A STUDY ON CAREER INDECISION OF 11TH AND 12TH GRADE STUDENTS: TESTING GENDER, CAREER BELIEFS, ACADEMIC SELF-EFFICACY AND PROBLEM SOLVING SKILLS THROUGH PATH ANALYSIS

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ABSTRACT

A STUDY ON CAREER INDECISION OF11TH AND 12TH GRADE STUDENTS: TESTING GENDER, CAREER BELIEFS, ACADEMIC SELF-EFFICACY AND PROBLEM SOLVING SKILLS THROUGH PATH ANALYSIS

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The aim of the current study was to examine some factors that contribute to career decision making of 11th and 12th grade students within the context of the Learning Theory of Career Counseling (LTCC; Krumboltz, 1996). Specifically, the study examined to what extend the variables of gender, career beliefs, self-efficacy and problem solving skills and their relationship predict career indecision.

The sample was composed of 409 (234 female, 175male) 11th and 12th grade students whose ranged between 16-18 (M = 16.48, SD = 3.04). The Career Beliefs Inventory (Krumboltz, 1991), Academic Self-Efficacy Scale (Jerusalem & Schwarzer, 1981; Yılmaz, Gürçay & Ekici, 2007), Problem Solving Skills Inventory (Heppner, 1988; Şahin, Şahin & Heppner, 1993), Career Decision Scale

(Büyükgöze-Kavas, 2010; Osipow et al., 1976) and Demographic Information Form were used as data collection instruments.

In the current study, a path model was proposed to examine the relationships between the predicting variables of gender, career beliefs, academic self-efficacy problem solving skills and their impacts on career indecision. Results of the path analyses indicated four nonsignificant paths. Thus, these paths were trimmed and eliminated from the proposed model. The trimmed model accounted for 18% of the variance in career indecision. The findings of the study showed that career indecision was negatively affected by problem solving skills, gender, and career beliefs. In addition, academic self-efficacy was indirectly related to career indecision. Overall, findings indicated that eventhough the hypothesized model that based on variables from Krumboltz's Learning Theory of Career Counseling (LTCC; Krumboltz, 1996) was not supported by the data, the trimmed model showed mediating role of task approach skills (academic self-efficacy and problem solving skills) through gender and career beliefs in predicting career indecision.

Key words: career indecision, career beliefs, Learning Theory of Career Counseling

ÖZ

11 ve 12. SINIF ÖĞRENCİLERİNİN KARİYER KARARSIZLIĞI ÜZERİNE BİR ÇALIŞMA: CİNSİYET, KARİYER İNANÇLARI, AKADEMİK ÖZ YETERLİLİK VE PROBLEM ÇÖZME BECERİLERİNİN YOL ANALİZİ İLE SINANMASI

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Bu çalışmanın amacı, Kariyer Danışmanlığında Öğrenme Kuramı (Krumboltz, 1996) çerçevesinde, 11 ve 12. sınıf öğrencilerinde kariyer kararlarını etkileyen bazı faktörleri incelemektir. Bu çalışmada özellikle, cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerileri gibi değişkenlerin ve bunların birbiri ile ilişkisinin kariyer kararsızlığını ne derece yordadığı araştırılmıştır.

Bu çalışmanın katılımcılarını yaşları 16-18 arasında değişen (yaş ortalaması 16.48, SD = 3.04) 409 (234 kız, 175 erkek) 11 ve 12. sınıf öğrencisi oluşturmuştur. Veri toplama aracı olarak Kariyer İnançları Ölçeği (Krumboltz, 1991), Akademik Öz Yeterlilik Ölçeği (Jerusalem & Schwarzer, 1981, Yılmaz, Gürçay and Ekici, 2007), Problem Çözme Becerileri Envanteri (Heppner, 1988, Şahin, Şahin and Heppner,

1993), Kariyer Karar Ölçeği (Osipow et al., 1976, Büyükgöze- Kavas, 2010) ve Demografik Bilgi Formu kullanılmıştır.

Bu çalışmada, Yol analizi, öncelikle önerilen modelde cinsiyetin, kariyer inançlarının, öz-yeterlilik ve problem çözme becerilerinin kariyer kararsızlığını ne ölçüde belirleyen etkenler olduğunu test etmek amacıyla kullanılmıştır. Sonuçlar, anlamlı olmayan dört yol olduğunu göstermiştir. Bu yüzden, bu yollar yenilenmiş ve önerilen modelden çıkarılmıştır. Yenilenen model, kariyer kararsızlığına ilişkin varyansın %18' ini açıklamaktadır. Çalışmanın sonuçları, kariyer kararsızlığının problem çözme becerileri, cinsiyet ve kariyer inançlarından olumsuz olarak etkilendiğini göstermiştir. Buna ek olarak, akademik öz-yeterlilik dolaylı olarak kariyer karasızlığı ile ilgilidir. Bulgular, Krumboltz'un Kariyer Danışmanlığında Öğrenme Kuramı modeline dayalı seçilen değişkinlerle hipotez edilen modeli her ne kadar bu örneklem tarafından desteklemese de, yenilenen model görev yaklaşım becerilerinin (akademik öz-yeterlilik ve problem çözme becerileri) cinsiyet ve kariyer inancı aracılığıyla (mediate) kariyer kararsızlığını yordadığını göstermiştir.

Anahtar Kelimeler: kariyer kararsızlığı, kariyer inançları, kariyer danışmanlığında öğrenme kuramı

To Prof. Dr. Oya Yerin Güneri &

To My Mother…

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CHAPTER I

INTRODUCTION

1.1. Background of the Study

In this ever-changing society decisions are inevitable part of our lives, since everything starts and ends with a decision. Thus, during the period from birth to death, every individual is consistently facing with various situations that require making decisions. One of those situations is deciding on what kind of job a person wants to do in the future. However this is somewhat a powerful one, which affects not only daily activities of an individual at least nine hours of a day, but also the geographical place person lives, kind of financial issues she/he has to cope with, social networks that they can be part of (Perkmen, 2009).

Certain ages in our lives are critical-periods regarding specific decisions. For example, throughout adolescent years individuals struggle with a variety of life issues such as managing school, social life, dealing with familial problems and romantic relationships. They also begin to explore who they are and what they can do in the future as a career. Eventhough career decision is one of the significant developmental tasks of adolescence (Crites, 1973; Super & Forrest, 1972) it is also a concern for adults (Niles, Yoon, Balın & Amudson, 2010). That is, many people from adolescents to highly-experienced adults suffer from career indecision.

Career indecison is found to be associated with wide range of variables including age and gender (Patton & Creed, 2001), career maturity (Rojewski, 1994), decision-making style (Mau, 1995), career barriers (Patton, Creed, & Watson, 2003), identity status (Vondracek & Kawasaki, 1995), self-knowledge (Gati & Saka, 2001), structure of thinking about careers (Tracey & Darcey, 2002), negative affective disposition (Multon & Lapan, 1995), fear of success (Staley, 1996), low feelings of self-esteem (Germeijs & De Boeck, 2002), poor self- awareness, anxiety (Wanberg & Muchinsky, 1992), and poor social skills (Nota & Soresi, 2004).

The duration and process of help provided to clients in career decision making have changed in time. Traditionally, counselors have helped clients in one or two seesions, wherein clients decided on the occupation (Krumboltz, Foley & Cotter, 2012). Counselors have also been expected to apply tests and scales while helping individuals in choosing a job. Most research studies also proposed to achive congruence between people and work by decreasing or eliminating career indecision (Krumboltz, 1994). However, according to Krumboltz (1992), career indecision should be viewed in a positive light, as open-mindedness. Krumboltz also states that "indecision is desirable and sensible, as it allows the opportunity for clients to benefit from unplanned events" (2011, p. 156). Likewise, Hall (1992) stated that indecision is an exploration process and Brown (2002) suggested that career decisions are essentially values-based decisions; therefore, indecisions should be viewed in terms of value evaluation. In fact, indecision is as valuable,

logical and sensible as career decision, since it gives individual an opportunity to learn and enhance him or herself.

In the world of 21st century, deciding on a career has become more complicated process due to several factors such as pressure from the job market to acquire new skills to meet the changing demands of society; expectations from friends and family, hopes and fears about future and self-efficacy beliefs about professions (Krumboltz, 1991). In the recent years, the Social Learning Theory that focused on how cognitive and environmental variables combine to affect human behavior (Phares, 1984) has been recognized as a valuable framework for understanding career development and decision making processes of individuals (Lent & Hackett, 1987).

Krumboltz's Learning Theory of Career Counseling primarily derived from Bandura's (1986) general Social Cognitive Theory, that emphasizes the interactions between person, contextual, and learning factors in shaping career choice behaviors (Lent & Brown, 1996; Lent et al., 1994) has also become popular in the last two decades. The original theory (Krumboltz et al, 1976, Mitchell & Krumboltz, 1990) was known as the Social Learning Theory of Career Decision Making (SLTCDM). This theory has been revised and transformed into the Learning Theory of Career Counseling (Mitchell & Krumboltz, 1996). The theory states that, changes are inevitable in one's career path and so decisions should be seen under the positive lights. Although the model has received considerable research attention, a need for further cross-cultural and cross-national studies has been underlined (Krumboltz et

al., 2012). Drawing from this line of research, the purpose of the present study was to gain insight into career indecision among 11th and 12th graders through the context of Krumboltz's Learning Theory of Career Counseling.

In Turkey, career indecision and its contributing factors have been investigated by many researchers (e.g. Balın, 2008; Büyükgöze-Kavas, 2010; Çakır, 2003; Doğan, 2010; Uğurlu, 2007). However, Learning Theory of Career Counseling Model, in spite of its popularity as being an extensive framework in understanding one's career choice and development, has not gained much attention in the Turkish literature. Thus, the aim of the present study was to test the proposed path model of career indecision among Turkish 11th and 12th grade students, using Learning Theory of Career Counseling as a framework.

1.2. Purpose of the Study

The purpose of this study was to investigate the correlates of career indecision among 11th and 12th grade students by using the Krumboltz's Learning Theory of Career Counseling Model as a framework. Specifically, the proposed antecedents of career indecision for this study were gender, career beliefs, academic self-efficacy, and problem solving skills. To be more precise, this model not only aimed to test the impact of combination of independent variables on career indecision, but it also tested the mediating role of task approach variables (academic self-efficacy and problem solving skills).

Krumboltz et al., (1994) emphasized in the Learning Theory of Career Counseling Model (LTCC) that "learning" is a key element and indecision might be linked to limited educational background of individual. Therefore, factors that influence individual preference in this social-learning model are composed of inherited personal characteristics and traits, interactions in the environment, and numerous cognitive processes. The presented theory attempts to explain interactions of the genetic factors, environmental conditions, learning experiences, and task approach skills (Figure 1.1) that leads one's career path (Krumboltz, Mitchell & Jones, 1976). Those factors result in different interactions and produce decisions.

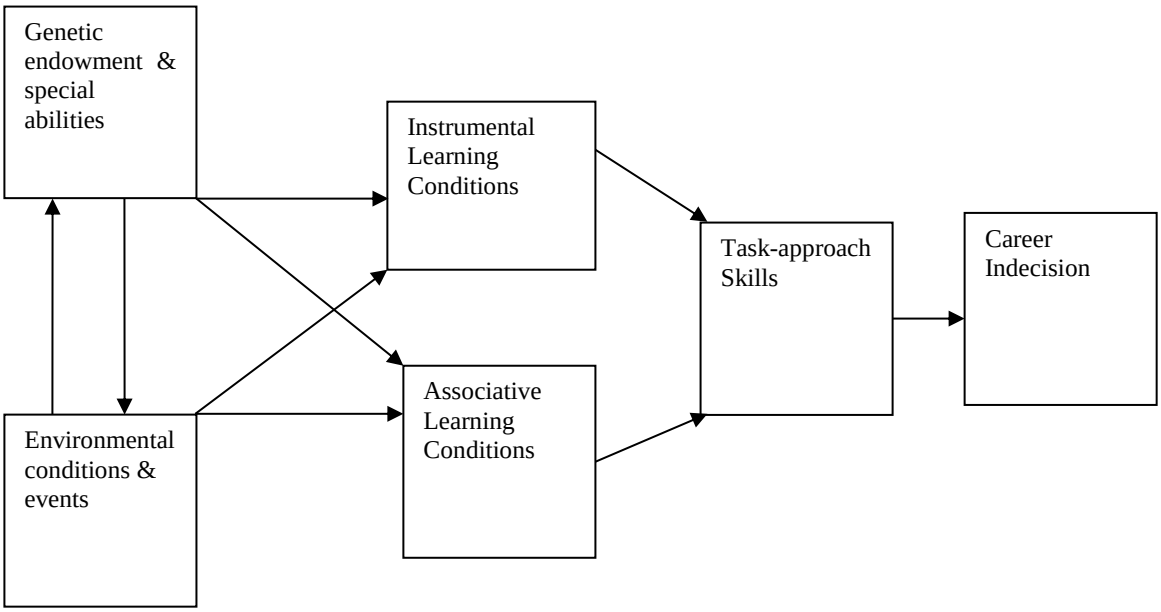

Figure 1.1 Krumboltz Model of LTCC

1.3. Research Question

The present study addresses the following research question:

"To what extent the career indecision is explained by the proposed path model that consisted of gender, career beliefs, academic self-efficacy and problem solving skills?"

1.4. Proposed Path Model and Hypothesis

The aim of the current study was to investigate how variables from Learning Theory of Career Counseling Model (Krumboltz et al., 1994) predict the career indecision among adolescents. Krumboltz et al., (1994) emphasized "learning" as the key element in the Learning Theory of Career Counseling Model (LTCC) and stated that indecision might be linked to limited educational background of individual. Therefore, factors that influence individual preference in this social-learning model are composed of inherited personal characteristics and traits, interactions in the environment, and numerous cognitive processes. The LTCC attempts to explain interactions of the genetic factors, environmental conditions, learning experiences, and task approach skills (Figure 1.1) that leads one's career path (Krumboltz et al., 1976). Those factors result in different interactions and produce decisions.

One of the study variables included from the model was gender. It was selected as the genetic endowment variable, because it was viewed as a reliable and central variable in the career decision process (Krumboltz, Mitchell & Jones, 1976). Krumboltz's theory, suggested that gender may strongly influence the career decision making process of respondents (Pedhazur, 1982). Accordingly, this

variable was included in the study as a means of controlling for its influence. Since, people's personalities and behavioral reportaires can be explained most usefully on the basis of their unique learning experiences (Mitchell & Krumboltz, 1996), it is important to understand and determine the influences of learning experiences, specifically career beliefs on career decision process. Therefore, a career belief, as the core of Learning Theory of Career Counseling Model, was included into the study in order to measure its effect on career indecision. In the present study, academic self-efficacy and problem solving skills were selected as task approach skills which influence outcomes of career decisions of Learning Theory of Career Counseling (Niles & Hartung, 2000). Self-efficacy is regarded as a variable that has powerful effect on the learning process (Bandura, 1997). Bandura (1977) introduced the concept of self-efficacy expectations, which means person's beliefs regarding his or her ability to perform a given task successfully, as a potent mediator of human behavior. Researchers have reported that the higher the perceived self-efficacy, the lower the levels of career indecision (Gloria & Hird, 1999; Robbins, 1985; Osipow, 1999). Therefore, it was thought that academic self-efficacy would in turn affect the individual's career decidedness. That is why self-efficacy was included in the model of the present study.

Likewise, in recent years, most researchers have examined the relation between an individual's perceptions of his or her ability to solve problems and to make career decisions (Heppner et al., 2004;McCracken & Weitzman, 1997) since the decisions and challenges throughout the career development process involve problem-solving skills. Although the association between problem-solving appraisal to career

behaviors has been well established in most studies, no studies applied this variable to the career development of Turkish students.

In the proposed path model, gender, career beliefs, academic self-efficacy and problem solving skills, were exogenous variables and career indecision was the endogenous variable. More specifically, academic self-efficacy and problem solving skills were tested as mediators between gender, career beliefs and career indecision in this proposed path model. Thus, the relation between gender, career beliefs and career indecision will be substantially strengthened when academic self-efficacy and problem solving skills are included as mediators. Figure 1.2 represents the proposed causal model of the present study.

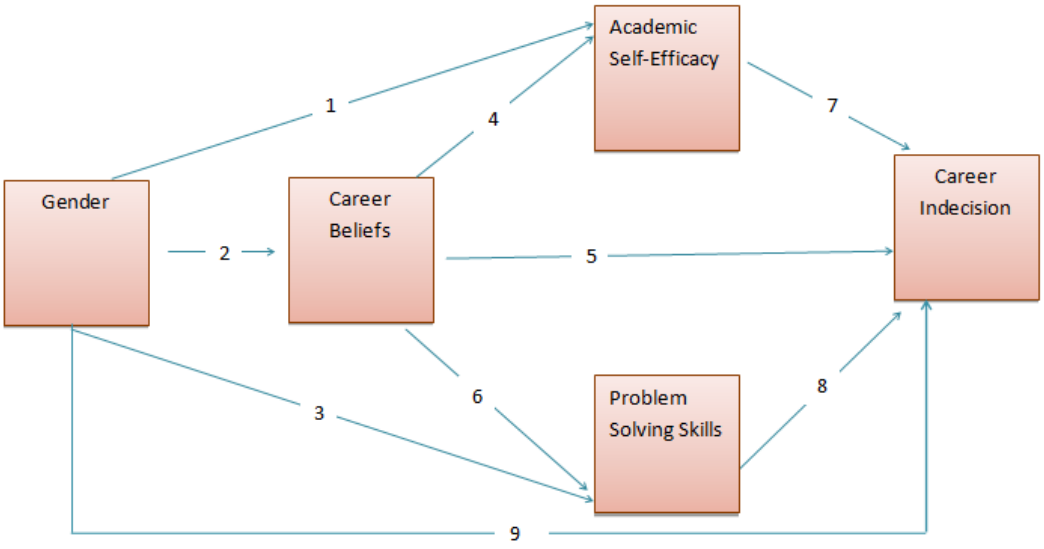

Figure 1.2 Proposed Model of Career Indecision

The following hypotheses will be tested in the present study:

Hypothesis 1: There will be a relation between gender and academic self-efficacy directly (Path 1)

Hypothesis 2: There will be a relation between gender and career beliefs directly (Path 2)

Hypothesis 3: There will be a relation between gender and problem solving skills directly (Path 3)

Hypothesis 4: There will be a relation between gender and academic self-efficacy indirectly through career beliefs (Path 2 and Path 4)

Hypothesis 5: There will be a relation between gender and problem solving skills indirectly through career beliefs (Path 2 and Path 6)

Hypothesis 6: There will be a relation between career beliefs and academic self-efficacy (Path 4)

Hypothesis 7: There will be a relation between career beliefs and problem solving skills (Path 6)

Hypothesis 8: There will be a relation between career beliefs and career indecision directly (Path 5)

Hypothesis 9: Career Beliefs will be related to career indecision

(a) through academic self-efficacy (Path 4 and Path 7)

(b) through problem solving skills (Path 6 and Path 8)

Hypothesis 10: Academic Self-efficacy will be related to career indecision (Path 7)

Hypothesis 11: There will be a relation between problem solving skills and career indecision (Path 8)

Hypothesis 12: There will be a relation between gender and career indecision indirectly

a. through academic self-efficacy (Path 1 and Path 7)

b. through problem solving skills (Path 3 and Path 8)

Hypothesis 13: Gender will be related to career indecision (Path 9)

1.5. Significance of the Study

The world, practice of the professions, industry, individuals, and life itself, in other words everything is changing so rapidly. Paralel to those changes, educational system, the government, and the national labor market emphasizes the power structure of "win-lose" and teach individuals that they need to be successful, and they are responsible for their happiness (Bougsty, 2012). Thus, especially young people are increasingly under the pressure of being successful and having a stable

career decision. Paralel to the changes in society, over the past two decades career counseling profession has moved toward a framing career choice as lifelong process rather than a onetime choice (Hall, 2004). Accordingly, substantial efforts have been focused on better understanding of the career indecision construct (Newman, Gray & Fuqua, 1999).

The changing world of work has called into question some of the old conventional theories of career development. Current trends in the career counseling profession emphasized the need for a change of a trait-and-factor or matching model in career counseling theory and practice (Krumboltz, 1999). The system of matching, which Parsons termed "true reasoning," was the basis of a questionnaire Parsons developed, which was administered to clients for purposes of "telling" them what kind of work they should do (Feller, Honaker & Zagzebski, 2001). Employing a matching model of career counseling is likely to result in students making choices based on limited past experiences. A general consensus among researchers is that the old models for career decision-making (i.e., trait-factor, sociological, developmental, personality, and behavioral approaches) have been valuable for helping people make decisions related to their careers, but these approaches are incomplete (Betz, 1992; Bolles, 2000; Cabral & Salomone, 1990; Gelatt, 1989; Krieshok, 1998; Miller, 1983; Mitchell, Levin, & Krumboltz, 1999). Because, as stated by Huang (1999) among these approaches career decision was viewed as a single decision-making event in which the individual's talents (his interests and abilities) were matched with the tasks (work opportunities and requirements).

Today most students enter college in order to receive training for the future jobs (Krumboltz, 1996). However, students need to be provided with opportunities to explore their assumptions, generalizations, and beliefs about themselves and the world of work to be able to better prepared for the future. The way in which people make career decisions is highly affected by their beliefs. As Krumboltz (1994) stated "If their beliefs are accurate and constructive, they will act in ways that are likely to increase the achievement of their goals. If their beliefs are inaccurate and self-defeating, they will act in ways that make sense to them but may decrease accomplishment of their goals"(p. 424).

In the Learning Theory of Career Counseling Model, Krumboltz (1992) asserted that individuals' skills, interests, beliefs, values, and personalities, are constantly changing as a result of exposure to new learning experiences and so simply matching current skills or interests to those of a particular occupation may not be the best course of action. Furthermore, Krumboltz (1999) stressed in LTCC that an ongoing dialogue about career indecision and the rationale behind career indecision is open-mindedness that will serve as powerful tool and resource for adolescents to make educated and informed choices about their careers. Therefore, career counselors do not only help individuals about occupational selections, they also help individuals expand their capabilities and interests, prepare them for changing work tasks, and deal with all career problems (Krumboltz, 1996).

In the recent decades, it has become clear that the way in which people make career decisions is highly affected by many factors such as self-efficacy beliefs (Betz &

Luzzo, 1996); family pattern (Kinnier, Brigman & Noble, 1990); personality (Hall, 2002); role models (Baugh & Fagenson-Eland, 2005; Buunk, Peiro, & Griffioen, 2007); and career beliefs (Enright, 1996). In order to make sound decisions, students need to be provided with opportunities to explore their assumptions, generalizations, and beliefs about themselves and the world of work (Krumboltz, 1991).

Most career development theories have developed models to investigate the factors that have impact on career indecision. However, most of these models have been developed in Euro-American cultures reflecting an individualistic orientation. According to Weiss (2000); these theories may not be applicable for ethnic minorities and culturally diverse populations that served collectivistic notion. In Turkish culture, which is also regarded as close to collectivistic orientation (Mocan-Aydın, 2000), no published research questionned effect of career indecision, gender, career beliefs, academic self-efficacy, and problem solving skills through taking LTCC as a theoretical framework. Thus, this study could be regarded as one of the initial efforts in Turkey for testing a model, which investigates the relationship between some variables that is based on LTCC and career indecision. Conducting a study with variables related to LTCC model among Turkish 11^{th} and 12^{th} graders is quite important in order to understand factors contributing career indecision in the context of this culture.

In the Turkish educational system Anatolian High Schools, have been regarded as selective institutions that were established with several aims such as preparing

students for higher education programs which correspond to their interests, abilities, and level of achievement; providing more effective foreign language teaching; ensuring more efficient education through use of a foreign language, usually English (Öngen, 2006). Due to the structure of the education system, all students in Turkey have to make their decisions regarding their career during high school years. This system also requires students to enter nationwide university entrance exam and make their career decisions according to the scores they obtained in the exam. Graduates of Anatolian Schools are generally are regarded as more competitive in the nationwide university entrance exam, having high aspirations for their future career. Therefore, the current study was conducted with Anatolian High School Students who are regarded as having high aspirations for their future career and career decision making.

In the current educational system in Turkey it is hard for students to change the department also when students enter a university. As Büyükgöze-Kavas (2010) stated that the current higher education system do not offer much opportunities to undecided students to change their department, a considerable number of students who are placed into academic programs after passing the exam, re-take the entrance exam several times to enter the academic program that they desire. In this regard at high school level, asessing factors that contribute to career indecision and relevant skills that are essential to facilitate students' career planning is specifically significant. Otherwise, as a long-lasting consequence of career indecision, many students may be at risk for being unsatisfied with the occupation they eventually obtain. Therefore, the information provided in this study can provide school

counselors to understand factors contribute career decision/indecision process of students and design their services accordingly.

Additionally, another aim of this study was to make translation, validity, and reliability studies of Career Beliefs Inventory (CBI; Krumboltz, 1994). Since in LTCC, assisting individuals to understand fully their beliefs is a major component, dealing with career indecision is also related to individuals' troublesome career beliefs. In this respect, an accurate assessment of career beliefs contributes to the development of effective intervention and prevention. Most of the instruments generally measure irrational career beliefs (Çakır, 2003; Yılmaz-Erdem, & Bilge, 2008). However, the CBI is a scale for diagnosis and not to determine right or wrong but to assess categories of beliefs that could find counterproductive assumptions (Krumboltz, 1994). Thus, another significant contribution of the present study was conducting the reliability validity studies of CBI with the Turkish high school students for the purpose of more accurate assessment of career beliefs.

1.6. Operational Definition of the Terms

Career indecision is a temporary state or developmental phase in which individuals pass on their way to reach a decision (Osipow, 1999). According to Krumboltz (1999), career indecision is a desirable and sensible, as it allows the opportunity for clients to benefit from unplanned events.

Career Beliefs are essential factors affecting one's career decision and job behaviors (Krumboltz, Rude, Mitchell, Hamel, & Kinnier, 1982). Krumboltz (1999) states career beliefs as the assumptions that people make about themselves and what they must do to succeed in the world of work.

Academic Self-efficacy refers to one's beliefs about what he or she can successfully carry out in a given academic task (Schunk, 1991).

Problem Solving Skills is the individual's ability to identify and define problems, find and generate solutions and use the solutions and at the end see whether they are effective or not (Reinecke, DuBois, & Schultz, 2001).

Genetic Endowments is the genetics or inherited qualities such as race, sex, and intelligence that may influence an individual's career selection (Krumboltz & Mitchell 1996).

Learning Experiences are any experiences learned or acquired vicariously or through direct observation may influence career selection (role modeling, positive and/or negative reinforcement) (Krumboltz & Mitchell, 1996).

Task Approach Skills are skill sets the individual has developed such as work habits, problem solving abilities, and mental sets, emotional and cognitive responses (Krumboltz & Mitchell, 1996).

CHAPTER II

REVIEW OF THE LITERATURE

This chapter provides a review of literature related with major theories and models of career development, as well as presents information regarding Social Learning Theory of Career Decision Making Model (Krumboltz, 1994). The chapter also includes research findings regarding study variables.

2.1. Theoretical Models of Career Development

In career counseling field, there have been three major theoretical movements in order to understand to career development and choice (Guidon & Hanna, 2002). According to Super (1981) theories and approaches to career development fall into 3 categories. First, focuses on matching people with occupations; second developmental approach leading to match; and the third career decision making. More specifically, therse approaches were named as Trait and Factor theories, Developmental theories and Social Learning theories. All these approaches explains how people develop and make career decisions with the aim of helping individuals who are exploring their career decisions or are unsure of their career path.

The earliest of the three theories, Trait and Factor theory, attempted to identify and categorize the traits of individuals in order to match them with the requirements of different occupations (Parsons, 1909). The pioneer of this theory is Parsons he suggested three steps help someone to make an occupational decision. These steps were as follows: "A clear understanding of self, abilities, interests, and limitations; advantages and disadvantages, opportunities in different lines of work; and true reasoning on the relations of these two groups of facts to (Parsons, 1909, p. 5)". In his three step procedure, Parson pointed out a schema about individual differences and skills of self-assessment, matching people and occupations, and the process of vocational decision.

The most widely used and studied Trait and Factor theory was further developed by John Holland (1966, 1997). According to Holland's Career Typology, career choices and decision making are expressions of an individual's personality. In his work, by analyzing and categorizing personalities and work environments, six typologies were developed. These six typologies are Realistic, Investigative, Artistic, Social, Enterprising and Conventional. Holland proposed that individuals naturally develop an individual orientation which can be described by a combination of these six interest typologies (Holland, 1997). The goal of this approach was to find congruence; or match between an individual's typologies and the typologies of the work environment. Since individuals tend to choose work environments that are congruent with their typology, it is believed that the individual's career path will remain stable over time. Trait and Factor Theory is criticized for lacking an explanation on how individuals develop their typologies.

While the emphasis is given on identifying and categorizing similarities between people and work environments, little insight is given on how this development has been occurred.

The second category of theories, Developmental Theory of career choice, has evolved since 1950s and pointed out the idea that career is a continuous process which occurs throughout the individual's lifetime (Super, 1957). One of the proponents of developmental approach, Ginzberg, Ginsburg, Axelrad and Herma (1951) focused on how individuals cope with problem of vocational choice in early years. According to Ginzberg et al., (1951) four variables comprise the concept of choice: first are the reality factors, second is the influence of educational process, third is the emotional needs and desires, and the fourth is the role of values. Accordingly, Donald Super's Life Span theory (1957) is another Developmental Theory of career counseling which extends the idea of Ginzberg. The theory also tries to understand how an individual's career decision making developed over the lifespan. Super's theory provides a longitudinal view of the different roles, tasks and obstacles an individual may experience throughout their career development. Super (1990) proposed that career development takes place across one's entire life-span and can be divided into five stages; Growth (4-to-13); Exploration (14-to-24); Establishment (25-to-44); Maintenance (45-65); and Disengagement (65 and over). Super's belief was that people develop and get their self-view based on their abilities, personality and life roles (Super, 1990). The lifespan aspect of his theory emphasizes the influence of different factors such as self-esteem, responsibilities and motivations that impact career decision at different times during employment.

More recent career theories have focused attention on decision-making process. For instance, Peterson, Sampson, and Reardon (1991), named their theory as Cognitive Information-Processing Approach, describe three domains of career choice (knowledge, decision making and executive processing domains). Gelatt (1989), another decision-making pioneer, pointed out positive uncertainty, in which he gave emphasis on the role of information. Gelatt (1989) recognized that in a changing world, decisions would need to be reformulated and adjusted many times over.

Recognizing the importance of complex, chaotic, and often messy "meaning" theme of career development, many contemporary theorists approach career development as an existential thing (Savickas, 2006). Likewise, Miller-Tiedeman's Life Career Theory (1988) has viewed the process as an internal journey requiring the use of a life-career compass (personal experience, intelligence and intuition) to find one's way. Another one, Social Cognitive Career Theory (SCCT) (Lent, 2005), has been mentioned as a recent approach to "understand career puzzle" (p.101). SCCT focused on specific cognitive mediators which influenced by learning experiences in career decision making (Patton & McMahon, 2006).

2.1.1 Theoretical Framework of the Study: Krumboltz's Learning Theory of Career Counseling (LTCC)

Social Learning Theory, aimed to explain why people make certain career decisions and choices (Bandura, 1997). Bandura's theory placed a greater emphasis on the

social learning that individuals experience and how their environment may or may not reinforce their views on what careers may be desirable or appropriate for them. Bandura proposed a Triadic Reciprocal Interaction System that defined the interaction of the environment, personal factors and actual behavior. Each of the three factors could affect and be affected by the other two and the system was regulated by the individual's cognitive structures and perceptions to determine individual behavior (Bandura, 1998). Bandura believed that this system could be used to assist counselors and individuals in understanding how their career decisions were influenced by the person and their environment. A key concept of his theory is observational learning. Observational learning occurs when individuals observe and imitate other's behavior. According to Bandura (1986), there are four processes influenced by the observer's behavior following exposure to models: Attention, Retention, Motor Reproduction and Motivation. For instance, if a child sees an adult receive praise for drawing a picture (attention) and attends to the behavior, he or she will retain aspects of the behavior (retention) and reward so that they can later reproduce the behavior (motor production) expecting a similar form of reinforcement (motivation). Observational learning is also believed to be related to an individual's self-efficacy; indicating that how well one manages difficult tasks will regulate their behaviors. In particular, if an individual does not believe they can reproduce the observed behavior, it is unlikely that they will move through the four component processes.

The original theory known as the Social Learning Theory of Career Decision Making (SLTCDM) was changed into Learning Theory of Career Counseling

(LTCC) by Krumboltz (1996), since Krumboltz found his original theory to be lacking when it came to providing specific direction to career counselors. The more recent version, namely LTCC, attempts to integrate practical ideas, research and procedures to provide a theory that goes beyond an explanation of why people pursue various jobs. While the two theories were published at different times, they can be regarded as one theory with two parts. Part one (SLTCDM) explains the origins of career choice and part two (LTCC) explains what career counselors can do about many career related problems' (Mitchell & Krumboltz, 1996, p. 234).

In the LTCC, Krumboltz (1994) assumed that individuals see a narrow set of potential options due to limited exposure to learning opportunities. Furthermore, the consequences experienced after these opportunities and reactions of others (parents, peers etc.) shape and restrict/enhance individual learning. Therefore, confusion, uncertainty or indecision about a career path can be viewed as a natural consequence of limited exposure to learning opportunities.

In addition, LTCC seeks to answer questions of why career decisions are made by examining four factors; Genetic Endowment and Special Abilities, Environmental Conditions, Learning Experiences and Task-Approach Skills (Krumboltz, 1979; Mitchell, Levin & Krumboltz, 1999).

Genetic Endowment (e.g., race, sex, physical ability) and special abilities (e.g., intelligence, musical ability, artistic ability), are what they are born with or the inherited aspects of an individual that are not learned. The greater an individual's

innate genetic abilities, the more likely they will be able to respond to learning. For instance, the theory proposes that some individuals may be more disposed towards certain fields such as the arts or athletics based on their specific genetic endowment.

Conversely, environmental factors (e.g., number and nature of job opportunities, social policies and procedures for selecting workers, technological developments) are ones generally viewed as being outside of an individual's control and can be explained by chance factors (Krumboltz, 1998). These can include social, cultural, economic, political and cultural factors, but are not limited to them. It is believed that anyone of these factors, or a combination, can have a significant impact on the availability of career choices.

Like Bandura's theory, learning (e.g., instrumental learning experiences, associative learning experiences) is a key factor in this model as an individual's career preferences are viewed as resulting from their prior learning experiences (Krumboltz, 1979). It is the combined effect of all previous learning through instrumental and associative means that provide the tools and experience for decision making (Mitchell, Levin & Krumboltz, 1999). Because of the life-long learning aspect of this theory, each person will have had a unique set of learning experiences that developed their views of career and the world of work.

The final factor, task approach skills (e.g., work habits, perceptual and cognitive processes, emotional responses), is those that an individual uses when needed to

solve a problem or make a decision. It is believed that the interaction of genetic endowment, environmental factors and learning experiences translate into the skills a person uses in observing, approaching and ultimately addressing the needs of a task (such as making a career decision) placed in front of him/her.

As a result of the combination of these factors three important consequences are postulated. First are self-observation generalizations (people's perception of their attitudes and skills, ability to perform a task successfully, learning experiences and personal values) which are self-views individual learns based on life experiences and world-view generalizations (beliefs about environment). According to Krumboltz (1984) self-observation generalizations influence people's judgments about their probabilities for success and so play an important role in determining career choices. The second, consequences, stresses the task approach skills which include the both cognitive and affective sets of skills the individuals have developed such as problem-solving skills, work habits, emotional responses, and cognitive responses. The last, consequences, are actions concerned with entry behaviors which represent an overt step in a career progression including changing a college major, applying for a specific job, accepting a job offer and other activities (Krumboltz et al., 1976; Brown, 2003).

A later addition to Krumboltz's Social Learning Theory is the theory of Planned Happenstance (Krumboltz, 1998; Mitchell, Levin & Krumboltz, 1999). Planned Happenstance is the recognition that many events outside of a person's control can influence their lives and career decisions. However, rather than accepting that

factors are outside of an individual's control; Planned Happenstance offers a method for identifying and generating chance events. Planned Happenstance also attempts to suggest what steps an individual may take in order to act upon the chance events in a way that is beneficial to them. Rather than avoiding the unpredictability of serendipity, Planned Happenstance theory encourages individual to embrace and use uncertainty. The two main points of the planned happenstance theory are that; the exploration of career options will generate opportunities and that the development of specific skills will assist individuals to take the advantage of the chance opportunities. The theory of Planned Happenstance is viewed as a positive one that replaces typically negative terms like "indecision" with "open-mindedness" and views career development as a more subjective and explorative process. According to Planned Happenstance, individuals, in order to be able to fully utilize chance in their career decision making, need to develop five skills; Curiosity, Persistence, Flexibility, Optimism and Risk Taking (Mitchell, Levin and Krumboltz, 1999). The goal of a Planned Happenstance is to help clients generate, recognize, and incorporate chance events into their career development (Mitchell et al., 1999). Planned Happenstance considers both environmental and intra-individual variables affecting individuals' career development (Niles & Harris-Bowlsbey, 2005).

Regarding empirical support, considerable evidence has been cited for documenting the processes described by the SLTCDM (Mitchell & Krumboltz, 1984, 1990). Other strengths of the approach are its acceptance of the influence of situational factors, such as the role of chance, in shaping careers (Cabral & Salomone, 1990).

In addition, Krumboltz's theory clarifies the effects of a variety of variables such as biological, social, ethnic, and cultural factors (e.g., gender, socioeconomic status) on career decision making by including their influence into learning experiences and task approach skills (Herr & Cramer, 1992; Mitchell & Krumboltz, 1990). For instance, in terms of genetic endowments and special abilities, gender (Datti, 2009; Ryan-Jones, 1990), personal and professional characteristics (Sorapuru, 2003) and disability status (Enright, 1996) were studied. Further, arising from LTCC's ecological base and emphasis on learning, some other research studies in the literature incorporated the variables such as role models (Perrone et al., 2001), career beliefs (Enright, 1996; Liu, 2003; Luzzo & Day, 1999), and career maturity (Schnorr & Ware, 2012). In spite of research on career beliefs has been wide, limited literature on task approach of LTCC, such as effectiveness of perceived ability on task skills (Sorapuru, 2003) were regarded as task approach skills.

2.2. Career Indecision

Deciding on a career is one of the most important aspects of an individual's development and personal happiness (Krumboltz & Worthington, 1999; Sharf, 2006). Generally, career indecision is regarded as being undecided about a future career (Kraus & Hughey, 1999). Career indecision is a common concern for adolescents, but it can be an issue for employed individuals as well. Because, career indecision is a choice individuals face more than once in their lifetime. Osipow (1999) stated that making a career decision only during late adolescence and early

adulthood is not enough, instead, revised career plans seem to be needed at every life transitions.

Guay, Senécal, Gauthier, and Fernet (2003) defined career indecision as a lack of ability to make choices. Chartrand and Robbins (1990) added that career indecision is the uncertainty that inhibits the act of selecting a career or implementing career plans. Tokar, Withrow, Hall, and Moradi (2003) defined career indecision as the lack of ability to select and commit to a career decision. According to Gati, Krausz and Osipow (1996), career indecision refers to those people who experience problems in career decision making. Krumboltz (1983) on the other hand, stresses that making decisions is a painful process that involves at least four causes of stress for teenagers: threat to self-esteem, surprise, deadlines and absence of allocated time for decision making.

When coming to specify career indecision states, Dysinger (1950) distinguished career indecision between developmental and chronic indecision. The former was labeled as indecision because of limited experience and knowledge. The latter, on the other hand, is defined as inability to form a career decision. Those with developmental indecision may only need information about the world of work to make a career decision, whereas those who have chronic indecision may have information, but have anxiety about their choices or to make a decision.

Career indecision has advanced through a conceptual progression, from a simple dichotomous classification of decided-undecided (Holland & Holland, 1977), to a

model specifying distinct levels (Savickas, 1989), to an interactional classification (Chartrand et al., 1994), to a typological classification of career indecision types based on career development and personality variables (Lucas & Epperson, 1988; Osipow et al., 1976; Savickas & Jarjoura, 1991).

Holland's Dichotomous view simply categorizes individuals between two, either decided or undecided. Holland and Holland (1977) acknowledged a difference between being undecided and indecisive. The distinction between indecision and indecisiveness became a cornerstone of future career indecision research. The distinction was that not all undecided students could be viewed in the same way.

Savickas's Level View specifies distinct levels of career indecision. Savickas (1994) suggested that career indecision should be viewed on a three-level continuum based on the degree of indecision and anxiety. The highest level is described as serious indecision and excessive anxiety related to making a career choice. The middle level is characterized by moderate to serious indecision and moderate anxiety. Finally, the lowest level represents moderate indecision and little anxiety. Savickas (1989) suggested that the lowest and middle levels were more representative of developmentally appropriate career indecision, whereas the highest level represented chronic indecisiveness.

Chartrand's interactional classification of career indecision criticized Savickas level approach in terms of unidimensional. Instead, Chartrand and her colleagues (1994) posited that the cognitive and affective dimensions of career indecision were

independent of one another and that the two dimensions would interact differently at various levels of career indecision. They suggested that "by conceptualizing undecidedness on a continuum, cognitive and affective antecedents to career indecision would be masked" (p. 56).

In typological view of career indecision, researchers have examined the relationships between career indecision and a number of different career and personality variables. For instance; Osipow et al., (1976) proposed a differentiated model of career indecision devised from 16 possible antecedents. Using factor analytic procedures, they identified four principal factors contributing to career indecision which are lack of confidence/choice anxiety, the perceived or actual presence of an external barrier (e.g race or sex discrimination), having a number of attractive alternatives so inability to make decision and some type of personal conflict or uncertainty regarding how to make a decision. Osipow, Carney, and Barak (1976) presented a different approach to understanding the career process. Rather than investigating general concepts such as career maturity, they directed their focus to career decision making, looking at obstacles preventing people from making career decisions. Osipow (1999) defined indecision as is a developmentally appropriate experience which individuals pass on their way to decision. He further proposed that career indecision fluctuates depending on a variety of situational factors such as decision making styles (Osipow & Reed, 1985), parental influence (Osipow, 1983) and gender (Osipow et al., 1976).

Lucas and Epperson (1988) proposed five distinct career indecision types. First one was the students who were close to make a career decision but still need to integrate their plans and priorities. The second one was students having difficulty to decide whether to concentrate on work, relationships, or other activities. The third type consisted of students who were uncertain about their career interests and appeared to lack motivation for making a career choice. The fourth type was characterized by feelings of distress and uncertainty about career goals. Finally, the fifth type consisted of students who were close to make a career choice despite having little interest in work activities.

Other than those four conceptualizations of career indecision, some researchers such as Cochran signified career indecision as a wavering back and forth between career goals (McInnes & Chen, 2011). According to Cochran's Narrative Approach, career indecision is a cognitive state that an individual moves in and out of overtime as decisions are considered, pursued, and changed.

Last but not the least, some researchers declined to define career indecision as a negative situation. For instance, Krumboltz (1992) stated that indecision is not always harmful, instead it is necessary and desirable quality to motivate finding individual's career pathway. Likewise, Osipow (1999) stated that career indecision is a normal developmental process during which career options are evaluated and in which a decision is made, is implemented, becomes obsolete, and leads to the need to make another decision, which results in new indecision. Mitchell, Levin, and Krumboltz (1999) proposed a theory regarding a unique type of career decision-

making style termed “Planned Happenstance,” urging individuals to not look at unplanned events as a negative occurrence, but instead see them as an opportunity for growth and learning. In this theory, career indecision is viewed as open-mindedness, with individuals learning to tolerate the unknown and begin exploring possibilities (Mitchell et al., 1999). Krumboltz (1992) discusses that in today’s society, there is absolutely no tolerance for ambiguity and people automatically predict a negative shadow or stigma over undecided persons. Instead, Krumboltz (1992) stressed that, rather than a negative situation, career indecision should be attributed in a positive way and indecision should not be confused with indecisiveness, which is a negative, pervasive, and chronic trait. Krumboltz (1992) refers to the "wisdom of indecision" and speaks in favor of being open to change. He comments on the need to rethink the system of career counseling that labels one who is open to possibility as "indecisive." Placing labels of maladjustment on individuals who fail to comply with the established paradigm of what constitutes "well adjusted" causes damage. Rather, Krumboltz (1999) recommends that individuals, from early childhood on, be encouraged to stay open to possibility and opportunity as they continue to explore career alternatives throughout their lifetime.

Career indecision is defined by Kuzgun (2006) as the inability of individuals to specify their careers, when they have to do. Additionally, Ulu (2007) stated that career indecision is a process of individual’s belief and value system. Akkoç (2012) added that career indecision is a long term in individual’s life which affects a variety of issues and processes such as from life values to where to live.

2.3. Factors related with Career Indecision

Multiple factors contribute to career indecision to some extent. Those variables that may contribute to the understanding of the complexity of career indecision have to be investigated (Saunders et al., 2000). Indecision is frequently associated with psychological distress, including depression (Multon & Lapan, 1995), anxiety (Fuqua, Seaworth, & Newman, 1987) and interpersonal difficulties (Felsman & Blustein, 1999). In addition, many individual variables like self-efficacy (Betz & Klein-Voyten, 1997; Nawaz & Gilani, 2011; Taylor & Popma, 1990), dysfunctional cognitions (Lewis & Gilhousen, 1987; Nevo, 1987; Sampson, Peterson, Saunders & Reardon, 1996b), irrational beliefs (Stead, Watson, & Foxcroft, 1993), as well as familial factors (Constantine, Wallace, & Kindaichi, 2005; Tokar, Withrow, Hall, & Moradi, 2003) and peer support (Guay, Senécal, Gauthier, & Fernet, 2003) were found contribute career indecision.

Egner and Jackson (1978) conducted a group counseling in order to increase individuals' career maturity and career decidedness. They investigated the effect of a 10-week career guidance program on career indecision high school students. Research findings pointed out that there is a positive effect of career guidance program on students' career maturity levels compared to control group. Savickas (1990), in his experimental study, indicated that individuals who have career indecisions attended to career decision making course and their levels of indecision decreased in terms of gaining insight in planful attitudes and behaviors. Mitchell and Krumboltz (1987), pursued a 5-week program based on Cognitive Behavioral

Therapy in order to decrease individuals career indecision by challenging their career beliefs. Results of the study indicated that participants attending to program learned to make decisions more effectively.

Likewise, in Turkey, career planning and decision-making process continues to be interest of researchers. Although there are studies that examined several variables like vocational maturity (Bacanlı, 1995; Evren, 1999; Uskaner, 1999), career choice (Büyükgöze-Kavas, 2005; Genç, Kaya, & Genç, 2007; Köksalan, 1999; Özyürek & Kılıç-Atıcı, 2002), career self-efficacy (Bacanlı, 2006a; Bozgeyikli, 2005; Bozgeyikli, Bacanlı, & Doğan, 2009), career beliefs (Ulu, 2007), career values (Korkut-Owen et al., 2009); few studies investigated the factors related to career decision/indecision of individuals (e.g Bacanlı, 2000; Büyükgöze-Kavas, 2010; Çakır, 2003; Güçray, 1996; Hamamcı & Hamurlu, 2005; Kuzgun, 1992; Ulu, 2007) Existing studies put much emphasis on career decision-making difficulties of adolescents (Bacanlı, 2008), career decision and career beliefs of high school students (Kırdök, 2010), irrational beliefs in career selection of high school students (Yılmaz-Erdem & Bilge, 2008), career indecision of university students (Büyükgöze-Kavas, 2010).

When looking at the experimental studies about career indecision in Turkey, firstly, Çakır (2003) investigated the effect of a 10-week career guidance program based on trait-factor approach on career indecision levels of 9th grade high school students. Participants of this study were 38 students either being in experimental or control

group. Research findings indicated that there is a positive effect of career guidance program on 9th graders' career indecision levels.

Furthermore, Doğan (2010) examined the effects of career decision-making group guidance program which was developed based on some decision-making models. Participants of the study were 30 ninth graders (15 in experimental group and 15 in control group). He found that such a program has a positive effect on high school students' decision making difficulties.

2.4. Research on Proposed Model Variables and Career Indecision

The following part of the literature review will summarize research findings related to career indecision and Learning Theory of Career Counseling. In the present study; career beliefs was regarded as exogenous variable; academic self-efficacy and problem solving were regarded as mediator variables. Career indecision was regarded as an endogenous variable.

2.4.1 Gender

Many studies have investigated gender with regard to career indecision. Most of the early career development theories were devoted to the career development of men though there have been attempts to explore gender difference (Betz & Fitzgerald, 1987). Even though studies that evaluated gender difference have repeatedly

reported no difference on career indecision (Browne, 2005; Creed, Patton, & Prideaux, 2006; Guerra & Braungart-Rieker, 1999; Kang, 2009; Osipow, Carney, & Barak, 1976; Taylor, 1982, Weiss, 2000), in some studies females found to have experienced higher career indecision than males (e.g., Creed, Patton, & Bartrum, 2004; Turkson, 2003). For example, a study conducted with high school students revealed that senior high school female students had significantly higher mean score on Career Indecision Subscale of Career Decision Scale than male students (Creed et al., 2004). According to the study of Lee (2005) female undergraduates were found to posses less coping ability in career indecision situations than males.

Furthermore, some studies that investigated gender with regard to career beliefs, indicated that there is not a consensus on gender difference about their career beliefs. Eccles (2007) found that men and women differed in the value that they placed on different types of occupations which effect their career beliefs. Larose, Ratelle, Guay, Senécal, Harvey, and Drouin (2008), in their studies, followed men and women studying science and technology through their college years and noted that in contrast to men, women's persistence may be more related to environmental factors such as messages about women in science from parents and teachers and their forming career beliefs about jobs in pursuing a career in science. However, Buday, Stake and Peterson (2012) found no significant differences between men and women in in their perceptions of the careers.

Accordingly, studies with gender and self-efficacy indicated that gender or sex-role effects, along with stereotypes, and gender-based expectancies (Diekman & Eagly,

2000; Eagly, 1987) can influence individuals' self-efficacy levels in several ways. First, gender-based expectations often result in men and women developing different types of skills; those that are consistent with the stereotypical, socially acceptable career paths. Second, expectations result in men and women pursuing gender-stereotypical career objectives. Finally, to the extent that gender-based social roles are normatively acceptable, they will lead to the presentation of different and often fewer business opportunities to women than to men (Schiller & Crewson, 1997; Wilson et al., 2007). In another study, Lindstrom, Harwick, Poppen, and Doren (2012) found young women with disabilities are restricted by a number of individual and structural barriers, such as low self-esteem and limited self-efficacy to fully explore a wide range of career options.

2.4.2 Career Beliefs

In the fields of psychology, sociology and education, personal beliefs are stated as a strong motivating force in human behavior (Bandura, 1995). Robbins (1991) reported that beliefs have the power to create as well as the power to destroy. He added that "It's not the events of our lives that shape us, but our beliefs as to what those events mean" (p .73). Beliefs about careers play a vital role in career decision making (Krumboltz, 1983). Career development is affected much from the maladaptive career beliefs they develop (Turner & Ziebell, 2011).

Career beliefs are formed and organized through interactions with the environment, which provide access to selective learning experiences (Bandura, Barbaranelli,

Caprara, & Pastorelli, 2001; Krumboltz, 1996). Career beliefs are acquired via young people's academic and social experiences and the subjective meanings they give to these experiences (Bandura et al., 2001).The influence of client cognitions in the career process continues to be of interest to researchers in the field of career development (Corbishley & Yost, 1989; Nevo, 1987; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b). There are lots of studies that support the existence of a relationship between career beliefs and career indecision. For instance, Enright (1996) provide empirical evidence that beliefs reflecting self-doubt may impair a person's ability to reason logically, which results in poor decisions. This finding also corroborates the cognitive behavioral assumption that irrational beliefs may complicate the decision-making process (Beck, 1976; Ellis, 1984; Nevo, 1987). Other empirical research further validates the proposed relationship between career beliefs and career indecision. Taylor and Betz (1983) found a strong, inverse correlation between career indecision and career decision-making self-efficacy statements involving a lack of confidence and structure regarding career decisions. Similarly, in cluster analyses performed on measures of career indecision, other authors (Larson, Heppner, Ham, & Dugan, 1988; Wanberg & Muchinsky, 1992) have reported clusters relating to doubts regarding confidence in career decision making. Finally, Stead, Watson, and Foxcroft (1993) found that irrational beliefs, particularly those relating to underlying anxiety, were related to levels of career indecision.

In another study on career indecision, Mitchell and Krumboltz (1987) compared a cognitive restructuring control group with other control groups focused only on

decision skills training, anxiety reduction techniques, and exploration of occupations. In contrast to the other three groups, the cognitive restructuring group maintained vocational exploratory behavior after the treatment ended, had reduced anxiety, and scored as well as the uncontrolled group on decision making skills. The authors concluded that cognitive restructuring interventions were more effective than traditional methods of counseling for decision making, finding occupational information, and anxiety control, and suggested cognitive restructuring to gain effective and beneficial results for career indecision. Heppner et al., (2004) agreed that the assessment of faulty personal beliefs toward the work world is crucial for individual progress and prospective careers. If students retained irrational beliefs and exaggerated generalizations about the transition process from education to career, career decisions would be postponed. Krumboltz (1992) claimed that if attitudes and assumptions are explored then career counseling becomes "more complete". In order to make decisions, it is often necessary to change the way one thinks, which lead to positive emotions and productive behavior.

Past research has found that there are domains that are socially or culturally regarded as "masculine" or "feminine" and that these stereotypes affect students' orientation towards the study of these domains (Correll, 2001; Hyde & Durik, 2005). It is believed that beliefs obscure tbe complexities in learning, and may lead to the conclusion that some groups (e.g, males or females) are inherently superior or inferior to others (Lerdpornkulrat, Koul, & Sujivorakul, 2012). Beliefs are causally related to stronger endorsement of stereotypes (Levy, Stroessner, &

Dweck, 1998). There are some research studies that support men and women form their career beliefs differently (Türküm, 2003; Stake & Mares, 2005; Steele, 1997). For instance, Stake and Mares (2005) posited that for girls and boys in high school academic role models and support from family members and friends lead them to generate different career beliefs.

In Turkey, the relationship among career indecision, general irrational beliefs, irrational career beliefs, and vocational maturity of high school students (N = 282) were investigated by Hamamcı and Esen-Çoban (2007). In the study, high positive correlation between irrational career beliefs and career indecision was found. Additionally, Kırdök (2010) investigated the effectiveness of a career decision making program on career indecision, irrational career beliefs and vocational maturity level of 9th grade high school students. Results of the study revealed that there is a significant difference between career indecision and irrational career belief levels of the students. In another study, Kepir (2011) investigated the irrational beliefs of the senior high school students attending high schools and 190 graduates who did not pass university exam. Results showed that hope level, type of school, irrational beliefs were found to be significantly related to career decision or indecision. Likewise, Akkoç (2012) in a study that evaluated the relationship between the career indecisions and career beliefs of 299 high-school students found a positive relationship between total scores of career decision and career beliefs of students.

2.4.3 Academic Self-Efficacy

Academic self-efficacy was studied as another contributing factor to career indecision for the present study and treated as another endogenous variable for the study. Academic self-efficacy is defined in the present study as students' beliefs in their own abilities to perform academic tasks (Solberg, O'Brien, Villarreal, Kennell, & Davis, 1993) and is based on Albert Bandura's definition of self-efficacy (Bandura, 1977).

Self-efficacy concept which was developed by Bandura (1977) is stated as an individual's belief in his or her own ability in a particular situation or environment, when outcome expectations include beliefs about the likely results of an action (Lent et al., 1994). Bandura described self-efficacy as having varying strength, magnitude, and generality (i.e., situational vs. global). Bandura (1986) hypothesized that people have beliefs about their own abilities (efficacy expectancies) and beliefs about contingencies operating in the environment (outcome expectancies). Therefore, if people believe they have or they can develop skills required to train for a demanding occupation and believe that achieving such a position is likely to result in a successful outcome (e.g., personal enjoyment, productive employment) they will be likely to persevere with education, training, and job seeking. Otherwise, they are unlikely to persevere in pursuing the occupation.

Self-efficacy is a construct that describes the beliefs about one's abilities to effectively overcome personal-emotional barriers to perform a task, such as career decision-making. In other words, self-efficacy is one's belief that he or she has the ability to take on a task and be effective at completing it successfully. Findings from several investigations have provided evidence that self-efficacy is associated with career beliefs, career maturity, career exploration (e.g, attending career workshops, meeting with a career counselor), and career decidedness (Luzzo, McWhirter, & Hutcheson, 1997). For instance, Luzzo (1993) found that self-efficacy was moderately and positively related to career decision-making attitudes and age of the participants, but it was not related to career decision-making skills. McAuliffe (1992) suggested that low self-efficacy limits career aspirations. Furthermore, Rothberg et al., (1987) found that career interest and career self-efficacy expectations significantly predicted the range of perceived career options above and beyond any other dependent variables, including socioeconomic status, gender, race, career interests, or sex role orientation. Meanwhile, Solberg et al., (1994) described the four sources of efficacy information and noted how application of these sources could help individuals become more successful in the career search process. The findings for Whiston's study (1996) indicated that there are family dimensions related to career indecision and career decision-making self-efficacy. Additionally, self-efficacy was found as a strong variable on career beliefs of individual (Cardoso & Moreira 2009; Zikic & Klehe 2006). People high in self-efficacy plan their career more effectively and show higher levels of job search behavior (Spurk & Abele, 2011).

Additionally, self-efficacy is also related to individuals' specific problem-solving experiences (Bandura, 1986; Caprara et al., 2003). Individuals learn how to solve or struggle with the problems through their observation and imitation of people around them. Bandura (1986) revealed that the perception of self-efficacy influences problem-solving skills since individuals with higher self-efficacy are having more cognitive skills and more initiative in their strategic flexibility and in controlling their environment. However, the low individuals' self-efficacies, the more they avoid challenging tasks since they perceive the difficulties as threats. Likewise, Matsushima and Shiomi (2003) claimed that individuals with high self-efficacy spend more efforts to deal with problems since they believe in themselves about their capacity and their perception to solve the problems.

In a similar vein, research findings in Turkey revealed that there is a relationship between career decision and self-efficacy beliefs. For instance, Büyükgöze-Kavas (2010) revealed in her study that career indecision was negatively predicted from career decision-making self-efficacy, perceived parental psychological autonomy, and positively predicted from locus of control and career outcome expectations. In another recent study, Tansu (2011) designed to investigate the possible relationship between high school students' career decision-making difficulties in terms of their career decision-making self-efficacy, subjective well-being and socioeconomic level. The results of the study revealed that career decision-making difficulty level would be explained by career decision expectation of competence, subjective well-being and socio-economic status.

2.4.4 Problem Solving Skills

Problem solving can be defined as "consistent individual differences in the ways people prefer to plan and implement generating activities in order to produce ideas and prepare for action" (Selby et al., 2004, p. 222). Jordaan (1963) noted that problem solving serves to enhance career exploration. D'Zurilla and Nezu (1999) define problem solving as "the self-directed cognitive-behavioral process by which a person attempts to identity or discover effective or adaptive solutions for specific problems encountered in everyday life" (p. 10). McGuire (2001) pointed out that when individuals are given explicit instructions and training on the process of defining and formulating problems, there were significant improvements in both the quantity and quality of solutions they generated and in the effectiveness of their decision making.

Research has shown that individuals with disabilities benefit from learning problem-solving skills. In an intervention designed by Bullis and Cheney (1999) for adolescents with emotional and behavioral disorders, teaching problem solving skills was a prominent part. An intervention (Schlossberg, 2001) focusing specifically on ninth grade students, incorporated goal setting, problem solving, and career exploration. The results indicated a significant increase in these three areas on the scores from pretest to post-test. Wolffe (1996), in her study of career education for students with visual impairments, suggested several important areas that should be included in a career education program including career exploration, goal setting, identifying vocational interests, self-awareness, creative thinking, and

problem solving. While problem-solving has been shown to be effective in a wide variety of areas, no research has been conducted on its effectiveness as applied to career counseling even though all the theorists recognize the real need to do so (Nyugen, 2005).

2.5. Summary

By many researchers, career indecision has been foci of career counseling for many years. In this chapter, major theories and models of career decision were presented. Matching theories, developmental career theories and theories focusing on career decision making were summarized. Furthermore, various definitions of career indecision and numerous studies which have been conducted to understand the factors that contributed to career indecision were emphasized. Krumboltz's Learning Theory of Career Counseling was utilized as the framework of the present study. In the current study, gender, career beliefs, academic self-efficacy and problem solving skills were included to predict career indecision.

CHAPTER III

METHOD

In this chapter methodological details of the study are presented. The chapter initially begins with the explanation of the research design. Next section provides information about the participant characteristics. The data collection instruments are explained in the third section. In the fourth section, explanations about data collection procedures are presented along with the potential limitations. The last section, presents Path Analysis technique used in the study along with the explanations of its basic terms.

3.1 Research Design

In the present study, the relationships between high school students' gender, career beliefs, academic self-efficacy problem solving skills and their impact on career indecision were investigated. This is a quantitative research which relies on self-report data from students. The design of the study is correlational, since it examines the relationships between two or more variables without any attempt to affect them. It also provides information about the magnitude and direction of the associations among variables (Bordens & Abbott, 2007; Jackson, 2011).

3.2 Participants

The accessible population for this study was 11th and 12th graders in 23 high schools' (N = 4650) in Çankaya district of Ankara. In the current study the convinience sampling was utilized to reach group of the participants in the schools. Especially, three Anatolian High Schools were chosen from the Çankaya district due to mainly two reasons. Firstly, Anatolian High Schools are generally known by their reputation about attracting highly achieving students who have high career aspirations. Second was the implementation of the same curriculum among those schools that is proposed by Ministry of National Education.

All 11th and 12th grade students in these selected 3 Anatolian High Schools (n = 495) constituted the sample of the study. The total of 428, 11th and 12th grade high school students enrolled in these selected schools volunteered to participate in the study. Data were collected during the fall semester of 2012–2013 academic year. After the data cleaning procedure, 19 cases were excluded from the data, due to incomplete or patterned fillings. The sample eventually consisted of 409 students (234 female, 175 male) 11th and 12th grade students with a age range of 16-18 (M = 16.48, SD = 3.04).

3.3 Data Collection Instruments

In the present study, the demographic form prepared by the researcher, Career Decision Scale (CDS) (Osipow et al., 1976, Büyükgöze- Kavas, 2010), Career

Beliefs Inventory (CBI) (Krumboltz, 1991), Academic Self-Efficacy Scale (ASE) (Jerusalem & Schwarzer, 1981; Yılmaz, Gürçay and Ekici, 2007), and Problem Solving Skills Inventory (PSI) (Heppner, 1988, Şahin, Şahin and Heppner, 1993) were used as data collection instruments.

The reliability and validity studies for the each measure were also conducted in the current study. In this respect, Cronbach Alphas were calculated for the evidence of reliability for the scales. In addition, Exploratory Factor Analysis was conducted to obtain construct validity evidence for Career Beliefs Inventory, Academic Self-Efficacy Scale and Problem Solving Skills Inventory. Since Career Beliefs Inventory was originally developed in the USA, it was translated into Turkish and adapted for use with Turkish high school students by the researcher. Confirmatory Factor Analysis of Career Decision Scale and Career Beliefs Inventory were also conducted.

3.3.1 Demographic Information Form

Basic demographics of participants were gathered by a short demographic form (*see* Appendix D for the demographic data form) including participants' gender, age and class. The form also included consent form explaining the aim of the study.

3.3.2 Career Decision Scale (CDS)

Career Decision Scale (Osipow, Carney, Winer, Yanico, & Koschier, 1976) is a self report measure to assess career decision (*see* Appendix E for the scale). The measure asks participants to rate how closely each statement describes their own thinking process regarding their educational and occupational plans (e.g., " I'm excited about to graduate and start working "). The first 18 items of the scale rating on a 4 point rating type scale (1 = not at all like me, 2 = only slightly like me, 3 = very like me, and 4 = exactly like me). The first two items of the scale (1^{st} item and 2^{nd} item) generate the Certainty Subscale and evaluate certainty of career/major choice. The remaining 16 items (items from 3 to 18) generate the Indecision Subscale. The last item (item 19) provides an opportunity to list additional obstacles of participants' career indecision not mentioned in the scale items. Reversed scores are 1 and, 2. The scores obtained from Certainty Subscale range from 2 to 8, with the higher scores representing a high degree of certainty about career decision. The scores of the indecision subscale ranged between 16 to 64 and higher scores indicating higher level of indecision.

There are a number of studies indicating that the CDS has adequate reliability and validity. In the original study, Osipow, Carney and Barak (1976) conducted a principal factor analysis with varimax rotation on a sample of 837 university students. Four factors, named as lack of structure and confidence (items: 5, 7, 8, 9, 10, 11, 13, 14, 17); presence or perception of some external barriers (items: 3, 9, 12, 16, 18); approach-approach (items: 4, 15) and personal conflict (items: 6, 7), explained the % 81.3 of the total variance (Osipow et al., 1976; Brown & Rector, 2008). This factor structure was not confirmed by subsequent studies that revealed

varied factor solutions ranging from two to four factors. Shimizu, Vondracek, Schulenberg, and Hostetler (1988) conducted an EFA on the CDS by using maximum likelihood with an oblique rotation and results indicated more similarity among factors than had previously been found, especially from the study of Osipow et al., (1976). Shimizu et al., (1988) found a four-factor structure that included diffusion (3 items), support (3 items), approach-approach (3 items), and external barriers (4 items). Shimizu et al., (1988) noted that three items did not load saliently on one factor (i.e., according to the Simple Structure Model). Vondracek, Hostetler, Schulenberg, and Shimizu (1990) decided to exclude these three items in creating subscales for the CDS. Cronbach Alpha (α) coefficients of the CDS ranged from .79 to .90 for Certainty Subscale and .86 to .89 for the Indecision Subscale (Savickas & Carden, 1992).

The translation and the standardization of the CDS for the Turkish university students were done by Büyükgöze-Kavas (2010). The internal consistency of the Certainty and Indecision subscales were found to be .85 and .86, respectively. Test-retest reliability results were .75. In order to test the convergent validity of the scale, the relationship between Career Decision Scale (Osipow et al., 1976) and Personal Indecisiveness Scale (Bacanlı, 2005) were examined and a significant and positive correlation ($r = .61$, $p < .01$) was found. Estimates of validity were also obtained for the Indecision subscales of CDS (Büyükgöze-Kavas, 2010). Using Principal Axis Factoring with varimax rotation, 4 factors for the Indecision subscale was yielded wherein the first factor included six items (5, 7, 8, 9, 10, 11), the second four items (7, 10, 13, 14), the third eight items (4, 9, 11, 12, 15, 16, 17, 18)

and the forth four items (3, 5, 6, 10). Four items (5, 7, 9, 11) also had double loadings and one item had triple loadings (10). Although the number of the factors was the same with the original Osipow's study, items loaded on different factors (Büyükgöze-Kavas, 2010). Additionally, confirmatory factor analysis (CFA) revealed two factors and model was confirmed by the data set (Büyükgöze-Kavas, 2012).

3.3.2.1 Reliability and Validity of Turkish Version of CDS for the Present Study

For the present study, the 18-items of the CDS (*see* Appendix E) were used. The researcher conducted a pilot study to provide evidence for reliability and validity of the CDS to test the usability of the scale for high school students. The convenience sampling procedure was used to collect data. A total of 123 (55 male, 68 female) high school students volunteered to participate the pilot study. The sample was consisted of 43 (35 %) 9^{th} graders, 26 (21.1 %) 10^{th} graders, 46 (37.4 %) 11^{th} graders, and 8 (6.5 %) 12^{th} graders. These students were not the participants of the actual study. To check the reliability of the scale, the internal consistency was measured by means of Cronbach alpha coefficient (α). The Cronbach alpha value for all the items of the CDS was .85.

The Confirmatory Factor Analysis was prefered as the procedure to test the factor structure of the Turkish version of CDS for high school students. A two-factor model for Turkish CDS was tested through a CFA in LISREL 8.71 (Joreskog & Sorbom, 2004). Prior to the analyses, the assumptions of CFA; namely, accuracy of

data entry, sample, size, missing values, outliers, normality, linearity, and multicollinearity were checked. Accurate data entry was achieved through inspection of minimum and maximum values, mean and standard deviations for each observed variables. As a result, no mis-entered data was found.

Since CFA is based on covariances, parameter estimates and chi-square test of fit are very sensitive to sample size (Ullman, 2001). According to different researchers, a critical ratio of sample size differs. While some of them (Kline, 2005; Ullman, 2001) suggest to use absolute minimum number of subjects, some others discussed that there is a view shift from an absolute critical ratio of sample size toward consideration of model quality (Gagne & Hancock, 2006). They stated that with the more sample size, there will be more indicators per factor, and stronger factor loadings which could lead to improved model convergence and parameter estimation. Therefore CFA study was conducted with 409 participants, attending 11^{th} and 12^{th} grades.

There are some conventional procedures to handle missing values such as deleting cases with missing values (listwise deletion, pairwise deletion) or imputing the missing values through single imputation methods (mean substitution, regression-based substitution, pattern matching, and random hot-deck imputation) (Kline, 2005). In this study, no missing values were found in the data set.

Another assumption for the CFA is univariate and multivariate outliers that indicate cases with scores which are very different from the rest (Kline, 2005). To find out

univariate outliers, standardized z scores exceeding the range between +3.29 and -3.29 were checked for each the observed variables (Tabachnick & Fidell, 2007). No univariate outliers were found exceeding z scores from the data set. For multivariate outliers Mahalanobis distance was calculated and no outlier was detected greater than $x^2(18) = 28.86$, ($p < .05$) in the data set. Therefore, the data analysis was conducted with 409 cases in this study.

As Kline (2005) suggested that univariate and multivariate normality assumptions which assume normal distributions for continious variables were also checked using LISREL 8.71. Univariate normality was checked through examining skewness and kurtosis indexes (Mardia, 1975). All of the observed variables indicated significant deviations from univariate normality. Indexes ranged from -.50 to .41 for skewness, and -1.14 to -.85 for kurtosis. Multivariate normality is crucial for a multivariate analysis. When non-normality is a case for continuous variables, the two most commonly estimation methods are recommended. The first one is robust maximum likelihood (ML) (Bentler, 1995; Satorra & Bentler, 1994). Another procedure is weighted least squares (WLS) (Browne, 1984). Test of multivariate normality showed significant deviations from multivariate normality (Skewness $z = 31.46$, $p < .001$; Kurtosis $z = 413.87$, $p < .001$; Skewness and Kurtosis = 452.07, $p < .001$). Since WLS requires large samples (Jaccard & Wan, 1996) and the sample was small ($n = 409$), here in this study the estimation method of robust ML was used.

The assumption of linearity was looked at by plotting the data on scatterplots in PASW Statistics 18 (Schumacker & Lomax, 2004; Ullman, 2001). Several

scatterplots were randomly selected to examine linearity and these scatterplots indicated that bivariate relationships between the variables did not departure from linearity.

Another assumption of the CFA is multicollinearity that occurs when there are high correlations among three or more independent variables. As it increased, the interpretation of the relationships will be difficult because it is hardly possible to determine the effect of any single construct due to their interrelationships (Hair, Black, Babin, Anderson, & Tatham, 2006). Intercorrelations among the variables were examined through correlation matrix. Correlation matrix indicated that there were no values exceeding the value of .85 (Kline, 2005). All the necessary assumptions checks indicated that the data was ready for CFA.

3.3.2.1.1 Model Estimation for the Turkish CDS for High School Students

In order to evaluate the fit of two-factor structure to the data, several fit indices were used. Kline (2005) suggested a minimal set of fit indexes when reporting and interpreting the results of CFA. These indexes are the model chi-square, root mean square error of approximation (RMSEA), comparative fit index (CFI), and standardized root mean square residual (SRMR). Brown (2006) classified these indices into three categories namely absolute fit (i.e., and SRMR), fit adjusting for model parsimony (i.e., RMSEA), and comparative or incremental fit (i.e., CFI, Tucker-Lewis index (TLI). The model chi-square x^2 is an example for absolute fit index. If model chi-square equals to zero, it indicates a perfect fit. If this value

increases, the fit of the model becomes worse. To deal with the sensitivity of chi-square to sample size, generally the value of normed-chi-square, obtained by dividing x^2 by the degree of freedom, is used (Kline, 2005). Kline (2005) suggested a favorable value of x^2/df ratio which is less than 3.

Another example for absolute fit index is standardized root mean square residual (SRMR). The SRMR indicates the differences between the observed and predicted correlations. It has a range falling between 0.0 and 1.0 and approximation to 0.0 indicates a perfect fit (Brown, 2006). Hu and Bentler (1999) suggested a cut off value close to .08 or below for SRMR for a good fit.

Comparative or incremental fit indices evaluate the fit of the proposed model compared with a baseline model (also called as null or independence model) (Brown, 2006). An example for this index is comparative fit index (CFI; Bentler, 1990). It has a range values between 0.0 and 1.0, and with values closer to 1.0 indicates good fit (Brown, 2006). Hu and Bentler (1999) suggested a cut-off value close to .95 or greater for CFI for a good fit.

Another popular comparative or incremental fit index is Tucker-Lewis index (TLI), also known as non-normed fit index (NNFI) in some programs. The TLI has a penalty function for adding parameters that do not change the fit of the model. The TLI values are interpreted as CFI that an approximation to 1.0 indicates a good fit (Brown, 2006). Hu and Bentler (1999) recommended a cut-off value close to .95 for TLI.

In this study, the following criteria were selected to determine good model fit: a chi-square value close to zero, an SRMR less than .08, a TLI greater than .95, a CFI greater than .95 (Hu & Bentler, 1999) and an RMSEA less than .05 (Browne & Cudeck, 1993).

Two-factor model for Turkish CDS for high school students was based on the covariance matrix and the model parameters were estimated using a robust ML estimation. The Satorra-Bentler scaled chi-square value was 297.02 with 134 degrees of freedom, making the chi-square over degrees of freedom x^2/df is 2.22 which lower than the suggested 3 (Kline, 2005). The standardized root mean square residual (SRMR) was .05, lower than the recommended of .08 (Hu & Bentler, 1999). The Tucker-Lewis index (TLI, also known as NNFI) was .97, greater than ≥ .95 (Hu & Bentler, 1999). The comparative fit index (CFI) was .97, greater than the suggestion of ≥ .95 (Hu & Bentler, 1999). The root mean-square error of approximation (RMSEA) value was .05 nearly lower than the suggested value of .05 (Browne & Cudeck, 1993). The overall model for the two-factor structure of Career Decision Scale did fit well, meaning that the model fit the data adequately. Besides goodness-of-fit indices of the model, the parameter estimates were also examined. The standardized error terms and coefficients of 18 indicators were presented in Table 3.1.

Table 3.1
Unstandardized and Standardized Parameter Estimates for Turkish CDS

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	*SE*	*t*	R^2
certainty	CDS1	.56	.55	.15	3.79	.30
	CDS2	1.01	1.00	.26	3.91	1.11
indecision	CDS 3	.59	.59	.04	14.25	.34
	CDS 4	.55	.55	.04	12.56	.30
	CDS 5	.65	.64	.04	16.77	.40
	CDS 6	.54	.54	.05	12.21	.29
	CDS 7	.74	.70	.04	20.35	.48
	CDS 8	.67	.67	.04	17.76	.45
	CDS 9	.62	.62	.04	16.01	.39
	CDS10	.66	.65	.04	17.22	.42
	CDS11	.69	.66	.04	18.56	.44
	CDS12	.49	.52	.04	11.19	.27
	CDS13	.69	.70	.04	19.12	.49
	CDS14	.68	.68	.04	18.21	.46
	CDS15	.54	.53	.04	12.28	.28
	CDS16	.55	.55	.04	12.82	.30
	CDS17	.49	.50	.05	10.70	.25
	CDS18	.26	.25	.05	4.74	.06

Note. All t-values were significant, $p < .001$.

All items in the scale significantly loaded on their corresponding factors. Factor pattern coefficients for the items of certainty subscale ranged from .55 to 1.00, and indecision from .25 to .70.

R^2 refers to the proportion of variance accounted for in each item by its corresponding item. R^2 is mostly expected to be greater than .50 and/or *t*-value for each indicator is expected to be significant (Bollen, 1989). For the items of certainty dimension, R^2 ranged from 30 to 1.11, and for the items of indecision dimension from .06 to .49. Consequently, the overall fit indices of the model and the parameter estimates indicated an adequate fit. The correlations among latent constructs were presented in Table 3.2, which were all significant

Table 3.2
Correlation among Latent Constructs for Two-Factor Model of CDS

Construct	1	2
1. Certainty	1.00	
2. Indecision	.54*	1.00

Note. n = 409, *p < .01

3.3.3 Career Beliefs Inventory

Career Belief Inventory (CBI) was developed by Krumboltz (1994) to asses an individual's maladaptive career beliefs in order to help them make better career decisions (*see* Appendix F for the scale). Specifically, the scale items (e.g., "Once I make a career decision, I will stick to it") increases individual's awareness of his/her career beliefs on occupational choice and the pursuit of a career (Krumboltz, 1991) and based on both social and cognitive understandings of human behavior as exposing assumptions that may be preventing an individual from making a career decision (Krumboltz, 1994a). It is a 96-item paper-and-pencil test which can be applied to individually or in group from, age range is from 8^{th} grade to adults. It is a 5 point Likert type scale (1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, and 5= strongly agree). The total of 45 items (3, 6, 9, 10, 11, 14, 15, 16, 21, 24, 25, 28, 30, 32, 33, 38, 39, 40, 41, 44, 45, 46, 47, 48, 51, 53, 54, 55, 61, 62, 70, 72, 73, 74, 75, 78, 80, 82, 84, 85, 87, 88, 92, 93, 94) are reverse scored. In the original study Krumboltz (1976) presented a 25 factor structure under 5 logical categories. When scoring CBI, scores below 40 points on each subscale should be examined for impact on career exploration.

The categories and items in each category are as follows:

1. My Current Career Situation:

(a) Employment Status (35, 39)

(b) Career Plans (4, 87)

(c) Acceptance of Uncertainty (3, 52)

(d) Openness (17, 51, 83, 48)

2. What Seems Necessary for My Happiness:

(e) Achievement (9, 45)

(f) College Education (20, 28)

(g) Intrinsic Satisfaction (57, 93, 12, 16, 41)

(h) Peer Equality (13, 65, 68)

(i) Structured Work Environment (60, 89)

3. Factors that Influence My Decisions:

(j) Control (23, 76)

(k) Responsibility (21, 61, 64, 71, 42)

(l) Approval of Others (37, 32)

(m) Self-Other Comparison (5, 33, 80, 15)

(n) Occupation/College Variation (14, 19, 46, 81, 90)

(o) Career Path Flexibility (31, 63, 67, 69)

4. Changes I am Willing to Make:

(p) Posttraining Transition (2, 26, 36, 79, 94)

(q) Job Exprementation (1, 6, 25, 44, 53, 62, 74, 84)

(r) Relocation (10, 27, 85, 92, 96);

5. Effort I am willing to Initiate:

(s) Improving Self (7, 50)

(t) Persisting While Uncertain (24, 22, 30, 40, 73)

(u) Taking Risks (11, 34, 38, 58)

(v) Learning Job Skills (86, 88)

(w) Negotiating/Searching (8, 29, 54, 82)

(x) Overcoming Obstacles (18, 43, 47, 55, 70, 75, 78, 72)

(y) Working Hard (49, 56, 59, 66, 77, 91, 95)

Krumboltz (1994a) examined the validity and reliability of the CBI. Both test-retest and internal consistency reliabilities yielded from low to moderate results. 3 months test-retest reliabilities for the 5 logical categories ranged from .26 to .66 in college samples. The reliabilities of internal consistency mostly fall between .40 to .50. Krumboltz (1999) stated that the CBI was designed without high internal reliability because it is not designed for selection or classification purposes, and beliefs are not static, instead it's used as a clinical instrument. However, Fuqua and Newman (1994) criticized that some scales require additional items to achieve desired internal consistency. Holland, Johnston, Asama and Polys (1993) concluded that CBI had moderate construct validity by using the NEO Personality Inventory, The Self Directed Search, the Vocational Identity and the Preconscious Activity Scale.

Face validity for the CBI is supported on the basis that items were generated from asking people to report their beliefs. Concurrent validity is based on correlating CBI scores with self-report measures of job satisfaction and/or school satisfaction. Next, construct validity for the CBI is evaluated with instruments related to career counseling such as Strong Interest Inventory, the Myers-Briggs Type Indicator, the

Career Assessment Inventory and the Fundamental Interpersonal Relations Orientation-Behavior. Yet, it showed an extremely small correlation between CBI and those instruments (Naylor & Krumboltz, 1994). Therefore, construct validity for CBI indicates that CBI clearly measures constructs differently from aptitudes and personalities and interests (Krumboltz, 1999).

A factor analysis with varimax rotation was performed on a sample of 1404 respondents (849 female, 555 male) for 96 items. Krumboltz found no support for 5 logical categories in an Exploratory Factor Analysis (EFA) instead he found 4 factor structure of the scale scores that had little overlap with the 5 logical categories. Those 4 factors are; I. Belief that work is valuable vs. Belief that work has little value, II. Belief in exploring options vs. Belief in maintaining a consistent direction, III. Beliefs in importance of self reliance vs. Belief in the importance of seeking help from others, IV. Belief in the importance of compliance vs. Belief in the importance of not being constrained. However, Krumboltz (1999) preferred to retain logical 5 factor structure since it made easier to understand the items. Mainly, reviews of the CBI have been done in the literature by Fuqua and Newman (1994), Wall (1994), and Walsh (1995). Most of the researchers (Fuqua & Newman, 1994; Levinson, Ohlers, Caswell, & Kiewra, 1998; Walsh, 1994) insisted on the problem of factor structure of CBI. For instance, according to study done by Walsh (1995), exploratory first-order factor analyses of the scores from the 96 item CBI resulted in a six-factor structure. Exploratory Factor Analysis for the second-order factor analyses of two data sets (CBI Sample and Pooled Sample) resulted in four-factor solutions. For the Confirmatory Factor Analyses, six substantive models were fit to

the data. None of the models resulted in a good fit to the data. In a separate assessment, Walsh et al., (1997) found some support for Krumboltz's empirical factor structure in a separate assessment of factor structure of the subscale scores in which the EFA on the 25 subscale yielded 4 factors, but only the first three factors (Vocational Achievement, Job Flexibility, Job Satisfiers) were similar with Krumboltz's study. In another study, conducted by Mahadevan (2002), separate EFAs of the CBI in three different cultural samples (Indian, Chinese, and Korean), he found that the number and content of the second-order factors varied across sample. Likewise, Hess et al., (2009) conducted a study with high school students and they found that the factor structure examined at the item level using EFA, a five-factor structure emerged. Therefore, it is important to examine the factor structure of the CBI in other cultures as well.

The first translation of the scale for the Turkish high school students (N=670) were done by Ulu (2007). The internal consistency of the subscales of the CBI was found to be varying from .13 to .87. In order to find 4 subscales for the scale, as its original, exploratory factor analysis was conducted and 24 items of the scale (1, 2, 3, 4, 5, 6, 7, 15, 21, 23, 25, 26, 31, 32, 33, 37, 50, 52, 76, 80, 86, 87, 88, and 94) discluded. Then Confirmatory Factor Analysis were implemented and additional 33 items (9, 11, 14, 16, 17, 18, 19, 22, 24, 41, 43, 45, 46, 47, 49, 54, 55, 56, 58, 59, 60, 65, 70, 72, 75, 77, 78, 81, 83, 89, 90, 93, and 95) were removed from the scale. Resuts yielded 15 subscales. However, 5 subscales were omitted from the CBI since their Cronbach alphas were under .50. At the end of adaptation study, Ulu (2007) concluded that the scale was composed of 10 subscales with 29 items.

Accordingly, the subscales were named as University Education, Inner Satisfaction, Peer Balance, Responsibility, Working Life Orientation, Job Trial, Give up Against Uncertainty, Risk Taking and Work. However, the adaptation study of Ulu (2007) yielded yielded different factor structure than the original Krumboltz's study. Ulu (2007) excluded total of 67 items from the original CBI and ended up with a different measure. Therefore for the purpose of adapting CBI into Turkish, CBI was re-translated into Turkish, and then its psychometric properties were examined with Turkish high school students by the researcher.

3.3.3.1 Translation and Adaptation Procedure of Career Beliefs Inventory

Before the translation and adaptation process of the CBI, necessary permission was obtained from the Consulting Psychologists Press (CPP) via email (*see* Appendix C). Initially, the scale was given 5 experts (three of them had doctoral degree in English Language Teaching and two of them had doctoral degree in counseling) for translation into Turkish, independently. In terms of layout, wording, clarity and cultural relevancy of the items into Turkish culture, the Turkish form of CBI was evaluated by two experts (a Professor of Psychological Counseling and Guidance, and an advanced graduate student in Psychological Counseling and Guidance). These experts suggested some changes in the wordings of 12 items. In line with this feedback, suggested changes were made. Finally, the scale was given to a group of high school students (n = 40) to obtain feedback about understandability and clarity of the scale items. Students found directions part of the scale and its items clear and

understandable. Consequently, the Turkish translated version of CBI included 96 items.

3.3.3.2 Reliability and Validity of the Turkish Version of CBI

The Turkish CBI was piloted with 404 (190 male, 214 female) high school students in Ankara in order to establish reliability and construct validity. The convenience sampling procedure was used in data collection. The sample of the pilot study was consisted of 136 (33.7%) ninth graders, 183 (45.3%) tenth graders, 71 (17.6%) eleventh graders and 14 (3.5 %) twelfth graders. These students were not the participants of the main study. The CBI (Krumboltz, 1994) was administered to the participants in the classroom setting by the researcher.

A series of preliminary analyses were utilized before conducting reliability and validity of CBI. Firstly, frequency analysis was performed for the distribution of responses for each item. Next, screening of the data was conducted including the normality of each variable (Skewness and Curtosis), outlier and missing data analysis. Normality of each data was made with the accepted level of Skewness and Curtosis values (± 3.29). Missing values were replaced with the mean since each variable has at least 5% missing value according to Tabachnick and Fidel (2007).

In order to check the reliability of the scale, the internal consistency and test-retest methods were used. The internal consistency estimate was measured by means of

Cronbach alpha coefficient (α). Internal reliability of Career Beliefs Inventory calculated by Cronbach Alpha coefficient formula was found as .89.

In order to provide evidence for construct validity of the Career Beliefs Inventory, an exploratory factor analysis (EFA) was conducted. Prior to factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's test of sphericity were examined to determine the appropriateness of the data for factor analysis. The KMO value was .776 defined as good, thus it is possible to say that the sample size is adequate for factor analysis (Field, 2009). In addition, the Barlett's test was significant [$\chi 2$ (404) = 9122.700, $p < .001$] indicating large enough correlations between the items to conduct EFA. Therefore, KMO and Barlett's Test of sphericity were satisfactory to perform EFA.

A series of factor analyses was used to determine the construct validity of the scale. Firstly, Principal Axis Factoring with varimax rotation with Kaiser Normalization was conducted on the scores of CBI. Rotation converged in 12 iterations and the rotated factor structure obtained through EFA indicated that 6 factors. However, 29 items were loading on two or triple loadings. Again, Principal Axis Factoring with direct oblimin was run and in that case there were 24 items (items; 2, 3, 5, 7, 11, 12, 13, 15, 19, 20, 22, 23, 25, 27, 28, 33, 38, 61, 72, 80, 85, 89, 92 and 94) with high cross loadings were omitted (MacCallum & Austin, 2000) in order to get more interpretable factor structures standing for each item to load on only one factor. After excluding 24 items which yielded low item loadings, the results of the final factor analysis indicated that all the items were loaded in 6 factors, with an

eigenvalue greater than 1.00 which was accounted for the 66.2% of the total variance. Factor loadings ranged from -.31 (item 32) to .63 (item 16). The first factor accounted for 12.13% of the total variance (eigenvalue 8.73), the second one 8.27% (eigenvalue 5.96), the third one 3.54% (eigenvalue 2.54), the fourth one 3.18% (eigenvalue 2.29), the fifth factor 2.30 (eigenvalue 2.15), and the sixth factor 2.87 (eigenvalue 2.06). The scree plot also supported this finding.

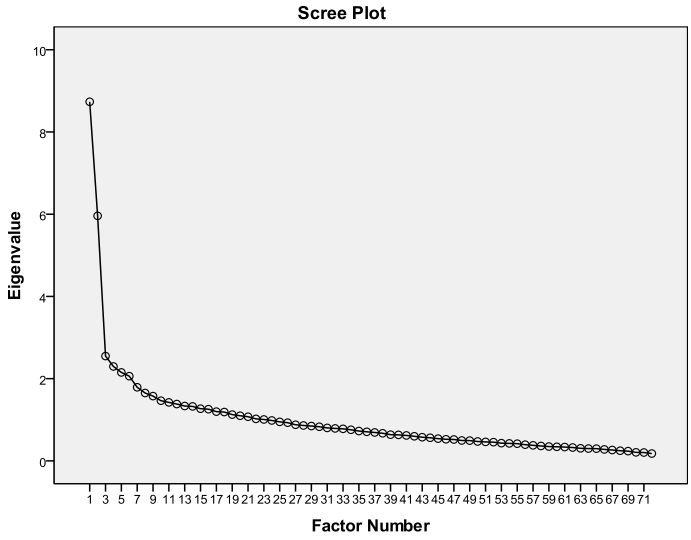

Figure 3.1 Scree Plot of Career Beliefs Inventory

Factor loadings of each item are presented in Table 3.3.

Table 3.3
Factor Loadings of Career Beliefs Inventory

Item Number	Factor Loadings					
	1	2	3	4	5	6
16	.63					
14	.63					
46	.60					
55	.57					
45	.56					
9	.54					
82	.53					
30	.53					
73	.52					
48	.52					
70	.51					
47	.50					
75	.50					
54	.50					
24	.50					
21	.48					
51	.48					
40	.42					
41	.41					
78	.40					
88	.39					
93	.38					
10	.35					
76		.53				
66		.52				
57		.48				
71		.48				
52		.47				
77		.47				
83		.46				
91		.46				
69		.46				
59		.45				
64		.43				
67		.43				
65		.42				
56		.42				
58		.42				
86		.41				
90		.41				
95		.40				
60		.38				

Note. Factor loadings <.30 were omitted

Table 3.3
Factor Loadings of Career Beliefs Inventory

Item Number	Factor Loadings					
	1	2	3	4	5	6
63		.37				
81		.36				
68		.35				
50		.35				
49		.35				
79		.35				
96		.33				
74			.55			
53			.50			
62			.33			
84			.31			
32			-.31			
6				.44		
39				.43		
44				.41		
37					.52	
42					.44	
36					.41	
35					.40	
31					.37	
34					.33	
26					.33	
8						-.55
29						-.51
18						-.48
43						-.46
87						.39
4						-.37
17						-.36

Note. Factor loadings <.30 were omitted

Thus, the distribution of scale items in the pilot study was somewhat different from the original study. In the current study, six factors were yielded and 24 items (2, 3, 5, 7, 11, 12, 13, 15, 19, 20, 22, 23, 25, 27, 28, 33, 38, 61, 72, 80, 85, 89, 92, and 94) with factor loadings below .30 were excluded from the study. The first factor labeled as Career Confidence included twentythree items (16,14, 46, 55, 45, 9, 82,

30, 73, 48, 70, 47, 75, 54, 24, 21, 51, 40, 41, 78, 88, 93, 10); the second factor labeled as Career Activity included twentyseven items (76, 66, 57, 71, 52, 77, 83, 91, 69, 59, 64, 67, 65, 56, 58, 86, 90, 95, 1, 60, 63, 81, 68, 50, 49, 79, 96); the third factor labeled as Career Positivity included five items (74, 53, 62, 84, 32); the fourth factor labeled as Career Dependability included three items (6,39, 44); the fifth factor labeled as Career Flexibility included seven items (37, 42, 36, 35, 31, 34, 26); and the sixth factor labeled as Career Negativity included seven items (8, 29, 18, 43, 87, 4, 17). Thus, the distribution of scale items in the Turkish version of the career beliefs was somewhat different from English version of CBI.

The results of the current study showed that the factor structure of the CBI related to Turkish students is very different from either the Krumboltz's logical five-factor or empirical four-factor model. Inconsistent factor structure of CBI was reported by other studies as well (Fuqua & Newman, 1994; Walsh, 1994; Levinson, Ohlers, Caswell, & Kiewra, 1998). For example, although Hess et al., (2009) they have found five factor-structure in their study with runing the analysis with Principal Axis Factoring, as did in the current study. The results of Hess et al., study seem to be similar in terms of the number of items and the factors overlapping with the curent study's categorical structure. The factor structure of Walsh et al., (1997) seems to be similar as well with most of the items loaded on the same subscale. In the current study, in order to confirm the factor structure of the CBI, confirmatory factor analysis was needed.

3.3.3.2.1 Confirmatory Factor Analysis (CFA) of CBI

A six-factor model for Turkish CBI was tested through a CFA in LISREL 8.71 (Joreskog & Sorbom, 2004) in order to test the factor structure of the 72-item CBI. The CFA was chosen as a procedure because it provides many analytic possibilities (e.g., assessment of method effects, investigation of the stability or invariance of the factor model over informants) that are not possible to obtain with exploratory factor analysis (EFA) (Brown, 2006). Initially, the assumptions of CFA; that is, sample size, missing values, outliers, normality, linearity, and multicollinearity were checked.

The sample size (n=409) was enough to conduct the CFA (n > 200; Anderson & Gerbing, 1984). No missing values were found in the data set. The minimum and maximum values, means, and standard deviations for each observed variables indicated that the data entry was accurate. No univariate outliers (exceeding the standardized z scores of ±3.29) and multivariate outliers (greater than x^2 (72) = 90.53, $p < .05$) were found. Regarding univariate normality, most of the observed variables were significantly skewed and kurtotic. Indexes ranged from -.37 to .87 for skewness, and -1.37 to -.26 for kurtosis. In order to test of multivariate normality showed significant deviations from multivariate normality (Skewness z = 6.38, $p < .001$; Kurtosis z = -1.21, $p < .001$; Skewness and Kurtosis = 1731.75, $p < .001$). Due to the deviations from univariate and multivariate normality, the estimation method of robust ML was selected. Linearity assumption was checked by scatterplots and randomly selected scatterplots showed that bivariate

relationships between the variables did not depart from linearity. In terms of the assumption of multicollinearity, correlation matrix, the variance inflation factor, and tolerance values were checked. Correlation matrix indicated that there were no values exceeding the value of .85 (Kline, 2005). All assumptions checks indicated that the data was ready for the CFA.

The model estimation and the CFA results were presented by checking model chi-square, ratio, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI; also known as non-normed fit index (NNFI), and standardized root mean square residual (SRMR). The following criteria were selected to determine good model fit: an RMSEA less than .05 (Browne & Cudeck, 1993), a relative ratio less than 3 (Kline, 2005), an SRMR close to .08, a TLI greater than .95, and a CFI greater than .95 (Hu & Bentler, 1999).

3.3.3.2.2 Confirmatory Factor Analysis (CFA) of CBI for High School Students

Six-factor model for CBI was tested based on the covariance matrix through using a robust ML estimation. The Satorra-Bentler scaled chi-square value was 5223.11 with 2478 degrees of freedom. The ratio was 2.10 which was close to the recommended value of 3 (Kline, 2005). The root mean-square error of approximation (RMSEA) value was .04, indicating a good fit which is less than .05 (Browne & Cudeck, 1993). The standardized root mean square residual (SRMR) was .06, close to the value recommended as ≤ .08 (Hu & Bentler, 1999). The

Tucker-Lewis index (TLI, also known as NNFI) was .96, a value greater than .95 (Hu & Bentler, 1999). The comparative fit index (CFI) was .96, a value greater than the suggestion of ≥ .95 (Hu & Bentler, 1999).

The standardized error terms and coefficients for 72 items were presented in Table 3.4. All items had significant loadings on their corresponding factors.

Table 3.4
Unstandardized and Standardized Parameter Estimates for CBI

Construct	Item	Unstandardized Factor Loading	Standardized Factor Loadings	*SE*	*t*	R^2
Career Confidence	5	.65	.53	.06	11.4	.05
	6	.48	.41	.06	8.36	.17
	7	.80	.65	.06	14.32	.42
	8	.74	.62	.06	13.24	.39
	11	.45	.36	.07	6.85	.13
	12	.67	.56	.06	12.05	.31
	15	.72	.58	.05	13.65	.34
	23	.64	.56	.06	11.31	.31
	24	.72	.61	.05	13.48	.37
	28	.74	.61	.06	13.43	.37
	29	.81	.67	.05	15.98	.44
	30	.65	.55	.05	12.25	.30
	31	.61	.50	.06	10.38	.25
	34	.62	.51	.06	10.59	.26
	37	.71	.60	.05	13.85	.37
	38	.84	.66	.06	14.74	.44
	52	.74	.61	.06	13.31	.38
	54	.66	.56	.06	12.17	.32
	56	.76	.60	.05	14.02	.37
	59	.65	.55	.05	12.45	.30
	62	.65	.55	.06	11.85	.30
	67	.66	.55	.05	12.53	.30
	70	.50	.43	.06	8.58	.19

Table 3.4
Unstandardized and Standardized Parameter Estimates for CBI

Career Activity	1	.31	.42	.04	17.07	.17
	32	.32	.43	.04	9.08	.19
	33	.26	.36	.03	7.82	.13
	35	.37	.49	.03	12.04	.24
	39	.37	.50	.03	12.12	.25
	40	.34	.45	.03	10.12	.20
	41	.30	.40	.04	8.56	.16
	42	.35	.46	.03	10.92	.22
	43	.27	.35	.04	7.32	.12
	45	.30	.40	.03	8.8	.16
	46	.41	.53	.03	13.36	.28
	47	.30	.40	.04	8.59	.16
	48	.37	.49	.03	11.12	.24
	49	.30	.39	.04	8.59	.15
	50	.38	.52	.03	12.98	.27
	51	.35	.46	.03	10.86	.21
	53	.38	.52	.03	12.58	.27
	57	.35	.45	.03	10.63	.20
	58	.32	.43	.03	9.74	.19
	60	.33	.42	.04	9.46	.18
	61	.27	.36	.04	7.35	.13
	63	.36	.48	.03	10.53	.23
	65	.38	.50	.03	11.99	.25
	55	.52	.43	.07	7.78	.19
	68	.33	.43	.04	9.37	.19
	69	.28	.38	.04	7.88	.15
	71	.38	.49	.03	11.96	.24
	72	.32	.40	.04	9.03	.16
Career Positivity	17	.29	.26	.07	4.05	.07
	36	.55	.49	.07	8.09	.24
	44	.55	.45	.07	7.79	.20
	55	.52	.43	.07	7.78	.19
	64	.52	.44	.07	8.00	.19
Career Dependability	3	.26	.23	.07	3.63	.05
	22	.93	.65	.08	11.56	.43
	27	.69	.53	.07	9.78	.28
Career Flexibility	13	.35	.47	.04	9.85	.22
	16	.42	.59	.03	12.91	.35
	18	.27	.38	.04	7.07	.14
	19	.45	.60	.03	14.37	.35
	20	.34	.46	.04	9.44	.21

Table 3.4
Unstandardized and Standardized Parameter Estimates for CBI

	21	.36	.47	04	9.67	.22
	25	.39	.52	.03	11.93	.27
Career Negativity	2	.43	.55	.03.	12.70	.30
	4	.42	.55	.03	12.35	.30
	9	.37	.49	.04	10.23	.24
	10	.46	.61	.03	15.06	.37
	14	.49	.63	.03	16.60	.40
	26	.36	.48	.04	9.84	.23
	66	-.34	-.26	.06	-5.24	.07

Note. All *t*-values were significant, $p < .001$.

Factor pattern coefficients for the items ranged from .05 to .44. As shown in the figure, the standardized coefficients for the items of 3 and 66 were low in magnitude compared to the other items.

Table 3.5
Correlations among Latent Constructs for Six-Factor Model of CBI

Construct	1	2	3	4	5	6
1.	1.00					
2.	.54*	1.00				
3.	.16*	.14*	1.00			
4.	.56*	.71*	-.01	1.00		
5.	.58*	.72*	.22*	.36*	1.00	
6.	.75*	.41*	.19*	.41*	.53*	1.00

Note. $n = 409$, *$p < .01$

3.3.4 Academic Self-Efficacy Scale (ASE)

Academic Self-Efficacy Scale (ASE) was developed by Jerusalem and Schwarzer (1981) in order to assess university students' sense of perceived academic self-

efficacy (*see* Appendix G for the scale). ASE is a 4-point Likert type (1 = true for me, 2 = slightly true for me, 3 = slightly false for me, and 4 = false for me) self report measure including items as "I know very well what I should do in order to get good grades". When scoring, from item 1 to item 6 are positively worded, whereas 7th item is negatively worded so it is reverse scored. The responded items are totaled to get the self-efficacy score in academic setting. Scores are ranged between 7 to 35 and the higher the scores the higher the perceived academic self-efficacy.

The internal consistency of the ASE was provided by using Cronbach Alpha coefficient which was found as .87 by Jerusalem and Schwarzer (1981). The divergent validity of the scale was performed by calculating the Pearson Product correlation of ASE scores with Rosenberg Self Esteem Scale scores. It has found to be .37 ($p<.01$). In order to get the construct validity of the scale, exploratory factor analysis was performed. According to the results, the 7 items of the scale was loaded on one factor.

Yılmaz, Gürçay and Ekici (2007) translated and adapted ASE into Turkish by conducting a research study with university students. According to the Cronbach Alpha estimation, internal consistency of the scale was found to be as .79. The authors reported a correlation coefficient of .44 between the ASE and Rosenberg Self Esteem Scale. Exploratory Factor Analysis of Turkish version of Academic Self-Efficacy Scale yielded single factor structure that explained 45% of the total

variance. The results of the reliability and validity studies of Turkish version of ASE were found to be reliable and valid for use in Turkish culture.

3.3.4.1 Reliability and Factor Structure of ASE for the Present Study

For the present study, the 7-item version of the original ASE was used (*see* Appendix G). Evidence for the reliability of the scale for the present sample was provided by calculating internal consistency estimate. The Cronbach alpha coefficient was found to be .65 for the 7 item Turkish version of ASE. Item-total correlations were also examined to see whether there would be any improvement if an item was removed. However, all items were equally contributing. Cronbach's alpha coefficient of the scale was greater than the suggested cut-off value .70 for acceptable reliability (Kline, 2000). However, more conservative approaches propose that a greater number of items in the test can artificially inflate the value of alpha so the alpha value .60 to .70 is also acceptable (George & Mallery, 2003).

Prior to factor analysis, the data were detected to meet two initial conditions for factor analysis identified as adequate sample size and moderate relationship between variables (Field, 2009). The Kaiser- Meyer- Olkin (KMO) measure of sampling adequacy and Barlett's test of sphericity were examined to determine the appropriateness of the data for factor analysis. The KMO value was .718 defined as good, thus it is possible to say that the sample size is adequate for factor analysis (Field, 2009). In addition, the Barlett's test was significant [$\chi 2$ (21) = 488.336, $p <$ .001] indicating enough correlations between the items to conduct EFA.

To provide further evidence for the validity of the ASE for the present study, exploratory factor analysis with principal axis factoring with varimax rotation was performed to figure out the underlying structure for 7 items of the Academic Self-Efficacy Scale. The analysis revealed one factor with an eigenvalue greater than 1.00 which was accounted for the 25% of the variance. The scree plot supported this finding.

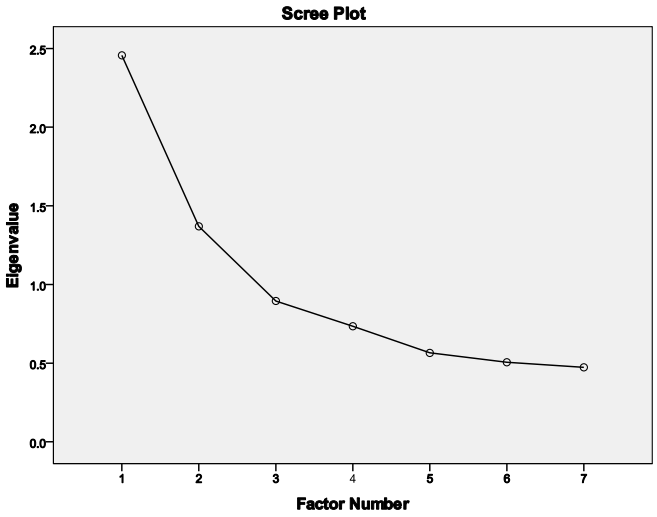

Figure 3.2 Scree Plot of Academic Self-Efficacy Scale

The factor loadings of items for the factor are displayed in Table 3.6.

Table 3.6
Factor Loadings of Academic Self-Efficacy Scale

Item Number	Factor Loadings
	1
3	.66
4	.61
2	.58
1	.46
6	.45
5	.35
7	.30

Note. Factor loadings <.30 were omitted

Thus, the distribution of scale items in the pilot study was the same with the original study. The results revealed that the 7 items of the ASE loaded on single factor (Güçlü, 2003; Uzun-Özer, 2010). Results of the all of the factor analytic studies indicated that the Turkish version of the ASE scale with seven items is unidimensional, like the original version. As a result, no changes were made for the instrument and total score of ASE were used in the current study.

3.3.5 Problem Solving Skills Inventory (PSI)

PSI was designed to assess individuals perceptions of his/her problem-solving ability (Heppner, 1988) (*see* Appendix H for the scale). It is a 32-item Likert-type scale (1 = always behave like that, 2 = often behave like that, 3 = usually behave like that, 4 = sometimes behave like that, 5 = rarely behave like that, and 6 = never behave like that). The responses to the items (e.g., "When confronted with a problem, I tend to do the first thing that I can think of to solve it") can be provided by asking "How often do you behave like that?" to the respondents. Items; 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30 and 34 are reverse scored. The total score range is 32 to 192. High scores indicate high levels of self-reported ineffective problem-solving strategies. That is the high scores indicate that the person perceives himself as inadequate in his problem solving abilities.

Estimates of reliability indicated that the scale was internally consistent (r = .72 to .90) and stable over a two-week period (r = .83 to .89). Factor analytic studies of

PSI revealed three factors as “Problem solving confidence (.85)”, “Approaching-avoiding (.84)” and “Personal control (.72)” (Heppner, 1988).

Şahin, Şahin and Heppner (1993) translated and adapted the scale into Turkish. According to the Cronbach Alpha estimation, internal consistency of the scale was found to be as .88 for the total scale. Test retest reliability was found to be as .81 among university students. The authors reported that PSI scores was significantly correlated with Beck Depression Inventory ($r\ (222) = .33$, $p<.001$) and with State Trait Anxiety Inventory ($r\ (222) =.45$, $p<.001$).

According to exploratory analysis, utilizing Principal Component Analysis with varimax rotation, items were loaded on 6 factors as “impulsive style” (.87), “reflective style”, (.76), “monitoring” (.69), “problem solving confidence” (.64), “avoidant style” (.74), and “planfulness” (.59) (Şahin, Şahin, & Heppner, 1993). Consequently, the results of the reliability and validity studies of Turkish version of PSI were found to be reliable and valid for use in Turkish culture.

3.3.5.1 Reliability and Factor Structure of PSI for the Present Study

For the present study, the 35-item version of the original PSI was used (*see* Appendix H). Evidence for the reliability of the scale for the present sample was provided by calculating internal consistency estimate. The Cronbach alpha coefficient was found to be .80 for the Turkish version of PSI.

Prior to factor analysis, the Kaiser- Meyer- Olkin (KMO) measure of sampling adequacy and Barlett's test of sphericity were examined to determine the appropriateness of the data for factor analysis. The KMO value was .871 defined as great, thus it is possible to say that the sample size is adequate for factor analysis (Field, 2009). In addition, the Barlett's test was significant [$\chi 2$ (595) = 4866.901, $p < .001$] indicating large enough correlations between the items to conduct EFA. To provide further evidence for the validity of the PSI for the present study, exploratory factor analysis was performed by using maximum likelihood with Varimax rotation. The results revealed that the 35 items of the PSI loaded on 6 factors with an eigenvalue greater than 1.00 which was accounted for the 41.46 % of the variance. The first factor accounted for 16.39% of the total variance (eigenvalue 5.73), the second one 8.88% (eigenvalue 3.10), the third one 5.18% (eigenvalue 1.81), the fourth one 4.40% (eigenvalue 1.54), the fifth one 3.40% (eigenvalue 1.21), and the sixth one 3.13% (eigenvalue 1.09). The scree plot has also supported this finding.

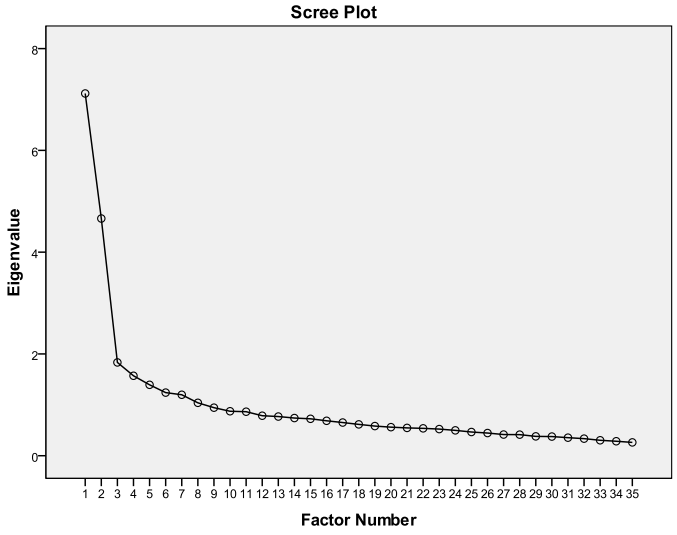

Figure 3.3 Scree Plot of Problem Solving Skills Inventory

The factor loadings of items for the factor are displayed in Table 3.7

Table 3.7
Factor Loadings of Problem Solving Skills Inventory

Item Number	Factor Loadings					
	1	2	3	4	5	6
23	.71					
20	.69					
24	.67					
19	.64					
27	.63					
31	.61					
22	.60					
12	.60					
10	.59					
35	.54					
33	.54					
18	.54					
16	.52					
28	.44					
11		.56				
34		.56				
14		.54				
26		.53				
32		.53				
21		.48				
15		.47				
9		.42				
25		.41				
3		.38				
17		.34				
2			.83			
1			.67			
4			.56			
7				.65		
6				.60		
5				.49		
8				.33		
29					.58	
30					.52	
13						.73

Note. Factor loadings <.30 were omitted

Thus, the distribution of scale items in the pilot study was somewhat different with the original study (Uzun-Özer, 2010) but the same with the Turkish psychometric study of Heppner, Şahin and Şahin (1993). In the Turkish adaptation study, six factors were found and labeled as impulsive style (items: 13, 14, 15, 17, 21, 25, 26, 30, 32); reflective style (items: 18,20, 31, 33, 35); monitoring (items: 6, 7, 8); problem solving confidence (items: 5, 23, 24, 27, 28, 34); avoidant style (items: 1, 2, 3, 4), and planfulness (items: 10, 12, 16, 19). The Chronbach alpha coefficient for the whole scale was .88 and for the subscales (impulsive, reflective, monitoring, problem solving confidence, avoidant and planfulness) were as follows: .78, .76, .74, .69, .54, and .59, respectively.

In terms of factor structure of the scale, different researchers yielded different results (Çapri & Gökçakan, 2008). Thus, it is stated that total score of PSI could give a valid and reliable result (Çam, 1999; Savaşır & Şahin, 1997). For the purposes of this study as suggested by many researchers (e.g Akbaş, 2001; Basmacı, 1998; Kılıç & Koç, 2003; Tümkaya & İflazoğlu, 2000), the total score was used.

3.4 Data Collection Procedure

Data collection procedure of the current study included following steps: First, approvals from the Human Subjects Ethics Committee of Middle East Technical University (*see* Appendix A for the approval letter) and Ankara Provincial Directorate of National Education (*see* Appendix B for the approval letter) were

obtained to initiate the study. Second, the researcher made a visit to the selected high schools and informed school principals about the purpose of the study, and requested their approval to apply the scales in the classroom hours. Third, after obtaining the school principles approval researcher administered instruments in to students by herself in classess. However, in one of the schools; the data were collected through the collaboration with school counselors due to administrator's suggestion. In that school, counselors arranged the classrooms and motivated students for the administration.

A survey package that contained all mentioned instruments and a consent form were given to each participant during regular classroom hours. In addition, during the administration of the measures students were also given explanation by the researcher about purpose of the study, how to fill out surveys and answered participants questions regarding the study. Considering confidentiality of the data, data collection was anonymous as participants were not asked to disclose any identifying or personal information. Participants were also guaranteed anonymity of their responses and confidentiality of the data during the data collection. The participation was strictly voluntary, and there was not any compensation associated with taking the survey. The privacy of the participants was ensured not asking personal information (name and student ID number) on measures. In order to obtain the data for test-retest reliability study, the participants were asked to write a nickname.

Data for the validity and reliability studies were collected by the researcher in May 2012 and data for main study were gathered in November 2012. The questionnaires were administered in the following order: Career Decision Scale, Career Beliefs Inventory, Parental Attitude Scale, Academic Self-Efficacy Scale, and Problem Solving Skill Inventory. The completion of the survey package took approximately a class hour (40 minutes).

3.5 Data Analyses

In order to analyze the data gathered, the following steps were considered. Firstly, the data set was controlled in terms of data entry by using frequencies, minimum and maximum scores. Then, data cleaning and screening procedure were done to identify missing values and to check the normality. Once data screening was completed, basic descriptive statistics were initially performed by means of SPSS (Statistical Package for Social Sciences) version 18 so as to screen and describe the data. In addition, Pearson product-moment correlations were computed to reveal the relationship between the variables. Next, the presented model was tested by means of Path Analysis via AMOS 18 software program (Arbuckle, 2009). Path analysis preferred rather than regression analysis because it can help to determine the indirect effects of the variables in the model. Further, path analysis allows for the decomposition of the effects of variables into direct, indirect, and total effects (Pedhazur, 1997). A set of additional regression is added to the original regression analysis to draw out indirect effects. Because of this complexity, a path diagram is typically used to display all of the causal relationships. Accordingly, a path analysis

separates direct effects and indirect effects thorough a mediator while regression analysis regards direct effect. In addition, a graphical language provides a convenient and powerful way to present complex relationships in path analysis (Ahn, 2002).

3.5.1 Operationalization of Variables

This section provides the operational definitions of variables investigated in this study. As mentioned, the proposed model examines the relationship between gender, career beliefs and career indecision of 11^{th} and 12^{th} grade students in conjunction with task approach skills (academic self-efficacy and problem solving skills). Variables are discussed under two categories: exogenous variables and endogenous variables. Exogenous variables are synonymous with independent variables, influencing endogenous variables. On the contrary, endogenous variable is synonymous with dependent variable in the model and it is influenced by the exogenous variables in the model, either directly or indirectly (Byrne, 2010).

3.5.1.1 Exogenous Variables

Career beliefs

Career beliefs was measured by Career Belifs Inventory (CBI), which is a 72-item, 5 point rating scale, and obtained high scores indicating more functional career beliefs. Research has demonstrated a negative link between career beliefs and career indecision (Enright, 1996).

Academic Self-Efficacy

Academic self-efficacy was measured by Academic Self Efficacy (ASE) scale, which is a 7-item, 4-point rating scale and obtained high scores indicating more academic self-efficacy. Research has demonstrated a negative association between academic self-efficacy and career indecision (Büyükgöze-Kavas, 2010).

Problem Solving Skills

Problem solving skills was measured by Problem Solving Skills Inventory (PSI), which is a 35-item, 6-point rating scale and obtained high scores indicating less problem solving skills. Research has demonstrated a negative association between problem solving skills and career indecision (Schlossberg, 2001).

3.5.1.2 Endogenous Variable

Career Indecision

Career indecision was measured by Career Decision Scale (CDS), which is a 18-item, 5-point rating scale, and obtained high scores representing being more career decided.

3.5.2 Path Model and Fit Indices

Path analysis was conducted to investigate the direct and indirect effects of gender, career beliefs, academic self-efficacy and problem solving skills on career

indecision of high school students. Path models are very useful for investigating the interrelationships among variables since researchers have a chance to "simultaneously assess various types of relations among variables and rigorously examine and compare similarities among and the differences between groups of study" (Olabatuyi, 2006, p.12). Path Model is an advanced and comprehensive statistical procedure and serves similar purposes of Regression. One of the advantages of path analysis is that it makes easy to measure the direct and indirect effects of each variable on other variables in the model, so it enables to compare the effects of different variables (Allen, 1997; Olabatuyi, 2006). Briefly, *Path Analysis* is statistical method which uses both bivariate and multiple linear regression techniques to test the causal relationship among the variables in the proposed model (Olobatuyi, 2006).

In path analysis, there are two kinds of variables. First one is *Endogenous Variable* (dependent variable) which is a variable whose variation is explained by the causal model, and they were caused by at least one variable (independent variable) in the path model (Gall, Gall & Borg, 2007; Mertler & Vanatta, 2005). Second one is *Exogenous Variable* (independent variable) which affects the endogenous variables and their variation is not explained by the model and they are considered to be influenced by other variables outside the causal model (Kline, 2005). Additionally, *Mediator* refers to a variable that accounts for the relationship between predictor variable(s) and criterion variable(s) (Baron & Kenny, 1986, p.1176). Thus, the relationship between the predictor and criterion variables can be accounted for by the mediator variable. Mediators have both incoming and outgoing causal arrows in

the path diagram. In this study, gender and career beliefs are exogenous variables; academic self-efficacy and problem solving skills are mediator variables and career indecision is endogenous variable of the proposed model.

To determine causal connections between the variables in the path model, some statistical procedures were conducted by using AMOS 18, developed by Arbuckle (2007). Using AMOS, it is possible to draw and test a model graphically and it provides valuable output information, which includes "type of least squares, data distribution, bootstrap options, residuals, standardized and unstandardized path estimates, and modification indices (Clayton & Pett, 2008, p.286). Also, direct, indirect and total effects are shown in Amos outputs. Allen (1997) defined the *direct effect* of a variable as "its effect on a dependent variable, controlling for the effects of both causally prior and intervening variables" (p.165). On the other hand, *indirect effect* happens when a variable influences an endogenous variable through its effect on some other variable (Mertler & Vanatta, 2005). According to Hair et al., (2006), indirect effects are consistent with mediation and a mediation effect occurs when "a third variable/construct intervenes between two other related constructs" (p.866). Last, the *total effects* can be estimated by summing direct and indirect effects of a variable on another.

The overall fit of the initial model was assessed by using some different fit statistics: Chi-square statistics, Root Mean Square Error Approximation (RMSEA), Comparative Fit Index (CFI), Normed Fit Index (NFI) and Tucker Levis Index (TLI).

Chi-Square (χ2) test discovers the degree of fit between the causal model and the observed data (Olabatuyi, 2006). A non-significant χ2 means the model fits the data. The researchers should be interested in obtaining a non-significant chi-square value since "it indicates that sample covariance matrix and the reproduced model-implied covariance matrix are similar" (Schumacker & Lomax, 2004, p.81). However, Chi-square value should be used with caution since it is very sensitive to sample size. When the sample size is above 200, the Chi-square statistics has a tendency to show a significant value. Therefore, if the sample size is large, some alternative fit indices should be considered.

Another index for consideration is *Root Mean Square Error of Approximation (RMSEA)* which is computed on the basis of the analysis of residuals. (Steiger & Lind, 1980). Values less than .05 are considered to be good, values between .05 and 0.8 considered to be adequate, and values greeter than .10 indicates a poor fit (Browne & Cudeck, 1993). Therefore, the smaller the values of RMSEA, the better the model fit.

Other indices for consideration were *Comparative Fit Index* (*CFI), Normed Fit Index (NF)* and *Tucker Levis Index* (*TLI*) indices, which are classified as incremental fit indices and they can provide information about practical significance (Bentler & Bonett, 1980). CFI, NFI and TLI scores higher than .90 indicate an acceptable fit. Accordingly, as suggested by Hoyle (1995), the

researchers used several fit indices to evaluate the overall fit of the model.

Finally, *Path Coefficient / Path Weight* are numerical estimates of the causal relationship between variables in the path analysis. It is calculated as the amount of expected changes in the dependent variables due to a unit change in the independent variable (Olobatuyi, 2006). Cohen (1988) claimed that standardized path coefficient with absolute values less than .10 may indicate a small effect; values around .30 indicate medium effect, and values above .50 indicate large effect.

3.6 Limitations of the Study

This study has some limitations as well as some strength and the findings should be evaluated by taking those limitations into consideration. A major limitation of this sample selection is that it is based on convenience sampling rather than simple random sampling. Although this method of sampling is a practical way to gather data, one cannot expect a highly representative sample. Since the data were collected from 11^{th} and 12^{th} grade students from Anatolian High Schools in Ankara, generalization of the research findings was limited to those who display similar characteristics to the research sample.

Second limitation of the study might be owing to the self-report nature of the data collection. In spite of its wide applicability, the validity of the self-report measures

is limited because the participants may not be giving honest responses due to the need for social desirability (Bickman & Rog, 1998).

Thirdly, although the researcher tried the best to ensure the participation of all subjects selected for the sample, the certain amount of nonresponse was inevitable. Especially 12th grade students participation to study was lower than the other grade levels, because in the 12th grade students who are getting ready to for the university entrance exam prefered to attend dersane (special tutoring instutions) rather than the school.

Additionally, this study is mainly grounded on the assumption that participants report their ideas in an honest and accurate manner, which may present a threat to the internal validity of the study. Occurrence of unforeseen events during the course of administering the instruments, namely history threat can also influence the responses of the participants. There may be as well location threat to the internal validity considering that students were at different schools. However, every effort was made to keep the conditions similar.

Last but not the least, according to LTCC, career indecision is influenced by a multitude of factors, but only one genetic factor, one learning conditions and two task-approach skills variables were considered in this study. Other genetic or learning conditions variables also play a critical role in career indecision. Therefore, the individual level variables used in this study should not be considered exclusively representative of such patterns. Additionally, no environmental factors

considered in this study due to the aim of investigating individual level variables. However, they should not be disregarded as factors influencing career indecision.

CHAPTER IV

RESULTS

This chapter presents the results of the study in two separate sections. The first section consists of the preliminary analyses, which specifically involves missing value analysis, the test of normality, the descriptive statistics, and the intercorrelations among the study variables. The second section indicates the main analysis of the study, namely path analysis conducted to test the proposed causal model, and trimmed model as well as direct and indirect relations and hypotheses testing were presented.

4.1 Preliminary Analyses

In this part, the missing value and outlier analysis, and normality analysis were presented. Moreover, the assumptions of the path analysis were also checked.

4.1.1 Missing Value Analysis

Prior to data entry, 19 cases were omitted due to incomplete and patterned filling. After the entry, data were checked for missing data. It was suggested that the missing data is an important issue, particularly when it exceeds 5% (Tabachnick &

Fidell, 2007). In the present study for 7 cases with missing values less than 5%, mean replacement was conducted.

4.1.2 Test of Normality and Outlier Analysis

The current statistical tests are based on the assumption that the data follow a normal distribution. Before applying these tests, this assumption was checked to examine outliers that might influence the analysis. The Skewness and Kurtosis for study variables were computed by using SPSS 18. If Skewness and Kurtosis scores are close to "0" and the shape of the histogram is bell shaped, it means that the distribution of population sample is normal. In other words, Kurtosis and Skewness values indicated that all scales follow a normal and symmetrical distribution (Muthén & Kaplan, 1985). Accordingly, for the preliminary analyses, outlier analysis over the data was run. In this respect, in order to check the univariate outlier, the data was converted into z-score and standardized z scores exceeding the range between +3.29 and -3.29 were checked for each of the z scores of the observed variables (Tabachnick & Fidell, 2007). No univariate outliers were found exceeding z scores from the data set. As a result of outlier analysis, the analyses were performed with data obtained from 409 cases.

4.1.3 Assumptions of Path Analysis

The path analyses employed in the present investigation rely on assumptions including independence of observations, sample size, normality, linearity,

homoscedasticity and multicollinearity. Taking into account those assumptions, even if the data were collected in the classroom settings, the researcher did not allow any interaction among participants to make sure that all observations were independent. In terms of sample size, Kline (2005) suggested that sample size should be at least 200 to conduct path analysis. Consequently, sample size of the study (N = 409) was large enough to perform path analysis

In order to check univariate normality, skewness and kurtosis values for each study variables were examined. Skewness and kurtosis statistics were found within the acceptable range of ± 3 (Field, 2009; Stevens, 2002; Tabacknick & Fidell, 2007).

Table 4.1
Indices of Normality for Study Variables

Variable	Skewness	Kurtosis
Career beliefs	.09	.50
Academic self-efficacy	-.56	-.35
Problem solving	.51	.24
Career indecision	.08	.22

As seen in the Table 4.1, each of the study variables manifested a normal distribution, since none of the values higher or lower than ± 3 (Stevens, 2002).

Beyond the skewness and kurtosis values, residual plot was used to examine the assumptions of normality, linearity, and homoscedasticity. In the current study,

residuals displayed an approximate rectangular distribution with scores concentrated in the center (Figure 4.1).

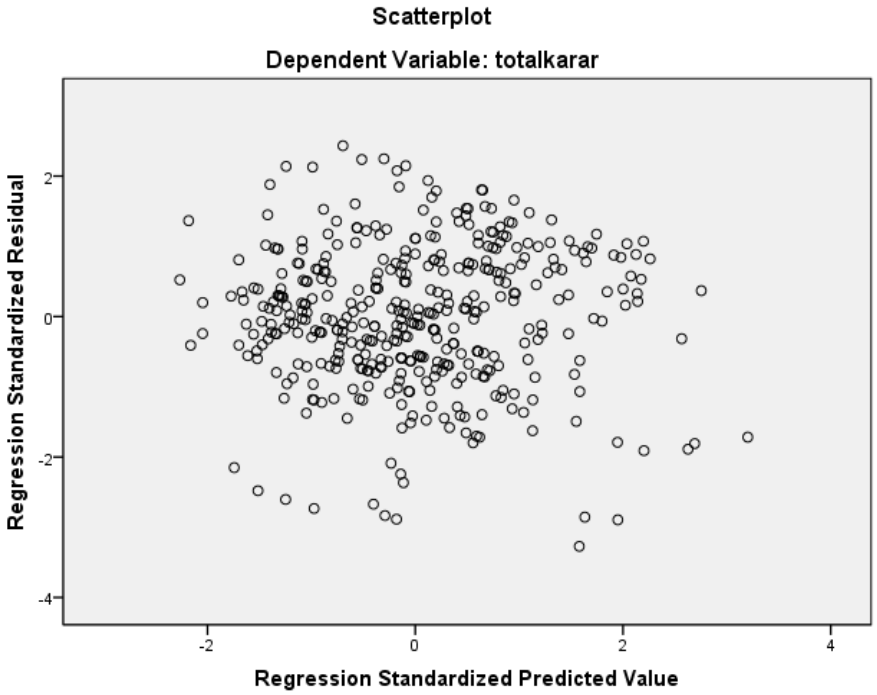

Figure 4.1 Scatterplot of Stardardized Predicted Values by Standardized Residuals

To sum up, it is possible to conclude that the assumptions of normality, linearity, and homoscedasticity among the variables included in the model were met. Thus, the final sample of the study consisted of 409 participants for further analyses.

4.2 Descriptive Statistics and Correlations

Descriptive statistics, including means and standard deviations and intercorrelations were computed for each variable in the sample (Table 4.2). In the present study, the mean of career indecision score for the total sample was 44.92 (*SD* = 9.97). In the

current investigation, the mean of the career beliefs for the total score was found to be 22.63 (*SD* = 3.47). Scores higher than the 39 means career beliefs of individuals are more rational (Krumboltz, 1994). Thus, the observed mean for the sample was not so high. Additionally, the observed mean for academic self-efficacy were found to be 19.78 (SD = 3.04) which means the higher the scores the higher the perceived academic self-efficacy. The score range for the PSI changed from 32 to 192. High scores indicate high levels of self-reported ineffective problem-solving strategies. That is the high scores indicate that the person perceives himself as inadequate in his problem solving abilities. The observed mean for Problem Solving Skills Inventory for the present sample was calculated as 100.91 (SD = 17.36) for the whole group.

Furthermore, bivariate correlations among all of the variables were computed to understand the relationships among the study variables and to detect the assumptions of multicollinearity. Therefore, Pearson product-moment correlation coefficients were calculated to evaluate the relationships among exogenous variable of gender; mediator variables of career beliefs, academic self-efficacy and problem solving skills; and endogenous variable of career indecision. To control for family wise error, a Bonferoni correction ($\alpha = .01$) was employed (Miller, 1991). The correlation matrix showing the correlations among the study variables for the entire sample is also presented in the Table 4.2

Table 4.2
Means, Standard Deviations and Intercorrelations

Variable	*M*	*SD*	1	2	3	4
1.CBI	22.63	3.47	. 09**	-		
2.ASE	19.78	3.04	.16**	-.12**	-	
3.PSI	100.91	17.36	.05	.29**	.25**	-
4.CDS	44.92	9.98	-.14**	-.39**	.03	-.25**

Note. N = 409. CBI = Career Beliefs; ASE = Academic Self-efficacy; PSI = Problem Solving Skills; CDS = Career Decision Scale.
***p* < .01, two-tailed.

The relationships also assess the presence of multicollinearity. Authors differ on how high the R^2 has to be to constitute a problem. According to Allison (2012), R^2 is greater than .60, is a concern for multicollinearity. Tabachnick and Fidel (2007) stated that multicollinearity among the study variables was not a concern for the current studysince none of the partial coefficients exceeded .50.

Overall examination of the correlations among the variables for the entire sample indicated no significant correlations at the .001 level. However, many significant relationships can be seen at the .01 and .05 levels. The significant correlation coefficients were changed in a ranged between .03 to .39.

As seen on the

Table 4.2, several patterns emerged. Career indecision was negatively correlated with career beliefs (r = -.39, p < .01), and problem solving skills (r = -.25, p < .01).

No significant relationship was revealed between career indecision and academic self-efficacy ($r = .03$, $p < .05$). These results indicated that the more rational the participants' career beliefs, the lower their career indecision level. The higher the participants' problem solving skills, the lower their career indecision. On the other hand, inconsistent with the expectation, no significant relationship was obtained between career indecision and academic self-efficacy. Academic self-efficacy was found to be positively associated with career beliefs. Similarly, problem solving skills was found to be positively associated with their career beliefs.

An independent samples *t*-test was employed to determine the possible gender difference on career indecision, career beliefs, academic self-efficacy, and problem solving skills. The mean of the career indecision was reported as 46.14 (*SD* = 9.6) for females and 43.3 (*SD* = 10.2) for males. Accordingly, results of the analyses revealed that there was a significant difference between female and male students career indecision [t (407) = 2.87, p = .004] scores. In the present sample, the observed mean for career beliefs was found to be 160.9 (*SD* = 24.6), and 165.6 (*SD* = 25.3) for females and males, respectively. The independent t-test result of the analyses revealed that there was a significant difference between female and male students career beliefs [t (407) = -1.88, p = .06] scores. Hence, is being male or female slightly differ on their indecision and belief process of individuals. The observed mean for academic self-efficacy was found to be 19.36 *(SD = 3.13)* for females, and 20.34 *(SD = 2.83)* for males. However, the independent t-test result of the analyses revealed that there was no significant differences between female and male students academic self-efficcay [t (407) = -3.27, p = .05] scores. Lastly, the

observed mean for problem solving skills was found to be 100.2 (*SD* = 18.03) for females, and 101.9 (*SD* = 16.4) for males. Accordingly, result of the analysis revealed that there was no significant differences between female and male students problem solving skills [*t* (407) = -1.001, *p* = .32] scores.

4.3 Path Analysis: Testing the Proposed Career Indecision Model

Path analysis is a method in which the whole model simultaneously can be assessed by observing both direct and indirect effects among the variables. The maximum likelihood estimation method, the most common method of estimation for path analysis, provides the best fitting parameter estimates. Assessing the model's fit to the data involved estimation of parameters that describe the relationships among the study variables. AMOS provided several ways to assess model fit through a variety of indices that compared reproduced conelations. In this section, measurement models of the present study were tested (N=409) with the help of Path Analysis. For the current study, chi square, goodness-of-fit index (GFI), Bentlers' comparative fit index (CFI) and root-mean-squared enror of approximation (RMSEA) were used to assess model fit to the data (Marcoulides & Hershberger, 1997). The recommended cutoff values for each goodness of fit index summarized in Table 4.3.

Table 4.3
Acceptable Cutoff Values for Goodness of Fit Indices

	Goodness of Fit Indices							
	X^2	*df*	x^2/df	GFI	CFI	TLI	NFI	RMSEA
Optimal Value	-	-	*<3.0*	*>.95*	*>.95*	*>.95*	*>.90*	*< .05*

Note. Marcoulides & Hershberger (1997)

A chi-square test for goodness-of-fit requires a significant x^2 value *(p* <.05); however, the null hypothesis is the desired outcome for x^2 goodness-of-fit comparison of the estimated and parsimonious models. In other words, a nonsignificant x^2 value is desired in order to demonstrate that the reproduced variance/covariance matrix does not significantly differ from the observed variance/covariance matrix (Browne & Cudeck, 1993). However, it is well known that tests of significance react to larger sample sizes; therefore, significance of the test may not necessarily mean a poor fit to the data (Marcoulides & Hershberger, 1997), and other measures of fit should be considered as well. Whereas a nonsignificant chi-square suggests good model-to-data fit, a significant chi-square suggests a poor model to data fit. For the GFI, TLI and CFI, values above .95 indicate a good fit, and for RMSEA, values of less than .05 indicate a good fit, while values between .06 and .08 suggest an acceptable fit of the model to the data (Browne & Cudeck, 1993; Marcoulides & Hershberger, 1997).

In order to test the proposed path model depicted in the Figure 4.2, a path analysis was conducted by using AMOS 18 (Byrne, 2001). The path analysis was conducted with academic self-efficacy and problem solving skills as mediators between

gender, career beliefs and career indecision. Within the context of the path analysis, AMOS 18 was used to examine the direct effects of gender and career beliefs on academic self-efficacy and problem-solving skills; the direct effect of career beliefs and gender on career indecision; the direct effects of academic self-efficacy and problem-solving skills on career indecision. In the path analyses; academic self-efficacy and problem solving skills were used as mediators between gender, career beliefs and career indecision. Therefore, in the path analysis, the indirect effect of career beliefs on career indecision through academic self-efficacy and problem solving skills were tested. The hypothesized model was tested, in order to see how well the data fitted the model based on Krumboltz's Learning Theory of Career Counseling.

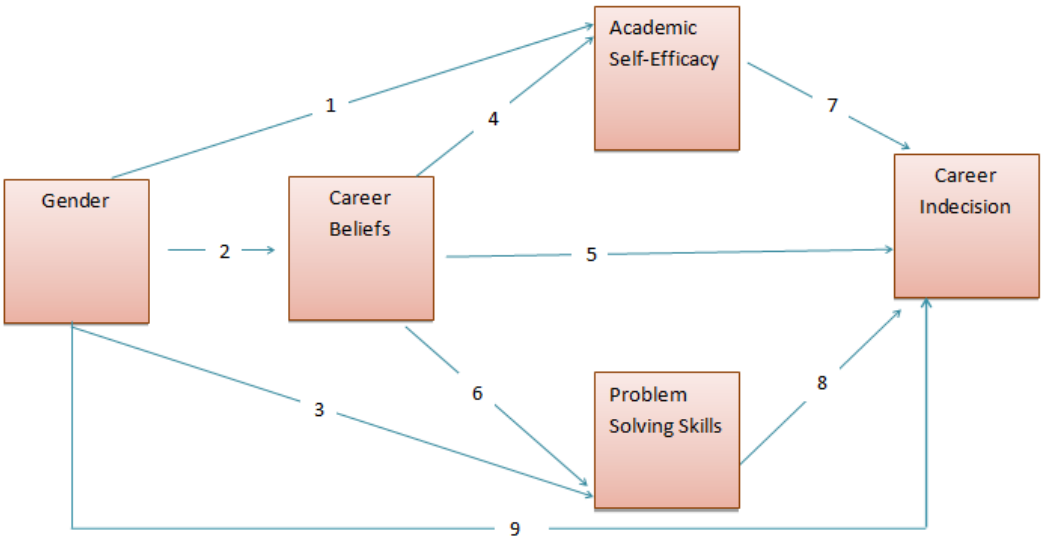

Figure 4.2 Proposed Path Model

4.3.1 Results of the Fit Statistics for Hypothesized Path Model

Table 4.4
Summary of Goodness of Fit Statistics for the Hypothesized Model

	Goodness of Fit Indices							
	x^2	*df*	x^2/df	GFI	CFI	TLI	NFI	RMSEA
Optimal Value	26.5	2	13.27(>3)	.85	.84	.19	.84	.17

The hypothesized model (Figure 4.2) of the present study was initially tested for the data. This analysis was conducted to determine the goodness of the model fit to the data. The initial fit statistics obtained from the path analysis are summarized in Table 4.4.

According to these indices, fit statistics for the proposed model indicated less than adequate fit. In the path analysis that evaluated the proposed model revealed large and statistically significant chi-square statistic value x^2 (2, n = 409) = 26.5, p = .00 which indicates poor model fit for the data. In addition, the ratio of x^2 to degrees of freedom (*df*) was calculated. However, the value of this ratio x^2/ *df* =26.5 / 2 = 13.2 was far away from recommended value of 3 (Kline, 2005). As earlier stated, it should be noted that chi-square is sensitive to sample size. Schumacker and Lomax (2004) stated that with large sample size, the chi-square yields significant values. In order to deal with limitations of chi-square statistics, other various goodness of fit indices (e.g., the goodness of fit index; GFI, the comparative fit index; CFI, and the root-mean-square error of approximation; RMSEA) are recommended to assess model fit. Even though some of the fit indices as GFI = .85, CFI = .84, NFI = .84 seemed to be acceptable, the chi-square statistics (p < .05), TLI (.19), and the

RMSEA values (.17) suggested poor model fit with the data. Considering the result of the path analysis for females, some indicators had low percentage of explained variance; however, these items were not excluded from the study that would remain a potential limitation of the present study.

As a result of the path analysis for females, which did not reveal any nonsignificant path, the trimmed model was conducted as alternative path model of career indecision. Thus, the trimmed model fits the data significantly better than the proposed model.

4.3.2 Path Analysis: Testing the Trimmed Career Indecision Model

One goal of path analysis is provision of a parsimonious model. Considering the results obtained from the initial analysis for hypothesized model, a parsimonious model can be used in future tests using new data in order to assess the model's predictive accuracy (Marcoulides & Hershberger, 1997). Since the overall model was a poor fit of the data, the model was trimmed to reach a more parsimonious model by eliminating of existing four nonsignificant paths. Specifically, the following paths were nonsignificant: the path between gender and career beliefs, the path between gender and problem solving skills; the path between academic self-efficacy and career beliefs; and the path between academic self-efficacy and career indecision. Subsequently, recommended changes were made to improve the fit of the model and a path analysis was rerun with the trimmed model.

Standardized path coefficients for the paths of the trimmed model are presented in Figure 4.3.

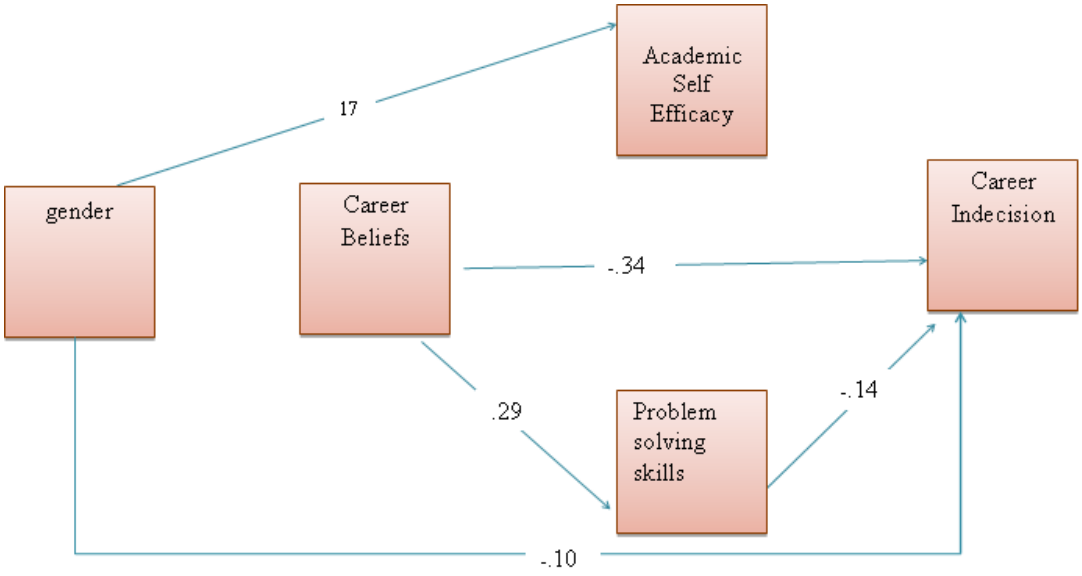

Figure 4.3 Standardized Path Coefficients for the Trimmed Model

An examination of the path coefficients among the variables of the trimmed model indicated that all of the paths including the correlations among exogenous variables (gender, career beliefs, academic self-efficacy and problem solving skills) were significant. The same model-fit statistics, namely chi-square (x^2), the ratio of chi-square to its degrees of freedom x^2/df), the goodness of fit index (GFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI), normed fit index (NFI), and the root-mean-square error of approximation (RMSEA) were computed for the trimmed model. The summary of model-fit statistics for the trimmed model is displayed in

Table 4.5.

Table 4.5
Summary of Goodness of Fit Statistics for the Modified Model

	Goodness of Fit Indices							
	x^2	df	x^2/df	GFI	CFI	TLI	NFI	RMSEA
Optimal Value	5.76	4	1.4	.99	.98	.97	.96	.03

In the trimmed model, x^2 (4, n = =409) = 5.76, p = .94, signifying that the model was a good fit of the data. Moreover, fit indices for the trimmed model indicated a good model to data fit: GFI = .99, CFI = .98, and TLI = .97. As a result of the second path analysis which did not reveal any nonsignificant path, the trimmed model was accepted as the final path model of career indecision. Thus, the trimmed model fits the data significantly better than the proposed model.

Regarding the research question of the effect of study variables on career indecision, the squared multiple correlation coefficient (R^2) indicated that the parsimonious model accounted for 18% of the variation.

4.3.2.1 Direct and Indirect Relationships

As shown in Figure 4.3, the path coefficients varied from .03 to -.35 for trimmed model. Cohen (1992) proposed effect size index and their values for standardized path coefficient (β) as values less than .10 indicate a "small" effect; values around .30 a "medium" effect; and values of .50 or more a “large" effect. Accordingly,

career beliefs (β = -.48) had the largest direct effect on career indecision. Conversely, academic self-efficacy (β = .03) had the lowest direct effect on career indecision. Among the 5 paths, three of them were negative (Figure 4.3). The standardized direct and indirect effects and their statistical significance for the trimmed model were calculated and summarized in Table 4.6. The indirect effects specified in hypotheses were estimated via bootstrapping (set at 1000), and bias corrected bootstrap (BC) 95% confidence intervals were requested. Bootstrapping is being used with increasing frequency and recommends by many researcher (Preacher & Hayes, 2008; Williams & MacKinnon, 2008). It is basically a statistical method of resampling from the original data set that provides significance of indirect effects (Kline, 2005). Further, the standardized total, direct, indirect (total), and specific indirect effects and their statistical significance for the trimmed model were calculated and summarized in Table 4.6.

Table 4.6

Standardized Total, Direct, and Indirect Estimates of the Trimmed Model

Paths	Standardized Estimates (*β*)
gender ⟶ Career Indecision	
Total	-.10**
Direct	.00*
career beliefs ⟶ Career Indecision	
Total	-.38**
Direct	-.34**
Indirect (by PSS)	.04*
Academic Self Efficacy ⟶ Career Indecision	
Total	.03*
Indirect (by PSS)	.03*
Problem Solving Skills ⟶ Career Indecision	
Total	-.14**

Note.; ASE = Academic self-efficacy; PSI = Problem Solving skills

*$p < .05$;; **$p < .001$.

4.3.2.2 Hypotheses Testing

Hypothesis 1: There will be a relation between gender and academic self- efficacy directly (Path 1). The results supported the Hypothesis 1 that there was a significant and positive relationship ($\beta = .17$, $p < .05$) between gender and academic self-efficacy indicating that being female or male had an effect on academic self efficacy of students.

Hypothesis 2: There will be a relation between gender and career beliefs (Path 2). Hypothesis 2 was rejected because gender was found to be not related to career beliefs ($\beta = .00$, $p > .05$) which means there is no direct relationship between gender and career beliefs.

Hypothesis 3: There will be a relation between gender and problem solving skills directly (Path 3). Hypothesis 3 was rejected because it was found that gender was not related to problem solving skills ($\beta = .00$, $p > .05$).

Hypothesis 4: There will be a relation between gender and academic self-efficacy indirectly through career beliefs (Path 2 and Path 4). The results of the study did not support that gender was related to academic self-efficacy indirectly through career beliefs ($\beta = .00$, $p > .05$) meaning that there is no indirect role of career beliefs between academic self-efficacy and gender.

Hypothesis 5: There will be a relation between gender and problem solving skills indirectly through career beliefs (Path 2 and Path 6). The results of the study indicated that gender was not related to problem solving skills indirectly through career beliefs ($\beta = .00$, $p > .05$). Therefore, Hypothesis 5 was rejected.

Hypothesis 6: There will be a relation between career beliefs and academic self-efficacy (Path 4). The results did not verify the hypothesis 6 as career beliefs was related to academic self-efficacy ($\beta = .00$, $p < .05$) meaning that students' career belif is not related with their academic self-efficacy.

Hypothesis 7: There will be a relation between career beliefs and problem solving skills (Path 6). The results verified the hypothesis 7 as career beliefs was related to problem solving skills ($\beta = .29$, $p < .001$). This indicates that adolescents who had more functional beliefs about career were more likely to have less problem solving skills.

Hypothesis 8: There will be a relation between career beliefs and career indecision directly (Path 5). Hypothesis 8 was supported that there was a negative and significant relationship between career beliefs and career indecision ($\beta = -.34$, $p < .001$) indicating that adolescents who had more functional beliefs about career had lower levels of career indecision.

Hypothesis 9a: Career Beliefs will be related to career indecision through academic self- efficacy (Path 4 and Path 7). The hypothesis was rejected because career beliefs was not related to career indecision indirectly ($\beta = .00$, $p < .05$) through academic self-efficacy indicating that there is no mediating effect of

academic self-efficacy on the relationship between students' career beliefs and career indecision levels.

Hypothesis 9b: Career Beliefs will be related to career indecision through problem solving skills (Path 6 and Path 8). The hypothesis was accepted as there was a negative and significant relationship between career beliefs and career indecision through problem solving skills ($\beta = -.04$, $p < .05$). There is a mediating role of problem solving skills between career beliefs and career indecision.

Hypothesis 10: Academic Self- efficacy will be related to career indecision (Path 7). Hypothesis 10 was rejected because academic self-efficacy was not related to career indecision directly ($\beta = .00$, $p < .05$) indicating that there is no direct relationship between academic self- efficacy and career indecision.

Hypothesis 11: There will be a relation between problem solving skills and career indecision (Path 8). The hypothesis was confirmed by the results. Accordingly, there was a negative and significant relationship between problem solving skills and career indecision ($\beta = -.14$, $p < .001$).

Hypothesis 12a: There will be a relation between gender and career indecision indirectly through academic self-efficacy (Path 1 and Path 7). Hypothesis 12a was

not accepted as there was no significant mediating effect of academic self-efficacy between gender and career indecision ($\beta = .00$, $p < .001$).

Hypothesis 12b: There will be a relation between gender and career indecision indirectly through problem solving skills (Path 3 and Path 8). The hypothesis was not confirmed by the results. Accordingly, there was no significant relationship between gender and career indecision through problem solving skills ($\beta = .00$, $p < .001$) indicating that there is no mediating effect of problem solving skills on the relationship between gender and students' career indecision levels.

Hypothesis 13: Gender will be related to career indecision (Path 10) . Hypothesis 13 was accepted as there was a negative and significant direct relationship between gender and career indecision ($\beta = -.10$, $p < .001$).

4.3.3 Summary of the Results

The hypothesized path model depicted in the Figure 1.2, consisted of some variables included from various factors such as genetic, learning, and task approach variables to predict career indecision. The genetic variable of gender and learning variable of career beliefs were hypothesized to be mediated by the some task approach factors namely by academic self-efficacy and problem solving skills when predicting career indecision.

Overall, the results of the analysis revealed that the variables included in the model were significantly related to career indecison among 11th and 12th grade high school students. Most of the stated hypotheses were confirmed by the results of the study. Moreover, as hypothesized career beliefs variable was mediated by task approach skills (academic self-efficacy and problem solving skills) for predicting career indecision. Considering the values obtained from the multiple fit indices along with statistically significant parameters the suggested model did not fit the data, however the trimmed model of career indecision was supported by the data.

CHAPTER V

DISCUSSION

This chapter presents a general discussion along with discussions of hypothesized relationships between studied variables based on the findings obtained from the current study that is followed by implications and recomendations for research and practice.

5.1 General Discussion

Current investigation aimed to examine the predictors of career indecision with in a proposed model based on variables from Learning Theory of Career Counseling Model (Krumboltz, 1996). In particular, this study investigated the role of gender, career beliefs, academic self-efficacy, and problem solving skills and how they interact to affect career indecision among Turkish 11^{th} and 12^{th} grade high school students. Accordingly, a mediational model in which academic self-efficacy and problem solving skills were proposed to interact with gender and career beliefs to predict career indecision was proposed and tested. Path analysis was utilized to test the proposed career indecision model (*see* Figure 1.2) to test multiple predictors and mediators of career indecision. The results of the path analysis revealed that proposed model was not supported by the data. Considering the results of path analysis, some modifications were recommended to improve the model.

Accordingly, some nonsignificant relationships were excluded from the model. After that, the path analysis was rerun for testing the trimmed model. Results of the analysis for trimmed model provided a perfect fit to the data and it was theorethically sound.

In summary, as expected the findings obtained from the present study revealed that career beliefs was the most salient components within the set of exogenous variables for specifying career indecision. Problem Solving was a weaker predictor of career indecision as a mediator variable whereas; academic self-efficacy was not a predictor variable on career indecision as a mediator variable. Gender was found to be last and weakest predictor of career indecision. Eventhough there are a limited number of studies that investigated the model of Krumboltz's Learning Theory of Career Counseling. The overall results of the present study are consistent with the findings of reported limited number of previous studies (Datti, 2009; Enright, 1996; Fillman, 2014; Sorapuru, 2012; Whitterspoon, 1998). For example, Enright (1996) in provided evidence for Krumboltz's LTCC by predicting career indecision by the help of career beliefs (learning experiences) and disability status (genetic endowments). Jackson et al., (2006) suggested that during the school years, an association exists between success experiences and occupational interests for low-income, culturally diverse, urban youth which is consistent with Krumboltz's SLTCDM learning principles apply with diverse groups. Likewise, Sorapuru (2012) indicated that examination of four factors (genetic endowments, environmental conditions, learning variables and task approach skills) of Krumboltz Learning Theory of Career Counseling model and in general, the study supported

Krumboltz's theory, with learning experiences as a significant predictor of principal's career decisions.

5.1 Hypothesized Relationships between Gender and Career Indecision

In the Career Decision-Making literature, there is no clear agreement about the relationship between gender and career indecision, that is while some studies indicate no gender difference on career indecision (Guerra & Braungart-Rieker, 1999; Kraus & Hughey, 1999; Meyer & Winer, 1993), the obtained finding concerning the gender difference was consistent with some other previous studies (Feldt, 2013; Osipow & Winer, 1996; Wallace-Broscious, Serafica & Osipow, 1994).

It was hypothesized that gender would be directly related to career indecision. Results of this hypothesis yielded a small and negative direct relationship between gender and career indecision scores. That is, when career indecision is considered, males are reported to be more decided than females. This finding is generally consistent with previous studies (Bacanlı, 2008; Burns, 1994; Gianakos & Subich, 1986). Even if it is a small correlation, this difference might be due to the the cultural roles assigned to males and females. As Aygün-Karakitapoğlu (2004) asserted that although, there have been changes in roles of males and females, there are still certain expectancies for females such as child bearing and child rearing responsibilities. These responsibilities often are given temporal priority over the issues of career decisions. As Osipow (1975) suggested that females didn't have the

same time schedule in terms of career development as males which means males are experiencing more permanent career planning than their female counterparts. This finding may be showing the tendency of cultural or societal expectations. Social pressure may be greater for men than women, especially in this age group, as it is believed that career development is more important and central to males' lives than to females. Therefore, males have to give priority to career issues and have career certainty more than females.

Concerning the direct relationship between gender and career beliefs, it was stated that there will be a relation between gender and career beliefs, but results yielded a nonsignificant relationship between two variables. The genders were not different from each other in terms of career beliefs which is consistent with Krumboltz's (1994) earlier finding that career beliefs seem not to discriminate between males and females. This may be due to the changing roles in society that women and men have. As more women have been recruited in business, career beliefs of them have been modified since the responsibilities and expectancies relevant to the career have been also reviewed. Depending on this process, males and females have become closer in terms of career beliefs.

Regarding to proposed individual path between gender and academic self-efficacy, the result was found to be significant (β = .17). That is, there has been a difference between gender groups in terms of academic self-efficacy; males reported having more academic self-efficacy than females consistent with the previous research findings. In particular, men scored significantly higher than women on academic

self-efficacy. This result was interpreted as suggesting that men approach career decision making as though it were a challenge and believing that they are in control of the decision making process. Women approach to the decision making process with the notion that they must fully meet all the demands of the situation, and must strongly rely on family and friends for support (Beutell & Greenhaus,1983). Although the present study conducted in a different cultural context from previous studies, the obtained finding concerning the gender difference was consistent with most of previous studies (Betz & Hackett, 1981; Bong, 1999; O'Brien et al., 1999). In most of the those studies, gender differences were noted as male self-efficacy ratings were higher in terms of mathematical self-efficacy than those of the females. Cultural attributions can also be made for this finding that being male was associated with higher academic self-efficacy, since as Karakitapoğlu-Aygün (2004) suggested that gender roles are significant in representing self.

On the contrary, result was also found to be nonsignificant between gender and problem solving skills. That is being male or female, did not affect the results of problem solving skills. Since, the present study conducted in a different cultural context from previous studies, the obtained finding concerning the gender difference was inconsistent with previous studies (Behjoo, 2013). Overall, the research findings imply that participants indicated no clear overall advantage for females over males or vice versa. They seem to be equal in their problem solving skills.

5.2 Hypothesized Relationships between Career Beliefs and Career Indecision

Career Beliefs was one of the mostly investigated variables in the previous model testing studies which mediating effect has been verified. The largest contribution to the prediction of career indecision was made by career beliefs (β = -.34). First of all, findings of the current study supported the hypothesis that career beliefs would be directly related to career indecision. This finding, consistent with related literature, implied that high school students' career indecisions are strongly informed by their career beliefs. Therefore, the results suggested that less rational career beliefs seem to be associated with decreased career indecision. This finding was similar to prior studies (Akkoç, 2012; Bash, 1987; Mitchell, 1980; Ryan-Jones, 1990; Sampson et al., 1996), indicating a significant and positive relationship between beliefs and indecision. Specifically, subjects with maladaptive, dysfunctional or irrational beliefs are more likely to be in career indecision. In an attempt to better understand career indecision, this study acknowledges the significance of career beliefs in the career choice process. Findings further support the influence of thinking or self-beliefs on behavior that limit exploration of individual interests and restrict perceptions of one's abilities (Borders & Archadel, 1987). As indicated by the findings of this study, career belief is a component of career indecision.

On the other hand, career beliefs did not relate to career indecision indirectly through academic self-efficacy (β = .03). This finding implied that, high school students career beliefs are not related to their interpretation of academic performances as successful while deciding on careers. Mediator effect of academic self-efficacy has not been proved in this study. For example, a number of studies

(McAuliffe, 1992; Luzzo, McWhirter, & Hutcheson, 1997) found that academic self-efficacy is effcetive both in career beliefs and career decidedness of students. At this point, it is important to note that, as indicated by the study conducted by Hess et al. (2009), it appears that when high school students are certain about their career choice, they also exhibit higher scores on career beliefs as well. However, students could not transfer their confidence to other areas, such as their academic self-efficacy. This may be related also with the education system of Turkey. Anatolian high school students, although they have selected to enter that kind of high shool, have to take the nation wide university exam for at least one more time, and their academic self-efficaces are not enough for their entrance. Likely, they could not transfer that academic self-efficacy to their future career paths.

It was hypothesized that career beliefs would be related to career indecision indirectly through problem solving skills. Consistent with previous findings (Heppner, Reed, & Larson, 1983; Johnson & Sarason, 1978; Lefcourt, Miller, Ware, & Sherk, 1981) the findings of the present study indicated that career beliefs were related to career indecision indirectly through problem solving skills. However, this finding suggests that participants who have less rational career beliefs and less problem solving skills had lower career indecision (β = .29), that means participants with more rational beliefs, less problem solving skills had lower career indecision. One possible explanation for this finding might that even if high school students have more rational career beliefs, their problem solving skills might be ineffective. Thus, maladaptive career beliefs inhibit individuals from fully engaging in the process of problem solving skills and may lead to career indecision,

like in the current study. Career beliefs can include both negative beliefs, potentially interfering with the career decision-making process, and positive beliefs, potentially enhancing the career choice process (Roll, 2002). Additionally, the Career Beliefs Inventory, used in the current study in order to measure career beliefs of participants does not organize vocational attitudes into right and wrong, positive and negative, or healthy and damaging categories (Porat et al., 1997). On the other hand, problem solving is considered as synonymous with coping and problem solving skills are closely related to cognitive skills (Heppner, 1988). Therefore, the sample of the current study characteristics is important in order to explain this finding. Participants were from Anatolian high school, in which students are considered to be high achievers with higher cognitive skills and higher career aspitations. Thus it could be speculated that for participants who seem to be well determined and not vulnerable to change, tolerance to ambiguity or hesitation about career beliefs or career choices might be low.

In conclusion, career belief is seen as a significant predictor of career indecision. However, the findings of the current study did not provide evidence as academic self-efficacy was a significant mediator for the relation between career beliefs and career indecision. In addition, problem solving skills is also a mediator for the relation between career beliefs and career indecision but the relation between career belief and problem solving is positive whereas the relationship between problem solving skills and career indecision is negative, as expected.

5.3 Hypothesized Relationships between Academic Self-Efficacy and Career Indecision

Self-efficacy was another investigated variable in the current study. Here in the study, it was hypothesized both the direct and indirect effect of academic self-efficacy on to career indecision. Results did not confirm such a significant direct relationship between academic self-efficacy and career indecision. The finding was inconsistent with the previous findings as previous studies mostly find a direct relationship between academic self-efficacy and career indecision (e.g., Guay et al., 2006; Rotberg et al., 1987). For instance, Taylor and Popma (1990) stated the relationship between self-efficacy and career indecision was found to be as, the lower the student's self-efficacy, the greater their career indecision. Academic self-efficacy was found to be negatively related to career indecision.

Additionally, the mediating role of academic self-efficacy was investigated. As discussed earlier, the mediator effect of academic self-efficacy between career beliefs and career indecision was not proved. Although, Krumboltz (1994) proposed that individuals' interpretations of their learning experiences with successful task performance help form their career beliefs, including self-efficacy judgments of their capabilities to perform such tasks, that relationship was not established in the current study. However, there is an indirect effect of academic self-efficacy on career indecision via problem solving skills. That means, partcipants having high academic self-efficacy also high problem solving skills result decreased career indecision. An explanation for this finding might be that experiencing a high level of confidence because of progress achieved in solving a

problem or challenge, the individual would believe he/she is capable of having a high degree of success in solving similar problems; which strengthens self-efficacy (Schunk, 2001) may have caused this result. Academic self-efficacy can be linked to the strength of a student‘s commitment and motivation (Schunk & Miller, 2002). Specifically, in high school students, those who had high self-efficacy for problem-solving activities also had higher academic persistence measures than students with low self-efficacy for problem-solving (Bouffard-Bouchard, Parent, & Parivee, 1991). In the current sample, as being high on academic self-efficacy, they seem to be highly motivated also on problem solving skills as well as career related issues.

5.4 Hypothesized Relationships between Problem Solving Skills and Career Indecision

Lastly, hpotheses regarding the direct association between problem solving skills and career indecision indicated that problem solving skills were significantly and negatively related to career indecision (β = -.14). Most of the earlier studies (Andrison, 1995; Larson & Heppner, 1985) revealed that individuals who perceive themselves as positive problem-solvers are characterized by a greater confidence in their decision-making ability and occupational potential and less career indecision.

To conclude up, the findings of this study suggested that gender and career beliefs were related to students’ career indecision directly and indirectly through the problem solving skills in ways that are consistent with LTCC. To sum up, results

based on the trimmed model provide support for the utility of LTCC in understanding antecedents of career indecision.

5.5 Implications for Practice

Several implications may be drawn from the findings of the present study for counselors and the educators. The present study explored the relationship between genetic factors, learning experiences and career indecision via mediating task approach skills among a representative sample of high school students enrolled in 11^{th} and 12^{th} grades.

The present study was one of the first attempts to investigate the role of variables regarded as factors that contribute to career indecision among high school students in Turkey, using the framework of the Krumboltz's Learning Theory of Career Counseling approach. Considering the lack of systematic studies about Krumboltz's Learning Theory of Career Counseling in Turkey is unfortunately a neglected topic in need of urgent attention and effort in terms of career counseling investigation. It is believed by the researcher that the present study is a preliminary one with an attempt to investigate career indecision within a broad theoretical framework. Based on the present study, following are some recommendations for future research.

This study was an attempt to test some aspects of Learning Theory of Career Counseling by examining its antecedents. There is no doubt that factors are not

restricted to the ones that have been conceptualized and investigated in the present study. Since the total variance explained by the trimmed model in career indecision was small, the rest could be explained by several other factors. The flexibility of the model provides researchers with the opportunity to examine many genetic, environmental, learning and task approach factors which may account for the individual differences in the experience of career indecision. Therefore, for the future research, it is important to determine other related variables to provide further information in explaining career indecision from all dimensions. For instance, since Turkey has been referred to as a collectivistic culture (Göregenli, 1997; Hofstede, 1980; İmamoğlu et al., 1993) in which one's career indecision situation can be affected by family and relative's approval and attitudes. Thus, these environmental factors should be incorporated into future studies.

In the present study, the Career Beliefs Inventory was translated and adapted into Turkish, which can play a facilitating role in the development of career counseling literature in this culture. Since, Career Beliefs Inventory is a scale for diagnosis (Krumboltz, 1994) and not to determine right or wrong but to assess categories of beliefs, it is important to use it with the purpose of assessment of career beliefs in pre-counseling sessions.

The present research was carried out with a sample of high school students from Anatolian High Schools, that limits the generalizability of the findings only to similar populations. Similarly, most of the studies with regard to career indecision were conducted with high school and undergraduate samples (e.g., Büyükgöze-

Kavas, 2010; Germeijs, Verschueren, & Soenens, 2006; Öztemel, 2013). However, future research should focus on more diverse populations such as different grades which could improve the understanding of career indecision regarding different developmental stages. In addition, it is believed by the researcher that the trimmed model arrived at this study should be re-tested in other samples to make sure that changes were not only representative of these particular participants. It would be useful also for future researches to include more diverse samples from different type of high school including state and private from different regions of Turkey.

Furthermore, career indecision was the only dependent variable in the current investigation and a measure assessing the overall level of career indecision was used (Osipow, 1987). Obviously, not all undecided students experience the same kind of career indecision. Thus, future studies should get more detailed information about the nature of career indecision experienced by high school students. To achieve this, those studies can use different measures in assessing different forms of career indecision are needed. Likely, as the world becomes a more global society, cross-cultural equivalence of some researches and instruments will continue to be important (Hess et al., 2009). In the current study, there is a good basis for understanding which universal career beliefs exist among high school students. Further research should seek to determine what universal and specific career beliefs exist, providing a greater understanding of cultural similarity and differences.

5.6 Recommendation for Further Research

On the basis of the present study, it is possible to make some suggestions for further studies. First of all, this study used the total score of Career Beliefs Inventory in the assesment process. Therefore in the future studies, it is important to use its dimensions. More specifically, by using six subscales of the CBI, researchers should conduct a study with a larger and diverse sample in order to evaluate its effects more compherensively in future studies.

This study was an attempt to investigate the role of task-approach skills mediators in the relationship between genetic factors, learning conditions and career indecision among students attending 11^{th} and 12^{th} grades in Anatolian High Schools in Ankara, Turkey. Using the frameworks of Krumboltz Learning Theory of Career Counseling model, a partial model was tested to understand whether task-approach skills mediators influence the relationship between genetic endowments, learning experiences and career indecision. However, only one genetic factor, one learning condition and two task-approach skills were included in the study. There is no doubt that other genetic or learning factors may have influence on the process of career indecision. For instance, race, physical ability or disability is other genetic factors that may associate with career indecision. Moreover, role models can also be investigated within learning conditions. Meanwhile, only two task-approach skills were included in this study. Other mediators, such as career decision making self efficacy can be included in further studies in order to broaden understanding on Learning Theory of Career Counseling mechanism of career indecision. Therefore, testing models including different variables can be especially fruitful in explaining career indecision.

Moreover, this study investigated the direct effects and indirect effects of study variables of Learning Theory of Career Counseling. However, future studies should examine the interaction effects of different levels of the LTCC on career indecision. Besides, the current study explained only 18% of the variance in career indecision. Further detailed investigations can help learn more about the unexplained 82% and other possible variables which may predict career indecision.

Moreover, this study only included individual-level variables as exogenous variables. That is to say, current study did not include enviromental-level variables of Learning Theory of Career Counseling, such as family factors and/or peer influence also deserve further investigations like the current study. The exploratory value of family factors in explaining career indecision using Learning Theory of Career Counseling model can provide some necessary information in understanding the role of family factors in career indecision among high school students.

Furthermore, Krumboltz's LTCC propositions suggest also that associative learning experiences (e.g., from observing valued role models and their success, failure, and reinforcement for performing career-related tasks) may influence individuals' occupational preferences. Further research might examine the relationship between instrumental and associative learning experiences and occupational interests and aspirations among diverse adolescents.

Last but not the least, significant direct and indirect relations were obtained among career beliefs, academic self-efficacy, problem solving skills and career indecision. Thus, parallel to LTCC, interventions might best focus on helping high school students, specifically to 11^{th} and 12^{th} graders to understand the role of career beliefs, academic self-efficacy and problem solving skills in order to make more accurate career decisions.

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APPENDICES

APPENDIX A

MIDDLE EAST TECHNICAL UNIVERSITY HUMAN SUBJECTS ETHICS COMMITTEE APPROVAL LETTER

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTE
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Sayı: 28620816/

15.11.2011

Gönderilen : Prof.Dr. Oya Yerin Güneri
Eğitim Bilimleri

Gönderen : Prof. Dr. Canan Özgen
IAK Başkanı

İlgi : Etik Onayı

Danışmanlığını yapmış olduğunuz Psikolojik Danışma ve Rehberlik Bölümü öğrencisi Desen Yalım Yaman'ın "Öğrenme Modeline Dayalı Kariyer Danışmanlığı Yaklaşımının Lise Öğrencileri Arasında Test Edilmesi" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

15/11/2011

Prof.Dr. Canan Özgen
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkanı
ODTÜ 06531 ANKARA

APPENDIX B

ANKARA PROVINCIAL DIRECTORATE OF NATIONAL EDUCATION

APPROVAL LETTER

T.C.
ÇANKAYA KAYMAKAMLIĞI
İlçe Milli Eğitim Müdürlüğü

Sayı : B.08.4.MEM.0.06.46.20-605.99- 15928 26.04.2012
Konu : Araştırma İzni- Desen YALIM YAMAN

İLGİLİ ANADOLU LİSESİ MÜDÜRLÜKLERİNE
ÇANKAYA

İlgi : **Ankara İl Milli Eğitim Müdürlüğü'nün 09.04.2012 tarih ve B.08.4.MEM.0.06.46.20.01-605.99-27906 sayılı yazısı.**

Orta Doğu Teknik Üniversitesi doktora öğrencisi Desen YALIM YAMAN'ın **"Öğrenme Modeline Dayalı Kariyer Danışmanlığı Yaklaşımının Lise Öğrencileri Arasında Test Edilmesi"** konulu tezi ile ilgili anketi ekli listede isimleri yazılı İlçemiz okullarında uygulama yapılması isteğinin İl Milli Eğitim Müdürlüğü Değerlendirme Komisyonunca uygun görüldüğü ilgi yazı ile bildirilmiştir.

Mühürlü anket örnekleri(13 sayfadan oluşan) İl Milli Eğitim Müdürlüğünce araştırmacıya ulaştırılmış olup; uygulama yapılacak sayıda araştırmacı tarafından çoğaltılarak, Okulunuzda yapılacak araştırmanın M.E.B. Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2012/13 Genelgesine göre okul ve kurum yöneticileri tarafından gönüllülük esasına göre uygulaması hususunda:

Bilgilerinizi ve gereğini rica ederim.

Yaşar KOÇAK
Müdür a.
Şube Müdürü

Ekler :
1. İlgi Yazı Örneği (1 Sayfa)
2. Okul Listesi (1 Sayfa)

Dağıtım :
1. Reha Alemdaroğlu Anadolu lisesi
2. Kırkonaklar Anadolu lisesi
3. Çankaya Anadolu lisesi

26/04/2012 Memur : G.KURSA
26/04/2012 Şef : S.ÖZDOĞAN

Adres : Kumrular Caddesi 3.Sokak Kızılay/ANKARA
Tel : 418 68 75- 418 84 58
Fax : 419 27 84-85
Web : http://www.cankaya-meb.gov.tr
e-posta : cankaya@cankaya-meb.gov.tr

APPENDIX C

CAREER BELIEFS INVENTORY PERMISSION LETTER

Desen Yalim Yaman
Middle East Technical University
Cevizlidere Mahallesi 1248
Sokak U ur A paratmant 3/10Balgat
Ankara, 06520 Turkiye

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"In selecting a test and interpreting a test score, the test user is expected to have a clear understanding of the purposes of the testing and its probable consequences. The knowledgeable user has definite ideas on how to

APPENDIX D

DEMOGRAPHIC INFORMATION FORM

(DEMOGRAFİK BİLGİ FORMU)

Sevgili Öğrenciler,

Lise öğrencilerinin kariyer inançları ile ilgili olan değişkenleri araştırmayı amaçlayan bu çalışmada sizden istenilen verilen yönergeleri dikkatle okuyarak tüm soruları yanıtlamanızdır. Sorulara vereceğiniz yanıtlar gizli tutulacaktır. Bu nedenle kimliğinizi belirten herhangi bir bilgi vermenize gerek yoktur. Bu ölçeğe vereceğiniz yanıtlar, çalışmanın amacına ulaşması açısından büyük önem taşımaktadır. Çalışma için katılımınız ve ayıracağınız zamandan dolayı şimdiden teşekkür ederim.

Desen Yalım Yaman
ODTÜ Eğitim Fakültesi
Eğitim Bilimleri, PDR
ydesen@yahoo.com

1. Okulunuz:……
2. Cinsiyet: K ( ) E ( )
3. Yaşınız: ……..
4. Sınıf: 11. sınıf ( ) 12. sınıf ( )

APPENDIX E

SAMPLE ITEMS OF CAREER DECISION SCALE

(KARİYER KARAR ÖLÇEĞİ ÖRNEK MADDELERİ)

Bu ölçek insanların eğitim ve mesleki planlarına ilişkin genel olarak dile getirdikleri bazı ifadeleri içermektedir. Lütfen ifadelerin tümünü okuyunuz ve her bir maddenin sizin kariyer ya da eğitim ile ilgili bir seçime ilişkin düşüncelerinize ne kadar yansıttığını, uygun olan sayıyı işaretleyerek belirtiniz. Eğer bir işte çalışmaya başlama konusunda heyecanlıysanız ve bu konuda herhangi bir tereddüttünüz yoksa tanımın tam olarak sizin duygunuzu yansıttığını belirtmek için "4" rakamını işaretleyiniz. Eğer madde sizin duygunuza yakın ancak tam olarak ne hissettiğinizi yansıtmıyorsa, örneğin mezun olduktan sonra çalışmaya başlamak için genelde heyecan duyuyorsanız ama bu konu hakkında bazı ufak tefek kaygılar da yaşıyorsanız "3" rakamını işaretleyiniz. Eğer madde sizi bazı yönlerden tanımlıyor, fakat genel olarak sizin duygularınızdan farklı ise, örneğin mezuniyetten sonra çalışma konusunda istekli olmaktan daha çok endişeliyseniz "2"yi işaretleyiniz. Son olarak madde eğer sizin duygularınızı hiçbir şekilde tanımlamıyorsa; yani mezuniyet ya da çalışma konusunda büyük ölçüde endişe taşıyor ve heyecan duymuyorsanız "1"i işaretleyiniz. Lütfen her bir maddeye sadece bir cevap verdiğinizden ve tüm maddeleri cevapladığınızdan emin olunuz.

		Beni tamamıyla yansıtıyor	**Beni büyük ölçüde yansıtıyor**	**Beni sadece biraz yansıtıyor**	**Beni hiç yansıtmıyor**
1.	Bir kariyer alanı üzerinde kararımı verdim ve bu konuda kendimi rahat hissediyorum. Kararımı nasıl uygulayacağımı da biliyorum.	1	2	3	4
2.	Bir kariyer alanını seçmeyle ilgili her şey çok belirsiz göründüğü için cesaretimin kırıldığını hissediyorum. Öylesine cesaretim kırıldı ki şu an için bir karar vermek istemiyorum.	1	2	3	4

APPENDIX F

SAMPLE ITEMS OF CAREER BELIEFS INVENTORY

(KARİYER İNANÇLARI ENVANTERİ ÖRNEK MADDELERİ)

	Size en uygun numarayi işaretleyiniz. İyice bastırınız.	**kesinlikle katılmıyorum**	**katılmıyorum**	**Kararsız**	**katılıyorum**	**Kesimlikle katılıyorum**
1.	Kariyerimle ilgili bir karar verdiğimde ona bağlı kalırım.	1	2	3	4	5
2.	Eğer bir iş için çok fazla enerji ve zaman harcasam, o işi daha sonra başka bir işle değiştirmem	1	2	3	4	5
3.	Hayatımın bu döneminde ne tür bir işte çalışmak istediğimi bilememem kesinlikle anlaşılabilir bir durum.	1	2	3	4	5
4.	Ne tür bir işte çalışmak istediğimi biliyorum	1	2	3	4	5
5.	Tanıdığım ve onun gibi olmak istediğim biri var	1	2	3	4	5
6.	Bir işte çalışıp, daha sonra da başka bir işe geçebilirim	1	2	3	4	5

APPENDIX G

SAMPLE ITEMS OF ACADEMIC SELF-EFFICACY SCALE

(AKADEMİK ÖZ-YETERLİK ÖLÇEĞİ ÖRNEK MADDELERİ)

Aşağıda, duygu ve düşüncelerinize yönelik 7 madde verilmiştir. Lütfen her bir maddeyi dikkatlice okuyarak, sizin için doğruluk derecesini verilen 5'li derecelendirme ölçeğini kullanarak yanıtlayınız.

		Kesinlikle Katılmıyorum	**Katılmıyorum**	**Kararsız**	**Katılıyorum**	**Kesinlikle Katılıyorum**
1.	Üniversite öğrenimimde her zaman yapılması gereken işleri başarabilecek durumdayım.	1	2	3	4	5
2.	Yeterince hazırlandığım zaman sınavlarda daima yüksek başarı elde ederim.	1	2	3	4	5

APPENDIX H

SAMPLE ITEMS OF PROBLEM SOLVING SKILLS INVENTORY

(PROBLEM ÇÖZME BECERİLERİ ENVANTERİ ÖRNEK MADDELERİ)

Bu envanterin amacı günlük yaşantınızdaki problemlerinize (sorunlarınıza) genel olarak nasıl tepki gösterdiğinizi belirlemeye çalışmaktır. Sözünü ettiğimiz bu problemler matematik ya da fen derslerindeki alışmış olduğumuz problemlerden farklıdır. Bunlar, kendini karamsar hissetme, arkadaşlarla geçinememe bir mesleğe yönelme konusunda yaşanan belirsizlikler ya da boşanıp boşanmama gibi karar vermesi zor konularda ve hepimizin başına gelebilecek türde sorunlardır.

Lütfen aşağıdaki maddeleri elinizden geldiğince samimiyetle ve bu tür sorunlarla karşılaştığınızda tipik olarak nasıl davrandığınızı göz önünde bulundurarak cevaplandırın. Cevaplarınızı bu tür problemlerin nasıl çözülmesi gerektiğini düşünerek değil, böyle sorunlarla karşılaştığınızda gerçekten ne yaptığınızı düşünerek vermeniz gerekmektedir. Bunu yapabilmek için kolay bir yol olarak her soru için kendinize şu soruyu sorun: "Burada sözü edilen davranışı ben ne sıklıkla yaparım? Yanıtlarınızı aşağıdaki ölçeğe göre değerlendirin:

1. Her zaman böyle davranırım
2. Çoğunlukla böyle davranırım
3. Sık sık böyle davranırım
4. Arada sırada böyle davranırım
5. Ender olarak böyle davranırım
6. Hiçbir zaman böyle davranmam

		Her zaman	Çoğunlukla	Sık sık	Arada sırada	Ender olarak	Hiçbir zaman
1.	Bir sorunumu çözmek için kullandığım çözüm yolları başarısız ise bunların neden başarısız olduğunu araştırmam	1	2	3	4	5	6
2.	Bir sorunla karşılaştığımda neler hissettiğimi anlamak için duygularımı incelerim	1	2	3	4	5	6

APPENDIX I

TURKISH SUMMARY

(TÜRKÇE ÖZET)

11 ve 12. SINIF ÖĞRENCİLERİNDE KARİYER KARARSIZLIĞI ÜZERİNE BİR ÇALIŞMA: CİNSİYET, KARİYER İNANÇLARI, AKADEMİK ÖZ YETERLİLİK VE PROBLEM ÇÖZME BECERİLERİNİN YOL ANALİZİ İLE SINANMASI

GİRİŞ

Sürekli değişen toplumda kararlar hayatımızın bir parçasıdır. Çünkü herşey bir kararla başlar ve biter. Bu nedenle, doğumdan ölüme kadar geçen sürede, her birey karar vermeyi gerektiren durumlarla karşı karşıya kalır. Bu durumlardan bir tanesi de kişinin gelecekte ne tür bir iş yapmak istediğine karar vermesidir. Ancak bu, bireyin sadece günlük aktivitelerini ve en azından 9 saatini etkileyen bir karar değil; hangi bölgede yaşayacağını, ne tür finansal sorunlarla başedeceğini, hangi sosyal ortamlara dâhil olacağını ve yaşamındaki pek çok alanı etkileyen güçlü bir karardır (Perkmen, 2009).

Hayatlarımızda belli yaşlar bazı kararlar açısından kritik dönemdir. Örneğin, ergenlik dönemi boyunca, bireyler kim olduklarını ve gelecekte ne tür bir kariyere sahip olacaklarını sorgulamaya başlarlar. Aynı zamanda, okulu ve sosyal hayatı idare etme, romantik ilişkiler ve aile problemleri ile uğraşma, kariyer seçme gibi hayat meseleleri ile de mücadele ederler. Kariyer kararı vermeyle ilgili pek çok çalışmada, kariyer kararı/kariyer kararsızlığı ergenlikte gelişimsel bir süreç olarak gösterilir (Super & Forrest, 1972; Crites, 1973). Kariyer kararsızlığı hem lise (Patton & Creed, 2001; Nota & Soresi, 2004) ve üniversite öğrencileri arasında (Gianakos, 1999; Lee, 2005), hem de yetişkinlerin yaşamında (Niles vd., 2010) önemli bir konudur. Genel olarak, pek çok araştırmada birey ve iş arasındaki uyuma ulaşmanın yolu olarak kariyer kararsızlığını azaltma ya da yok etme ile önerilir (Krumboltz, 1994). Ancak hayat bir öğrenme deneyimidir ve bazen ilk karar en iyisi olmayabilir. Krumboltz'a göre (1992), kariyer kararsızlığı, açık-fikirlilik olarak olumlu bir şekilde ele alınmalıdır. Danışana, karar vermesi için yapılan yardımın süresi ve süreci zamanla değişmiştir. Geçmişte, danışmanlar danışanlara bir mesleğe karar vermelerine yardımcı olmak amacıyla bir ya da iki oturumluk görüşmeler yaparlardı (Krumboltz, Foley & Cotter, 2012). Danışmanların ayrıca danışanlarına "Gelecekte hangi işi seçeceğim?" sorusuna cevap bulmalarına yardım ederken test ve ölçekler uygulamaları beklenirdi. Ancak, 21. Yüzyıl dünyasında, kariyer kararı vermek, iş dünyasının hızlı değişen koşulları ile birlikte daha da karmaşık hale gelmiştir.

Krumboltz'un original kuramı (Krumboltz et al, 1976, Mitchell & Krumboltz, 1990) Sosyal Öğrenme Teorili Kariyer Karar Verme yaklaşımı (SLTCDM) olarak

adlandırılır. Social Öğrenme Teorileri son zamanlarda kariyer gelişim süreçlerini anlamak açısından çok değerli bir çerçeve sunmaktadır (Lent & Hackett, 1987). Bu kuram yeniden gözden geçirilmiş ve Kariyer Danışmanlığında Öğrenme Kuramı (Mitchell ve Krumboltz, 1996) olarak güncellenmiştir. Bu kuram, değişikliklerin kaçınılmaz olduğunu ve kararlara olumlu bakış açısından yaklaşılması gerektiğini savunur. Modelin, diğer kütürlerde ve diğer milletlerde araştırılmasına gerek duyulmaktadır (Krumboltz vd. 2012).

Günümüzün çok hızlı değişen iş dünyasında, kariyer kararsızlığına ya da onun yokluğuna ne yer ne de hoşgörü vardır. Çoğu çalışma kariyer kararsızlığı ile ilgili faktörleri araştırmıştır (mesela Çakır, 2003; Uğurlu, 2007; Balın, 2008; Büyükgöze-Kavas, 2010; Doğan, 2010). Ancak, Kariyer Danışmanlığında Öğrenme Kuramı bir kişinin kariyer seçimi ve gelişimini anlamak için kapsamlı bir çerçeve olmasına rağmen, Türkiye'de çok dikkat çekmemiştir. Bu yüzden, bu çalışmanın amacı, Krumboltz'un Kariyer Danışmanlığında Öğrenme Kuramı modelini temel alarak önerilen kariyer kararsızlığı modelini Türk lise öğrencileri arasında sınamaktır.

Çalışmanın Amacı

Bu çalışmanın amacı, lise 11 ve 12. sınıf öğrencilerinin kariyer kararsızlığını etkileyen olası faktörleri incelemektir. Bu doğrultuda, cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerileri ile kariyer kararsızlığı arasındaki doğrudan ve dolaylı ilişkileri sınamak amacıyla, Kariyer Danışmanlığında Öğrenme Kuramı'na (LTCC) dayalı, ara değişkenli bir kariyer

kararsızlığı modeli önerilmiş ve tüm bu değişkenlerin birleşiminin kariyer kararsızlığını ne ölçüde yordadığı sınanmıştır.

Buna göre, Kariyer Danışmanlığında Öğrenme Kuramı'na dayalı olarak önerilen bu modelde kariyer kararsızlığı bağımlı değişken olarak belirlenmiş; cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerileri bağımsız değişkenler olarak önerilmiştir. Ayrıca, öne sürülen modelde, akademik öz-yeterlilik ile problem çözme becerileri ara değişkenler olarak yer almıştır. Bu çalışmada, "Kariyer kararsızlığı; cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerileri değişkenleri tarafından ne ölçüde yordanmaktadır?" sorusuna yanıt aranmaktadır.

Önerilen Yol Modeli

Krumboltz'un Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımına göre, bu çalışma kapsamında kariyer kararsızlığı modeli önemli değişkenleri olarak kabul edilen cinsiyet (genetik özellikler), kariyer inançları (öğrenme durumları), akademik öz-yeterlilik ve problem çözme becerilerini (görev-yaklaşım becerileri) içermektedir. Bu kapsamda, cinsiyet ve kariyer inançları kariyer kararı sürecinde temel değişkenler olarak görüldüklerinden bu çalışmaya dâhil edilmiştir. Yine Krumboltz'un kuramında temel ara değişkenler olarak tanımlanan akademik öz-yeterlilik ve problem çözme becerileri, bu çalışmada önerilen modelde de ara değişkenler olarak yer almaktadır. Önerilen yol modelinde, cinsiyet, kariyer inançları, akademik öz-yeterlilik, problem çözme becerileri bağımsız değişkenler

olarak, kariyer kararsızlığı ise bağımlı değişken olarak çalışmada yer almıştır. Özellikle, akademik öz-yeterlilik ve problem çözme becerileri, kariyer kararsızlığı arasında ara değişkenler olarak test edilmiştir.

Çalışmanın Önemi

Dünya, mesleklerin icra edilmesi, endüstri, bireyler ve yaşamın kendisi çok hızlı değişmektedir. Dolayısıyla, öğrenciler giderek daha başarılı olma ve sabit bir kariyer kararına sahip olma baskısı altındadır. Öğrencilerin, kendileri ve iş dünyası ile ilgili varsayım, genelleme ve inançlarını keşfetmek için fırsatlar sunulmalıdır. Krumboltz'un (1994) belirttiği gibi "Eğer öğrencilerin inançları sağlam ve yapıcı ise, hedeflerine ulaşmadaki başarılarını artırmak için, o yönde davranacaklardır. Eğer inançları hatalı ve kendi kendini çürütüyorsa, o yönde mantıklı olsun diye davranacaklar ama o da başarılarını düşürebilecektir (p. 424).

Pek çok kariyer gelişimi kuramı kariyer kararsızlığını araştırmak için modeller oluşturmuşlardır. Ancak bu modellerin çoğu Avrupa-Amerika kültürünün bireyci yönünü yansıtan şekilde geliştirilmiştir. Kariyer Danışmanlığında Öğrenme Kuramı'nı teorik çerçeve alarak; kariyer kararsızlığı, cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerilerinin Kariyer Danışmanlığında Öğrenme Kuramı çerçevesinde lise öğrencileri arasında çalışılması önemlidir. Bu kapsamda, bu çalışmanın bulgularının okul psikolojik danışmanlarının, teoriyi temel alarak, öğrencilerin kariyer kararlılığı/kararsızlığı sürecinde etki eden faktörleri anlamada yardımcı olacağı öne sürülebilir. Bununla birlikte, çalışmanın

bir diğer amacı, Kariyer İnançları Envanteri'nin (CBI; Krumboltz, 1994) çevirisini, geçerlik ve güvenirlik çalışmasını yapmaktır.

YÖNTEM

Örneklem

Bu çalışmaya, 2012- 2013 eğitim öğretim yılında, Ankara'da 3 ayrı Anadolu Lisesinde eğitimlerine devam eden 11 ve 12. sınıf düzeyinde, yaşları 16-18 arasında değişen (yaş ortalaması 16.48) olan 409 (234 kız, 175 erkek) lise öğrencisi katılmıştır.

Veri Toplama Araçları

Çalışma kapsamında Demografik Bilgi Formu, Kariyer Karar Ölçeği, Kariyer İnançları Envanteri, Akdemik Öz-Yeterlilik Ölçeği ve Problem Çözme Becerileri Envanteri veri toplama araçları olarak kullanılmıştır.

Demografik Bilgi Formu katılımcılara ait yaş, cinsiyet, sınıf ve okullarına ilişkin sorulardan oluşmaktadır.

Kariyer Karar Ölçeği (Osipow vd., 1976) uluslararası kariyer kararsızlık çalışmalarında sıkça kullanılan, birçok farklı dile çevrilmiş, geçerlik ve güvenirlik çalışmaları yapılmış ölçeklerden biridir (Osipow & Winer, 1996). Ölçek, son maddesi açık uçlu olmak üzere toplam 19 maddeden oluşmaktadır. 1 ve 2. maddeler kesinlik alt ölçeğini, 3 ile 18 arasındaki maddeler ise kariyer kararsızlık alt ölçeğini

oluşturmaktadır. Kariyer kararsızlık alt ölçeğine ilişkin yapılan faktör analizi çalışmaları farklı sonuçlar göstermiştir. Osipow (1987) kariyer kararsızlığının değerlendirilmesinde kariyer kararsızlık alt ölçeğininin toplam puanın kullanılmasını önermektedir. Kariyer Karar Ölçeği'nin Türkçe' ye çevirisi, geçerlik ve güvenirlik çalışmaları Büyükgöze-Kavas (2010) tarafından yapılmıştır. Ölçüt geçerliğinin sınanması için ölçek Kişisel Kararsızlık Ölçeği (Bacanlı, 2000) ile arasındaki ilişki katsayısı .61, kesinlik alt ölçeği ile arasındaki ilişki katsayısı -.34 olarak bulunmuştur. İç tutarlılık katsayısı kariyer kararsızlık alt ölçeği için .86, kesinlik alt ölçeği için .85'dir. Ayrıca, test-tekrar test ilişkisel katsayısı kariyer kararsızlık alt ölçeği için .84, kesinlik alt ölçeği için .77 olarak hesaplanmıştır. Ölçeğin lise grubuna uygunluğuna bakmak için araştırmacı tarafından 404 lise öğrencisi ile pilot çalışması yapılmıştır. Kariyer Karar Ölçeği'nde faktör yapısının literatürle tutarlı olarak maddelerin iki faktöre yüklendiği bulgusu bulunmuştur. Bu nedenle kariyer kararsızlığının değerlendirilmesinde kariyer kararsızlık alt ölçeğininin toplam puanı kullanılmıştır.

Kariyer İnançları Envanteri Krumboltz, (1994) tarafından geliştirilmiş, Türkçe'ye araştırmacı tarafından uyarlanmıştır. Envanter, bireylerin kariyer gelişimlerini bozan inançlarını tanımlamalarına yardımcı olmak amacıyla geliştirilmiştir. Kariyer İnançları Envanteri' nin psikolojik danışma sürecinin en başında verilmesi daha etkilidir; böylece psikolojik danışman ve danışan hangi inançlara odaklanmalarının daha işlevsel olacağına karar verebilirler (Krumboltz, 1994). Envanter, danışanların hangi inançlarının doğru ya da yanlış oldugunu belirtmez; daha çok danışanlara amaçlarına ulaşmalarını engelleyen inançları üzerinde farkındalık kazanmalarında

yardım eder. Envanter, “Tamamen Katılıyorum” dan “Hiç Katılmıyorum” a dğgru işaretlenen 5’li Likert tipinde 96 maddeden oluşmaktadır (Krumboltz,1999). Envanter, meslekler, öz gelişim ve engellerle baş etmeyi öğrenme gibi konularla ilgili çeşitli inançları içeren 25 alt ölçekten oluşmaktadır. Ölçeğin 25 alt ölçekleri: (1) Çalışma Durumu, (2) Kariyer Planları, (3) Belirsizliği Kabul Etme, (4) Açıklık, (5) Başarı, (6) Üniversite Eğitimi, (7) İçsel Tatmin, (8) Akran denkliği, (9) Yapılandırılmış Çalışma Ortamı, (10) Kontrol, (11) Sorumluluk, (12) Başkalarından Onay Alma, (13) Ben-Başkası Karşılaştırmaları, (14) Meslek / Üniversite Değişimi, (15) Kariyer Yolunun Esnekliği, (16) İş Hayatına Yönelim, (17) İş Denemesi, (18) Yerleştirme, (19) Kendini Geliştirme, (20) Belirsizlik Karşısında Vazgeçmeme, (21) Risk Alma, (22) İş Becerilerini Öğrenme, (23) Karara Varma/Uzlaşma, (24) Engellerin Üstesinden Gelme, (25) Çalışma’ dır. Ölçegin ilk dört alt ölçegi “Şu Anki Kariyer Durumum” kategorisinin içinde; 5, 6, 7, 8. ve 9. alt ölçekler “Mutluluğum İçin Gerekli Olanlar” kategorisinin içinde; 10,11, 12, 13, 14 ve 15. alt ölçekler “Kararlarımı Etkileyen Faktörler” kategorisinin içinde; 16, 17 ve18. alt ölçekler “Yapmak İstediğim Değişiklikler” kategorisinin içinde ve 19,20, 21, 22, 23, 24 ve 25. alt ölçekler ise “Harcamak İstediğim Çaba” kategorisinin içinde yer almaktadır (Krumboltz, 1999). Her alt ölçeğin puanları, 10 ile 50 arasında değişmektedir. Düşük puanlar kariyer amaçlarını sınırlayan inançlar olarak değerlendirilmektedir. Pozitif ifade içeren maddelere “Tamamen Katılıyorum” cevabı verildiginde 5 puanla değerlendirilirken, “Hiç Katılmıyorum” cevabı 1 puanla değerlendirilmektedir. Ortada bulunan cevaplar ise 4, 3 ve 2 puanlarını alırlar. Envanterde 45 madde (3, 6, 9, 10, 11, 14, 15, 16, 21, 24, 25, 28,

30, 32, 33, 38, 39, 40, 41, 44, 45, 46, 47, 48, 51, 53, 54, 55, 61, 62, 70, 72, 73, 74, 75, 78, 80, 82, 84, 85, 87, 88, 92, 93, 94) ters olarak puanlanmaktadır.

Lise öğrencilerinde pilot çalışma yapılmış, güvenirlik .89 olarak bulunmuştur. Yapılan açımlayıcı faktör analizi sonucunda 6 faktörlü yapı elde edilmiş ve 24 madde (2, 3, 5, 7, 11, 12, 13, 15, 19, 20, 22, 23, 25, 27, 28, 33, 38, 61, 72, 80, 85, 89, 92, ve 94) envanterden çıkarılmıştır. Ölçekte, doğrulayıcı faktör analizi bu 6 faktörlü yapı doğrulanmıştır. Kariyer inançlarının değerlendirilmesinde envanterin toplam puanı kullanılmıştır.

Akademik Öz Yeterlik Ölçeği (Jerusalem ve Schwarzer, 1981)'nin orjinaliAlmancadır. Ölçek toplam 7 maddeden oluşmakta ve tek boyutlu bir faktör yapısı göstermektedir. Akademik öz-yeterlilik ölçeğinin Türkçe uygulaması için geçerlik ve güvenirlik çalışması Yılmaz, Gürçay ve Ekici (2007) tarafından yapılmıştır. Ölçeğin Türkçe formu da aslı gibi 7 maddeden ve tek boyuttan oluşmuştur. Ölçekte bir maddenin (madde 7) ters puanlanması yoluyla toplam puan elde edilmektedir. Ölçeğin Türk örneklemi için iç tutarlık katsayısı .79 olarak ve benzer ölçek geçerliği .44 olarak bulunmuştur.

Problem Çözme Becerileri Envanteri Heppner ve Peterson (1982) tarafından geliştirilen, Şahin, Şahin ve Heppner (1993) tarafından Türkçe' ye uyarlanan, problem çözme becerisini ölçmek için kullanılan bir ölçektir. Envanter, bireyin problem çözme becerileri konusunda kendini algılayışının nasıl olduğunu ortaya çıkarmaya yöneliktir. Envanter 35 maddeden oluşan, 1- 6 arası puanlanan likert

tipindedir. Puanlama sırasında 9, 22 ve 29. maddeler puanlama dışı tutularak, 1, 2, 3, 4,11, 13, 14, 15, 17, 21, 25, 26, 30 ve 34. maddeler ters olarak puanlanmaktadır. Puan ranjı 32-192 arasındadır (Savaşır & Şahin, 1997). Envanterin alt boyutlarında test- tekrar test güvenirlik katsayıları r=.83 ve r=. 89 arasında değişmektedir. Cronbach Alfa iç tutarlık katsayısı .90, alt boyutlar için elde edilen katsayılar ise .72 ile .85 arasında bulunmuştur. Yapı geçerliği için yapılan çalısmalar sonucunda envanter, "Problem ÇözmeYeteneğine Güven", "Yaklaşma Kaçınma", "Kişisel Kontrol" olmak üzere üç faktörden oluşmaktadır. Problem Çözme Envanterinin Türkçe'ye uyarlanmasıyla güvenirlik çalışması tekrarlanmıştır. Buna göre; 244 üniversite ögrencisi üzerinde uygulanarak envanterin iç tutarlığı için hesaplanan Cronbach Alfa güvenirlik katsayısı .88 olarak bulunmuştur.Ayrıca envanterin yapı geçerliği incelenmiş ve yapılan faktör analizinde envanterin 6 faktörlü olduğu saptanmıştır. Bu faktörler, "Aceleci Yaklaşım", "Düşünen Yaklaşım", "Kaçıngan Yaklaşım", "Değerlendirici Yaklaşım", "Kendine Güvenli Yaklaşım", "Planlı Yaklaşım" olarak tespit edilmiştir (Savaşır & Şahin, 1997).

Veri Toplama Süreci

Araştırma verileri, Orta Doğu Teknik Üniversitesi İnsan Araştırmaları Etik Kurulundan ve Ankara İl Milli Eğitim Müdürlüğü'nden alınan uygulama iznin ardından, 2012-2013 eğitim öğretim yılının ilk döneminde araştırmacı tarafından okul müdürlerinin izni ile sınıf ortamında toplanmıştır. Öğrenciler gönüllü olarak çalışmaya katılmışlardır.

Veri Analizi

Önerilen modeli sınamak ve modelde ele alınan değişkenlerin kariyer kararsızlığını ne ölçüde yordadığını belirlemek amacıyla elde edilen verilere, AMOS 18 veri analiz paket programı kullanılarak, "Yol Analizi" uygulanmıştır.

BULGULAR

Bu çalışmada öncelikle, çalışmanın temel analizi olan yol analizinin gerekliliği olan sayıltılar test edilmiştir. Buna göre veri analizinden önce eksik veriler ve aykırı değerler tespit edilmiş ve %5 in üzerinde eksik veri ve aykırı veri bulunan katılımcılar veri analizine dâhil edilmemiştir. Bunun yanı sıra, verilerin dağılımının normal olup olmadığını test etmek amacıyla Skewness ve Kurtosis değerlerine bakılmıştır. Veri analizinin ilk aşamasında betimsel istatistik yöntemleri kullanılmış değişkenlerin ortalamaları ve standart sapmaları (Tablo 4.2); daha sonra da değişkenler arasındaki korelasyonlar hesaplanmıştır (Tablo 4.3).

Genel olarak beklendiği gibi korelasyonlar kariyer kararsızlığı, kariyer inançları, problem çözme becerileri ile negatif yönde ilişkilidir. Ancak; analiz sonuçları kariyer kararsızlığı ile akademik öz yeterlilik arasında anlamlı bir ilişki olduğunu göstermemektedir.

Bağımsız değişkenlerin bağımlı değişkeni yordama gücünü sınamak ve akademik öz-yeterliliği ve problem çözme becerilerinin ara değişken (mediator) olma

rollerinin incelenmesi amacı ile AMOS 18 programı ile iki farklı yol analizi (path analysis) yapılmıştır.

Modelde, cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerileri ile kariyer kararsızlığı arasındaki direk ilişkiler ile cinsiyet, kariyer inançları ve akademik öz-yeterlilik arasındaki doğrudan ilişkiler; cinsiyet, kariyer inançları ve problem çözme becerileri arasındaki doğrudan ilişkiler; akademik öz-yeterlilik ile problem çözme becerileri arasındaki doğrudan ilişki incelenmiştir. Ayrıca; cinsiyet, kariyer inançları ile akademik öz-yeterliğinin kariyer kararsızlığı ile dolaylı ilişkileri; cinsiyet, kariyer inançları ve problem çözme becerilerinin kariyer kararsızlığı ile dolaylı ilişkileri sınanmıştır (Figür 1.2).

Önerilen modelin sınanması amacı ile öncelikle modelin çalışma verilerine uygun olup olmadığını görmek için çeşitli uygunluk ölçütleri hesaplanmıştır. Tablo 4.4'e göre, önerilen modelin değerine ($x^2(409) = 26.2$) ilişkin *p* değerinin anlamlı olduğu görülmüştür. Ancak model, serbestlik derecesi oranına ($x^2/df = 26.2 / 2 = 13.28$) göre değerlendirildiğinde ise, elde edilen sonucun önerilen 3 değerinin (Kline, 2005) üzerinde olduğu görülmüştür. Aynı zamanda uyum indeksleri değerlendirilmiştir (GFI =.85; CFI = .84; TLI = .19; NFI = .84; RMSEA = .17) ve sonuç olarak modelin veriler ile tam olarak uyum sağlamadığı ortaya çıkmıştır. Buna göre analiz sonuçlarında; cinsiyetten kariyer inançlarına ve cinsiyetten problem çözme becerilerine giden yolun; kariyer inançlarından akademik öz-yeterliğe giden yolun, akademik öz-yeterlilikten kariyer kararsızlığına giden yolun, analizden çıkarılmasına karar verilmiş ve yol analizi tekrarlanmıştır. Buna göre, yenilenen modelin değerine ($x^2(409) = 5.76$) ilişkin *p* değerinin anlamlı olduğu ve

uyum indeksleri açısından (x^2/df = .382 / 4 = 1.4; GFI =.99; CFI = .98; TLI = .97; NFI = .96; RMSEA = .03) uyumun neredeyse mükemmel olduğu anlaşılmıştır. Ayrıca, modeldeki tüm yollar anlamlı bulunmuştur.

Buna göre, modeldeki doğrudan ve dolaylı yollar incelendiğinde cinsiyetin kariyer kararsızlığı ile doğrudan ilişkisinin (β =- .10, p < .01) ve akademik öz-yeterlilik ile doğrudan ilişkisinin (β = .17, p < .01) anlamlı düzeyde olduğu görülmüştür. Kariyer inançlarının kariyer kararsızlığı ile doğrudan ilişkisinin (β = -.34, p < .01) de anlamlı olduğu bulunmuştur. Kariyer inançlarının problem çözme becerileri (β = .29, p < .01) arasındaki ilişkinin anlamlı ancak pozitif olduğu anlaşılmıştır. Ayrıca, önerilen modelin ara değişkeni olan problem çözme becerilerinin kariyer kararsızlığı ile ilişkisi (β = -.14, p < .01) anlamlıdır. Tüm doğrudan ve dolaylı ilişkiler dikkate alındığında, önerilen modelin lise öğrencilerinde kariyer kararsızlığının %18'ini açıkladığı görülmektedir.

TARTIŞMA

Bu çalışmanın amacı Kariyer Danışmanlığında Öğrenme Kuramı çerçevesinde belirlenen değişkenlerin lise öğrencilerinin kariyer kararsızlığını ne ölçüde yordadığını araştırmaktır. Bu kapsamda, cinsiyet, kariyer inançları, akademik öz-yeterlilik ve problem çözme becerilerinin hem kariyer kararsızlığı ile hem de kendi aralarında ne düzeyde ilişkili oldukları incelenmiş ve Şekil 1.2'de yeralan ara değişkenli model test edilmiştir.

Kariyer Karar Verme alanyazını incelendiğinde, lise öğrencilerinin kariyer kararsızlığına katkıda bulunan çok sayıda faktör tanımlamaktadır. Ancak literatürde Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımını lise öğrencileri ile sınayan sınırlı sayıda çalışma yer almaktadır. Aynı şekilde, Türkiye'de de Krumboltz'un modelinde bu çalışmanın değişkenleri arasındaki çoklu ilişkileri inceleyen başka bir çalışma ile karşılaşılmamıştır.

Bu çalışmada kariyer kararsızlığının çoklu yordayıcılarını ve ara değişkenlerini içeren bir kariyer kararsızlığı modeli önerilmektedir. Önerilen modelin sınanmasında yol analizi kullanılmıştır. Analiz sonuçları önerilen modelin toplanan veri tarafından desteklendiğini göstermektedir. Yol analizi sonucunda, modeli geliştirmek için bazı değişiklikler önerilmiştir. Buna göre bazı istatistiksel olarak anlamlı olmayan yollar modelden çıkarılmıştır. Sonrasında, düzenlenen modeli sınamak için yol analizi tekrarlanmıştır. Düzenlenen modelin analiz sonuçları incelendiğinde veriye neredeyse mükemmel uyum sağladığı görülmüştür.

Bu çalışmanın sonuçları kız ve erkek öğrencilerin kariyer kararsızlığı puanları arasında anlamlı düzeyde negatif bir fark ortaya koymuştur. Buna göre, kız öğrencilerin kariyer kararsızlığı ortalama puanları, erkek öğrencilerin puanlarından anlamlı düzeyde yüksektir. Literatürde cinsiyet ve kariyer kararsızlığı arasındaki ilişkiye ilişkin farklı sonuçlar rapor edilmiştir.

Çalışma bulguları kariyer inançları ile kariyer kararsızlığı arasındaki doğrudan ve dolaylı ilişkileri doğrular niteliktedir. Buna göre kariyer inançları ve kariyer

kararsızlığı arasında önceki çalışmalarda da görüldüğü gibi negatif bir ilişki vardır. Ayrıca, problem çözme ile kariyer kararsızlığı arasında da negatif bir ilişki vardır. Ancak, modelde ortaya çıkan kariyer inançları ve problem çözme becerileri arasındaki doğrudan olumlu ilişki literatürden farklı bir sonuç ortaya çıkarmaktadır. Diğer bir deyişle, bu bulgu kariyer inançları rasyonel olan öğrencilerin, problem çözme becerilerinin beklenmedik bir şekilde düşük olduğuna işaret etmektedir.

Bu çalışma ile Krumboltz'un Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımına dayalı olarak önerilen kariyer kararsızlığı modelinin bir kısmını doğrulamıştır. Çalışmanın bulguları cinsiyet, kariyer inançları ve problem çözme becerilerinin Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımında olduğu gibi öğrencilerin kariyer kararsızlığı ile doğrudan ve problem çözme becerileri üzerinden dolaylı bir şekilde ilişkili olduğunu göstermiştir. Kariyer inançları önceki Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımını sınama çalışmalarında en sık incelenen ve genellikle doğrulanan değişkenlerden birisidir. Elde edilen sonuçlar Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımıyla (Krumboltz, 1996) paralel olarak, kariyer inançlarının doğrudan; problem çözme becerilerinin ise kariyer inançları ile kariyer kararsızlığı arasında önemli bir ara değişken olarak yer aldığını doğrular niteliktedir.

Bu araştırma, Türkiyede'ki 11 ve 12. Sınıf lise öğrencilerinin kariyer kararsızlığına ilişkin Kariyer Danışmanlığında Öğrenme Kuramı yaklaşımını test eden ilk çalışma olması açısında önem taşımaktadır. Bu çalışmanın bulgularına dayanarak bundan sonra ülkemizde yapılacak çalışmalar için bazı öneriler yapılabilir. İlk olarak, bu

çalışma kapsamında kariyer kararsızlığına ilişkin yeniden düzenlenen model tarafından açıklanan toplam varyans küçük olduğu için varyansın geri kalanı açıklamak için diğer değişkenlerin çalışmaya dâhil edilmesi önerilebilir. Bu çalışmada veriler sadece Anadolu Liselerinden toplanmıştır. Bu bağlamda çalışmada test edilen modelin farklı bölgelerde yer alan liselerde ya da özel okullarda farklı örneklem gruplarıyla sınanması önerilebilir.

Son olarak, bu çalışmanın bulguları, kariyer kararsızlığının en güçlü yordayıcısının kariyer inançları olduğunu göstermiştir. Buna göre, kariyer kararsızlığının üstesinden gelinmesi doğrultusunda çalışmalar yapan araştırmacıların ya da psikolojik danışmanların öğrencilerin kariyer kararsızlığı ile ilgili çalışmak için öncellikle onların kariyer inançlarına odaklanmaları önerilebilir.

APPENDIX J

CURRICULUM VITAE

PERSONAL INFORMATION

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EDUCATION

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WORK EXPERIENCE

Year	Place	Enrollment
2004- Present	Ministry of National Education	Pyschological Counselor

FOREIGN LANGUAGES

English (Advanced)

PRESENTATIONS

1. Dolunay, F., Yalım-Yaman,D., & Erdur-Baker, O. (2009, October). Danışmandan Danışana Fısıltılar: Kendini Açma Davranisina Kültürel Bakış [Whispers from Counselor to Client: A Cultural Sense of Self Disclosure]. *Paper presented at X. National Psychological Counseling and Guidance Congress*, Çukurova University, Adana, Turkey.

2. Demirli, A., Yalım-Yaman, D. Çayırdağ, N., & Owen, D. (2008, March). Culture and Psychological Counseling in Turkey. *Paper presented at the International Congress of Counseling*, Bahçeşehir University, İstanbul, Turkey.

3. Yerin Güneri, O., & Yalım, D. (2005, September). Şiddete Maruz Kalma ve Çatışma Çözümleri Arasındaki İlişki [The relationship between exposure to violence and conflict resolution]. *Paper presented at VIII. National Psychological Counseling and Guidance Congress,* Marmara University, Istanbul, Turkey.

APPENDIX K

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü	☐
Sosyal Bilimler Enstitüsü	x
Uygulamalı Matematik Enstitüsü	☐
Enformatik Enstitüsü	☐
Deniz Bilimleri Enstitüsü	☐

YAZARIN

Soyadı : YALIM YAMAN
Adı : DESEN
Bölümü : EĞİTİM BİLİMLERİ BÖLÜMÜ

TEZİN ADI (İngilizce) : A STUDY ON CAREER INDECISION OF 11TH AND 12TH GRADE STUDENTS: TESTING GENDER, CAREER BELIEFS, ACADEMIC SELF-EFFICACY AND PROBLEM SOLVING SKILLS THROUGH PATH ANALYSIS

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora x

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. x
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: