-	1	1
Total	**40**	**42**	**82**

3.2. RESULTS OF ANALYSES

Vocational choice of the subjects was compared with some sociodemographic characteristics of the subjects, such as gender, parent's level of education, etc., in each section of the results of analyses. Also, there are results of the statistical analyses between vocational choices of the subjects and self-reported data about the psychological health status of subjects. Moreover, opinions of subjects on factors affecting their vocational choices are analyzed, and also compared according to the genders. The relationship between vocational choice and affective temperament are placed at the end of this part.

3.2.1. VOCATIONAL CHOICE BY SOCIODEMOGRAPHIC CHARACTERISTICS OF THE SUBJECTS

There are seven sociodemographic characteristics of the subjects (Gender, study field in the high school, number of siblings, fathers' level of education, mothers' level of education, mothers' work status, socioeconomic status) which are found to be statistically related to vocational choices of the subjects in this study. Chi-square tests were applied in order to understand the significance and direction of the relationships between vocational choices and the sociodemographic characteristics of the subjects.

3.2.1.1. VOCATIONAL CHOICE BY GENDER

Vocational choices of the subjects are crosstabulated by gender, this crosstabulation between vocational choice and gender is illustrated in table 3.2.1.1. It can be seen from this table that what number of males and females are present in each vocational category.

Table 3.2.1.1. Vocational choice by gender

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	144	72	52	33,1	73	54,5	26	35,6	20	30,3	23	35,9	338	48,7
Female	56	28	105	66,9	61	45,5	47	64,4	46	69,7	41	64,1	356	51,3
Total	200	100	157	100	134	100	73	100	66	100	64	100	694	100

Chi-square test was applied in order to investigate the significance of relationship between gender and vocational choice and it was found that there

is a significant relationship between vocational choice and gender *(χ^2= 77,964, df=5, p=0,0001).* According to the results of statistical analyses, while females chose mostly undergraduate programs related to “Architecture and Design”, “Medicine and Related” and “Law”; males chose mostly “Engineering” programs. “Science and Letters” and “Education” departments are very diverse and it is also found that females predominantly chose these diverse departments more than males. So, it was found that gender is significantly related to undergraduate program choice of the subjects of this study.

3.2.1.2. VOCATIONAL CHOICE BY STUDY FIELDS

In Turkey’s educational system, students make a study field choice when they finish 9th grade in high school. There are subjects who are studying in two study fields in this study: “Science” and “Mathematics-Literature”. In table 3.2.1.2, vocational choices of subjects in each of these study fields are shown.

Table 3.2.1.2. Vocational choice by study fields

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Science	185	92,5	123	78,3	13	9,7	62	84,9	1	1,5	7	10,9	391	56,3
Math & Literature	15	7,5	34	21,7	121	90,3	11	15,1	65	98,5	57	89,1	303	43,7
Total	200	100	157	100	134	100	73	100	66	100	64	100	694	100

As it was expected, chi-square test results showed a very significant relationship between vocational choice and high school study fields of the subjects *(χ^2= 341,103, df=5, p=0,0001)*. This is a very meaningful relationship, because of that, study field is the main constraint for the vocational choice of the students. For instance, students normally choose “Science” study field, if they want to study “Engineering” in university in the future. The reason for this previous choice is that the academic background necessary for “Engineering” is present in the “Science” study field. It is also true for “Medicine and Related Fields” and “Architecture and Design Fields”, likewise “Engineering”.

However, some subjects from study field of “Mathematics and Literature” also chose from these three science-based vocational categories. This problem is more apparent in “Medicine and Related Fields” category. There are 34 (21,7%) subjects who made a vocational choice on the opposite direction of their study fields in the high school. Nevertheless, most of the subjects made vocational choices appropriate for their study fields.

3.2.1.3. VOCATIONAL CHOICE BY NUMBER OF SIBLINGS

Number of siblings of the subjects are categorized into there categories as: “no sibling”, “one sibling”,and “more than one sibling”. These three categories are crosstabulated by each vocational choice category as it is listed in table 3.2.1.3. As it can be seen from the table, more than half of the subjects (57,1%) have only one sibling.

Table 3.2.1.3. Vocational choice by number of siblings of the subjects

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
no sibling	40	20	40	25,5	32	23,8	17	23,3	12	18,2	10	15,9	151	21,8
one sibling	124	62	72	45,9	85	63,5	42	57,5	37	56,1	36	55,6	396	57,1
more than one sibling	36	18	45	28,6	17	12,7	14	19,2	17	25,7	18	28,5	147	21,1
Total	200	100	157	100	134	100	73	100	66	100	64	100	694	100

Chi-square test was applied in order to investigate the significance of relationship between number of siblings and vocational choice of the subjects and it was found that there is a significant relationship between vocational choice and number of siblings *(χ^2= 20,598, df=10, p=0,024)*. According to the results of statistical analyses, subjects who have more than one sibling chose mostly "Medicine & Related Fields", and "Science, Letters & Education", however, these subjects did not choose undergraduate programs in the "Administrative Fields & Trade" category as much as other subjects. In addition, in relation to statistical analyses, subjects who have no sibling chose programs in the "Science, Letters & Education" category less than others. So, it was found that number of siblings is significantly related to undergraduate program choice, or vocational choice, of the subjects in this study.

3.2.1.4. VOCATIONAL CHOICE BY FATHERS' LEVEL OF EDUCATION

Fathers' level of education was classified into two categories as it can be seen from table 3.2.1.4: "fathers have not got the university level of education",and "fathers completed the university". Statistical analyses pointed out a significant relationship between vocational choice and these categories.

Table 3.2.1.4. Vocational choice by father's level of education

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Not Uni.*	82	42,7	81	55,9	86	65,2	37	54,4	39	60	41	69,5	366	55,4
Uni.**	110	57,3	64	44,1	46	34,8	31	45,6	26	40	18	30,5	295	44,6
Total	192	100	145	100	132	100	68	100	65	100	65	100	661	100

***Not Uni. = have not got the university level of education.**

****Uni.= completed the university level of education.**

When the vocational choice and fathers' level of education are crosstabulated, chi-square test results showed that there is a meaningful relationship between these two variables *(χ^2= 22,931, df=5, p=0,001).* According to the results of statistical analyses, subjects whose fathers completed university level of education chose undergraduate programs in the "Engineering" category, more than other subjects. On the other hand, these subjects whose fathers have not got the university level of education chose undergraduate programs in two vocational categories as: "Administrative Fields & Trade", and "Science, Letters & Education", less than others. Thus, there is a statistically very strong relationship between vocational choice and the status whether if the subjects' father completed university level of education or not.

3.2.1.5. VOCATIONAL CHOICE BY MOTHERS' LEVEL OF EDUCATION

Mothers' level of education was classified into three categories as it can be seen from table 3.2.1.5: "Below High School", "High School" and "University". Statistical analyses pointed out a significant relationship between vocational choice and the mothers' level of education.

Table 3.2.1.5. Vocational choice by mothers' level of education

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Below High School	45	22,7	47	30,1	45	33,6	21	28,8	24	37,5	25	41	207	30,2
High School	70	35,4	60	38,5	59	44	24	32,8	18	28,1	22	36	253	36,9
University	83	41,9	49	31,4	30	22,4	28	38,4	22	34,4	14	23	226	32,9
Total	198	100	156	100	134	100	73	100	64	100	61	100	686	100

When the vocational choices and mothers' level of education are crosstabulated, chi-square test results showed that there is a statistically meaningful relationship between vocational choice and mothers' level of education *(χ^2= 23,473, df=10, p=0,009).* According to statistical analyses, the nature of the relationship is very complex Firstly, subjects whose mothers have "Below High School" level of education chose programs in "Law" and "Science, Letter & Education" categories more than other subjects. Secondly, subjects whose mothers have "High School" level of education chose programs in "Administrative Fields & Trade" category more than others. Finally, subjects whose mothers have "University" level of education chose programs in "Engineering", and "Architecture and Design Fields" more than other subjects of the study. Thus, there is a statistically strong relationship between vocational choice and mothers' level of education at 0,01 significance level.

3.2.1.6. VOCATIONAL CHOICE BY MOTHERS' WORK STATUS

There are nearly equally distributed three categories of mothers' work status as it can be seen in table 3.2.1.6: "never worked", "worked past, not now", and "working" in this study. When the vocational choice categories and

the mothers' work status are crosstabulated, chi-square test results showed that there is a meaningful relationship between vocational choice and mothers' work status of the subjects *(χ^2= 21,064, df=10, p=0,021).*

Table 3.2.1.6. Vocational choice by mothers' work status

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
never worked	62	31	48	30,6	51	38,1	20	27,4	16	24,2	24	37,5	221	31,8
worked past, not now	81	40,5	50	31,9	45	33,6	24	32,9	27	41	28	43,8	255	36,7
Working	55	27,5	58	36,9	37	27,6	29	39,7	21	31,8	10	15,6	210	30,3
Total	198	100	156	100	133	100	73	100	64	100	62	100	686	100

According to the statistical analyses, subjects whose mothers are stated as "never worked" chose undergraduate programs in "Administrative Fields and Trade", and "Science, Letters & Education" vocational categories more than other subjects. On the contrary, subjects whose mothers are stated as "working" chose programs in "Medicine and Related Fields", and "Architecture and Design Fields" more than other subjects. Thus, there is a statistically significant relationship at 0,05 significance level.

3.2.1.7. VOCATIONAL CHOICE BY SOCIOECONOMIC STATUS OF THE SUBJECTS

There are five socioeconomic categories in this study, with no subject who stated oneself as in the "Low SES". It is an expected finding, because of that individuals who are in low socioeconomic status cannot afford the expenses of "dershane". Sample of this study consists of students who are

having education in a preperatory institution for university entrance exams. So, these individuals did not participate in this study. Most of the subjects are from “Medium” (50,4%) and “Upper middle” (39,5%) socioeconomic status. There are a few subjects in both “Lower middle” (4,9%), and “High” (5,2%) socioeconomic status categories. As it can be seen in table 3.2.1.7, when the “Lower Middle” and “Medium” categories are combined in new category as “Medium”; and “Upper middle” and “High” categories as “High”, statistical analyses indicated a significant relationship.

Table 3.2.1.7. Vocational choice by socioeconomic status

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Medium	96	48	96	61,1	78	57,8	39	53,4	33	50	42	66,7	384	55,3
High	104	52	61	38,9	57	42,2	34	46,6	33	50	21	33,3	310	44,7
Total	200	100	157	100	135	100	73	100	66	100	63	100	694	100

Six vocational choice categories and two socioeconomic status categories are crosstabulated, then chi-square test results showed that there is a statistically meaningful relationship between vocational choices and socioeconomic status of the subjects *(χ^2= 10,987, df=5, p=0,047).* According to the statistical analyses, subjects who are in “medium SES” category chose undergraduate programs in “Medicine and Related Fields”, and “Science, Letters & Education” categories more than other subjects. On the other hand, subjects who are in “high SES” category chose undergraduate programs in “Engineering” category more than others. Thus, there is a statistically significant relationship between vocational choice and the socioeconomic status of the subjects.

3.2.2. VOCATIONAL CHOICE BY SELF-REPORTED PSYCHOLOGICAL HEALTH STATUS

Psychological health status of the subjects is analyzed in terms of vocational choices of the subjects in this section. There are two subsections as "Vocational choice by self-reported current psychological health status" and "Vocational choice by self-reported negative effect of vocational choice process on psychological health status of the subjects".

3.2.2.1. VOCATIONAL CHOICE BY SELF-REPORTED CURRENT PSYCHOLOGICAL HEALTH STATUS

There are five psychological health status defined as from "very poor" to "very good", subjects of the study chose one of these five options. As it can be seen from table 3.2.2.1, when "Very Poor" and "Poor" categories are combined in a new category as "Poor"; and "Good" and "Very Good" categories as "Good"; and "Normal" category is preserved, statistical analyses indicated a significant relationship between vocational choice and current psychological health status.

Table 3.2.2.1. Vocational choice by self-reported current psychological health status

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Poor	55	27,5	52	33,2	29	21,5	23	31,5	15	22,7	25	39,7	199	28,7
Normal	66	33	58	36,9	54	40	29	39,7	32	48,5	27	42,9	266	38,3
Good	79	39,5	47	29,9	52	38,5	21	28,8	19	28,8	11	17,5	229	33
Total	200	100	157	100	135	100	73	100	66	100	63	100	694	100

When the vocational choice categories and current psychological health status of the subjects are crosstabulated, chi-square test results showed that there is a significant relationship between vocational choice and mothers' work status of the subjects *(χ^2= 20,720, df=10, p=0,023).* According to the statistical analyses, subjects whose psychological health status is defined as "Poor" chose undergraduate programs in the "Science, Letters & Education" vocational category more than other subjects. Also, while subjects who are in "normal" psychological health status chose "Law" undergraduate program more than others, subjects who are in "good" psychological health status chose both "Engineering", and "Administrative Fields and Trade" more than other subjects in the study. Thus, there is a statistically significant relationship between the psychological health status and vocational choices of the subjects.

3.2.2.2. VOCATIONAL CHOICE BY SELF-REPORTED NEGATIVE EFFECT OF VOCATIONAL CHOICE PROCESS ON PSYCHOLOGICAL HEALTH STATUS OF THE SUBJECTS

There are 258 (37,2 %) subjects who stated that "vocational choice process has negative effects on my psychological health status" in the sample of this study. Nevertheless, nearly two third of the subjects did not state negative effect of vocational choice on their psychological health status. The rates of subjects in each vocational category according to its negative effect on psychological health status are shown in table 3.2.2.2.

Table 3.2.2.2. Vocational choice by self-reported negative effect of vocational choice process on psychological health status of the subjects

	Engineering		Medicine & Related Fields		Administrative Fields & Trade		Architecture & Design Fields		Law		Science, Letters & Education		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Negative	61	30,5	56	35,7	46	34,3	37	50,7	32	48,5	26	40,6	258	37,2
Not Negative	139	69,5	101	64,3	88	65,7	36	49,3	34	51,5	38	59,4	436	62,8
Total	200	100	157	100	134	100	73	100	66	100	64	100	694	100

When the vocational choice categories and self-reported negative effect of vocational choice process on psychological health status of the subjects are crosstabulated, chi-square test results showed that there is a significant relationship between these two variables *(χ^2= 14,296, df=5, p=0,014).* According to the statistical analyses, while subjects who stated negative effect of vocational choice process on their psychological health chose programs in both “Architecture and Design Fields”, and “Law” vocational categories more than others, subjects who did not state negative effect on their psychological health chose undergraduate programs in the “Engineering” category more than other subjects.

3.2.3. OPINIONS OF SUBJECTS ON FACTORS AFFECTING THEIR VOCATIONAL CHOICES BY GENDER

Opinion of subjects on factors that may affect vocational choice is another important research question investigated in this study. The subjects were asked to rate between 0 to 5 (0=“no effect at all” and 5=”maximum effect”) in order to express their subjective experience on eighteen factors that may affect their vocational choice.

Nine of these eighteen factors, as listed in table 3.2.3, are considered as more influential than the other nine factors which have means below the mean of means *(M=2,79).* According to the means of rates of the subjects, the most influential factor on vocational choice is “Interest and Ability”. According the subjects’ opinion, second one is “Vocational Value”, and the third one is “Name of the University”. The other factors can be seen in table 3.2.3, in order of importance.

Table 3.2.3. Descriptive statistics of perceived influence of factors and independent samples t-test results according to gender

	Males		Females			
	M	**SD**	**M**	**SD**	**t**	**p**
Interest and Ability	4,39	0,919	4,24	1,078	2,03	0.043†
Vocational Value	3,79	1,512	4,12	1,155	-3,249	0.001***
Name of the University	3,74	1,455	4,02	1,246	-2,757	0.006**
Media	3,56	1,403	3,63	1,381	-0,636	0.525
Academic Status	3,34	1,426	3,52	1,462	-1,688	0.092
Undergraduate Program Content	3,25	1,544	3,50	1,407	-2,245	0.025*
Economic Conditions of the Country	3,23	1,625	3,49	1,590	-2,137	0.033*
Socioeconomic Status	3,20	1,665	3,14	1,652	0,459	0.647
Minimum Scores of Undergraduate Programs	2,88	1,750	2,99	1,730	-0,831	0.406

† result is significant at (.05) sig. level
* results are significant at (.05) sig. level
** result is significant at (.01) sig. level
*** result is significant at (.001) sig. level

Independent samples t-test was applied in order to investigate the difference between males and females in terms of these nine factors that have more effect on vocational choice, regarding the subjects’ opinion. Independent samples t-test results show that four factors are not significantly different between males and females. These four factors are: “Media”, “SES”, “Minimum scores for undergraduate programs”, “Academic status”.

Females gave higher ratings than males on “Vocational value”, “Name of the university”, “Undergraduate program content”, “Economical conditions of the country”. For males, “Interest and Ability” is the only more influential factor in vocational choice. Therefore, according to male subjects, their interests and abilities related to vocational fields have significantly more effect on their vocational choice, even though female subjects also gave the highest importance to this factor.

3.2.4. VOCATIONAL CHOICE BY AFFECTIVE TEMPERAMENT

In this study, there are six vocational choice and five affective temperament categories. Descriptive statistics related to affective temperament subscale scores for all of the subjects and subjects in each vocational category are shown in table 3.2.4. In order to find out the nature of relationship between vocational choices and affective temperament subscale scores, Multiple analysis of variance (MANOVA) was applied for each vocational categories.

The following section presents results of Multiple analysis of variance (MANOVA) for differences between mean scores of affective temperament subscales with respect to each vocational choice category. Each of six vocational choice categories is going to be analyzed in the subsequent sections.

Table 3.2.4. Vocational choice by affective temperament subscale scores

	Engineering (n=200)		Medicine & Related Fields (n=157)		Admin. Fields & Trade (n=134)		Architect. & Design Fields (n=73)		Law (n=66)		Science, Letters & Education (n=64)		ALL (N=694)	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
D. Temp. Subscale Score (Max=15)	5,04	2,978	6,71	3,370	5,03	3,297	5,23	2,366	5,57	2,756	5,27	3,441	5,25	3,111
C.Temp. Subscale Score (Max=19)	9,32	4,351	9,79	4,016	9,57	4,786	10,40	3,989	9,50	4,414	10,06	4,473	9,70	4,348
H.Temp. Subscale Score (Max=20)	12,06	4,033	12,84	3,973	12,51	4,595	10,19	4,182	10,79	3,920	10,58	4,170	11,56	4,183
I.Temp. Subscale Score (Max=17)	4,76	3,575	5,11	3,424	4,80	3,564	7,25	4,285	4,73	3,690	5,55	3,875	5,05	3,671
A. Temp. Subscale Score (Max=24)	6,75	4,492	5,06	4,603	5,63	5,241	8,19	4,471	5,80	4,708	6,02	4,006	5,96	4,761

(Admin.: Administrative, Architect.: Architecture), (D.Temp.: Depressive Temperament, C.Temp.:Cyclothymic Temperament, H.Temp.:Hyperthymic Temperament, I.Temp.: Irritable Temperament, A.Temp.: Anxious Temperament)

3.2.4.1. VOCATIONAL CHOICE AS "ENGINEERING" BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose "Engineering" and subjects who chose other vocational categories are illustrated in table 3.2.4.1.

Table 3.2.4.1. MANOVA results for subjects who chose "Engineering" as vocation *(n=200)* **vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	5,04	5,34	1; 692	1,334	0,249
cyclothymic temperament	9,32	9,86	1; 692	2,169	0,141
hyperthymic temperament	12,06	10,35	1; 692	4,071	0,044*
irritable temperament	4,76	5,17	1; 692	1,822	0,177
anxious temperament	6,75	5,20	1; 692	4,588	0,033*

* results are significant at (.05) sig. Level

M_1= Mean of scores who chose "Engineering" category

M_2= Mean of scores who did not choose "Engineering" category

As it can be seen from table 3.2.4.1, subjects who chose "Engineering" have significantly higher hyperthymic and anxious temperament subscale scores than all of other subjects who chose other vocational categories. Therefore, in comparison with other vocational choices, there is a significant difference between "Engineering" and other vocational choices for both anxious *(p=0,033)* and hyperthymic *(p=0,044)* temperament subscale scores.

When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, it was found that there is still a significant difference between "Engineering" and other vocational choices for both anxious *(F=4,082, p=0,043)* and hyperthymic *(F=4,572, p=0,034)* temperament subscale scores.

3.2.4.2. VOCATIONAL CHOICE AS "MEDICINE AND RELATED FIELDS" BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose "Medicine and related fields" and subjects who chose other vocational categories are illustrated in table 3.2.4.2.

Table 3.2.4.2. MANOVA results for subjects who chose "Medicine and Related Fields" as vocation *(n=157)* **vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	6,71	5,21	1; 692	4,539	0,033*
cyclothymic temperament	9,79	9,68	1; 692	0,083	0,733
hyperthymic temperament	12,84	10,77	1; 692	6,004	0,015*
irritable temperament	5,11	5,03	1; 692	0.050	0.823
anxious temperament	6,06	5,93	1; 692	0,102	0,749

* results are significant at (.05) sig. level

M_1= Mean of scores who chose "Medicine and Related Fields" category

M_2= Mean of scores who did not choose "Medicine and Related Fields" category

As it can be seen from table 3.2.4.2, subjects who chose "Medicine and related fields" have significantly higher hyperthymic and depressive temperament subscale scores than all of other subjects who chose other vocational categories. Therefore, in comparison with other vocational choices, there is a significant difference between "Medicine and related fields" and other vocational choices for both hyperthymic *(p=0,015),* and depressive *(p=0,033)* temperament subscale scores.

When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, it was found that there is

still a significant difference between “Medicine and related fields” and other vocational choices for both hyperthymic *(F=5,342, p=0,027),* and depressive *(F=5,369, p=0,023)* temperament subscale scores.

3.2.4.3. VOCATIONAL CHOICE AS “ADMINISTRATIVE FIELDS AND TRADE” BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose “Administrative fields and trade” and subjects who chose other vocational categories are illustrated in table 3.2.4.3.

Table 3.2.4.3. MANOVA results for subjects who chose “Administrative Fields and Trade” as vocation *(n=134)* **vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	5,03	5,30	1; 692	0,826	0,364
cyclothymic temperament	9,57	9,73	1; 692	0,142	0,707
hyperthymic temperament	12,50	11,20	1; 692	3,952	0,047*
irritable temperament	4,80	5,11	1; 692	0,782	0,377
anxious temperament	5,63	6,03	1; 692	0,762	0,383

* results are significant at (.05) sig. level

M_1= Mean of scores who chose “Administrative Fields and Trade” category

M_2= Mean of scores who did not choose “Administrative Fields and Trade” category

As it can be seen from table 3.2.4.3, subjects who chose “Administrative fields and trade” have significantly higher hyperthymic temperament subcale scores than all of other subjects who chose other vocational categories. Therefore, in comparison with other vocational choices, there is a significant difference between “Administrative fields and trade” and other vocational choices for hyperthymic *(p=0,047)* temperament subscale scores.

When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, it was found that there is still a significant difference between “Administrative fields and trade” and other vocational choices for hyperthymic *(F=4,216, p=0,041)* temperament scores.

3.2.4.4. VOCATIONAL CHOICE AS “ARCHITECTURE AND DESIGN FIELDS” BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose “Architecture and Design Fields” and subjects who chose other vocational categories are illustrated in table 3.2.4.4.

Table 3.2.4.4. MANOVA results for subjects who chose “Architecture and Design Fields” *(n=73)* **as vocation vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	5,23	5,25	1; 692	0,002	0,962
cyclothymic temperament	10,40	9,62	1; 692	2,091	0,149
hyperthymic temperament	11,19	11,60	1; 692	0,624	0,430
irritable temperament	7,25	4,93	1; 692	6,153	0,013*
anxious temperament	8,19	5,91	1; 692	5,526	0,019*

* results are significant at (.05) sig. level

M_1= Mean of scores who chose “Architecture and Design Fields” category

M_2= Mean of scores who did not choose “Architecture and Design Fields” category

As it can be seen from table 3.2.4.4, subjects who chose “Architecture and Design Fields” have significantly higher irritable and anxious temperament subscale scores than all of other subjects who chose other vocational categories. Therefore, in comparison with other vocational choices, there is a

significant difference between “Architecture and Design Fields” and other vocational choices for both irritable *(p=0,013)* and anxious *(p=0,019)* temperament subscale scores.

When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, it was found that there is still a significant difference between “Architecture and Design Fields” and other vocational choices for both irritable *(F=4,328, p=0,037)* and anxious *(F=4,346, p=0,036)* temperament subscale scores.

3.2.4.5. VOCATIONAL CHOICE AS “LAW” BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose “Law” and subjects who chose other vocational categories are illustrated in table 3.2.4.5.

Table 3.2.4.5. MANOVA results for subjects who chose “Law” as vocation *(n=66)* **vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	5,57	5,12	1; 692	1,714	0,191
cyclothymic temperament	9,50	9,72	1; 692	0,157	0,692
hyperthymic temperament	11,79	11,53	1; 692	0,221	0,639
irritable temperament	4,73	5,08	1; 692	0,565	0,453
anxious temperament	5,80	5,97	1; 692	0,076	0,783

M_1= Mean of scores who chose “Law” category

M_2= Mean of scores who did not choose “Law” category

According to the affective temperament subscale scores, there is no significant difference between subjects who chose “Law” and subjects who chose any of other vocational categories. Thus, there is no significant relationship between “Law” as a vocational choice and affective temperament subscale scores. When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, there is still no significant relationship.

3.2.4.6. VOCATIONAL CHOICE AS “SCIENCE AND LETTERS & EDUCATION” BY AFFECTIVE TEMPERAMENT

MANOVA results according to means of affective temperament subscale scores between subjects who chose “Science and Letters & Education” and subjects who chose other vocational categories are illustrated in table 3.2.4.6.

Table 3.2.4.6. MANOVA results for subjects who chose “Science, Letters & Education” as vocation *(n=64)* **vs. other vocational choices**

	M_1	M_2	df	F	p
depressive temperament	5,75	5,20	1; 692	1,829	0,177
cyclothymic temperament	10,06	9,63	1; 692	0,157	0,204
hyperthymic temperament	11,98	11,16	1; 692	3,383	0,069
irritable temperament	5,55	5,00	1; 692	0,565	0,256
anxious temperament	6,02	4,85	1; 692	3,501	0,062

M_1= Mean of scores who chose “Science, Letters & Education” category

M_2= Mean of scores who did not choose “Science, Letters & Education” category

According to the affective temperament subscale scores, there is no significant difference between subjects who chose “Science and Letters &

Education" and subjects who chose any of other vocational categories. So, there is no significant relationship between "Science and Letters & Education" as a vocational choice and affective temperament subscale scores. When 82 subjects who are defined as having dominant affective temperament are excluded from statistical analyses, there is still no significant relationship.

3.2.5. DOMINANT AFFECTIVE TEMPERAMENT

Subjects who have subscale scores which are 2 SD above the mean are defined as having a dominant affective temperament (Vahip et al., 2005; Akiskal, 1998). In this study, there are 82 (11,8%) subjects who have any dominant affective temperament and 13 (1,87%) subjects who have more than one dominant affective temperament type.

3.2.5.1. DOMINANT AFFECTIVE TEMPERAMENT BY GENDER

Among these 82 subjects who have any dominant affective temperament, there are 40 (46,3%) number of male and 42 (53,7%) number of female subjects. Number of male and female subjects in each dominant affective temperament category are listed in table 3.2.5.1a. It was found that there is no significant difference between genders in term of depressive, cyclothymic and irritable temperaments. However, one-way ANOVA (Analysis of variance) results showed that hyperthymic temperament is more prevalent among males *(p=0,020)* and anxious temperament is more prevalent among females *(p=0,073).*

Table 3.2.5.1a. Rates of dominant affective temperaments by gender

	Male		Female		Total	
Dominant Temperament Type	**n**	**%**	**n**	**%**	**n**	**%**
Depressive	9	40,9	13	59,1	22	3,1
Cyclothymic	6	42,9	8	56,1	14	2
Hyperthymic	11	73,3	4	26,7	15	2,2
Irritable	13	56,5	10	43,5	23	3,3
Anxious	7	30,4	16	69,6	23	3,3

In terms of dominant affective temperaments, numbers of subjects in both genders pointed that males tend to be hyperthymic, while females tend to be anxious according to the results of one-way ANOVA. Because of not having enough subjects, it is not possible to generalize these results. Also, the sample of the study may not represent the population of same age adolescents. However, distributions of dominant affective temperaments give some idea about the difference between males and females.

The prevalence of dominant affective temperaments in Vahip et al. (2005) study is shown in table 3.2.5.1b. In that study, there were 87 (13,2%) subjects who had dominant affective temperaments among 658 subjects. Similarities can be seen more apparently between these two studies, except for dominant hyperthymic temperament. There were fewer subjects with dominant hyperthymic temperament in the Vahip et al.'s study (2005). It may be caused by the age differences between the samples of these two studies, there are younger subjects in this study. Mean age of all subjects was 31,6 (its range was between 18 to 88 years) in the Vahip et al.'s study (2005), while mean age of all subjects was 17,78 (its range was 17 to 20 years) in this study.

Table 3.2.5.1b. Rates of dominant affective temperaments by gender in Vahip et al.'s study (2005)

	Male		Female		Total	
Dominant Temperament Type	**n**	**%**	**n**	**%**	**n**	**%**
Depressive	9	42,9	12	57,1	21	3,1
Cyclothymic	4	36,3	7	63,7	11	1,7
Hyperthymic	4	50	4	50	8	1,2
Irritable	14	58,3	10	41,7	24	3,7
Anxious	8	34,8	15	65,2	23	3,7

3.2.5.2. DOMINANT AFFECTIVE TEMPERAMENT BY SELF-REPORTED CURRENT PSYCHOLOGICAL HEALTH STATUS AND SELF-REPORTED PAST OR PRESENT PSYCHOPATHOLOGY

When the current psychological health status of the subjects are taken into consideration, it seems that subjects who have dominant depressive temperaments are more inclined to be in "Very Poor" and "Poor" status in terms of current psychological health as can be seen from the table 3.2.5.2a.

Table 3.2.5.2a. Dominant affective temperament of the subjects and current psychological health status

	Depressive Temperament	Cyclothymic Temperament	Hyperthymic Temperament	Irritable Temperament	Anxious Temperament	Total
Very poor	8	4	1	4	9	26
Poor	7	4	1	9	4	25
Normal	5	4	5	8	10	32
Good	2	1	3	2	-	8
Very good	-	1	5	0	-	6
Total	22	14	15	23	23	

Among 82 participants who have any dominant affective temperament, 53 (64,6%) subjects have not reported any type of past or present psychopathology. Thus, there are 29 (35,4%) subjects (11 male, 18 female)

with a dominant affective temperament who have any type of self-reported past or present psychopathology. In addition, most of them are either with depressive or anxious temperaments as can be seen from table 3.2.5.2b.

Table 3.2.5.2b. Dominant affective temperament of the subjects and self-reported past or present psychopathology

	Past or Present Psychopathology		
Dominant Affective Temperament Type	**Yes**	**No**	**Total**
Depressive	15	7	22
Cyclothymic	1	13	14
Hyperthymic	0	15	15
Irritable	9	14	23
Anxious	14	9	23

Number of subjects with dominant temperament types and their self-reported past or present psychopathological status are shown in table 3.2.5.2b. Five subjects with dominant irritable temperament who answered “yes” to the question of having a diagnosis for past or present psychopathology, also have either depressive or anxious dominant temperament. One subject with cyclothymic temperament who has past psychopathology has also a dominant depressive temperament. Thus, it seems that there is a meaningful relationship between psychopathology and having a dominant depressive or anxious temperament.

3.2.5.3. DOMINANT AFFECTIVE TEMPERAMENT BY VOCATIONAL CHOICES OF THE SUBJECTS

Dominant affective temperament types and vocational choices of the subjects are crosstabulated in table 3.2.5.3. Some interesting findings can be

drawn out from this table, such as: 11 subjects of 20 who have dominant depressive temperament also made their vocational choice from “Medicine and Related Fields” category. Then, 12 out of 15 subjects with dominant hyperthymic temperament also made their vocational choice as either “Engineering” or “Administrative Fields”. In addition, 15 out of 23 subjects with dominant irritable temperament also made their vocational choice as either “Engineering” or “Architecture and Design”. Number of subjects in each category can be seen in table 3.2.5.3.

Table 3.2.5.3. Dominant affective temperament and vocational choices of the subjects

	Depressive Temperament	Cyclothymic Temperament	Hyperthymic Temperament	Irritable Temperament	Anxious Temperament	Total
Engineering	3	3	5	8	2	21
Architecture and Design	0	1	1	7	3	12
Medicine and Related Fields	11	2	0	2	5	20
Law	1	0	1	1	3	6
Science and Letters & Education	3	3	1	2	3	12
Administrative Fields & Trade	4	5	7	3	7	26
Total	22	14	15	23	23	

To sum, even though there are not enough subjects in dominant affective temperament categories for meaningful statistical analyses, it is obvious to see that there are meaningful relationships between some dominant affective temperament types and vocational choices of the subjects.

4- DISCUSSION

Discussion on the results of the study is classified into three main categories in this section as: “Vocational choice and sociodemographic characteristics of the subjects”, “Vocational choice and psychological health” and “Vocational choice and affective temperament”.

4.1. VOCATIONAL CHOICE AND SOCIODEMOGRAPHIC CHARACTERISTICS OF THE SUBJECTS

There are seven sociodemographic characteristics of the subjects (Gender, study field in the high school, number of siblings, fathers’ level of education, mothers’ level of education, mothers’ work status, socioeconomic status) which are found to be statistically related to vocational choices of the subjects in this study. In this section, the nature of relationships between vocational choice and these sociodemographic characteristics of the subjects are discussed.

4.1.1. VOCATIONAL CHOICE BY GENDER

Gender is significantly related to undergraduate program choice. While females chose mostly undergraduate programs related to “Architecture and Design”, “Medicine and Related” and “Law”; males choose mostly “Engineering” departments. Females tend to choose technical vocational fields, like engineering, less than males, however, females are more interested in design fields like architecture and industrial design than males (Shafers, Epperson &

Nanta, 1997). “Science and Letters” and “Education” departments are much diversified and it is apparent that females chose these diverse departments more than males. Actually, according to Kuzgun (2000), there are fewer male students in undergraduate programs in both faculty of science and literature, and faculty of education from various Turkish universities.

In this study, there are three times more male subjects than female subjects the “Engineering” category. According to statistical data of Turkish Statistical Institute (TUIK) about number of students in Turkish universities between years 1996 and 2003, there are more male students registered in “Engineering” departments like “Mechanical Engineering”, “Computer Engineering”, “Electrical and Electronical Engineering”, and “Civil Engineering” than females. On the contrary, some engineering departments are chosen by both genders nearly in equal rates, such as: “Industrial Engineering”, “Chemical Engineering” , “Food Engineering”. When the statistics between 2003 and 2007 are investigated, it is found that the number of male students are higher than females in engineering departments (ÖSYM, 2005).

It is found that females are more interested in undergraduate programs in “Medicine and Related Fields” category than males; there are two times more female subjects who chose undergraduate programs from this category which statistically significant. According to Capuzzi and Stauffer (2006), increasing number of women take responsibility for the breadwinner role in the family, consequently women become more interested in vocations, like medicine and law, which provide higher quality for living standards for their families in today’s changing world of work.

Also, there are two times more females than males in “Architecture and Design Fields” vocational category. So, it is obvious that female students are more interested in these vocational categories. This finding is supported by the views of Shafers et al. (1997) as females are more interested in vocational fields related to design and creativity. In addition, architecture seems like an appropriate vocation for having home offices. Most of the architects are working in their own house. Females are experiencing “work-family” conflicts more than males. In order to balance the demands of work and family, females may tend to choose vocations which offer more flexible and less heavy schedules.

“Law” is another vocational category chosen by more than twice as many female subjects. According to Kuzgun (2000), like most of other social sciences, “Law” is chosen by more number of females than males. It is thought that some advantages of this vocation force women to choose “Law” as a vocation. Some of these advantages are that opportunity for owning their own businesses in the private practice, flexible work schedules, high income and the opportunity to take their economic freedom by working less hours (Abowitz & Knox, 2003).

In short, results of this study are supported by various views of professionals in vocational counseling, and also results of numerous research studies in terms of gender differences in vocational fields. Gender affects the vocational choice of the individuals by several ways. Vocational and occupational stereotyping is very important part of gender role socialization in the society. Also, many cultural and global variables interfere with vocational choices in terms of gender. So that, gender is a very important factor which has influence on vocational choices of individuals.

4.1.2. VOCATIONAL CHOICE BY STUDY FIELDS

In Turkey's educational system, students make a study field choice when they finish their 9th grade in high school. Study field is the main constraint for the vocational choice of the students. For instance, students normally choose "Science" study field, if they want to study "Engineering" in university in the future. The reason for this previous choice is that the academic background necessary for "Engineering" is present in the "Science" study field.

As it was expected, there is a significant relationship between vocational choices and study fields. However, there are also some students who did not make appropriate vocational choices according to their study fields in high school. One out of five students who chose "Medicine and Related Fields" was from "Mathematics-Literature" study field. Normally all of the students who chose this vocational category should be from "Science" study field. This is a very important finding about the study field choice of the high school students. Students may change their minds later, but there are limited chance to change their study fields in high schools.

Students make their "study field" choice when they complete 9th grade which is when they are about 15 years old. In fact, this age is very young for such a complicated choice. It is necessary to have effective vocational counseling services for these students who experience study field choice conflicts in their schools. Also, some kind of flexibility in rules and regulations for changing study fields is urgently required. In Turkey, this is a significant problem that most of the students cannot find professional support when they make their study field choices. According to the current educational system in Turkey,

study field choice is the main constraint for the vocational choice of the students. Therefore, study field choice is a very critical issue for high school students.

Hopefully, most of the subjects made vocational choices appropriate for their study fields in this study. However, students who made faulty choices, either by consciously or unconsciously are under the risk of undesired results in the future. So, it is necessary to increase the awareness on this issue, and to gain attention of professionals in order to develop effective prevention programs related to this problem.

4.1.3. VOCATIONAL CHOICE BY NUMBER OF SIBLINGS

There is a statistically meaningful relationship between vocational choice and number of siblings of the subjects in this study. There are two research results related to number of siblings of the students who took university entrance exams in 1991 and 2004. According to these results, while the number of siblings among the students who have more than two siblings increasing, the success of the students tended to decrease (ÖSYM, 2005). Increase in the number of siblings is the sign of low economic status and low education level of parents (Kuzgun, 2000). Number of sibling may affect vocational choice of the adolescents from various ways, but it seems that there is an inverse relationship between number of siblings and the level of success in academic life. Academic success is a highly influential factor on the interest in having higher education.

4.1.4. VOCATIONAL CHOICE BY PARENTS' LEVEL OF EDUCATION

When the fathers' level of education was classified into two categories as: "fathers have not got the university level of education", and "fathers completed the university", this new classification indicated that among subjects who made a vocational choice from "Administrative Fields and Trade" category, only one third of the subjects' fathers have not got university level of education; also among subjects who made a vocational choice from "Science and Letters & Education" category, less than one third of the subject's fathers completed university level of education. So, these two vocational categories are related to fathers' lower level of education.

On the other hand, in engineering category, there are more than half of the subjects whose fathers completed the university level of education. So, this vocational category is related to fathers' higher level of education. Thus, fathers' level of education is significantly related to the vocational choice of the subjects in this study. It is necessary to investigate more the nature of relationship between the fathers' level of education and particular vocational choices of the adolescents. Most of the fathers are working, but their professions are not known. The nature of the relationship would be better understood, if we have the information related to fathers' professions. Even though subjects of the study gave a medium level of importance on their fathers' vocation as influences on their vocational choices, there may be some vicarious connections between undergraduate program choices and fathers' professions, especially for subjects whose fathers completed university level of education.

In terms of mothers' level of education, when compared to the fathers' level of education, there are more subjects whose mothers have lower level of education. When mothers' level of education was grouped into three categories as: "Below High School", "High School" and "University", it seems like that nearly each one third of the subjects goes to each educational level category, although nearly half of the fathers' level of education is "University". It is open to say that there are subjects whose fathers are more educated than mothers in our sample.

In "Engineering" category, there is less percent of mothers from "below high school" level of education while there is less percent of mother from "university" level of education in "Science and Letters & Education" category. This supports the findings in fathers' level of education. The similar pattern was seen while analyzing data in that section. This inverse relationship may be due to role model effects of the parents.

It is apparent in this study that "Engineering" is a more preferred vocational choice, because it is more popular and prestigious. Mothers, and also fathers of course, who have higher level of education are more likely to be role models for adolescents whose vocational choice is more prestigious ones, such as "Engineering" or "Architecture and Design".

Thus, mothers, and fathers, who have "university" level of education, will affect their children in some way to make more prestigious choices. On the contrary, some less prestigious and less popular vocational choices are more expected for subjects whose mothers are from "below high school" level of education. This is a kind of expectation for continuum of family status in social life. Mothers and fathers who have higher level of education may have some

narcissistic anxieties about their children. They may be subjected to questions from their social environment, such as: “Will your son or daughter continue in your way?”, “What do you think about your company when you will be retired? Who will manage the business? etc. Then, parents want their children to have competencies to continue managing the family investments.

Children are observing and acquiring some skills and specific professional behaviors from their parents and they feel safe when they are imagining themselves in their parents’ roles. Similar to the Bandura’s (1977) social learning theory, children develop their attitudes towards adult life through vicarious learning. Likewise, adolescents identify themselves with their parents even though they are mostly denying their parents suggestions about vocational choice as the same pattern repeats in most of the fields of life.

4.1.5. VOCATIONAL CHOICE BY PARENTS’ WORK STATUS

Mothers’ work status was grouped into three categories as “never worked”, “worked past, not now” and “working”. There seems like a reverse relationship between “Medicine and Related Fields” and “Administrative Fields & Trade” vocational categories in terms of “never worked” and “working “mothers. While the percent of subjects whose mothers are working is higher in numbers in the “Medicine and Related Fields” category, the percent of subjects whose mothers never worked is higher in numbers in the “Administrative Fields & Trade” category. Also, there is less percent of subjects whose mothers are working in “Science, Letters & Education” category.

These findings also support the previous findings. If mothers are working, or have a work experience, their children tended to choose more prestigious and technical skill-required vocations, such as: “Medicine and Related Fields” and “Architecture and Design”. On the contrary, for example, vocations in “Administrative Fields and Trade” category are less technical and mostly related directly to “financial departments” in the work life. Likewise, vocations in “Science and Letters & Education” category are less prestigious and less popular professions.

In addition, if mothers are working, they may affect their children in some way to choose vocations which have more demanding training process and they are more skill-prone vocations. On the other hand, vocations such as “Administration”, “Trade” or “Sociology” are chosen more by the subjects whose mothers never worked. Training process of such vocations are less demanding and they are less skill-prone vocations. Therefore, mothers’ experience of work life is expected to have significant influences on subjects’ vocational choice.

We could not see any pattern in fathers’ work status section because the lacking of diversity, nearly ninety percent of fathers are working. However, mothers’ work status gives us ideas about vocational choices of the subjects according to the parents’ work status in general. If the parent is working, their children may have more chance to discover their parents’ vocations, or similar ones. Moreover, these children may have more opportunities for self-discovery in terms of vocational interests and abilities.

4.1.6. VOCATIONAL CHOICE BY SOCIOECONOMIC STATUS

There are no “Low SES” subjects in this study, because low-SES families cannot afford higher education expenses of their family members. They need to earn money instead of going to the university. They struggle to meet even the most basic family needs of food, clothing and shelter, moreover the health care is either nonexistent or not sufficient for them (Cappuzzi and Stauffer, 2006). According to Capuzzi and Stauffer (2006), socioeconomic status is expected to be more dominant factor in vocational choices of the individuals, because of the increasing expenses in higher level of education.

It seem like that nearly equal number of students are present in each “Medium” and “High” SES categories in three vocational categories as “Engineering”, “Architecture and Design” and “Law” in this study. On the other hand, other three categories are chosen more by subjects in Medium-SES category. This result is mathematically expected, because there are more subjects in “Medium” category.

It is necessary to emphasize those students who are in High-SES category tended to make a choice from “Engineering”, “Architecture and Design” and “Law” vocational fields. In this study, it was found that there is a statistically significant relationship between these vocational choice and high socioeconomic status of the subjects. When it is asked to the high-SES level senior year high school students that: “How do you imagine yourself in work life, ten years later?” they generally reply as: “There will be no difference, it will be the same: quite possibly, I will be in the place of my father or mother. I think that

I will manage the business". So, they want to prepare themselves for relatively predetermined future careers.

On the other hand, medium-SES level students have imaginations on a larger scale. First of all, they want to change their SES towards a higher quality of living standards. They wanted to be managers, doctors, engineers, etc., because generally they want to earn more money than their parents in a relatively short time by working less. Some of them observe the difficulties of parents related to both vocational and work conditions. However, some of them are satisfied with their socioeconomic status. Even though they are lacking of some economic opportunities, they are not seeking for more money. Some of the students in medium-SES tend to be idealist individuals, such as, they want to be scientists, educators, etc. whose salaries may not be very high, but according to their view, these vocations are highly respected by the society (Kuzgun, 2000). Therefore, their perceptions and imaginations are more diverse than the students who are from high-SES.

4.2. VOCATIONAL CHOICE AND PSYCHOLOGICAL HEALTH

Psychological health of the subjects is discussed under two main headings: Self-reported current psychological health status, and vocational choice effect on psychological health status of the subjects. Results of the study related to these two headings are discussed in this section.

4.2.1. VOCATIONAL CHOICE BY SELF-REPORTED CURRENT PSYCHOLOGICAL HEALTH STATUS

In this study, subjects described themselves as “Very poor”, “Poor”, “Normal”, “Good”, “Very good” in terms of their psychological health status. While nearly half of the subjects who chose “Law” stated themselves as “Normal” in terms of psychological health status, one third of the subjects who chose “Engineering” stated themselves as “Normal”. According to the statistical analyses, these findings are significant. Subjects who chose undergraduate programs in “Law”, “Engineering”, and “Administrative Fields and Trade” categories described themselves in psychologically better conditions than other subjects of the study.

When the subjects’ psychological health status is narrowed into three new categories as “Poor”, “Normal” and “Good”, there are statistically more subjects in “Engineering” category who stated themselves as “Good” (39,5 %), while there are less subjects in “Science and Letters & Education” who stated themselves as “Good” (17,5%) in terms of current psychological health status. It means that there is two times difference of current psychological status according to these two vocational choices. Likewise “Engineering”, subjects who chose “Administrative Fields and Trade” is also feeling better than other subjects. Temperamental characteristics of these subjects support these findings. Subjects who chose undergraduate programs from these two categories have higher hyperthymic temperament subscale scores than others. High amount of resilience is embedded in characteristics of hyperthymic temperament against the potential psychological problems (Akiskal, 2005).

There are significant differences among six vocational categories in terms of psychological health status. Current psychological health status may have several effects on vocational choice. Feeling “poor” or “good” may affect opinions about future and even may cause some change in future plans. For instance, subjects who feel better tended to choose undergraduate programs in “Engineering”, and “Administrative Fields and Trade” categories, on the other hand, undergraduate programs in “Science and Letters & Education” category was mostly chosen by subjects described themselves as feeling psychologically worse. Some questions come to the mind in this point as: “Can there be a temperamental influence on vocational choice?”, or “Why subjects who chose “Engineering”, and “Administrative Fields and Trade” are described themselves feeling better?” In section 4.4, these questions will be discussed in detail.

4.2.2. VOCATIONAL CHOICE EFFECT ON PSYCHOLOGICAL HEALTH STATUS OF THE SUBJECTS

While one third of the subjects stated that: “Vocational choice process has negative effects on my psychological health”, two third of them stated the opposite view. After applying statistical analyses, some differences among vocational categories are noticed; there is more negative influence of vocational choice process on some subjects.

Nearly half of the subjects who chose “Architecture and Design Fields” and “Law” categories stated that “vocational choice process has negative effects on my psychological health status”. These results are statistically significant. On the other hand, nearly one third of the subjects in all other

categories stated as so. What may be the reason for this difference? Again, this question will be discussed in depth while examining the relationship between vocational choice and affective temperament in the section 4.4.

4.3. OPINION OF SUBJECTS ON FACTORS THAT AFFECT VOCATIONAL CHOICE BY GENDER

Opinion of subjects on factors that affect vocational choice is asked in this study. Subjects rated eighteen factors according to their degree of influence of their own vocational choices. It was found that factors with most influence on vocational choice according to the subjects are listed in order of importance as: “Their interest and ability”, “Vocational value”, “Name of the University”, “Media”, “Academic Status”, “Undergraduate Program Content”, “Economic Conditions of the Country”, “Socioeconomic Status”, and “Minimum Scores of Undergraduate Programs”. Hopefully, “interest and ability” was stated by the subjects of the study as the most influential factor on their vocational choices.

When the influence of these nine factors are compared between male and female subjects, it was found that: “Media”, “Socioeconomic status”, “Minimum scores for undergraduate programs”, “Academic status” factors were given nearly equal importance by subjects in both gender categories. “Vocational value”, “Name of the university”, “Undergraduate program content”, “Economic conditions of the country” factors are more important on their vocational choice for females than males. For males, “Interest and Ability” is the only factor rated more highly in vocational choice of the subjects. Therefore, according to male subjects, their interests and abilities related to vocational

fields have significantly more influence on their vocational choice, even though female subjects also gave the highest importance to this factor.

According to Kuzgun (2000), males gave more importance to their "Interest and Ability" than female subjects, when they make decisions about their vocational choice. Thinking style of males in their vocational choice process is supposed to be more rigid than females. Gilligan (1982) asserted that the influence of the deeply embedded gender-role socialization of males and females is so profound that there are marked differences in their career decision-making processes. The pattern that is more characteristic of woman's decision making is contextual and embedded in relationships with others (Jackson & Scharman, 2002). In other words, women often make decisions based on relationship and connectedness, considering the effects of their decisions on others. Jackson and Scharman (2002) formulated this pattern of behavior as ***dichotomous***.

Dichotomous career-decision making means that women are socialized to perform the primary family role of nurturer and caregiver (Gilligan, 1982). Thus, women's perspective is that family and career do not run parallel with each other; rather family and career are in conflict. Also in Turkey, women are forced to choose between family and career. However, the process is quite different for males. Male gender-role socialization is primarily defined through work (Gilligan, 1982). As Gilligan (1982) asserted, men were historically socialized to be the family's financial provider, or breadwinner. Thus, men's family and career obligations ran parallel and were ***synchronous*** with each other (Jackson & Scharman, 2002).

Synchronous career-decision making means that career decision making fulfill simultaneously both family and career domains. However, this condition seems to be changing today. Males and females become both caregivers and financial providers. Thus, according to Jackson and Scharman (2002), men's career decisions have become more dichotomous, because the success in work role may compete with meaningful involvement in family life.

In this study, work status of the subjects' parents points this conflicting structure: While more than eighty percent of fathers are working, only thirty percent of mothers are working. However, more than one third of the mothers worked in the past, even though not working now. So, mothers are still more dichotomous and fathers are still more synchronous. While staying in this contextual framework, it is apparent to say that: Females feel free to decide on vocations, and they are more independent to choose among several vocational options. However, males are forced to depend more on logic and available opportunities in order to attend the world of work as soon as possible (Kuzgun, 2000).

In addition, males feel more under pressure in their career decision-making process due to the requirements of job market, males need to be successful in today's' highly competitive world of work (Capuzzi & Stauffer, 2006). If an individual is working in a field where s/he has satisfactory level of ability, the amount of success is expected to be high. Thus, it is supposed to be that males give more importance to "interest and ability" due to this tremendous need for success in today's competitive nature of job market. On the contrary, in addition to giving considerable amount of importance on the "abilities and interests" in their vocational choices, females give more importance to several

other factors than males, such as: “Vocational Value”, “Name of the University”, “Undergraduate Program Content”, etc. according to the results of statistical analyses in this study.

From another perspective, there is supposed to be a generation gap between parents and children as the subjects of this study. Both male and female subjects of the study gave the least importance of influence on vocational choice to the “opinions of parents”. Female subjects give importance to “vocational value”, because it is supposed that they want to have a place in work labor. Females want to be independent economically, and external factors such as, “name of the university”, and “economic conditions of the country” become more influential on their decision-making.

Economic conditions of the country may affect career decision-making of each gender, but it seems to affect females more than males. Because it is thought that females become more aware than the past that they will need to work in order to support financial requirements of the family in the future. Because of the worsening economic conditions of the countries, number of income sources and amounts of income are required to increase in order to afford the expenses of the household. Nowadays, more women are taking responsibility for the breadwinner role in the family (Capuzzi, Stauffer, 2006).

Gender-role differences are decreasing in the work labor, women are working in more diverse work fields than in the past (Capuzzi & Stauffer, 2006). Of course, there are still many differences according to genders, and the world of work does not present the same opportunities to both genders. However, it is changing now: Males and females have nearly equal opportunities in some of work fields. Today, there are less gender stereotyping and discrimination in the

job market, than it was in the past (Kuzgun, 2000). Also, men participate increasingly in the household work, and that women decreased the amount of time they devote to household tasks, and they become more involved in work.

Both male and female subjects gave nearly same importance of order to the factors which affect vocational choice. The only difference was seen between each of parents' vocations. As it was expected, males gave more importance to "fathers' vocation" and females gave more importance to "mothers' vocation". Girls and boys internalize societal messages regarding gender expectations, and as a result, their career decision-making processes are shaped while they are still very young (Capuzzi & Stauffer, 2006).

"Name of the university" and "Minimum scores for undergraduate programs" factors are both found to be very important on vocational choices, according to the opinions of adolescent subjects of this study. As previously stated, these two factors generate problematic consequences in terms of adolescents' vocational choice. Because these factors cause the adolescent change his or her mind for the sake of giving up his or her vocational interest and abilities. According to Kuzgun (2000), if an adolescent gives tremendous importance on both of these factors, it will mean that his vocational choice is supposed to be under risk of potential future problems.

4.4. VOCATIONAL CHOICE BY TEMPERAMENT

The relationship between vocational choices and the affective temperament types of the subjects are going to be discussed in this section. Firstly, discussions on the results related to all of the subjects are placed, and

then, ones related to subjects with dominant affective temperament in the subsequent sections.

4.4.1. VOCATIONAL CHOICE BY AFFECTIVE TEMPERAMENT

In this study, there are six vocational choice categories and five affective temperament categories. After applying appropriate statistical analyses, it was found that subjects in each vocational category have different means of affective temperament subscale scores. These differences are examined in order to understand the nature of relationship between vocational choices and affective temperamental characteristics of subjects.

First and mostly chosen vocational category is “Engineering” *(n=200)*. For subjects who chose undergraduate programs in this vocational category, both hyperthymic and anxious temperament subscale scores are significantly different from subjects who did not choose programs from “Engineering”. Thus, there is a significant relationship between “Engineering” as a vocational choice and both anxious and hyperthymic temperament subscale scores. However, subjects who chose undergraduate programs from both “Administrative Fields and Trade” and “Medicine and Related Fields” categories have also high hyperthymic temperament subscale scores. “Administrative Fields and Trade” category has the highest mean of the hyperthymic subscale score as can be seen from the table 3.2.4. Thus, hyperthymic temperament is significantly related to vocational choices as “Administrative Fields and Trade”, “Engineering” and “Medicine and Related Fields” in order of importance.

Hyperthymic temperamental characteristics are significantly related to three vocational choice categories, but mostly to the “Administrative Fields and Trade” category. This vocational choice category requires more extraverted, talkative, enthusiastic individuals. Hyperthymic temperament includes more enthusiastic, excited and impulsive characteristics. These people have high self-esteem and more narcissistic characteristics. According to Akiskal and Mallaya (1987), individuals with hyperthymic temperamental characteristics have more tendencies to experience hypomania and generally they sleep less than other individuals. These individuals are more controlling and they tend to interrupt other people. Also, they are more boastful and egocentric in decision-making in comparison with individuals with other affective temperament types. They do not want to be under pressure, they become sarcastic and irritable when they feel under pressure. Thus, it is an expected finding that subjects who chose “Administrative Fields and Trade” vocational category are more hyperthymic than the other categories. Because this vocational category includes individuals who wants to be managers, business executives, economists, bankers, stock exchange brokers, politicians, bureaucrats, diplomats, tradesmen, etc. The list of undergraduate programs under this category can be seen in table 3.1.5e.

Subjects who chose “Engineering” category have statistically high anxious temperament subscale scores. However, subjects who chose “Architecture and Design Fields” category have higher anxious temperament subscale scores than the subjects who choose “Engineering” category. “Architecture and Design Fields” category has the highest mean of the hyperthymic subscale score as can be seen from the table 3.2.4. Thus, anxious

temperament is significantly related to both vocational choices as “Architecture and Design Fields” and “Engineering” in order of importance. In common sense, this vocational choice category requires individuals whose lives are more systematic and in order. They arrange complicated technical procedures, that is to say, they are measuring and considering small technical details. They cannot tolerate errors of measurement and ignorance of components in complicated and complex systems. They investigate the structures of systems comprehensively, even sometimes compulsively. As a result, they may become highly obsessive in work from time to time.

Anxious temperament subscale scores are also high for subjects in “Engineering” category. “Engineering” is similar to “Architecture and Design Fields” in some way, because both of them must consider physical laws and their applications such as static balance, thermodynamic and aerodynamic principles, electromagnetic resonances of electrical circuits, etc. They need to measure and evaluate conditions carefully in order to prevent the complex systems from damages or catastrophes. These obligations may require extra arousal of attention and concentration while they are working. These individuals may have some somatic complaints during their working hours, and then become anxious about their performances. These are the main characteristics of anxious temperament: worry, somatic and autonomic anxiety. Individuals with anxious temperamental characteristics are more hypersensitive and they are less able to relax. Architects, engineers, industrial designers, etc. are all systematic-thinkers and they need to be highly sensitive on systematic procedures. It is apparent that most of their anxious characteristics are due to

the necessities of their professional careers. Thus, subjects who tend to choose similar ones of those professions are expected to have high anxiety potential.

Subjects who chose “Architecture and Design Fields” have also high irritable temperamental subscale scores. This may be due to their inability to relax easily, but also they are less tolerant of mistakes. According to Akiskal and Mallaya (1987), individuals with irritable temperament are more inclined to think deeply and they are usually criticizing themselves severely. Moreover, they have high impulsivity, but they suppress their impulses due to their pessimistic thoughts and intolerance to possible faults. They may make irritating jokes if they are disturbed. Individuals who chose “Architecture and Design Fields” are supposed to be less tolerant to negative outcomes. They are very sensitive about their own products, but intolerable and even very rigorous to products of colleagues, and possibly other professionals. This sensitivity and rigidity may cause them to be more irritable and fault-finder individuals.

Depressive temperamental characteristics are significantly related to “Medicine and Related Fields” as vocational choice category. In common sense, this vocational choice category requires individuals who are more humanitarian, sympathetic, help-giver, conscientious, compassionate, etc.; but also these individuals need to be well-organized, self-controlled, disciplinary, investigating, and enthusiastic about new explorations in relation to their curiosity on anatomy and physiology of living organisms. According to Akiskal and Mallaya (1987), individuals who have depressive temperamental characteristics are more pessimistic, hopeless and distrustful; they may have low self-esteem, but they are also conscientious, suspicious and criticizing about unexpected outcomes. However, they are also self-controlled, altruistic, generous and unselfish.

Likewise, they are sensitive about problems of human beings and nature. Thus, they have both negative and positive characteristics. Some of both negative and positive characteristics of individuals with depressive temperament intersect with particular requirements of individuals who work in the vocations in "Medicine and Related Fields" category.

Subjects who chose "Medicine and Related Fields" have also high hyperthymic temperament subscale scores. Thus, depressive and hyperthymic temperamental characteristics balance each other in some way. Positive characteristics of hyperthymic temperament are supposed to outweigh negative characteristics of depressive temperament. As it was discussed before, individuals with hyperthymic temperament are highly energetic individuals, and they are excited about new explorations. In other words, doctors, dentists, physicians, veterinarians, etc. need to be sensitive and altruistic individuals, while they have enthusiasm about new explorations about life.

These professionals are expected to feel responsibility in order to overcome difficult conditions related to nature. They may experience very extreme events, such as catastrophic events, severe injuries, difficult life conditions, etc. Thus, ordinariness is not appropriate in these professions. They are supposed to be more aware of value of living, and especially doctors must be ready to adapt difficult circumstances. They need to feel both responsibility and enthusiasm in both extremes, because their job is mainly focused on the struggles to overcome difficulties and problems about human life. So, subjects who wanted to choose undergraduate programs in this vocational category have higher hyperthymic and depressive temperament subscale scores.

Cyclothymic temperament is not found to be related to any vocational choice category. Cyclothymic temperament is supposed to be related to more art-based programs like photography, dance, sculpture, acting, etc. Subjects who chose undergraduate programs in “Architecture and Design Fields” category have the highest mean of cyclothymic temperament subscale scores, even though there is no statistically important difference between this and other vocational choice categories. Vocations in “Architecture and Design Fields” category are the most art-based programs among all of six vocational categories in this study. According to Akiskal and Mallaya (1987), the main cyclothymic temperamental characteristics are fluctuations between pessimism and optimism, cognitive confusion and creative thinking, introversion and extroversion, etc. All of these fluctuations are obviously observed among artistic individuals, such as sculptures, composers, painters, architects, fashion designers, dancers, actors or actress, etc. Thus, cyclothymic temperament is expected to be related to similar kind of professions.

“Science, Letters & Education” category is not found to be related to any type of affective temperament. This category consists of various undergraduate programs and there is chosen by few subjects. So, it was quite expected that no significant relationship is found between this vocational choice category and affective temperament types. Also, “Law” is the other vocational choice category which is not related to any type of affective temperament.

In section 4.2., two questions were asked: “Can there be a temperamental influence on vocational choice?”, “Why subjects who choose “Engineering” and “Administrative Fields and Trade” feeling better?” in order to be investigated in this section. Subjects who made their vocational choice as

“Administrative Fields and Trade” have relatively higher “hyperthymic temperament” subscale scores than other subjects, this is a statistically significant finding. It is similar for the subjects in “Engineering” and “Medicine and Related Fields” categories. Hyperthymic temperamental characteristics explain why they are feeling better. These individuals are more fun-loving, enthusiastic, and adventuresome than others. These subjects stated less negativity due to vocational choice process. Nearly two third of these subjects have not been affected negatively due to vocational choice process.

Nearly half of the subjects who chose “Architecture and Design Fields”, and “Law” categories stated that “vocational choice process has negative effects on my psychological health status”. The influence of temperamental characteristics on vocational choice can be seen here again. Subjects who made their vocational choice as “Law” have relatively higher “depressive temperament” subscale scores, this explains why they stated a negative influence of the vocational choice process on their psychological health status, because they are more inclined to affect negatively due to their depressive temperamental characteristics.

Subjects who chose “Architecture and Design Fields” have statistically high “irritable” and “anxious” temperament subscale scores. Also, subjects in “Science, Letters and Education” have relatively high “anxious temperament” subscale scores. It is noticed that having “hyperthymic” temperamental characteristics may balance the negative effects of the vocational choice process for these individuals. Thus, for this category, negative effect ratio did not occur as higher as in both “Law”, and “Architecture and Design Fields” vocational choice categories.

4.4.2. VOCATIONAL CHOICE BY DOMINANT AFFECTIVE TEMPERAMENT

Subjects, who have affective temperament subscale score which is 2 SD above the mean, are defined as having dominant affective temperament in Vahip et al.'s (2005) study. In this study, nearly ten percent of subjects have dominant affective temperaments. Prevalence of dominant affective temperaments in both studies is very close, except for hyperthymic temperament, as can be seen in table 4.4.2.

There were fewer subjects with dominant hyperthymic temperament in the Vahip et al.'s study (2005). It may be caused by the age differences between the samples of these two studies, there are younger subjects in this study. Mean age of all subjects was 31,6 (its range was between 18 to 88 years) in the Vahip et al.'s study (2005), while mean age of all subjects was 17,78 (its range was 17 to 20 years) in this study.

Table 4.4.2. Comparison of rates of dominant affective temperaments by gender

	Vahip et al.'s study (2005) N=658		**This Study (2009)** N=694	
Dominant Temperament Type	**n**	**%**	**n**	**%**
Depressive	21	3,1	22	3,1
Cyclothymic	11	1,7	14	2
Hyperthymic	8	1,2	15	2,2
Irritable	24	3,7	23	3,3
Anxious	23	3,7	23	3,3

Numbers of female and male subjects are nearly equal in total, except for two affective temperaments: hyperthymic and anxious temperaments. There are

more males who have dominant hyperthymic temperament than females, and more females who have dominant anxious temperament than males, as can be seen in table 3.2.5.1a. Because of not having enough number of subjects, it is not possible to generalize these results. However, it is apparent that male individuals who have dominant anxious temperament are less than females. In addition, the reverse is true for hyperthymic temperament; there are more dominantly hyperthymic males than females in the sample of this study.

When the current psychological health status of the subjects are taken into consideration, it seems that subjects who have dominant depressive temperaments are more inclined to say that they are in “very poor” and “poor” status in terms of current psychological health as can be seen from the table 3.2.5.2a. Similarly, most of subjects with dominant affective temperament who have any self-reported past or present psychopathology are either with depressive or anxious temperaments as illustrated in table 3.2.5.2b. So, it is obvious that depressive and anxious temperaments are predictors of self-reported psychopathological conditions. Because of the temperamental characteristics of the subjects, most of the psychopathological diagnoses are assumed to be anxiety or mood disorders.

When the vocational choices and dominant affective temperaments of the subjects are crosstabulated as illustrated in table 3.2.5.3, it can be seen that there is a meaningful relationship between vocational choices and some dominant affective temperaments. There are too few subjects in dominant affective temperament categories in order to generalize these results, so it was not meaningful to investigate the statistical relationship between these categories. However, these data give us some idea about the nature of the

relationships between vocational choice and dominant affective temperament types. There are more dominantly irritable subjects in both “Engineering” and “Architecture and Design Fields” categories. Also, there are more dominantly depressive subjects in “Medicine and Related Fields” category. These findings support the findings in the previous section.

It is also necessary to note here that, subjects who stated experiencing psychological problems during vocational choice process are mostly the subjects who have dominant affective temperaments. Professionals who are working with adolescents must be aware of this relationship. Even though investigating the psychopathological status of these subjects is not the main aim of the study, it is important to emphasize that these individuals are under the risk of experiencing serious psychopathology. As Akiskal (1998) stated, there is a significant relationship between having dominant affective temperament and affective disorders, and the findings of this study support this view.

5- CONCLUSIONS

5.1. THE PROBLEM

Adolescence is the developmental transition period between childhood and adulthood. During this transitional period, many changes occur related to adolescents' identity development. Considering and making decisions about future professional careers is also part of their identity development. Most of the high school students are experiencing serious psychosocial problems in their undergraduate program choice, or vocational choice process. Making such a significant choice is not easy, because after making a decision, it also requires responsibility and perseverance to complete consequent professional training. Vocational decision making is an important step towards adult life. When adolescents make decisions about their future professional life, they become more "mature" individuals. Difficulties and problems in decision making for higher level of education was a neglected, but a very critical issue. This study aims to contribute increasing the awareness for the problem of senior year high school students' vocational choice in Turkey.

Today's' world of work is evolving very fast, and emerging new professions are at the core of this evolution. Technological advancements and globalization in work fields accelerate changes in jobs and work opportunities. Adolescents are primarily under the risk of negative effects of fast changing world of work. Most of the adolescents are confused about which vocational category is more appropriate for themselves.

In addition, forming a new and functional ego and self-identity is the most difficult psychological task for the adolescent because of its complex, comprehensive and multi-faceted nature (Steinberg, 1999). According to Erikson (1968), identity formation is both a social and cognitive process. The adolescent's identity is the result of a mutual recognition between the young person and society (Erikson, 1968). Adolescents travel towards adulthood as their personal identities develop over time; this process is called as 'maturation'. Making personal choices is also part of this maturation process; because of those adolescents feel that they are unique when they make appropriate and satisfactory choices for themselves. According to Adams and Marshall (1996), a good enough identity formation provides the structure for understanding who one is, and enables the recognition of potential through a sense of future possibilities and alternative choices.

Adolescents generally perceive a vocation only as a way of earning money, although a vocation provides also independence, respect, guarantee to continue living standards, being part of a social group, and many other social necessities and benefits (Kuzgun, 2000). Each vocation has different advantages and disadvantages. So, the increasing variety of vocations causes difficulty in vocational decision making for young people. If the adolescent individual has adequate level of self-awareness, and also s/he has sufficient amount of knowledge about the vocational options that s/he wants to choose, a better decision will be made regarding the vocational choice, because the individual will consider the appropriateness of both advantages and disadvantages of the vocation when s/he is aware of his own interests and abilities.

In the framework of this study, a limited number of vocational options such as: engineering, medicine, law, etc. are considered. These vocational fields, or professions, require at least an undergraduate level of education. In other words, in order to be included in these vocational fields, the undergraduate program choice and completing the requirements of the related training is necessary. Therefore, in order to understand the vocational choices of the adolescent subjects of this study, their undergraduate program choices are asked. They were given a list of undergraduate programs in Turkish universities, they made their most preferred choice from this list. Then, their undergraduate program choice is considered as their vocational choice.

A sound vocational decision-making requires that the person be relatively sure about oneself (Kuzgun, 2003). Late adolescence, between 15 to 19 years old, is more appropriate time period for making decisions about vocational choices. Adolescents may need to be supported to become aware of their interests and abilities. In addition to the vocational abilities and interests, there is another very important, but neglected, source of knowledge which provides knowledge about abilities and interests: personality.

Personality is also very complicated and multi-faceted construct. It is very difficult to have a clear definition of personality. In that case, the relationship between vocational choices and substructures of personality need to be investigated. According to Kuzgun (2000), especially for individuals who assert that abilities and interests are the most influential factor on their vocational choice, it is quite expected that there is strong relationship between vocational choices and substructures of personality. However, it is difficult to investigate the relationship between several personality constructs and vocational interests

(Kuzgun, 2000). As a relatively stable substructure of personality, temperament is assumed to have a significant relationship with vocational choice of the adolescent. All of these set the basis for the main research question of this study: What is the relationship between the temperamental characteristics and the adolescents' vocational choices?

5.2. RESULTS OF THE RESEARCH AND DISCUSSION

In the framework of this study, a limited number of vocational options such as: engineering, medicine, law, etc. are considered. These vocational fields, or professions, require at least an undergraduate level of education. In other words, in order to be included in these vocational fields, the undergraduate program choice and completing the requirements of the related training is necessary. Therefore, in order to understand the vocational choices of the adolescent subjects of this study, their undergraduate program choice is asked. They were given a list of undergraduate programs in Turkish universities; they made their most preferred choice from this list. Then, this undergraduate program choice is considered as their vocational choice. In this study, undergraduate program choices are combined into six fundamental categories: "Engineering", "Medicine and Related Fields", "Administrative Fields and Trade", "Architecture and Design Fields", "Law", and "Science and Letters & Education".

According to the statistical analyses, while females chose mostly undergraduate programs related to "Architecture and Design", "Medicine and Related" and "Law"; males chose mostly "Engineering" departments. It was

found that there is a statistically very significant relationship between vocational choice and gender of the subjects. There are also statistically meaningful relationships between number of siblings, parents' levels of education, mothers' work status and vocational choices of the subjects. Furthermore, socioeconomic status is found as a statistically influential factor on vocational choices of the adolescents.

In addition, psychological health status is related to the vocational choices of the adolescents. In relation to the statistical analyses, subjects whose psychological health status is defined as "Poor" chose undergraduate programs in the "Science, Letters & Education" vocational category more than other subjects. Also, while subjects who are in "normal" psychological health status chose "Law" undergraduate program more than others, subjects who are in "good" psychological health status chose both "Engineering", and "Administrative Fields and Trade" more than other subjects in the study. According to the statistical analyses, while subjects who stated negative effect of vocational choice process on their psychological health chose programs in both "Architecture and Design Fields", and "Law" vocational categories more than others, subjects who did not state negative effect on their psychological health chose undergraduate programs in the "Engineering" category more than other subjects. The nature of this relationship can be explained by interpreting the findings about affective temperaments, so that, better psychological health status is related to having more hyperthymic temperamental characteristics.

According to the subjects' opinions, their interests and abilities are the most influential factors on their vocational choices. On the contrary, parents' opinions are considered as the least important factor. Because of the

development of self-identity and autonomy during adolescence, these findings were expected. After analyzing statistical results, it was found that the most influential nine factors on vocational choice are: “Interest and ability”, “Vocational value”, “Name of the university”, “Media”, “Academic status”, “Undergraduate program content”, “Economic conditions of the country”, “Socioeconomic status”, and “Minimum scores of undergraduate programs” in order of importance. When the influences of these nine factors are compared statistically between male and female subjects, it was found that: “Media”, “Socioeconomic status”, “Minimum scores for undergraduate programs”, “Academic status”. “Vocational value”, “Name of the university”, “Undergraduate program content”, and “Economic conditions of the country” factors are more important for females on their vocational choice than males; while for males, “Interest and Ability” is the only more important factor on their vocational choice than females.

Males and females think differently about the factors which affect their vocational choices. In this study, while males gave more importance on their interests and abilities than females in their vocational choices, females gave more importance to various factors than males, such as: “Vocational values”, “Name of the university”, “Undergraduate program content”, “Economic conditions of the country”. Thinking style of males in their vocational choice process is assumed to be more rigid than females. Females feel free to decide, and they are more independent than males to choose among several vocational options. Males feel themselves more under pressure in their career decision-making process, because males are expected by the society that they have to work and they must be successful in their jobs. From this point of view, it is

meaningful for males to give more importance to “abilities and interests” than females in their vocational choices.

“Economic conditions of the country” is found to be as effective as “socioeconomic status” in vocational choices of the subjects. While economic conditions of the country become worse, it seems like that individuals get more interested in some vocations which have more economic values, such as: engineering, medicine, economics, business administration, etc. There are more subjects who chose these vocational categories in this study. In general, these vocations are perceived as work guaranteed with high salaries. This is an expected outcome, because wealthy people in the society belong mostly to these vocational communities. They are mostly engineers, doctors, economists, bankers, etc. On the other hand, some vocational fields like education, science and letters, etc. become losing their popularity in the study. In this study, there is relatively little number of subjects in these categories. However, it is important to note here that individuals who make their vocational choices by considering environmental factors become increasing. Also, especially because of worsening economic conditions, increasing number of individuals neglect their personal needs and expectations. Fortunately, in this study, it was found that interests, abilities, and vocational values are still more effective on individuals’ vocational choices, according to the subjects’ opinions.

According to Kuzgun (2000), especially for individuals who assert that abilities and interests are the most effective factor in their vocational choice, it is quite expected that there is significant relationship between vocational choices and substructures of personality. As Strelau (1998) stated temperamental characteristics represent raw material that will be modified to generate the

noticeable features of mature human personality, so temperament is considered as core component of personality. The most important part of this study is to investigate the relationship between adolescents' vocational choices and their temperamental characteristics.

In this study, there are five affective temperament categories. It was found that subjects in each vocational category have different means of affective temperament subscale scores. These differences are examined in order to understand the relationship between vocational choices and affective temperamental characteristics of subjects. It was found that affective temperament type is significantly related to vocational choices of the adolescents. Hyperthymic temperament is related to adolescents' vocational choice as "Administrative Fields and Trade". Both depressive and hyperthymic affective temperaments are related to "Medicine and Related Fields". Also, individuals who chose "Architecture and Design Fields" have significantly higher irritable and anxious affective temperament scores than others, so these temperaments are influential on this vocational choice. Additionally, the vocational choice "Engineering" is found to be related to hyperthymic and anxious temperaments, but "Law" is not found to be related to any affective temperament. In conclusion, according to all of these results, there is significant relationship between vocational choice and affective temperament.

When dominant affective temperaments are taken into consideration, numbers of female and male subjects in total are nearly equal, except for two affective temperaments: hyperthymic and anxious temperaments. There are more males who have dominant hyperthymic temperament, and more females who have dominant anxious temperament. On the contrary, there is no

significant difference between genders in terms of dominant depressive, cyclothymic, and irritable temperaments. It seems that subjects who have dominant depressive temperaments stated themselves either as “very poor”, or “poor” in terms of psychological health. There are too few subjects who have dominant affective temperaments in order to generalize these results, however these data give some idea about the prevalences of these dominant temperaments. Actually, further research is required in order to understand the nature of relationship between psychopathology and affective temperament types extendedly.

5.3. LIMITATIONS OF THE STUDY

There are three main limitations of the study:

1- There are few subjects who chose “Education” and “Science & Letters” categories in comparison with other categories. So, it was required to combine these two groups into one category. This combined category does not give an idea about both of the subcategories.

2- In this study, there are subjects from two study fields in high school: “Science” and “Mathematics and Literature”. However, some undergraduate programs, or vocational trainings, are chosen by students who are in other study fields as “Social Sciences” and “Foreign Languages”. There are no subjects in this study from these two study fields. So, vocational choices which are related to these two study fields, such as: “Cinema-Television”, “Communication”, “German Literature”, “Teaching French”, etc. are totally absent in this study.

3- In addition to the factors included in this study, there may be several other factors which affect vocational choice of senior year high school students in Turkey. There are a limited number of factors in this study. Some factors which are thought to be more influential on vocational choices of adolescents are included, some factors may be neglected.

5.4. RECOMMENDATIONS FOR FURTHER RESEARCH

There are three recommendations for further research:

1- Vocational choice after the eighth grades is also very important issue in vocational choice field. Students who choose to have education in "Vocational and Technical High Schools" are under the risk of several problems. These students make their vocational choices when they are fourteen years old. Generally, this choice is not made by the individual himself or herself, but by his or her parents. These early adolescents who are guided to continue their secondary education in "vocational and technical high schools", and their families are out of the scope of this study. There need for further research about their problems in Turkey.

2- There could be another research related to this one as: administering the temperament questionnaire which is used in this study to the professionals who are already working in real life, such as: mechanical engineers, doctors, lawyers, architects, etc. in order to make a comparison with the findings of this study. There will be any correspondence between findings. If so, for instance: architects are expected to have "irritable and anxious" affective temperaments.

3- In this study, "Name of the university" and "Minimum scores for undergraduate programs" factors are both found to be very important on vocational choices according to the opinions of adolescent subjects of the study. Success in the exam becomes more important than the vocational choice. It is highly recommended to investigate this problem.

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7- APPENDICES

BİLGİLENDİRME

Bu araştırmanın amacı üniversite bölüm seçimi ile bazı sosyodemografik özellikler ve mizaç (huy) özellikleri arasındaki ilişkiyi araştırmaktır. İlişikte bu amaçla hazırlanmış üç bölümlü bir form bulunmaktadır.

Birinci bölümde hakkınızdaki sosyodemografik bilgiler sorulmuştur. İkinci bölümde tercih etmeyi düşündüğünüz üniversite lisans programını belirtmeniz istenmiştir. Üçüncü bölümde ise mizaç özelliklerini sorgulayan sorular yer almaktadır. Bu formdaki soruları dikkatle okuyup içtenlikle yanıtlamanızı rica ediyoruz. Cevap kağıdının üzerinde isim veya tanıtıcı bir ifade bulundurmayınız. Yanıtlarınız sadece araştırma amacıyla araştırmacı tarafından değerlendirilecektir.

Katkılarınız için teşekkür ederiz.

APPENDIX A.

BÖLÜM-1

SOSYODEMOGRAFİK BİLGİ FORMU

1- Doğum tarihiniz:___/___/_____ (gün/ay/yıl)

2- Cinsiyetiniz: (E) (K)

3- Lisedeki alanınız (Aşağıdakilerden birini seçiniz) :

A) Fen Bilimleri
B) Türkçe-Matematik
C) Sosyal Bilimler
D) Dil
E) Diğer (lütfen belirtiniz):_____

4- Kendiniz dahil, toplam kaç kardeşsiniz? ___

5- Anneniz hayatta mı? (E) (H)

6- Annenizin tamamladığı eğitim seviyesi (Aşağıdakilerden birini seçiniz) :

A) Okur-yazar değil
B) Okur-yazar
C) İlkokul
D) Ortaokul
E) Lise
F) Üniversite-Ön Lisans (meslek yüksek okulu) mezunu
G) Üniversite-Lisans mezunu
H) Yüksek lisans yapmış
I) Doktora yapmış
J) Diğer (lütfen belirtiniz):_____

7- Annenizin çalışma durumu:

A) Halen çalışmıyor, geçmişte hiç çalışmadı.
B) Halen çalışmıyor, geçmişte çalıştı.
C) Halen çalışıyor.
D) Emekli

8- Babanız hayatta mı: (E) (H)

9- Babanızın tamamladığı eğitim seviyesi (Aşağıdakilerden birini seçiniz):

A) Okur-yazar değil
B) Okur-yazar
C) İlkokul
D) Ortaokul
E) Lise
F) Üniversite-Ön Lisans (meslek yüksek okulu) mezunu
G) Üniversite-Lisans mezunu
H) Yüksek lisans yapmış
I) Doktora yapmış
J) Diğer (lütfen belirtiniz):_____

10-Babanızın çalışma durumu:

A) Halen çalışmıyor, geçmişte hiç çalışmadı.
B) Halen çalışmıyor, geçmişte çalıştı.
C) Halen çalışıyor.
D) Emekli

11-Anne, babanız birlikte mi? (E) (H)

12-Ailenizin ve kendinizin sosyoekonomik düzeyini nasıl tanımlarsınız?

A) Alt
B) Alt-Orta
C) Orta
D) Orta-Üst
E) Üst

13- Şu sıralar psikolojik sağlık durumunuzu nasıl tanımlarsınız?
(1=en kötü, 5=en iyi)

1 2 3 4 5
/_____/_____/_____/_____/

14-Halen tedavi görmekte olduğunuz bir psikolojik rahatsızlığınız var mı? (E) (H)

15- Geçmişte geçirdiğiniz bir psikolojik rahatsızlığınız oldu mu? (E) (H)

16-Meslek seçimi süreci psikolojik sağlık durumunuzu olumsuz etkileyen bir süreç mi? (E) (H)

17-Aşağıdaki listede şimdiye kadar yapılmış bilimsel araştırmalardan çıkan bulgulara göre meslek seçiminde etkili olan faktörler yer almaktadır. Her bir faktörü kendi meslek seçiminizdeki etki durumunu düşünerek 0 ile 5 (0=hiç etki yok, 5=en yüksek etki) arasında derecelendiriniz.

0 1 2 3 4 5
/_____/_____/_____/_____/_____/

A- Kendi ilgi ve yeteneklerim (__)

B- Arkadaşlarımın benim hakkımdaki düşünceleri ve önerileri (__)

C- Annemin mesleği (__)

D- Annemin benim hakkımdaki düşünceleri ve önerileri (__)

E- Babamın mesleği (__)

F- Babamın benim hakkımdaki düşünceleri ve önerileri (__)

G- Akraba(ları)mın benim hakkımdaki düşünceleri ve önerileri (__)

H- Ders öğretmenlerimin benim hakkımdaki düşünceleri ve önerileri (__)

I- Okuldaki rehberlik hizmetleri sayesinde edindiğim bilgi ve izlenimler (__)

J- Dershanedeki rehberlik hizmetleri sayesinde edindiğim bilgi ve izlenimler (__)

K- Mesleğin toplumdaki yeri ve meslek değeri (__)

L- Medya (TV,gazete,dergi,internet vs.)aracılığıyla edindindiğim bilgi ve izlenimler (__)

M- Ailemin ve kendimin şuanki sosyoekonomik durumu ve yaşam şartlarımız(__)

N- Üniversite bölümlerinin ÖSYM kılavuzunda yer alan taban puanları (__)

O- Akademik başarı durumum (__)

P- Üniversitenin Adı (__)

Q- Üniversitedeki bölümlerin içerikleri ve ders planlarına ilişkin bilgi ve izlenimlerim (__)

R- Ülkenin içinde bulunduğu ekonomik durum ve yaşam şartları (__)

S- Diğer (lütfen belirtiniz):_____ (__)

APPENDIX B.

BÖLÜM-2

SEÇMEK İSTEDİĞİNİZ ÜNİVERSİTE LİSANS PROGRAMI

Burada bir üniversite lisans programı tercihi yapmanızı istiyoruz. Aşağıdaki kutuya arka sayfalardaki listede yer alan bölümler arasından, **tamamen özgürce, lisedeki alanınızı, sınava hazırlık sürecindeki sınav performanslarınızı ve bölümlerin taban puanlarını da düşünmeksizin, seçmeyi istediğiniz bölümü ve numarasını yazınız** (Arka sayfada 2008 ÖSYM tercih kılavuzunda yer alan üniversite lisans programları esas alınarak alfabetik sıraya göre hazırlanmış 237 seçenekten oluşan bir üniversite lisans programları listesi yer almaktadır).

Bölümün Adı:

_____

Listedeki Numarası: ____

ÜNİVERSİTE LİSANS PROGRAMLARI LİSTESİ

1	Acil Yardım ve Afet Yönetimi			51	Ebelik	
2	Aktüerya			52	Eczacılık	
3	Alman Dili ve Edebiyatı			53	Ekonometri	
4	Almanca Öğretmenliği			54	Ekonomi	
5	Amerikan Kültürü ve Edebiyatı			55	Ekonomi-Yönetim Bilimleri	
6	Antropoloji			56	Elektrik Mühendisliği	
7	Arap Dili ve Edebiyatı			57	Elektrik-Elektronik Mühendisliği	
8	Arapça Öğretmenliği			58	Elektronik Mühendisliği	
9	Arkeoloji			59	Elektronik ve Haberleşme Mühendisliği	
10	Arnavutça			60	Endüstri Mühendisliği	
11	Astronomi ve Uzay Bilimleri			61	Endüstri Ürünleri Tasarımı	
12	Avrupa Birliği İlişkileri			62	Enerji Sistemleri Mühendisliği	
13	Balıkçılık Teknolojisi Mühendisliği			63	Enformasyon Teknolojileri	
14	Bankacılık			64	Eski Yunan Dili ve Edebiyatı	
15	Bankacılık ve Finans			65	Eşit Ağırlıklı Programlar	
16	Basın ve Yayın			66	Fars Dili ve Edebiyatı	
17	Beslenme ve Diyetetik			67	Felsefe	
18	Bilgi Teknolojileri			68	Felsefe Grubu Öğretmenliği	
19	Bilgi ve Belge Yönetimi			69	Fen Bilgisi Öğretmenliği	
20	Bilgisayar Bilimleri			70	Finans Matematiği	
21	Bilgisayar Mühendisliği			71	Finans Matematiği	
22	Bilgisayar Teknolojisi ve Bilişim Sistemleri			72	Fizik	
23	Bilgisayar ve Enformatik Sistemleri			73	Fizik Mühendisliği	
24	Bilgisayar ve Öğretim Tekn. Öğretmenliği			74	Fizik Öğretmenliği	
25	Bilişim Sistemleri Mühendisliği			75	Fizik Tedavi ve Rehabilitasyon	
26	Biyokimya			76	Fransız Dili ve Edebiyatı	
27	Biyoloji			77	Fransızca Öğretmenliği	
28	Biyoloji Öğretmenliği			78	Gastronomi	
29	Biyomedikal Mühendisliği			79	Gazetecilik	
30	Biyomühendislik			80	Gemi İnşaatı ve Gemi Makineleri Müh.	
31	Boşnakça			81	Gemi Makineleri İşletme Mühendisliği	
32	Bulgar Dili ve Edebiyatı			82	Genetik ve Biyomühendislik	
33	Cevher Hazırlama Mühendisliği			83	Gıda Mühendisliği	
34	Coğrafya			84	Görme Engelliler Öğretmenliği	
35	Coğrafya Öğretmenliği			85	Gürcü Dili ve Edebiyatı	
36	Çağdaş Yunan Dili ve Edebiyatı			86	Güverte	
37	Çalışma Ekonomisi ve Endüstri İlişkileri			87	Halkla İlişkiler	
38	Çeviribilim			88	Halkla İlişkiler ve Reklamcılık	
39	Çevre Bilimleri ve Yönetimi			89	Havacılık Elektrik ve Elektroniği	
40	Çevre Mühendisliği			90	Havacılık ve Uzay Mühendisliği	
41	Çin Dili ve Edebiyatı			91	Hemşirelik	
42	Çocuk Gelişimi			92	Hidrojeoloji Mühendisliği	
43	Deniz İşletmeciliği ve Yönetimi			93	Hindoloji	
44	Deniz Teknolojisi Mühendisliği			94	Hititoloji	
45	Deniz Ulaştırma İşletme Mühendisliği			95	Hukuk	
46	Deri Mühendisliği			96	Hungaroloji	
47	Dil Ağırlıklı Programlar			97	İç Mimarlık	
48	Dilbilim			98	İç Mimarlık ve Çevre Tasarımı	
49	Din Kültürü ve Ahlak Bilgisi Öğretmenliği			99	İktisat	
50	Diş Hekimliği			100	İlahiyat	

101	İletişim			151	Metalurji ve Malzeme Mühendisliği	
102	İlköğretim Matematik Öğrt.			152	Meteoroloji Mühendisliği	
103	İmalat Mühendisliği			153	Mimarlık	
104	İngiliz Dil Bilimi			154	Moda Tasarımı	
105	İngiliz Dili ve Edebiyatı			155	Moda-Tasarım	
106	İngiliz Dili ve Karşılaştırmalı Edebiyatı			156	Moleküler Biyoloji ve Genetik	
107	İngilizce Öğretmenliği			157	Muhasebe	
108	İnşaat Mühendisliği			158	Muhasebe ve Finans Yönetimi	
109	İspanyol Dili ve Edebiyatı			159	Mühendislik ve Doğa Bilimleri	
110	İstatistik			160	Mütercim-Tercümanlık	
111	İşitme Engelliler Öğretmenliği			161	Nükleer Enerji Mühendisliği	
112	İşletme			162	Okul Öncesi Öğretmenliği	
113	İşletme Enformatiği			163	Orman Endüstrisi Mühendisliği	
114	İşletme Mühendisliği			164	Orman Mühendisliği	
115	İşletme-Ekonomi			165	Otomotiv Mühendisliği	
116	İtalyan Dili ve Edebiyatı			166	Pazarlama	
117	Japon Dili ve Edebiyatı			167	Petrol ve Doğalgaz Mühendisliği	
118	Japonca Öğretmenliği			168	Peyzaj Mimarlığı	
119	Jeodezi ve Fotogrametri Mühendisliği			169	Psikoloji	
120	Jeofizik Mühendisliği			170	Radyo, Sinema, Televizyon	
121	Jeoloji Mühendisliği			171	Rehberlik ve Psikolojik Danışmanlık	
122	Kamu Yönetimi			172	Reklamcılık	
123	Karşılaştırmalı Edebiyat			173	Reklamcılık ve Halka İlişkiler	
124	Kentsel Tasarım ve Peyzaj Mimarisi			174	Rus Dili ve Edebiyatı	
125	Kimya			175	Sağlık Kurumları İşletmeciliği	
126	Kimya Mühendisliği			176	Sağlık Yönetimi	
127	Kimya Öğretmenliği			177	Sanat Tarihi	
128	Kimya-Biyoloji Mühendisliği			178	Sanat ve Sosyal Bilimler Programı	
129	Konaklama ve Turizm İşletmeciliği			179	Sanat Yönetimi	
130	Kontrol Mühendisliği			180	Sayısal Programlar	
131	Kore Dili ve Edebiyatı			181	Seramik Mühendisliği	
132	Kültür Yönetimi			182	Sermaye Piyasası	
133	Küresel ve Uluslararası İlişkiler			183	Seyahat İşletmeciliği	
134	Latin Dili ve Edebiyatı			184	Sınıf Öğretmenliği	
135	Leh Dili ve Edebiyatı			185	Sigortacılık	
136	Lojistik Yönetimi			186	Sigortacılık ve Risk Yönetimi	
137	Maden Mühendisliği			187	Sinema ve Televizyon	
138	Makine Mühendisliği			188	Sinoloji	
139	Makine ve Üretim Mühendisliği			189	Sistem Mühendisliği	
140	Maliye			190	Sivil Hava Ulaştırma İşletmeciliği	
141	Malzeme Bilimi ve Mühendislği			191	Siyaset Bilimi	
142	Malzeme Mühendisliği			192	Siyaset Bilimi ve Uluslararası İlişkiler	
143	Matematik			193	Sosyal Bilgiler Öğretmenliği	
144	Matematik Bilimleri			194	Sosyal Hizmet	
145	Matematik Mühendisliği			195	Sosyoloji	
146	Matematik Öğretmenliği			196	Su Ürünleri Mühendisliği	
147	Matematik ve Bilgisayar Bilimleri			197	Sümeroloji	
148	Matematik-Bilgisayar			198	Şehir ve Bölge Planlama	
149	Medya ve İletişim			199	Tarım İşletmeciliği	
150	Mekatronik Mühendisliği			200	Tarih	

201	Tarih Öğretmenliği	
202	Tekstil Geliştirme ve Pazarlama	
203	Tekstil Mühendisliği	
204	Telekomünikasyon Mühendisliği	
205	Televizyon haberciliği ve Programcılığı	
206	Tıp	
207	Turist Rehberliği	
208	Turizm İşletmeciliği	
209	Turizm İşletmeciliği ve Otelcilik	
210	Türk Dili ve Edebiyatı	
211	Türk Dili ve Edebiyatı Öğretmenliği	
212	Türk Halkbilimi	
213	Türkçe Öğretmenliği	
214	Tütün Eksperliği	
215	Uçak Elektrik- Elektronik	
216	Uçak Gövde-Motor	
217	Uçak Mühendisliği	
218	Ulaştırma ve Lojistik	
219	Uluslararası Finans	
220	Uluslararası İlişkiler	
221	Uluslararası İlişkiler ve Avrupa Birliği	
222	Uluslararası İşletme	
223	Uluslararası Lojistik ve Taşımacılık	
224	Uluslararası Ticaret	
225	Urdu Dili ve Edebiyatı	
226	Uygulamalı Matematik	
227	Uzay Mühendisliği	
228	Üretim Mühendisliği	
229	Üstün Zekalılar Öğretmenliği	
230	Veteriner	
231	Yazılım Mühendisliği	
232	Yiyecek, İçecek İşletmeciliği	
233	Yönetim Bilişim Sistemleri	
234	Yunan Dili ve Edebiyatı	
235	Yunanca	
236	Zihin Engelliler Öğretmenliği	
237	Ziraat Mühendisliği	

APPENDIX C.

BÖLÜM – 3

MİZAÇ DEĞERLENDİRME ÖLÇEĞİ

AŞAĞIDAKİ SORULARI NASIL YANITLAYACAKSINIZ?

Lütfen her cümleyi dikkatle okuduktan sonra yaşamınızın büyük bir bölümü için size uyup uymadığına karar verin.

"Nasıl biri olduğunuzu, çevrenizdeki insanların sizi nasıl anlattığını, çocukluğunuzda ve gençliğe adım attığınız dönemden itibaren nasıl biri olduğunuzu, bu özelliklerin sizin huyunuzu suyunuzu anlatıp anlatmadığını" düşünerek:

- Eğer cümle size "kesinlikle veya çoğunlukla uyuyorsa" : (D) Doğru'yu işaretleyiniz.
- Eğer cümle size "tam olarak uymuyorsa" ya da "yaşamınızın yalnızca bazı bölümleri için uyuyorsa" : (Y) Yanlış'ı işaretleyiniz.
- Her cümleyi Doğru ya da Yanlış olarak cevaplayınız. Lütfen boş bırakmayınız.
- Bu formun her hangi bir yerine Adınızı veya Soyadınızı yazmayınız, verdiğiniz yanıtlar sadece ilgili uzmanlar tarafından kimliğiniz bilinmeden incelenecektir.
- Bu cümlelerin herkes için geçerli doğru ya da yanlış bir cevabı yoktur. Lütfen kendiniz için uygun cevabı samimiyetle cevaplayınız.

Teşekkür ederiz

	DOĞRU	YANLIŞ	
1	**(D)**	**(Y)**	Üzgün, mutsuz bir insanım
2	**(D)**	**(Y)**	İnsanlar bana olayların komik yanlarını göremediğimi söylerler
3	**(D)**	**(Y)**	Hayatım boyunca çok çektim
4	**(D)**	**(Y)**	İşlerin sonu sıklıkla kötüye varır diye düşünürüm
5	**(D)**	**(Y)**	Kolay pes ederim
6	**(D)**	**(Y)**	Kendimi bildim bileli başarısız hissetmişimdir
7	**(D)**	**(Y)**	Başkalarının sorun saymadıkları konularda ben kendimi daima suçlamışımdır
8	**(D)**	**(Y)**	Başka insanlar kadar çok enerjim olduğunu sanmıyorum
9	**(D)**	**(Y)**	Değişikliği pek sevmeyen tipte bir kişiyim
10	**(D)**	**(Y)**	Grup içinde konuşmaktansa başkalarını dinlemeyi tercih ederim
11	**(D)**	**(Y)**	Sıklıkla önceliği başkalarına veririm
12	**(D)**	**(Y)**	Yeni insanlarla karşılaştığımda kendimi oldukça rahatsız hissederim
13	**(D)**	**(Y)**	Eleştirildiğimde ya da reddedildiğimde duygularım çok kolay zedelenir
14	**(D)**	**(Y)**	Ben her zaman güvenilebilecek tipte bir insanım
15	**(D)**	**(Y)**	Başkalarının ihtiyaçlarını kendiminkilerin önüne koyarım
16	**(D)**	**(Y)**	İşlerin başında olmaktansa başkasının altında çalışmayı tercih ederim.
17	**(D)**	**(Y)**	Hiçbir şeyden emin olamayan tipte bir kişiyim
18	**(D)**	**(Y)**	Cinsel arzularım her zaman az olmuştur
19	**(D)**	**(Y)**	Normal olarak günde 9 saatten fazla uykuya ihtiyacım vardır
20	**(D)**	**(Y)**	Çoğu zaman sebepsiz yorgunluk hissederim
21	**(D)**	**(Y)**	Ruh halimde ve enerjimde ani değişiklikler olur
22	**(D)**	**(Y)**	Ruh halim ve enerjim ya yukarılarda ya da aşağılardadır, ender olarak ikisinin arasındadır

23	**(D)**	**(Y)**	Ortada görünür bir neden yokken zihnim bazen çok açık bazen de donuk olur
24	**(D)**	**(Y)**	Birisini gerçekten çok sevebilir ve sonra ona olan ilgimi tamamen kaybedebilirim
25	**(D)**	**(Y)**	Sıklıkla insanlara parlarım ve sonra suçluluk duyarım
26	**(D)**	**(Y)**	Sıklıkla birşeylere başlar ve onları bitirmeden ilgimi kaybederim
27	**(D)**	**(Y)**	Ruh halim (duygularım) sebepsiz yere sık sık değişir
28	**(D)**	**(Y)**	Canlılık ve uyuşukluk arasında sürekli gidip gelirim
29	**(D)**	**(Y)**	Bazen yatağa çökkün girer fakat sabah müthiş iyi hissederek uyanırım
30	**(D)**	**(Y)**	Bazen yatağa kendimi çok iyi hissederek girer ve sabahleyin yaşamın yaşamaya değer olmadığı duygusuyla uyanırım
31	**(D)**	**(Y)**	Bana olaylar karşısında sıklıkla karamsarlığa kapıldığım ve eski mutlu zamanları unuttuğum söylenir
32	**(D)**	**(Y)**	Aşırı kendine güven ile bir türlü kendinden emin olamama duyguları arasında gider gelirim
33	**(D)**	**(Y)**	Dışa dönüklükle içe kapanıklık arasında gider gelirim
34	**(D)**	**(Y)**	Tüm duyguları yoğun olarak yaşarım
35	**(D)**	**(Y)**	Bazen her şeyi çok canlı, bazen yaşamdan yoksun denecek kadar renksiz algılarım
36	**(D)**	**(Y)**	Aynı anda hem mutsuz, hem mutlu olabilen bir kişiyim
37	**(D)**	**(Y)**	Başkalarının ulaşılmaz saydıkları şeyler hakkında uzun uzun hayaller kurarım
38	**(D)**	**(Y)**	Kolay aşık olup, kolay vazgeçen bir kişiyim
39	**(D)**	**(Y)**	Çoğunlukla havamda ya da neşeli bir ruh halindeyimdir
40	**(D)**	**(Y)**	Yaşam, sonuna kadar tadını çıkardığım bir şölendir
41	**(D)**	**(Y)**	Fıkra anlatmayı, espriler yapmayı severim, insanlar bana şakacı olduğumu söylerler
42	**(D)**	**(Y)**	Her şeyin zamanla iyi olacağına inanan tipte bir kişiyim
43	**(D)**	**(Y)**	Kendime müthiş güvenirim
44	**(D)**	**(Y)**	Sıklıkla büyük fikirler üretirim
45	**(D)**	**(Y)**	Her zaman birşeylerle meşgulümdür
46	**(D)**	**(Y)**	Birçok işi, hem de yorulmadan, yapabilirim
47	**(D)**	**(Y)**	Konuşmaya doğuştan yetenekliyim. Konuşmam başkaları için ikna edici, etkileyici ve ilham vericidir
48	**(D)**	**(Y)**	Riskli bile olsalar yeni projelere atlamaya bayılırım
49	**(D)**	**(Y)**	Birşey yapmayı birkez kafama koyduğumda beni hiçbir şey durduramaz
50	**(D)**	**(Y)**	Doğru dürüst tanımadığım insanlarla bile son derece rahatım
51	**(D)**	**(Y)**	İnsanlarla birlikte olmayı çok severim
52	**(D)**	**(Y)**	İnsanlar bana sıklıkla burnumu başkalarının işine soktuğumu söylerler
53	**(D)**	**(Y)**	Cömertim ve başkaları için bol para harcarım
54	**(D)**	**(Y)**	Birçok alanda yetenekli ve uzmanım
55	**(D)**	**(Y)**	Canımın istediğini yapma hakkım ve ayrıcalığım olduğunu hissederim
56	**(D)**	**(Y)**	İşin patronu, “tepedeki adam” olmayı seven tipte bir kişiyim
57	**(D)**	**(Y)**	Birisiyle bir konu üzerinde anlaşamadığım zaman ateşli bir tartışmaya girebilirim
58	**(D)**	**(Y)**	Cinsel isteklerim daima fazladır
59	**(D)**	**(Y)**	Huysuz (sinirli) bir kişiyim
60	**(D)**	**(Y)**	Bir türlü hoşnut olmayan tabiatta bir kişiyim

61	**(D)**	**(Y)**	Çok yakınırım
62	**(D)**	**(Y)**	Başkalarını çok eleştiririm
63	**(D)**	**(Y)**	Kendimi sıklıkla patlamaya hazır, gergin hissederim
64	**(D)**	**(Y)**	Kendimi sıklıkla keman yayı gibi gerilmiş hissederim
65	**(D)**	**(Y)**	Adeta hayatımı anlayamadığım, hoş olmayan bir huzursuzluk yönetiyor
66	**(D)**	**(Y)**	Sık sık öylesine sinirleniyorum ki gözüm hiçbir şey görmüyor
67	**(D)**	**(Y)**	Terslendiğimde kavga edebilirim
68	**(D)**	**(Y)**	İnsanlar bana hiç yokken parladığımı söylerler
69	**(D)**	**(Y)**	Sinirlendiğimde insanlara bağırırım
70	**(D)**	**(Y)**	İğneleyici şakalarım beni zor durumda bırakır
71	**(D)**	**(Y)**	O kadar öfkelenebilirim ki birilerine zarar verebilirim
72	**(D)**	**(Y)**	Eşimi (ya da sevgilimi) o kadar kıskanırım ki buna dayanamıyorum
73	**(D)**	**(Y)**	Küfürbaz olarak bilinirim
74	**(D)**	**(Y)**	Birkaç kadeh içkiyle saldırganlaştığım söylenmiştir
75	**(D)**	**(Y)**	Çok kuşkucu bir kişiyim
76	**(D)**	**(Y)**	Cinsel isteklerim sıklıkla o kadar yoğundur ki gerçekten rahatsızlık yaratır.
77	**(D)**	**(Y)**	Kendimi bildim bileli endişeli biriyim
78	**(D)**	**(Y)**	Her zaman endişelenecek bir şey bulurum
79	**(D)**	**(Y)**	Başkalarının ufak tefek saydığı günlük şeyler hakkında endişelenir dururum
80	**(D)**	**(Y)**	Endişelenmenin önüne geçemiyorum
81	**(D)**	**(Y)**	Birçok insan bana bu kadar endişelenmememi söylemiştir
82	**(D)**	**(Y)**	Zorda kaldığımda çoğu kez kafam durur, bloke olurum
83	**(D)**	**(Y)**	Gergin olduğumda gevşemeyi beceremiyorum
84	**(D)**	**(Y)**	Sık sık içimde huzursuz bir kıpırtı hissederim
85	**(D)**	**(Y)**	Zor durumda kaldığımda, sıkıldığımda sıklıkla ellerim titrer
86	**(D)**	**(Y)**	Sık sık midem bozulur
87	**(D)**	**(Y)**	Heyecanlandığımda ishal olabilirim
88	**(D)**	**(Y)**	Heyecanlandığımda sıklıkla bulantı hissederim
89	**(D)**	**(Y)**	Heyecanlandığımda tuvalete daha sık gitmek zorunda kalırım
90	**(D)**	**(Y)**	Birisi eve geç kaldığı zaman başına bir kaza gelmiş olabileceğinden korkarım
91	**(D)**	**(Y)**	Sıklıkla ailemden birileri ciddi bir hastalığa yakalanacak diye çok korkarım
92	**(D)**	**(Y)**	Devamlı olarak aile üyeleriyle ilgili kötü bir haber alacakmışım gibi geliyor
93	**(D)**	**(Y)**	Uykum dinlendirici değil
94	**(D)**	**(Y)**	Sıklıkla uykuya dalmakta güçlük çekerim
95	**(D)**	**(Y)**	Zor durumda kaldığımda, sıkıldığımda hemencecik başım ağrır
96	**(D)**	**(Y)**	Zor durumda kaldığımda, sıkıldığımda göğsüm sıkışır
97	**(D)**	**(Y)**	Kendimi güvende hissetmiyorum
98	**(D)**	**(Y)**	Günlük işleyişteki küçük değişiklikler bile beni çok zorlar
99	**(D)**	**(Y)**	Araba kullanırken yanlış herhangi bir şey yapmasam bile, polis beni durduracakmış gibi bir korku duyarım
100	**(D)**	**(Y)**	Ani sesler beni kolayca irkiltir