

THE RELATIONSHIPS AMONG CAREER INFLUENCES, CAREER
EXPLORATION AND CAREER INDECISION: A TEST OF SYSTEMS
THEORY FRAMEWORK

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ABSTRACT

THE RELATIONSHIPS AMONG CAREER INFLUENCES, CAREER EXPLORATION AND CAREER INDECISION: A TEST OF SYSTEMS THEORY FRAMEWORK

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The study aimed to investigate the structural relationships among career influences (career decision making self-efficacy, academic self-efficacy, parental support, teacher support, friend support, negative social events, ethnic-gender expectations), career exploration (self-exploration, environmental exploration, intended-systematic exploration) and career indecision by testing a structural model based on Systems Theory Framework. This study also aimed to adapt the Career Influence Inventory (CII) and Career Exploration Survey (CES) into Turkish and investigate the psychometric properties of the CII and CES. The results have verified adequate psychometric properties of the Turkish CES and

CII. 836 university students participated in the main study. The Career Decision Scale, CII, Career Decision Self-Efficacy Scale-Short Form, CES and Demographic Information Form were used as data collection instruments. The data were analyzed by using structural equation modeling. The results indicated that career decision making self-efficacy, ethnic-gender expectations, self-exploration and environmental exploration had direct effects on career indecision. Academic self-efficacy, teacher support, friend support, parental support, negative social events and intended-systematic exploration had no direct effects on career indecision of university students. Additionally, the indirect associations between career decision making self-efficacy and career indecision were provided by the mediator roles of self-exploration and environmental exploration. The results indicated that academic self-efficacy had an effect on career indecision through the indirect effect of self-exploration. Parental support predicted career indecision through the indirect effect of environmental exploration. Findings were discussed by taking into consideration of relevant literature. Implications for practice and recommendations for further studies, practitioners, and policymakers were presented.

Keywords: Career Exploration, Career Indecision, Career Decision Making Self-Efficacy, Career Influence, Systems Theory Framework

ÖZ

KARİYER BELİRLEYİCİLERİ, KARİYER ARAŞTIRMA VE KARİYER KARARSIZLIĞI ARASINDAKİ İLİŞKİLERİN İNCELENMESİ: SİSTEMLER KURAMININ TEST EDİLMESİ

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Bu araştırmanın amacı, üniversite öğrencilerinin kariyer belirleyicileri (kariyer kararı yetkinlik beklentisi, akademik öz-yeterlilik, aile desteği, öğretmen desteği, arkadaş desteği, olumsuz sosyal yaşantılar, etnik kökene ve cinsiyete dayalı beklentiler), kariyer araştırma düzeyleri (çevresel araştırma, bireysel araştırma, planlı-sistemli çevresel araştırma) ve kariyer kararsızlığı arasındaki ilişkileri yapısal eşitlik modeli kullanarak incelemektir. Bu araştırmanın bir diğer amacı da Kariyer Belirleyicileri Envanteri'nin (KBE) ve Kariyer Araştırma Ölçeği'nin (KAÖ) Türkçe'ye uyarlamak ve psikometrik özelliklerini incelemektir. Araştırma bulguları, KBE'nin ve KAÖ'nün yeterli geçerlik ve güvenirlik değerlerine sahip olduğunu göstermektedir. Araştırmaya 836 üniversite öğrencisi katılmıştır. Araştırmada Kişisel Bilgi Formu, Kariyer Karar Ölçeği, KBE, Kariyer Kararı

Yetkinlik Beklentisi Ölçeği-Kısa Formu ve KAÖ veri toplama araçları olarak kullanılmıştır. Önerilen modelin analizinde Yapısal Eşitlik Modellemesi kullanılmıştır. Araştırmada elde edilen bulgulara göre, kariyer kararı yetkinlik beklentisi, bireysel kariyer araştırma, çevresel kariyer araştırma, etnik kökene ve cinsiyete dayalı beklentiler ile kariyer kararsızlığı arasında anlamlı doğrudan bir ilişki bulunurken; akademik öz-yeterlilik, olumsuz sosyal yaşantılar, algılanan öğretmen, aile ve arkadaş desteği, planlı-sistemli kariyer araştırma ile kariyer kararsızlığı arasında anlamlı doğrudan ilişkiler bulunamamıştır. Ayrıca, üniversite öğrencilerinin kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı arasındaki dolaylı ilişkiler bireysel kariyer araştırma ve çevresel kariyer araştırma aracılığı ile sağlanmıştır. Bireysel kariyer araştırmanın dolaylı etkisi yoluyla akademik öz-yeterliliğinin kariyer kararsızlığını olumlu yönde yordadığı bulunmuştur. Algılanan aile desteği çevresel kariyer araştırmanın dolaylı etkisi yoluyla kariyer kararsızlığını olumlu yönde yordamıştır. Çalışmanın bulguları alan yazın ışığında tartışılmış, uygulama açısından sunduğu katkılar belirtilmiş ve ileride yapılacak araştırmalara, uygulamacılara ve politika yapıcılara yönelik öneriler verilmiştir.

Anahtar Kelimeler: Kariyer Araştırma, Kariyer Kararsızlığı, Kariyer Kararı Yetkinlik Beklentisi, Kariyer Belirleyicisi, Sistemler Kuramı



To My Mother

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TABLE OF CONTENTS

PLAGIARISM.....	iii
ABSTRACT	iv
ÖZ.....	vi
DEDICATION	vii
ACKNOWLEDGMENTS	ix
TABLE OF CONTENTS	xii
LIST OF TABLES	xvii
LIST OF FIGURES	xviii
CHAPTER	
1. INTRODUCTION	1
1.1 Background of the Study	1
1.2 Purpose of the Study.....	11
1.3 Research Questions	12
1.3.1 Proposed Path Model and Hypothesis	12
1.3.1.1 Direct Effects	12
1.3.1.2 Indirect Effects	14
1.4 The Significance of the Study	17
1.5 Definition of the Terms	25
2, LITERATURE REVIEW	28
2.1 Career Indecision.....	28
2.2 Career Exploration.....	48
2.3 Career Decision Making Self-Efficacy.....	53
2.4 Career Influences	56
2.5 Overall Summary.....	68
3, METHOD	69
3.1 Overall Design of Study	69
3.2 Sampling Procedure and Participants	70

3.2.1 Sampling Procedure	70
3.2.2 Participants	71
3.3 Data Collection Instruments	73
3.3.1 Demographic Information Form	74
3.3.2 Career Exploration Survey	74
3.3.2.1 Adaptation Procedure of Turkish Version of Career Exploration Survey	76
3.3.2.1.1 Translation Procedure of Turkish Version of Career Exploration Survey	76
3.3.2.1.2 Psychometric Properties of the Turkish Version of Career Exploration Survey – A Pilot Study	78
3.3.2.1.2.1 Validity of Turkish Version of Career Exploration Survey	79
3.3.2.1.2.2 Reliability of Turkish Version of Career Exploration Survey	91
3.3.3 Career Decision Scale	91
3.3.3.1 Psychometric Properties of Career Decision Scale	92
3.3.3.1.1 Validity of Career Decision Scale	92
3.3.3.1.2 Reliability of Career Decision Scale	96
3.3.4 Career Decision Self-Efficacy Scale-Short Form	96
3.3.4.1 Psychometric Properties of Career Decision Self-Efficacy Scale- Short Form	97
3.3.4.1.1 Validity of Career Decision Self-Efficacy Scale-Short Form	97
3.3.4.1.2 Reliability of Career Decision Self-Efficacy Scale-Short Form	102
3.3.5 Career Influence Inventory	102
3.3.5.1 Adaptation Procedure of Turkish Version of Career Influence Inventory	103

3.3.5.1.1 Translation Procedure of Turkish Version of Career Influence Inventory.....	103
3.3.5.1.2 Psychometric Properties of the Turkish Version of Career Influence Inventory - A Pilot Study	105
3.3.5.1.2.1 Validity of the Turkish Version of Career Influence Inventory.....	105
3.3.5.1.2.2 Reliability of Turkish Version of Career Influence Inventory.....	116
3.4 Data Collection Procedure.....	116
3.5 Description of Variables.....	117
3.5.1 Exogenous variables	117
3.5.2 Endogenous variables	119
3.5.3 Mediator variables	120
3.6 Data Analyses.....	121
3.7 Limitations of the Study	122
4, RESULTS.....	125
4.1 Preliminary Data Analysis.....	125
4.1.1 Data Screening.....	125
4.1.1.1 Accuracy of Data	125
4.1.1.2 Missing Data.....	126
4.1.1.3 Outliers	126
4.1.1.4 Sample Size	127
4.1.1.5 Assumptions	128
4.1.1.5.1 Univariate and Multivariate Normality	128
4.1.1.5.2 Linearity and Homoscedasticity	130
4.1.1.5.3 Multicollinearity	131
4.1.1.5.4 Independent Observations	132
4.2 Descriptive Statistics	133
4.2.1 Means and Standard Deviations	133
4.2.2 Bivariate Correlations among variables	137

4.3 Model Testing	141
4.3.1 Measurement Model.....	141
4.3.2 Structural Model.....	146
4.3.3 Testing the Proposed Model.....	146
4.3.4 Direct and Indirect Effects	150
4.3.5 Hypotheses Testing	153
4.3.5.1 Direct Effects	153
4.3.5.2 Indirect Effects	156
4.4. Summary of the Results	161
5, DISCUSSION	163
5.1 Discussion of Major Findings	163
5.1.1 Discussion of Findings Related to the Individual System	166
5.1.2 Discussion of Findings Related to the Social System.....	169
5.1.3 Discussion of Findings Related to the Environmental/Societal System.....	173
5.1.4 Discussion of Findings Related to Mediator Variables.....	175
5.2 Implications for Practice	176
5.3 Recommendations for Further Research, Practice and Policy Makers	178
5.3.1 Recommendations for Further Research.....	178
5.3.2 Recommendations for Practice	180
5.3.3 Recommendations for Policy Makers	181
REFERENCES.....	183
APPENDICES	
Appendix A: Approval of the Ethics Committee.....	234
Appendix B: Sample Items of Career Decision Scale	235
Appendix C: Sample Items of Career Exploration Survey	237
Appendix D: Sample Items of Career Influence Inventory	238
Appendix E: Sample Items of Career Decision Self-efficacy Scale - Short Form	239
Appendix F: Demographic Information Form.....	240

Appendix G: CFA for Career Decision Scale	241
Appendix H: CFA for Career Influence Inventory.....	242
Appendix I: CFA for Career Exploration Survey.....	243
Appendix J: CFA for Career Decision Self-Efficacy Scale	244
Appendix K: CFA for Career Influence Inventory – Pilot Study.....	245
Appendix L: CFA for Career Exploration Survey – Pilot Study (57-14-1)	246
Appendix M: CFA for Career Exploration Survey – Pilot Study (14-3-1)	247
Appendix N: Measurement Model Unstandardized Results	248
Appendix O: Permission for Figure of System Theory Framework	249
Appendix P: Structural Equation Model	250
Appendix R: Curriculum Vitae	251
Appendix S: Turkish Summary/Türkçe Özet	254
Appendix T: Tez Fotokopisi İzin Formu.....	291

LIST OF TABLES

Table 3. 1 Demographic Characteristics of the Participants	73
Table 3. 2 Demographic Characteristics of the Participants – Pilot Study	79
Table 3. 3 Fit Indices and Cut-Off Criteria for Several Fit Indexes	80
Table 3. 4 Results of the Confirmatory Factor Analysis for the Pilot Study	82
Table 3. 5 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CES.....	83
Table 3. 6 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CES for the Main Study	89
Table 3. 7 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CDS	93
Table 3. 8 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CDSE-SF in the Present Study	99
Table 3. 9 Demographic Characteristics of the Participants – Pilot Study	106
Table 3. 10 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CII.....	108
Table 3. 11 Unstandardized and Standardized Parameter Estimates, t Values and R ² for CII	113
Table 4. 1 Indices of Normality for Study Variables	129
Table 4. 2 Means and Standard Deviations of the Study Variables.....	135
Table 4. 3 Correlations among Study Variables	139
Table 4. 4 Estimated Latent Correlations for Measurement Model.....	145
Table 4. 5 Summary of the Model Fit Statistics for the Hypothesized Model ...	147
Table 4. 6 Squared Multiple Correlations for Latent Variables.....	150
Table 4. 7 Bootstrapped Results of Direct, Indirect and Total Effects	151

LIST OF FIGURES

Figure 1.1 Proposed Model of Career Indecision.....	16
Figure 1.2 Systems Theory Framework of Career Development.....	45
Figure 3.1 Estimates of Parameters of Confirmatory Factor Analysis for 14 Subscales Model (57- 14- 1) of Career Exploration Survey	85
Figure 3.2 Estimates of Parameters of Confirmatory Factor Analysis for the Hypothesized Model (14 -3 -1) of Career Exploration Survey	86
Figure 3.3 Estimates of Parameters of Confirmatory Factor Analysis of Career Exploration Survey	90
Figure 3.4 Estimates of Parameters of Confirmatory Factor Analysis of Career Decision Scale	95
Figure 3.5 Estimates of Parameters of Confirmatory Factor Analysis of Career Decision Self- Efficacy Scale	101
Figure 3.6 Estimates of Parameters of Confirmatory Factor Analysis of Career Influence Inventory.....	110
Figure 3.7 Estimates of Parameters of Confirmatory Factor Analysis of Career Influence Inventory.....	115
Figure 4.1 Scatterplot Matrix of All Study Variables	130
Figure 4.2 Scatterplots of Standardized Predicted Values by Standardized Residuals.....	131
Figure 4.3 Measurement Model.....	142
Figure 4.4 The Hypothesized Model with Standardized Estimates and Significant and Nonsignificant Paths	149
Figure 4.5 The Path from Career Decision Making Self-Efficacy to Career Indecision Through Environmental Exploration.	156
Figure 4.6 The Path from Career Decision Making Self-Efficacy to Career Indecision Through Self-Exploration	157

Figure 4.7 The Path from Academic Self-Efficacy to Career Indecision Through Self-Exploration	158
Figure 4.8 The Path from Parental Support to Career Indecision Through Environmental Exploration	159
Figure 4.9 The Path from Ethnic-Gender Expectations to Career Indecision Through Intended-Systematic Exploration	160



CHAPTER 1

INTRODUCTION

This introduction chapter offers an overview of the career decision making process of university students. With this purpose, the contribution of this study to career counseling literature, the purpose and the significance of the study, research questions and hypothesized model and hypothesis were explained. Additionally, terms used in this study were operationally defined.

1.1 Background of the Study

Making a career choice is one the most important decisions one will ever make. Career decision making process is more than just choosing a job. It also includes exploring various possible career directions (DuPre & Williams, 2011), determining experiences to be pursued prior to graduation (Viola, Musso, Ingoglia, Coco, & Inguglia, 2017), being ready for entering the world of work, determining need for further education, synthesizing a huge amount of information (Gati, Krausz, & Osipow, 1996), and thinking on about part-time job (Patton & Creed, 2001). According to Lancaster, Rudolph, Perkins, and Patten (1999), career decision making is a crucial developmental task. It is also regarded as a necessary skill at every stage of life for better mental health (Hinkelman & Luzzo, 2007), to contribute community (Desjarlais, Eisenber, Good, & Kleinman, 1995) have less dysfunctional career thoughts thus have less depressive symptoms (Walker & Peterson, 2012). However, in todays rapidly changing, technologically advanced and economically unstable world career decision making has become a more complex process. In particular, in some countries such as Turkey, it has become a deep-rooted social problem. Majority of high school students and

university students in Turkey are undecided regarding their career path (Gizir, 2005; Öztemel, 2013; Yalın-Yaman, 2014) due to anxiety caused by the emerging educated youth unemployment after the 2001 economic crisis (Karaca & Çiğdem, 2013), changes in nature of career decision making process (Yeşilyaprak, 2012) and the need to reconcile personal characteristics of the individual with the characteristics of the profession (Öztemel, 2012).

Until now, researchers and scholars have shown an increased interest in career indecision in the literature because it leads to high psychological and financial costs (Gati & Amir, 2010). Callahan and Greenhaus (1990), Guay, Senécal, Gauthier, and Fernet (2003), and Kelly and Lee (2002) viewed the status of career indecision as an inability. According to Guay et al. (2003), individuals experience career indecision when they are not able to show the ability to choose a career even if they want to pursue. Career decision refers to a developmental phase which individuals pass through as they make career-related decisions (Talib & Aun, 2009). Hawkins - Breaux (2004) defined the career indecision as a situation in which individuals are not able to move forward in the process of career choice making due to many reasons although they need to take direction for their career future. Osipow (1999) pointed out the problems that prevent an individual to make a well-informed career decision while making a career decision. For this reason, career indecision is defined by Osipow (1999) as a result of severe problems encountered by individuals while making a career decision. Career indecision has been viewed as a developmental problem which individual have when they do not enough information about themselves or environment (Sampson, Reardon, Peterson, & Lenz, 2004; Santos & Ferreira, 2012). Similarly, Kelly and Lee (2002) indicated that individuals experience career indecision when they are not able to show the ability to integrate information about self and environment during the career decision making process. For this reason, career indecision is viewed as an inability (Borgen & Hiebert, 2006; Kelly & Lee, 2002). For university students, career indecision refers to the degree of inability to make

an appropriate career choice regarding the university major or occupation (Borgen & Hiebert, 2006).

Career indecision has become a vital issue in career decision making process after Parson's (1909) theory and work on career decision making. Parson's (1909) theory focuses on three aspects, namely knowing oneself, knowing the job characteristics and making a career decision. After comprehending the importance of career decision, research has begun to focus on the career indecision between the 1960s and 1970s (Osipow, 1999). The earliest work was done to find out why individuals are experiencing career indecision and studies found that individuals with low level of self-insight into their own capabilities and information about different professions and high level of fear of commitment were more likely to be undecided related to their career path (Feldman, 2003).

In recent years, scholars, who conducted studies related to career counseling, and practitioners, who service career counseling, have focused on the role of factors which negatively influence the level of career certainty of individuals. The low self-esteem (Tokar, Fischer, & Subich, 1998), having many vocational interests (multipotentiality) (Rysiew, Shore, & Leeb, 1999), low level of self-efficacy (Taylor & Betz, 1983), neuroticism (Tokar et al., 1998) and introversion has been negatively linked to career indecision in previous studies. On the other hand, parents' wealth (Shea, 2000), parents' job security (Brooks, 2001), engaging in more exploration of career opportunities (Callanan & Greenhaus, 1992) contribute to one's career decision process.

While some studies were focusing on the antecedents of career indecision, others classified career indecision types and identified possible consequences of career indecision (Germeijs, Verschuerin & Soenens, 2006). According to researchers, developmental indecision and chronic indecision are two main categories of career indecision (Betz & Vuyten, 1997; Guay, Ratelle, Senécal, Larose, & Deschênes, 2006). Individual experience developmental indecision when they do

not have enough information about personal characteristics and the world of work. Due to nature of developmental career indecision, career indecision level of individuals decrease when they gain more self-insight and gather information about the world of work. Conversely, chronic indecision that stems from anxiety and fear of commitment is more stable than developmental indecision over time. Since chronic indecision occurs when individuals experience a high level of fear and anxiety, chronic career indecision is more problematic than developmental indecision (Feldman, 2003).

The more recent studies aim to understand the possible consequences of career indecision. Career indecision results in stress, anxiety, avoidance, unemployment and delayed career decision among university students (e.g Miller & Rottinghaus, 2014; Zhou & Xu, 2013). In some cases, it may also result in someone else making the decision for the person (Gati & Saka, 2001). Research findings indicated that many young adults who encounter career decision making difficulties, feel lost and unable to choose an appropriate career path for themselves (Miller & Rottinghaus, 2014). Over the past decades, most studies have emphasized the role of the subjective well-being (Skorikov, 2007; Uthayakumar, Schimmack, Hartung, & Rogers, 2010), life satisfaction (Hirschi, 2011), psychological well-being (Viola et al., 2017), and hope (Wilkins et al., 2014) on well-informed career indecision. Zhou and Xu (2013) investigated the impact of psychological well-being on career indecision and results showed that university students with high level of psychological well-being reported a low level of career indecision and a lack of information about their future careers. Similarly, Viola et al. (2017) found that psychological well-being is negatively related to career indecision of university students. Several studies underlined the role of career exploration because career decision cannot be made without adequate career exploration (Xu, Hou, & Tracey, 2014).

Making a decision related to career path continues over the life course (Hartung, Porfeli, & Vondracek, 2005; Hinkelman & Luzzo, 2007) although several studies focused on career decision making process of adolescents (Akkoç, 2012; Bacanlı, 2012; Öztemel, 2012, 2013) than emerging adults and late adolescents (Creed, Patton, & Prideaux, 2006). Despite this trend in career-related research, research findings (Dursun & Aytacı, 2012; Gizir, 2005; Güldü & Ersoy-Kart, 2017; Lucas & Berkel, 2005) and theorists (Gati et al., 1996; Hartung et al., 2005) indicated that university students encounter problems regarding setting career goals and moving forward in career decision making process. College years are the period in life in which individuals feel obliged to explore a variety of career opportunities, prepare themselves for the job search, determine levels of their needs for further education, and also synthesize a huge amount of information that they gather. According to Gati et al. (1996), many college students in this process encounter problems regarding fulfilling these responsibilities and have chronic difficulties in making decisions for their career. Herr, Cramer, and Niles (2004) indicated that more than half of university students have difficulties or problems in making a career decision. Many students who request counseling services at university counseling centers reported problems they encounter during career decision making (Kelly & Pulver, 2003; Lucas & Berkel, 2005). Similarly, in Turkey university students face different obstacles in their career development process and thus led they have problems in career planning (Güldü & Ersoy-Kart, 2017). Gizir (2005) underlined that senior students studying in Turkey have a number of significant problems in academic, social, and career areas. Işık (2007) added that the majority of the students were not conscious of the career counseling services which they can get help related to career-related problems. However, university students need help while making career choice by getting information about their skills, vocational values and preparing themselves for school to work transition. University students with high level of anxiety reported that they believe their degrees was not going to assist them to achieve their career goals (Dursun & Aytacı, 2012). So, it can be concluded that university students in Turkey have

some difficulties while making a decision regarding their career path. Due to difficulties, they experience career indecision and have high-level anxiety and show a low level of self-efficacy beliefs in career-related tasks during the career decision making.

Over the past decades, several attempts have been made to comprehend the antecedents and consequences of career indecision among university students. To date, the link career indecision of university students and individual characteristics has been reported in the literature. Individual characteristics including career decision making self-efficacy (Choi et al., 2012; Creed, Patton, & Prideaux, 2006; Jadidian & Duffy, 2012), career exploration (Robitschek et al., 2012; Xu, Hou & Tracey, 2014), depression symptoms and dysfunctional career thoughts (Walker & Peterson, 2012); psychological well-being (Hartung, 2011; Viola et al., 2017; Zhou & Xu, 2013), anxiety (Saka, Gati, & Kelly, 2008); and life satisfaction (Hirschi, 2011) have a role in deciding a career. For instance, Di Fabio, Palazzeschi, Levin, and Gati's (2014) study showed that extraversion was negatively related to problems with career decision making.

Among variables examined in previous studies, career exploration was perhaps the most widely studied construct related to career indecision (Jadidian & Duffy, 2012; Walker & Tracey, 2012). Career exploratory behaviors help individuals to cope with the career transitions (Blustein, 1997), develop a clear sense of identity (Flum & Blustein, 2000), clarify career interests and values (Geiken, 2009) and reduce career indecision (Van Reenen, 2010). Making a sufficient career decision without adequate exploration of both individual and environmental characteristics is not possible (Xu, Hou, & Tracey, 2014). There are many studies showing that career exploratory behaviors in the career choice process are influential factors which contribute to career development (Bağlama & Uzunboylu, 2017; Jadidian & Duffy, 2012; Kanten, Kanten, & Yeşiltaş, 2016). For instance, the findings of Kanten et al.'s (2016) study showed that career decision making self-efficacy of

university students influenced the level of their self-exploration and intended-systematic exploration. Another influential factor helping individual deciding the right career which matches the personal characteristics, setting achievable career goals and gathering career-related information is career decision making self-efficacy. This influential factor plays a critical role in career planning process and help individuals focus on their career decision and deal with problems occurring in this process (Prideaux, Patton, & Creed, 2002). Individuals who believe their abilities are more likely to obtain relevant occupational information and select appropriate career goals (Taylor & Betz, 1983) and feel more ready to make a career decision (Brown et al., 2012). Career decision making self-efficacy affect individuals while completing tasks related to career decision and performing career behaviors. Previous learning experiences and contextual backgrounds influence the individual's degree of self-efficacy belief while completing necessary tasks related to making career-related choices (Krumboltz, 1994; Lent, Brown, & Hackett, 1994). The research findings of previous studies supported that career decision making self-efficacy affect the individuals' career behaviors during the process of developing their career. For instance, Bağlama and Uzunboylu (2017) investigated the relationship among career decision making self-efficacy, demographic variables, and vocational outcome expectations of university students (n = 156) in Turkey. The results of this study indicated that university students' grade level and socioeconomic level influenced the university students' degree of self-efficacy believes related to their abilities to complete career-related tasks. Additionally, Bağlama and Uzunboylu (2017) found that the more university students' degree of vocational outcome expectations were increased, the more university students believed themselves in completing successfully tasks during career decision making process. Ulaş (2016) analyzed the data from 729 senior university students and concluded that career decision making self-efficacy was directly influenced by hopelessness and perceived career barriers. Additionally, university students' degree of self-efficacy believes regarding making a career decision affected by the locus of control with the

mediating role of hopelessness. Previous studies support the notion that individual characteristics have roles on ones' formulating career goals and experiencing uncertainty regarding one's career choices. Additionally, career undecided individuals tend to have negative judgments of their abilities to perform tasks for making a career decision, unwillingness to gather information about their personal characteristics and environmental conditions including jobs, industries, organizations, feel sad or down most of the time, have lost interest in career-related activities and have lower self-acceptance.

There has been consistent empirical attention focused on the interpersonal factors that influence the university student's level of career indecision (e.g., Lam, 2016; Li, Hou & Jia, 2015; Mao, Hsu & Fang, 2016; Mao, 2017; Öztemel, 2013; Ukil, 2016). Many theorists (Lent, Brown, & Hackett, 1994; McMahon & Patton, 1995) and researchers emphasized the role of lack of career counseling (Işık, 2007; Ukil, 2016), low level of parental support (Mao et al., 2016), social comparison (Li et al., 2015), friend support (Ulaş & Özdemir, 2017), participating career course (Lam, 2016) and teacher support (Cheung & Arnold, 2014). Much work on the potential influence of parents or friends has been carried out (e.g. Metheny & McWhirter, 2013; Nawaz & Gilani, 2011; Ulaş & Özdemir, 2017) and found that individuals' career-related choices and also career indecision influenced by factors related to family (Raque-Bogfan, Klingaman, Martin, & Lucas, 2013; Starica, 2012). According to Osipow (1999), the expectations and perceptions of society, as well as the role of the family have an impact on the student's ability to make career choices. Parents' contribution to career decision making process enhance university students' understandings of career decision making process and also assist university students to decrease the level of career indecision (Simmons, 2008). Having more supportive friendships is crucially important to make effective career decision (Fisher & Griggs, 1995). Since encouraging and supportive friend relationship assist young adults developing a sense of freedom related to making career-related choices (Felsman & Blustein, 1999). Teacher

support, in particular, has been viewed as an influential factor that has a role in exhibiting adaptive career behaviors and outcomes of individuals (Cheung & Arnold, 2014; Işık, 2013; Öztemel, 2013). For instance, Cheung and Arnold (2014) found in a sample of 271 undergraduates by cross-sectional analysis that individual who highly perceived teacher support were more likely to have a high degree of self-efficacy believes in making significant career decisions. Additionally, Cheung and Arnold (2014) found that the more Hong Kong Chinese University Students received teacher support, the more they acquired information. In sum, the more university students receive social support (parental, friend and teacher support), participate career course and receive career counseling services, the more they tend to have the willingness to establish career goals and seek out information about careers. Conversely, the more university students encounter at least mildly negative social events at some time during their lives and perceive their gender or ethnicity as a barrier while deciding their career path, the more they are more likely to show an inability to establish career goals and implement their career plans.

There are several models of career decision making that explain how individuals make their career decisions, factors influence career-related choices and stages take part in career decision making process (Zunker, 2006). Hijazi, Tatar, and Gati (2004) and Gati et al. (2001) reported that different approaches were utilized in order to understand and explore career indecision. For instance, Life-Span, Life Space Theory (Super, 1953), Theory of Types and Person-Environment Interactions (Holland, 1973), Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994), The Cognitive Information Processing Approach (Sampson, Peterson, Lenz, & Reardon, 1992; Peterson, Sampson, Reardon, & Lenz, 1996), and Systems Theory Framework (McMahon & Patton, 1995; Patton & McMahon, 1997, 1999, 2006, 2014) have been developed by scholars and tested in variant settings to comprehend one's career planning process and also comprehend which factors influence the career uncertainty levels. Gati et al. (1996) were apparently

the first group of researchers who developed a taxonomy related to the process of career decision making. Career indecision, as a term, firstly used in a taxonomy developed by Gati et al. (1996). In their model, Gati et al. (1996) defined the career indecision as a situation which occurs when individual encounter difficulties in making career-related choices. Initially, several models regarding career decision making and career indecision focused on the congruence of personal characteristics with the jobs which individual pursue. In recent years, studies make huge effort to revise the several theories related to career choice and development since the importance of contextual and cultural issues in career decision making process have been recognized (Zunker, 2006).

Systems Theory Framework of career development (STF) is one of the widely used as a theoretical approach which underlines the importance of contextual and cultural issues in career decision making process. According to STF (McMahon & Patton, 1995; Patton & McMahon, 2006), individual's career-related behavior and career development outcomes shaped by individual's characteristics and interactions with social and environmental-societal influences. The individual is at central of the STF and individual characteristics were defined as "individual system". Similarly indicated in postmodern approach, McMahon and Patton (1995) indicated that individuals construct their meaning of career by taking into consideration of contextual factors. Although the personal factors are central to the framework, contextual, environmental and social factors have also a role in career development (Arthur & McMahon, 2005). Due to the importance of contextual influences, the social system and the environmental/societal system were defined (McMahon & Patton, 2009). Social influences were described as "social system". Lastly, environmental-societal influences were defined as "environmental/societal system". According to the STF, the process of career development is a dynamic depicted through its process influences, recursiveness, change over time and chance (Patton & McMahon, 2006, p.95). Since career development of individuals characterized by constant change or progress in this

framework, each of three systems has elements that affect individuals at different stages of their lives. Additionally, the content has a role in managing individuals' career.

In the recent years, STF has become a popular work for studying individual's career development. It has been frequently applied to diverse cultural groups and in settings and it emphasized: "individual in context" (McMahon, Watson, & Patton, 2014). In recent years, several studies have revealed that STF might be useful theoretical framework for understanding the role of influences on career decision making process of different cultural groups such as Australian Aboriginal (Sarra, 1997) and Chinese (Back, 1997) and variant groups such as gifted adolescents (Patton, 1997), people with low socioeconomic backgrounds (Doyle, 2011) and people grown up in rural areas (Collett, 1997). However, there has been little discussion about the role of the systems in making career-related choices in the literature by adopting the theoretical framework, especially the STF.

1.2 Purpose of the Study

The purpose of the present study was to understand the role of individual system (career decision making self-efficacy, academic self-efficacy), social system (parental support, teacher support, friend support), environmental/societal system (negative social events, ethnic-gender expectations), intended-systematic exploration, environmental exploration and self-exploration on career indecision among Turkish university students by testing a proposed model developed based on Systems Theory Framework. With this purpose, the structural relationships among career decision making self-efficacy, academic self-efficacy, parental support, teacher support, friend support, negative social events, ethnic-gender expectations, intended-systematic exploration, environmental exploration, self-exploration and career indecision were examined. In the present study, the individual system includes academic self-efficacy and career decision making self-efficacy while social system includes parental support, friend support, and

teacher support. The environmental/societal system includes ethnic-gender expectations and negative social events. Figure 1.1 displays all variables (individual system, social system, environmental/societal system, intended-systematic exploration, environmental exploration, self-exploration and career indecision) were included in the conceptual model.

1.3 Research Questions

A mediational model based on System Theory Framework was proposed to examine; a) the direct and indirect relationships of individual system, social system and environmental/societal system, intended-systematic exploration, environmental exploration, self-exploration, and career indecision b) to what extent the combination of exogenous and mediator variables explain career indecision of university students in Turkey.

1.3.1 Proposed Path Model and Hypothesis

Figure 1.1 represents the proposed model developed by adopting System Theory Framework with all variables (career decision making self-efficacy, academic self-efficacy, parental support, teacher support, friend support, negative social events, ethnic-gender expectations, intended-systematic exploration, environmental exploration, and self-exploration). The predictive relationships among exogenous, mediator and endogenous variables are also depicted in Figure 1.1 The specific relations are labeled with letters H1- H21.

1.3.1.1 Direct Effects

The Direct Effects from Exogenous Variables to Endogenous Variable

Individual system:

Hypothesis 1: Career decision making self-efficacy will significantly and directly be related to career indecision.

Hypothesis 2: Academic self-efficacy will significantly and directly be related to career indecision.

Social system:

Hypothesis 3: Parental support will significantly and directly be related to career indecision.

Hypothesis 4: Friend support will significantly and directly be related to career indecision.

Hypothesis 5: Teacher support will significantly and directly be related to career indecision.

Environmental/Societal System:

Hypothesis 6: Ethnic-gender expectations will significantly and directly be related to career indecision.

Hypothesis 7: Negative social events will significantly and directly be related to career indecision.

The Direct Effects from Exogenous Variables to Mediator Variables

Individual system:

Hypothesis 8: Career decision making self-efficacy will significantly and directly be related to self-exploration.

Hypothesis 9: Career decision making self-efficacy will significantly and directly be related to environmental exploration.

Hypothesis 10: Career decision making self-efficacy will significantly and directly be related to intended-systematic exploration.

Hypothesis 11: Academic self-efficacy will significantly and directly be related to self-exploration.

Social system:

Hypothesis 12: Parental support will significantly and directly be related to environmental exploration.

Environmental/Societal system:

Hypothesis 13: Ethnic- gender expectations will significantly and directly be related to intended-systematic exploration.

The Direct Effects from Mediator Variables to Endogenous Variables

Hypothesis 14: There will be a significant relationship between self-exploration and career indecision.

Hypothesis 15: There will be a significant relationship between environmental exploration and career indecision.

Hypothesis 16: There will be a significant relationship between intended-systematic exploration and career indecision.

1.3.1.2 Indirect Effects

Individual system:

Hypothesis 17: Career decision making self-efficacy will significantly and indirectly be related to career indecision through the environmental exploration.

Hypothesis 18: Career decision making self-efficacy will significantly and indirectly be related to career indecision through the self- exploration.

Hypothesis 19: Academic self-efficacy will significantly and indirectly be related to career indecision through the self- exploration.

Social system:

Hypothesis 20: Parental support will significantly and indirectly be related to career indecision through the environmental exploration.

Environmental/Societal system:

Hypothesis 21: Ethnic- gender expectations will significantly and indirectly be related to career indecision through the intended-systematic exploration.

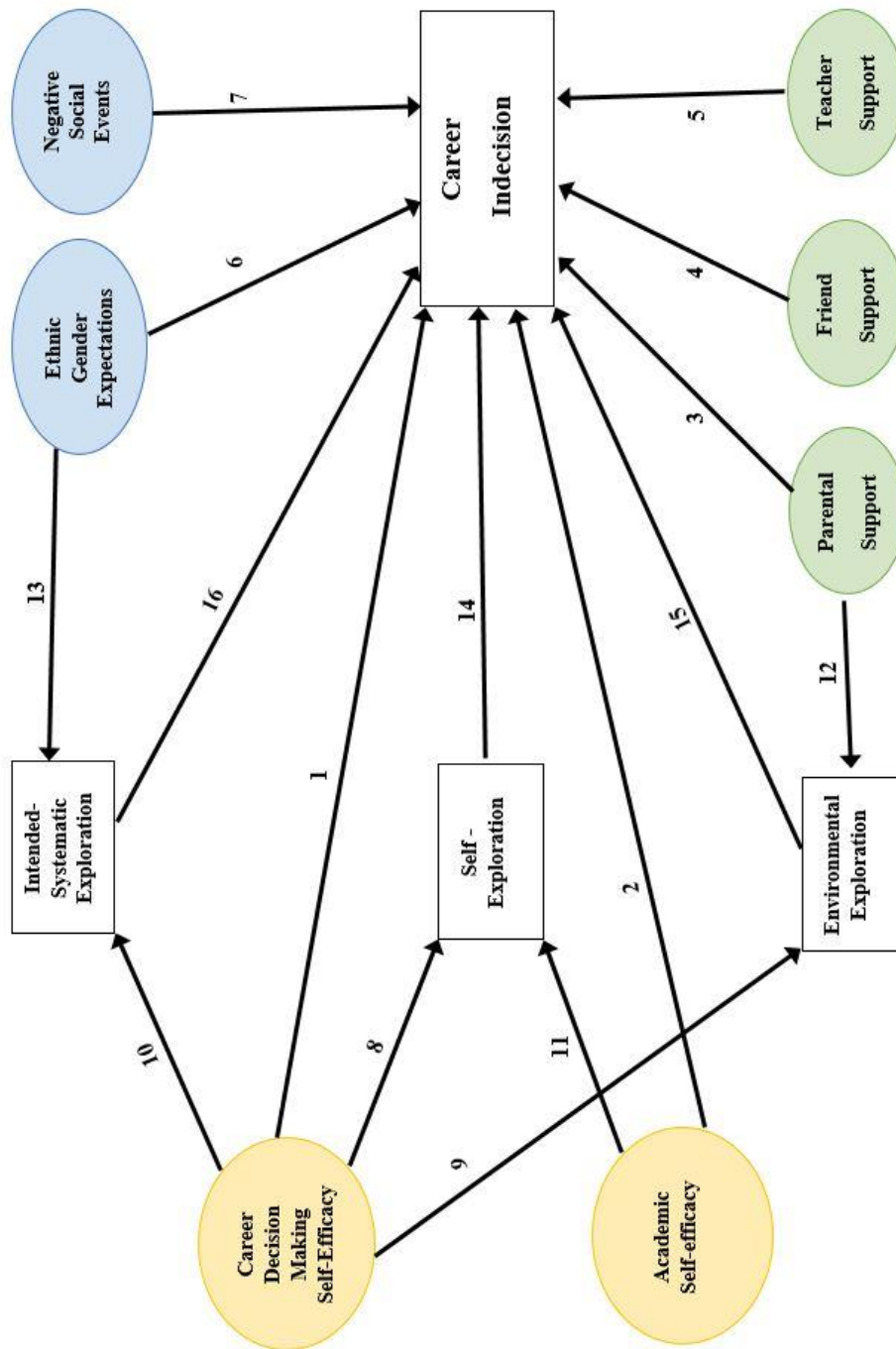


Figure 1.1 Proposed model of career indecision

Note. The influences of the individual system in the yellow circle, the influences of social systems in the blue circle, the influences of social systems in the green circle.

In the proposed path model, variables located in the individual system (career decision making self-efficacy, academic self-efficacy), social system (parental support, teacher support, friend support) and environmental/ societal system (negative social events, ethnic-gender expectations) will be exogenous variables. Self-exploration, intended-systematic exploration, and environmental exploration will be tested as mediators between variables located in each system in the System Theory Framework and career indecision in this proposed model. Lastly, career indecision will be the endogenous variable of this study.

1.4 The Significance of the Study

The career decision making is defined as a crucial task of people of all ages. Thus it is a constant and continuous process that every individual engage in over a course of life (Gati et al., 1996; Hall, 2004). Contrary to popular belief, career decision making process is more than just choosing a program or job. It includes many tasks, such as engaging in career exploration activities (DuPre & Williams, 2011), being ready for entering the world of work and job search (Ranta, Dietrich, & Salmela-Aro, 2014). Much more studies conducted on career decision making process of middle and late adolescents (Öztemel, 2012, 2013; Savickas, 1997) than young adults (Creed, Patton, & Prideaux, 2006). Findings of career-related research showed that university students encounter problems regarding setting career goals and making appropriate career choices (Dursun & Aytaç, 2012; Gizir, 2005; Güldü & Ersoy-Kart, 2017; Lucas & Berkel, 2005).

Making career decision has been found to be most stressful task to be completed between the ages of 18 and 29, since young adults experience a variety of pressures to make career-related decisions (Choi et al., 2012; Dursun & Aytaç, 2012; Güldü & Ersoy-Kart, 2017; Lee, 2005; Miller & Rottinghaus, 2014; Rowh, 2008). College students experience difficulties such as determining which kind of experiences to be pursued prior to graduation or exploring the various possible career directions (DuPre & Williams, 2011; Morgan & Ness, 2003; Viola et al.,

2017). Similarly, university students in Turkey face different obstacles in their career development process and this causes problems in career planning (Güldü & Ersoy-Kart, 2017). They found that university students worried about the future of their profession and employment opportunities.

Career indecision has been increasingly recognized as a serious issue that is closely related to individual's mental health (Hirschi, 2011; Uthayakumar et al., 2010; Viola et al., 2017; Walker & Peterson, 2012). It may cause severe psychological problems, such as stress, anxiety, avoidance, amotivation, unhappiness, helpless and delayed career decision among university students (Miller & Rottinghaus, 2014; Reece, 2011; Reeve, Nix, & Hamm, 2003; Rottinghaus, Jenkins & Jantzer, 2009; Walker & Peterson, 2012). Career-related anxiety is also the biggest problem among the problems which were reported by college students seeking career counseling services (Multon, Heppner, Gysbers, Zook, & Ellis-Kalton, 2001). Similarly, in Turkey, university students experience career-related anxiety during college years (Gizir, 2005). Therefore, individuals who show uncertainty in career choice are also more likely to have inability in handling with stress, show avoidance career behavior, have a lack of confidence regarding the appropriateness of the career-related choice, perceive little control over their own life and life choices and hardly motivate themselves for making career-related choices and entering the workforce. Besides relationship between career indecision and mental health, a few studies shed light on the link between career indecision and economic wealth. According to Grier-Reed and Skaar (2010), "50% of all university students change majors at least once in the USA" (p.42). "Changing majors likely leads to postponed graduation and increase in student loans which can become a financial burden" (Tressler, 2015, p. 4). There are various costs of extension of graduation due to career indecision. Additionally, college students tend to drop out of school if they do not have an academic major or career path (Gaffner & Hazler, 2002; Peterson, 1993). In Turkey, Şimşek (2013) examined the dropout tendency among university students studying at

Harran University and found that almost half of the university students (% 45) tend to dropout. There are various costs of extension of graduation due to career indecision. In higher education in Turkey, the annual cost to the state and the family of each student reaches at least 10 000 TL for a year (Bülbül, 2012). Many families living in Turkey might not be able to set off this cost. Having children who study at university struggle not only for families in Turkey, but also families around the world since it requires a financial stability and savings (Habib, 2013). Additionally, college students tend to drop out of school if they do not have an academic major or career path (Gaffner & Hazler, 2002; Peterson, 1993) or they believe their degrees would not to assist them to achieve their career goals (DuPre & Williams, 2011). Therefore, it is possible to assume that individuals with a high proportion of uncertainty regarding career choice tend to change their major, postpone graduation and drop out of university. Consequently, career indecision has significant associations with a number of personal and social problems. Therefore, examining the antecedents of career indecision may help practitioners increase career indecision and this lead to prevent these personal and social problems before they occur. However, there are few numbers of studies (Bańka & Hauziński, 2015; Büyüköze-Kavas, 2011; Vignoli, 2015) aiming to understand the antecedents of career indecision among university students. Thus this study aims to gather data which will help to fill this gap in literature by investigating the structural relationships among individual system, social system, environmental/societal system, environmental exploration, intended-systematic exploration, and self-exploration as antecedents of career indecision among university students.

In Turkey, many research studies have been carried out with the high school students about career indecision (Akkoç, 2012; Bacanlı, 2012; Öztemel, 2012; Şahin, Sarı, Duman, Kerimoğlu, & Kocaman, 2015). One of the reasons for this trend in career-related search may be the critical career development stage at adolescence period (Sharf, 2002). Another one could be the education system in

Turkey that requires high school students to choose a field in the 10th grade (MEB, 2016). By choosing a field, high school students make an important decision about their careers and reduce the number of possible programs which they could attend at university (Büyükgöze-Kavas, 2011). The accuracy of this career decision made in the high school directly affects the job satisfaction, life satisfaction, and happiness when studying at university and entering the work world (Yılmaz, 2004). This link between career decision and satisfaction was also examined in Turkey and studies showed that high school students have difficulties in making career decision (Çakır, 2003; Yazıcıoğlu, 2008). The second step for individuals is to choose a program that they want to pursue a degree after graduation from university. High school students' choice and placement in the undergraduate program are based on their university entrance exam scores. According to the application and placement numbers in university program between 2010 and 2017, it seems that the number of high school graduate students applying to enter the university has increased over years (OSYM, 2017). Despite the increasing number of high school graduates who apply to enter the university, the number of students who have placed in the university is very small compared to potential degree candidates. In 2017, only 825,397 students among 1,846,880 students could be placed in two and four years program combined at the university. When the data is evaluated in terms of "Number of Students who applied and placed in a university according to Educational Status", it is found that 40.6 % of the 825,397 students, who were placed in university, were 12th-grade high school students. It is seen that the other individuals, who were placed in university, had not been placed in the previous years, had been already placed, had completed a higher education institution or had deleted their registration from higher education. These numerical data indicate that students are still career indecisive although they were placed in university. Thus studying on the level of career indecision among university students in Turkey would bring valuable findings.

In Turkey, students who are indecisive about their careers can change their program in terms of opportunities such as horizontal or vertical transition, or they may apply for double major programs after they are placed in undergraduate programs. However, these opportunities are limited and a few university students are able to use these opportunities in order to choose a career, which they want to pursue. University students can not attend any double major program they wish to study. Additionally, university students can only be able to apply for the horizontal or vertical transition from their university/ program to another university /program if their grade point average is above a certain level. Besides limited opportunities offered to university students who are career indecisive, many students do not know who can support them and provide career-related information when they have difficulties in career decision making (Işık, 2007). Consequently, individuals try to enter the university entrance exam again and get the desired score in order to be placed in the desired program. Therefore, the score obtained from university entrance exam may not directly affect the level of students' satisfaction with career decisions. As the results of studies conducted in Turkey showed individuals make their career-related choices largely by taking into consideration of their academic achievement and university entrance exam score rather than personal, social and environmental factors (Ayık, Özdemir, & Yavuz, 2007; Sarıkaya & Khorshid, 2009). Making a career decision considering only academic achievement might be possible antecedents of career dissatisfaction. Moreover, re-taking university entrance exam requires a lot of support (family, friend, teacher support) and having psychological, social and economic resources. Students who do not have these resources may give up what they want and may be placed in an undergraduate program different from they wanted. Şahin, Zoraloğlu, and Fırat (2011) indicated that a significant proportion of the students choose departments in which they are less interested or are not interested at all due to difficulty in entering the university. Therefore, it is possible to claim that the having high score of university entrance exam and choosing an undergraduate program in the direction of university entrance exam score does not

always mean that the university students are satisfied with their career decision and are pleased with an undergraduate program, which they chose. To examine antecedents and consequences of university students, who enroll any program at the university by taking into consideration of academic achievement but do not satisfy their career indecision, may prevent students retaking university entrance exam. According to Mubiana (2010), assisting students to make a career decision and to plan their career is a critical issue for a career counselor. Career counselors assist students in improving career-related skills as well as in responding to problems related to their career (Dragolea, 2015). Although the role of career counselor is emphasized in the literature, there are few studies about career indecision of university students. Especially, in Turkey, a few studies (e.g. Büyükgöze-Kavas, 2011) examined the nature of career indecision among university students. The present study conducted to understand the the nature of career indecision among university students who are studying in Turkey. In this way, it is aimed to provide both contributions to career-related literature and findings, which may guide the practitioners in serving preventive counseling. Therefore, the model developed with these suggestions in mind would be helpful and informative for practitioners who serve mental health services to clients who are career undecided.

In Turkey, university students experience career-related anxiety during college years (Gizir, 2005). University students with high level of anxiety reported that they believe their degrees are not going to assist them to achieve their career goals (Dursun & Aytaç, 2012). In some cases, it may result in someone else making the decision for them (Gati & Saka, 2001). For many years, scholars and researchers have emphasized the cultural factors' role in career decision making process (e.g., Byars-Winston, 2010; Mau, 2000; Xu, Hou, & Tracey, 2014) and developed counseling strategies to be used by career counselor by taking a multicultural context into consideration (Fouad & Bingham, 1995; Hartung et al., 1998). For many years, cultural context has been viewed as a vital factor that influences the

individual's career development outcome (Byars-Winston, 2010) and shaping behaviors and attitudes (Aslinia, Rasheed, & Simpson, 2011). For example, the satisfaction of individual needs is more important than group needs in individualistic cultures (Taylor, Welch, Kim, & Sherman, 2007) while in a collectivist societies the priority of group goals are over individual goals due to the importance of social cohesion and interdependence (Markus & Kitayama, 1991). Western Europe and North America (Triandis, 1993) are considered as more individualistic cultures while Turkish culture (Mocan-Aydm, 2000), Chinese culture (Triandis, 1995), Latin America (Triandis, 1993) are thought to be more collectivistic ones. These differences between cultures change the individual attributes and their career development needs. For example, in collectivistic societies, parents have high power on their children's decisions regarding a career (Mao et al., 2016; Hou & Leung, 2011) since the self is defined relative to others (Chadda & Deb, 2013). Individual's decision depends on the group members, including a family, a society or an organization (Xu, Hou, & Tracey, 2014) in those societies. In sum, cultural differences have been identified as an influential factor on individuals' career selections. Although there have been many attempts to develop the career development models and conduct study that provide comprehensive knowledge related to the link between cultural factors and career development, far too little attention has been paid to this relationship. Because the majority of existing career development models have been developed by considering the White, middle-class American cultural values (Hendricks, 1994; Preskill & Donaldson, 2008). Similar research has been conducted in other collectivist cultures, there have been a few studies that investigate career decision of individuals who grew up and study in Turkey. Due to limited research, it is difficult to understand which cultural factors university students consider and also how much they consider social norms and family expectations while making a career decision in Turkey. With the hope that current study would contribute to career-related literature, the present study seeks to test the proposed model by adopting the Systems Theory Framework since this theoretical framework

emphasizes the vital role of cultural factors on deciding on a career path. Through the lens of System Theory Framework, this study is willing to comprehend the role of cultural factors on decisions regarding the career of university students in Turkey, which is considered as a more collectivist culture (İmamoğlu, Küller, İmamoğlu, & Küller, 1993; Mocan-Aydın, 2000). In the current study, the proposed model developed to understand whether university students get support from their friends, teachers, and parents and how perceived social support influence career decision by examining cultural factors. Investigating cultural factors that shape career-related behavior and choices might be informative and helpful for career counselors and might make important contributions to theory development (McMahon & Patton, 2006). Therefore, practitioners who provide career counseling in Turkey might benefit from findings of the current study while working with clients.

The career exploration is increasingly becoming a vital factor in career decision-making process (Xu, Hou & Tracey, 2014). Exhibiting different career exploratory behaviors seems as an important step for career planning process for late adolescent and early adult (Jordan, 1963; Super, 1990). However, most studies have failed to investigate the relationship between career exploration and career planning process (Xu, Hou, & Tracey, 2014). Several studies have investigated the individual characteristics-career congruence (e.g., Nauta, 2010). Scholars (e.g. Leong & Hartung, 2000) have underlined the necessity of examining the reliability and validity of career assessment instruments across diverse groups, such as ethnic, language. This is the first study that aims to adapt Career Exploration Survey (CES) to Turkish in order to fill this gap in career counseling literature. Despite the abundance of research on career indecision of university students, the limited studies focusing on the career exploratory behavior have been conducted with a sample of university students (Rogers & Creed, 2011). Therefore, with a hope that the adaptation of the CES into Turkish will

encourage researchers to examine the career exploration behaviors of university students.

Much work on the potential influence of parents or friends has been carried out (e.g. Leung, Hou, Gati, & Li, 2011; Metheny & McWhirter, 2013; Nawaz, & Gilani, 2011; Ulaş & Özdemir, 2017) yet there are still some critical issues in assessing the role of career influences on career planning process of university students by using reliable and valid instruments (Fisher & Stafford, 1999). This is the first study to adapt Career Influence Inventory to into Turkish in order to fill this gap in career counseling literature. By adapting this data collection instrument, career counselors would be able to comprehensively compare the influences on career development of Turkish university students. Additionally, career practitioners may use the measures adapted in Turkish to help more effectively people develop career plans while taking into consideration of career influences of on clients' career development. Furthermore, career counselors should be aware of individual career development needs and individual characteristics in order to effectively help client's career-related issues (Gadassi, Gati, & Wagman-Rolnick, 2013). Whatever approaches adopted by career practitioners, assessing the career development needs and individual differences are among the essential tasks of career counselors (Brown & Rector, 2008). For this reason, measures based on variant career counseling theories, as the ones adapted into Turkish in the current study should be tested. It is also hoped that measures adapted into Turkish in the current study would provide valuable information to career practitioners about the career counseling needs of college students.

1.5 Definition of the Terms

Career indecision: Career indecision is viewed as an inability to decide regarding a career that individuals want to pursue (Guay et al., 2003).

Career decision making self-efficacy: This term is described the degree of self-efficacy beliefs that one can complete necessary tasks for making well-informed career decision (Taylor & Betz, 1983).

Career exploration: The career exploration refers to the degree of career exploratory behaviors including gathering information about personal and environmental characteristics and gaining an understanding of oneself and world of work (Stumpf, Colarelli & Hartman, 1983).

Self-exploration: The self-exploration tends to be used to the extent of career exploratory behaviors regarding one's personal career goals, personality, interests, vocational values and abilities (Stumpf et al., 1983).

Environmental exploration: The environmental exploration can be defined as the extent of career exploratory behaviors including gathering information relevant to various occupations, industries, possible career paths, job requirements and reflecting on career choice (Stumpf et al., 1983).

Intended-systematic exploration: The intended-systematic exploration is defined as career exploratory behaviors including gathering information about personal and the environmental characteristics in an intended or systematic manner (Stumpf et al., 1983).

Social support: The social support is described as the support and accessibility which one receives from significant others. By way of getting social support, individuals feel that they are protected and loved by others (Sarason, Levine, Basham, & Sarason, 1983). Family members, peers, friends, and teacher give social support (Malecki & Elliott, 1999). In the current study, parental, teacher and friend support will be examined as important sources of social support.

Parental support: The parental support is defined as the family encouragement, expectation, accessibility of children and the influence of all of them on children's academic and career goals (Fisher & Stafford, 1999).

Teacher support: The teacher support is defined as the teachers' expectations of students, their support to students and the influence of expectation and support on students' academic and career goals (Fisher & Stafford, 1999).

Friend support: The friend support is defined as the friends' expectations of friends, their support to their friends and the influence of expectation and support on friends' academic and career goals (Fisher & Stafford, 1999).

Academic self-efficacy: The academic self-efficacy is defined as the degree of individual's sense of confidence in the performance regarding academic subject area (Fisher & Stafford, 1999).

Ethnic-Gender expectations: The ethnic and gender expectation refers to the degree of individuals' perceived expectations of whose school personnel and family members based on their gender and ethnic (Fisher & Stafford, 1999).

Negative social events: The negative social events are defined as the obstacles which individual experiences during one's whole life (Fisher & Stafford, 1999).

CHAPTER 2

LITERATURE REVIEW

This literature review chapter offers a pertinent literature regarding career decision making process among university students. This chapter started with a review of theories that affect career decision making. The first section commences by describing the study variables (career decision making self-efficacy, academic self-efficacy, parental support, friend support, teacher support, negative social events, ethnic-gender expectations, intended-systematic exploration, self-exploration, environmental exploration and career indecision) in order to further understanding the nature of study variables. After the definition of study variables, this chapter continues with a summary of the relevant theoretical literature explaining the possible antecedents and consequences of each study variables. Systems Theory Framework of career development (STF) was introduced and why the STF was adopted as theory was discussed in the second section. As a part of literature review chapter, the findings of studies that aimed to examine the relationship among study variables and career indecision were provided. The following section reviewed the Turkish literature related to study variables and how these constructs interact each other in the process of career decision making. Finally, a summary of the research studies is presented.

2.1 Career Indecision

Career decision making is defined as a life-long process in which each individual need to make a career-related choice at different stages of their whole life. This process includes so many steps including actions that individuals need to carry out for making decisions regarding career (Peterson et al., 1996). The steps of career

decision making process are making a commitment to a career decision, planning and implementation. In these steps of career planning process, some individuals have trouble following steps or completing steps and as a result of these difficulties, individual experience career indecision (Osipow, 1999). Career indecision is described as problems encountered by individuals while making career decision (Osipow, 1999). Esters (2007) agreed with Osipow's (1999) opinion and added that career indecision occurs when individuals face problems during the career decision making process. According to Crites (1978), individuals suffer from career indecision when individuals have many abilities, decide a career path that does not fit their skills and interests or have less interest in any career path. University students who are not able to select a university major or choose a job which they want to get after graduation are classified as a career undecided individual (Borgen & Hiebert, 2006). Kelly and Lee (2002) described career indecision as "the inability to specify an educational or occupational choice" (p. 322).

The career indecision regarded as a construct which has four subtypes of career indecision: planless avoiders, informed indecisives, confident but uninformed, and uninformed (Larson, Heppner, Ham, & Dugan, 1988). Individuals who have difficulties in having adaptive coping strategies and problem-solving skills, and also planning career path defined as planless avoiders. The second type of career indecision, namely informed indecisives, who are not able to decide their career since they have negative self-appraisal of themselves even if they have information how to plan their career. Individuals, who are confident but uninformed, do not have enough information about career decision making process and also themselves. They are not able to make career decision even if they have positive self-appraisal of their problem-solving skills. The last subtype of career indecision is uninformed. Individuals with this type have moderately problem-solving skills. However, they do not know how to plan their career. The result of Larson et al. (1988) shows that career indecision is not a dichotomous

construct. Indeed, this construct is multidimensional. Unlike Larson et al. (1988), Sampson et al. (2004) defined the levels of career indecision. According to them, there are three levels of career indecision: decided, undecided, and indecisive (Sampson et al., 2004). Indecisive individuals do not finalize their career decision since they have maladaptive problem solving and a lack of information. Undecided individuals do not have sufficient ways to obtain information, they have not make a career commitment. Decided individuals are certain related to their chosen career path.

Since the emergence of the concept of career indecision, many antecedents have been found by researchers (e.g. Bańka & Hauziński, 2015; Vignoli, 2015). The previous studies indicated that intrapersonal factors are closely related to high levels of career indecision. For instance, anxiety about one's future (Saka et al., 2008; Vignoli, 2015); trait career indecisiveness (Jaensch, Hirschi, & Freund, 2015), maladaptive coping behaviors (Lipshits-Braziler, Gati, & Tatar, 2015); low level of career exploration (Park, Woo, Park, Kyea, & Yang, 2017; Robitschek et al., 2012), neuroticism (Di Fabio et al., 2014), a lack of information (Santos & Ferreira, 2012) and absence of meaning in life (Miller & Rottinghaus, 2014) have been found as antecedents of career indecision. In addition to, career indecision has been examined to be predicted by interpersonal factors, such as national shortage of good job, lack of parental interest, lack of career counseling (Ukil, 2016), low level of parental support (Mao et al., 2016), social comparison (Li et al., 2015), participating career course (Lam, 2016) and low level of maternal support for female university students (Mao, 2017).

Regardless of career indecision type, making a decision regarding career is an essential task for individuals in their whole life (Gati, Krausz & Osipow, 1996). Especially in exploration stage (Super, 1980), making career decision is a salient task for university students (Stringer & Kerpelman, 2010). Arnett (2000) indicated that experiences of university students in emerging adulthood period have a role

in identity development and also in making a career decision for the future. Additionally, Super (1980) indicated that young people in the exploration stage crystalize their career-related choices before finalizing their career decision. However, some university students have difficulty in using career decision making skills or making career decision while others deal with obstacles occurred during the career planning process (Leung et al., 2011). Having difficulties in making a career decision and career indecision that arises as a result of these difficulties may influence people of all ages (Gianakos, 1999), especially university years (Gati et al., 2011).

There has been consistent empirical attention focused on the multiple factors that influence the university student's level of career indecision (e.g., Burns, Jasinski, Dunn, & Fletcher, 2013; Jaensch et al., 2015; Leung et al., 2011; Mojgan, Kadir, Noah, & Hassan, 2013; Porfeli et al., 2011; Vignoli, 2015). Previous research studies indicated that variables which are included in the current study were closely associated with career indecision among university students. For instance, ethnicity (Lopez & Ann-Yi, 2006), career exploration (Cheung & Arnold, 2010; Park et al., 2017; Porfeli & Skorikov, 2010; Robitschek et al., 2012), outcome expectations (Lent., Ireland, Penn, Morris, & Sappington, 2017), career decision making self-efficacy (Büyükgöze-Kavas, 2011; Jadidian & Duffy, 2012; Lent, Ezeofor, Morrison, Penn, & Ireland, 2016; Pesch, 2014) were found as a variable which was related to career indecision. Additionally, several variables influence the career indecision of university students. For example, previous studies indicated that personality (Burns et al., 2013), vocational identity (Porfeli et al., 2011), decisional anxiety (Lent et al., 2016), coping behaviors (Lipshits-Braziler et al., 2015), hope (Wilkins et al., 2014), lack of career counseling (Ukil, 2016), personality traits (Brown & Hirschi, 2013; Burns et al., 2013; Martincin, & Stead, 2015), anxiety (Park et al., 2017), and parental support (Leung et al., 2011; Mao, 2017; Mojgan et al., 2013; Raque-Bogdan et al., 2013) are related to career indecision. In 2011, Bullock-Yowell, Andrews, and Buzzetta (2011) study

reported that both career and life stress were associated with the less career indecision and satisfaction with career choice of university students (n = 232). The findings of Martincin and Stead's (2015) highlight the crucial role of personality traits in the level of career indecision. In their meta-analysis study, they found that agreeableness and openness were negatively related to career indecision. In a study focused on career decision making self-efficacy, Lent et al. (2016) found self-efficacy completely mediated the relationship of conscientiousness to career decidedness and decisional anxiety. Another important finding was that university students' self-efficacy and vicarious learning were significant predictors of their outcome expectations (n = 324) (Lent et al., 2017). Lent et al. (2017) concluded that there was a significant structural relationship among self-efficacy, mastery and positive emotions and career decidedness. Although numerous studies have attempted to explain the career decision making process of diverse populations, there has been very little research explored the link between social, personal and cultural factors and career indecision of individuals in Turkey. The previous studies were carried out in Turkey with the participation of high school students rather than university students or adults. While a fair amount of research (Hamamcı & Esen-Çoban, 2007; Öztemel, 2012; Şahin et al., 2015; Yalın-Yaman, 2014) has been conducted with high school students to identify the correlates of career indecision, there has been little research regarding this concept in relation to students studying at university (e.g. Büyükgöze-Kavas, 2011). In an investigation into career indecision making high school students, Hamamcı and Esen-Çoban (2007) tested the relationship among career maturity, irrational beliefs, and career indecision (n = 282) in Turkey. They reported that career indecision was positively associated with irrational beliefs. Conversely, Şahin et al. (2015) found that irrational beliefs were not found a significant predictor of career indecision of high school students (n = 266). Whereas Büyükgöze-Kavas's (2011) study on 723 college students demonstrated that career decision making self-efficacy was directly related to career indecision of university students. Additionally, in her study, career decision making self-

efficacy had a mediator role on the relationship between the level of locus of control and career indecision.

Since career development theories enhance our understandings of career development process, information about established theories of career choice and development was given in following a section of this chapter. There are several models of career decision making that explain how individuals make their career decision, which kind of influences affect career-related choices of individual and which stages take part in career decision making process.

Established Theories of Career Choice and Development

Trait and Factor Theory (Parsons, 1909) is a theory of career choice and development that developed based on the assumption that individuals have unique patterns of traits to be objectively measured. The patterns of traits are closely related to with the requirements of variant jobs (Zunker, 2006). The fundamental elements that are the determinants of career selection: self-knowledge, occupational knowledge and the matching the individual with the occupation. As stated in Trait and Factor Theory (Parsons, 1909), individuals differ from others in terms of their personal characteristics, including interests, abilities, values, and personality (Patton & McMahon, 2014). The element of self-knowledge contributes individuals' understandings of themselves, especially their capabilities, interests, strengths, recourses and other individual characteristics.

The last element of career-related choices is labeled as matching the individual with the occupation. The cognitive processes and analytical skills have a key role in this matching the individual with the occupation process (Patton & McMahon, 2014). However, O'Brien (2001) indicated not only cognitive processes but also intrapersonal and interpersonal influences have a role in career decision making processes. From this perspective, Patton and McMahon (2014) concluded that Parson's theory has contributed both to the logical positivist and constructivist

positions on the career-related literature (p. 30). The Trait and Factor Theory is seemed more static than developmental career development theories and social constructivist approaches (Zunker, 2006). While developmental approaches claim that individual changes over time and individuals' career-related choices are shaped by environmental, social and individual factors; social constructivist career theories underline the role of contextual factors and construction of career development based on subjective experiences.

Life-Span, Life-Space Theory (Super, 1953): This theory has become one of the most important career choice theories in the recent years (Borgen, 1991). Since the making a career choice is viewed as a developmental process rather than an event, career development consists of several decisions, which individuals make. According to Super's theory (1953), individuals make a career decision which represents an implementation of their self-concept. The fundamental aspect of this theory is self-concept defined as individuals' objective and subjective judgments about themselves. The self-concept is schemed in the whole life of individuals. Individual's self-concept becomes more stable as the person progresses through the developmental stages of career development. Super (1963) also emphasized the development of vocational self-concept. Individuals construct their self-concept and vocational self-concept by evaluating themselves and feedback from the others within their social context through their life.

Super (1953) conceptualized the stages of career development as linear. In his theory, there are five career development stages: Growth, Exploration, Establishment, Maintenance, and Decline. Individuals go through these stages, but not in the same manner or at fixed ages. And each stage consists of unique developmental tasks for an individual. The more individuals successfully complete necessary tasks in stages of career development, the more they function effectively their life roles. According to Super, Savickas, and Super (1996), individual hold six main life roles: child, student, worker, leisurite, homemaker,

and citizen. The more individuals' self-concept and vocational self-concept become stable, the more individuals implement their self-concept in different life and work roles.

Theory of Circumscription and Compromise: Gottfredson (1981) developed Theory of Circumscription and Compromise and then revised it in 1996. Since this theory incorporates the developmental concepts into career development process, this theory is the one of the most influential developmental theory. In other words, making a career choice is viewed as a process rather than an event. Gottfredson (1996) developed her theory since she wanted to explain why individuals' personal characteristics (social class or ethnicity) influence their vocational expectations. Different from Super (1953), Gottfredson (1996) focuses on the influence of individuals' cognitive development and social factors on career decision since individual eliminate their possible career path according to their personal awareness and self-image. Individual's career-related choices evolve according to their social and contextual environment while growing up. Social and contextual environment factors, especially gender identity, perceptions of appropriate social aspirations, values, and interests influence the individual's career decision (Gottfredson, 1996). Career-related choices are viewed as an expression of the self in this theory. Gottfredson (1981; 1996) proposed four developmental processes that are fundamentally important for explaining how individuals choose their career. These developmental processes are the Cognitive Growth, the Self-Creation, the Circumscription, and the Compromise. Since career decision process is cognitively demanding, age-related growth in cognitive ability, which is labeled as cognitive growth, is essential for making a career decision. Self-creation have a role on which process including seeking occupations that satisfy one's interests and career goals as an individual active product of both nature and nurture, personal attributes are more influenced by shared and non-shared environments. Career-related choices begin as a process of circumscription that is a process of narrowing the acceptable career alternatives

according to conflicts between self-concept and the variety of career alternatives. Four stages of circumscription in which all individuals move forward through in the circumscription. In the first stage of circumscription, namely Orientation to Size and Power, individuals categorize people around them in simple ways without conscious awareness of gender role. In the second stage of circumscription, namely Orientation to Sex Roles, individuals develop an orientation to gender role and define their vocational aspirations based on their gender roles. In the third stage of circumscription, namely Orientation to Social Valuation, individuals develop an orientation to social valuation and become sensitive to prestige and status in society. In the fourth stage of circumscription, namely Unique Self, individuals develop an orientation to internal unique self and determine their vocational aspirations according to their interest, personality, and values. The compromise includes rethinking on career alternatives, modifying alternative career choices and choosing the career based on gender role, prestige, status and personal characteristics.

Theory of Types and Person-Environment Interactions: Holland (1973) focus on the match between the personal characteristics and the occupational environment in early work. Later, Holland (1997) categorized the occupational environments and personality types. There are six categories of occupational environments and these six occupational environments. Individual personalities were divided into six types: RIASEC (realistic, investigative, artistic, social, enterprising, and conventional) in this theory (Holland, 1997). Individuals tend to have characteristics from two or three of the RIASEC. However, each individual has a unique combination of personality types. Individual seek for occupational environments in which they may be able to exercise their abilities and express their attitudes and values. There are six occupational environments: Realistics, Investigative, Artistic, Social, Enterprising, and Conventional. Holland (1992) views career-related choices as an expression of the individual's personality. If individual's personality type matches the occupational environment, they are

more likely to be more satisfied related to career choice and perform better in their occupational environment. This is called congruence in this theory. Congruence means the degree of fit between an individual's personality and the type of occupational environment in which individuals currently reside or anticipate entering (Holland, 1997). Choosing an occupational environment that coincides with personality type is essential for career satisfaction. However, when individual's personality type is not congruent with the occupational environment, they tend to resolve this incongruence by searching a new occupational environment. The second core concept of this theory is the differentiation that refers to the degree of distinctiveness among types representing a person's personality profile. The third core concept is the consistency that means the degree of internal coherence within personality types. The fourth concept is identity refers to the degree of one's clarity related to his or her goals, interest and abilities. Self-knowledge and self-awareness are needed for someone who clarifies their personal values and abilities (Holland, 1973). The more individuals gather accurate knowledge about themselves and world of work, the more they clarify their identity and that results in appropriate career decision (Zunker, 2002).

Emerging Career Choice and Development Theories

John Krumboltz's Learning Theory of Career Counseling: Krumboltz and his colleagues have developed a learning theory of career counseling which comprises two approaches, namely Social Learning Theory of Career Decision Making (SLTCDM) (Mitchell & Krumboltz, 1996) and Learning Theory of Career Counseling (LTCC) (Krumboltz & Henderson, 2002; Mitchell & Krumboltz, 1996). Mitchell and Krumboltz have labeled the entire theory as LTCC since SLTCDM focus on the origins of career choice while LTCC focuses on career counseling process (Niles & Harris-Bowlsbey, 2009). LTCC have been derived from the Bandura's (1977; 1986a) Social Learning Theory. Krumboltz developed this theory in order to guide counselors in serving more effectively

counseling services. This theory was developed for assisting counselors to design interventions for their clients, especially individuals who experience career indecision (Niles & Harris-Bowlsbey, 2009, p 78). Career counselors create a therapeutic environment and provide client's previous learning experiences to help client correct faulty assumptions learn new skills and interest and learn skills for coping with changing work tasks (Krumboltz, 1996).

Social Learning Theory of Career Decision Making (SLTCDM): SLTCDM is derived from Bandura's (1977) Social Learning Theory; career decision making process is regarded as a learning process. As stated in Bandura's (1977; 1986) learning theory, learning is acquired in a social context and occurs through observation as part of a cognitive process. Individual's learning experiences over their life impact career-related decisions (Mitchell, & Krumboltz, 1996). In SLTCDM, genetic endowments and special abilities, environmental conditions and events, instrumental and associative learning experiences, and lastly task approach skills are categorized the key determinants that play role in making a career decision and career development (Mitchell, & Krumboltz, 1996). The inherited characteristics of individuals are labeled as genetic endowments, such as physical appearance, unique talents, hair color, and sex. Additionally, environmental conditions and events such as cultural, social, political forces, many of which are generally beyond the control of any individual single, affect the career decision making process (Krumboltz, Mitchell, & Gelatt, 1976, p.7). In line with John Krumboltz's Social Learning Career Theory, individual infer them by learning experiences that involve antecedents, behaviors, and consequences. Task approach skills that depict how one approaches a particular task to be performed during career decision making and include the individual's problem-solving skills, work habits, emotional responses as well as cognitive responses. These key determinants influence individuals' belief about themselves and also about the world through actions one takes, task approach skills used in career choice, self-observation or worldview generalization. Each individual is

differently influenced by these determinants and each individual makes career decision according to the interaction of these determinants (Mitchell & Krumboltz, 1996). They draw a conclusion about their performance capabilities, interest, and values after comparing their performance to the performance of others. These four factors affect individuals' career decision through actions one takes, task approach skills used in career choice, self-observation or worldview generalization (Mitchell & Krumboltz, 1996).

Social Cognitive Career Theory (SCCT): SCCT (Lent, Brown & Hackett, 1994; Brown & Lent, 1996) is based on the application of Bandura's (1986a) general Social Learning Theory to career decision making. SCCT specifically focus on what individuals know, how they make a career choice, how contextual factors influence their career-related choices (Lent, Brown, & Hackett, 1996). SCCT is a helpful theoretical framework for explaining the how individuals develop their interest, how they make educational and vocational choices and also how they perform career-related tasks and persist in completing necessary tasks while making career decision (Lent et al., 1994). As proposed in the SCCT, personal characteristics (such as gender, ethnicity, socioeconomic status) interact with background and contextual variables. Individual, background and contextual variables influence the learning experiences, self-efficacy beliefs and outcome expectations (Lent et al., 2002). In turn self-efficacy beliefs, outcome expectations, and past performance accomplishments lead an individual to develop academic and occupational interests (Lent et al., 1996). Interests influence the personal goals that lead individuals to choose a career (Lent, 2013).

Self- efficacy beliefs defined as an individual's judgments of their own abilities to plan and perform the actions to successfully perform tasks at designated level (Bandura, 1986a, p. 391). Self-efficacy beliefs lead an individual to develop beliefs about whether one can perform specific tasks. Individuals' self-efficacy positively or negatively impacted by observational or vicarious learning, personal

performance accomplishments, feedback or responses from the social environment and internal states (Bandura, 1986b; Lent et al., 1996). Personal performance accomplishments are the most influential sources among sources of self-efficacy (Niles & Hartung, 2000).

The Cognitive Information Processing Approach (CIP; Sampson et al., 1992; Peterson et al., 1996) emphasizes the cognitive process of career decision making. This approach uses a pyramid that presents the crucial areas of cognition involved in career decision making. The first level of the pyramid is named as the cornerstone of career planning. This level is presented as a base of the pyramid that contains the knowledge domains, including self-knowledge and occupational knowledge (Reardon, Lenz, Sampson, & Peterson, 2000). The second level of the pyramid is called as CASVE (communication, analysis, synthesis, valuing, and execution) cycle. Individuals obtain, analysis, and syntheses the information related to career problem solving and career decision making at this level. Following synthesis, individuals determine the best possible career alternative after evaluating possible career alternatives based on their values system. As a final domain in CIP approach, executive processing domain which is located at the top of the pyramid. Individuals become knowledgeable about how they think, feel and performance since this domain includes metacognition. The main metacognitions consisting of the executive processing domain include monitoring and controlling, self-talk and self-awareness. Self-awareness refers to degrees of one's awareness of oneself as the doer of a task. Monitoring and controlling are crucial functions of the executive processing domain. These functions are determinant of moving forward to the next level of in the CASVE cycle (Sampson et al., 2004). The function of monitoring enables individual to understand whether the amount of information obtained in each phase in the cycle. The function of controlling includes decision-making process. If individuals decide their amount of information is enough, they decide to move forward to next phase (Peterson et al., 1996).

Values-based, holistic model of career and life-role choices and satisfaction (Brown, 1995, 1996) is a career development theory in which values seem as an important influence on the career choice process. Brown's values-based career model is derived from Super (1957), and Beck (1987). Values are defined as a cognitive structure including behavioral and emotional dimensions (Brown, 2002). In this career model, values, especially cultural and work values, influence the evaluation of individuals related to their own actions and the actions of others. Individual make career decision based on their values with high priorities while they have more than one alternative available (Brown & Crace, 1996).

Postmodern Approaches

Postmodern approaches refer to approaches (e.g. narrative, contextual, constructivist) (Niles & Harris Bowsbey, 2009) that emphasize the individual's subjective experience of career development (Niles & Hartung, 2000) and individual's capabilities to construct her or his own reality (Savickas, 2005). Postmodern approaches include constructivist assumptions and that means they emphasize personal agency in the career construction process (Niles & Harris Bowsbey, 2009, p.109). Contextual Action Theory (Young, Valach & Collin, 1996, 2002), The Chaos Theory of Careers (Pryor & Bright, 2011), Career Construction Theory (Savickas, 2005), and the Systems Theory Framework (McMahon & Patton, 1995; Patton & McMahon, 2006) of career development and The Relational Theory Of Working (Blustein, 2001, 2006,) have been viewed as postmodern approaches in career counseling

Career Construction Theory: Career Construction Theory developed including personal and social constructivist assumptions focuses on individuals construct their meaning and their social and psychological worlds through individual, cognitive processes (Young & Collin, 2004, p. 375). According to Savickas (2002) that individuals subjectively construct the career by imposing meaning on their vocational behavior and occupational experiences (p.43). Savickas (2005)

mentioned about three key components of career development of the individual: vocational personality, career adaptability, and life themes. Vocational personality refers to career-related abilities, needs, values, and interests of individuals. Individual's vocational personality is constructed by relational and social factors. Vocational personalities are formed by individuals in their families of origin and developed in the neighborhood and school and essential for an individual for being ready to enter the work world. The career adaptability component of career construction theory addresses an individual's readiness and resources for handling anticipated tasks and career transitions. Career Construction Theory views career adaptability as a developmental task (Savickas, 2002) and response readiness and coping resources are central to this developmental task (Savickas, 2005). Career Construction Theory (Savickas, 2002; 2005) categorized four dimensions of career adaptability as a concern, control, curiosity, and confidence. The term of Life themes has been developed based on early work of Super (1953). The Life Themes refer to subjective meaning including present experiences, future aspirations and past memories. Therefore, Life Themes, as a term, is the narrative component of career construction theory and focuses on individual work life (Savickas, 2005).

Theoretical Framework of the Study

Systems Theory Framework of Career Development: The Systems Theory Framework (STF) (McMahon & Patton, 1995; Patton & McMahon, 2006) of career development was developed due to the convergence debate of the early 1990s (McMahon, 2014). The STF (Patton & McMahon, 2006) includes a series of interconnected circles which represents a system of influence on the career development of individuals. The STF is a metatheoretical framework that consists of both the content influences and the process influences of an individual's career development (McMahon & Patton, 2009). The term *influence* reflects both content and process components of career theory. Influences do not always have the same

meaning for everybody. Based on perception of the individual, they are regarded as having either negative or positive impact on the career development (McMahon, 2002; McMahon & Patton, 2009; Patton & McMahon, 1999). The content influences intrapersonal characteristics and personal capabilities as well as contextual variables from the context in which individual they live and with whom they interact (Arthur, & McMahon, 2005). Since content influences are not static and interact with each other during the career development process, STF provides dynamic open system while helping clients who have difficulties in coping with obstacles. The content influences are organized in the STF and three interconnecting systems of influence on career development have been defined as content influences: individual system, the social system and the environmental/societal system (McMahon & Patton, 1995; Patton & McMahon, 1999). The individual is located in the individual system at the center of the STF. Although the individual and individual system are central to the framework, contextual, environmental and social factors have also a role in career development (Arthur & McMahon, 2005). Because of the importance of contextual influences, the social system and the environmental system have been defined (McMahon & Patton, 2009). These three systems of content influences provide insight related to process of career development over time. The individual system refers to influences such as gender, personality, ethnicity, interests, disability, and self-efficacy beliefs. The social system is surrounding the individual system of influences and comprises a range of social influences such as family, friends, media and educational institutions. The environmental/societal influences such as geographic location, socioeconomic conditions, socioeconomic circumstances, and political decisions, globalization are involved in the environmental/ societal system (McMahon and Patton, 1995). The process influences of an individual's career development reflect the dynamic nature of career development. The process influences of STF are the recursiveness, change over time, chance. Recursiveness is pictured in Figure 1.2 the dotted lines and that means each system is an open system. Each influence of each systems might be

affected by other influences in other systems and may also influence that which is beyond its boundaries. Recursiveness refers to the connectedness within and between all elements of the system and also between systems while change over time means that the degree of influences that influence the individual's career development might change as time progress. Additionally, the influences which affect the individual's career development play more role in some periods of individual's whole life while the influences sometimes do not have a role in the career choice process of individuals. This explanation related to the nature of career influences reflects the term of "change over time". Chance reflects the unplanned, accidental, unexpected and undesired events that individuals encounter while making a career decision. Change can influence on any part or combination of parts in the system. That means making a career related choice not always be planned before due to the complexity of an individual's life. All of these process influences show the dynamism of the STF (Patton & McMahon, 1999). The content (individual, social and environmental/societal system) and process (change over time, change, recursiveness) influences are located in the context of time (Arthur & McMahon, 2005) (see Figure 1.2).

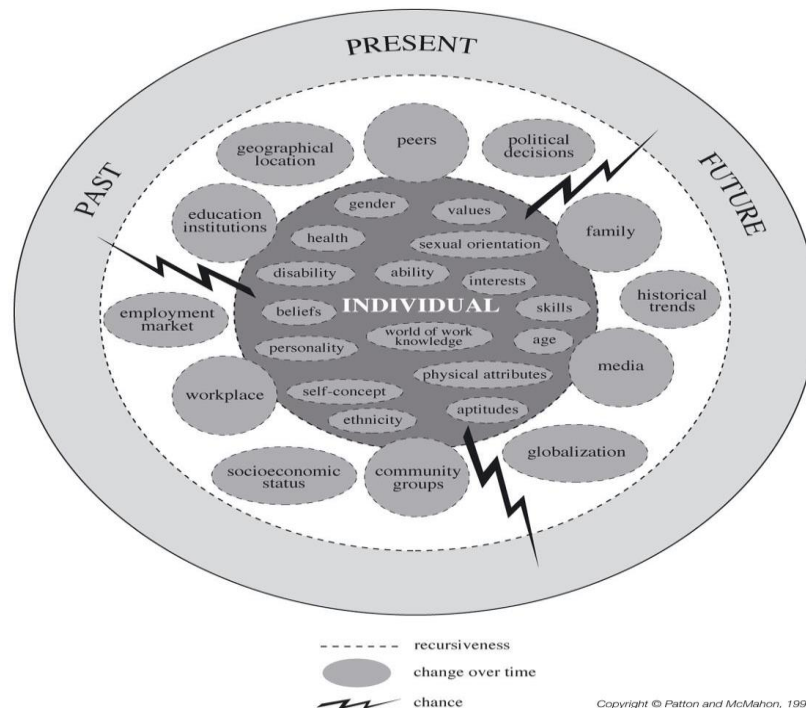


Figure 1.2 Systems Theory Framework of career development

Note. From *Career Development and Systems Theory: A New Relationship*, p. 164, by W. Patton & M. McMahon, 1999, Pacific Grove, CA: Brooks/Cole. Copyright 1999 by W. Patton and M. McMahon. Reprinted with permission.

Numerous studies have studied the role of multiple factors that influence the career planning and choice process of individuals through the lens of Systems Theory Framework (STF). For instance, McIlveen, McGregor-Bayne, Alcock, and Hjertum (2003) investigated the practical efficacy of a semi-structured interview derived from the STF by comparing ‘standard’ interview to interview based upon the STF and they found that the interview based upon the STF has some tentative merit as a potential alternative method for career assessment. McIlveen (2006) designed *My Career Chapter* by utilizing the STF (Patton & McMahon, 2006), Career Construction Theory (Savickas, 2005), the theory of Dialogical Self (Hermans & Kempen, 1993). *My career chapter* is a workbook containing detailed instructions and it is delivered to clients as a homework exercise following on from initial counseling interviews (McIlveen, 2006). Similarly, a workbook of *My*

System of Career Influences (MSCI) for adolescents and for adults was developed by using the STF (McMahon & Patton, 1995; Patton & McMahon, 1999, 2006) of career development. MSCI is helpful for clients in identifying, prioritizing and storying their career influences. Another qualitative study conducted by Byrne (2007) who used STF as a theoretical approach in order to understand the influential factors on the selection of speech pathology as a career. In this study, 16 undergraduate speech pathology students at an Australian university reported that the factors located in the individual and social systems were more influential than factors in the environmental-societal system of the STF. Bridgstock (2007) made an effort to develop and examine psychometric properties of a brief quantitative measure of career development influences based on STF. The pilot study was conducted with 168 university students studying at Education Faculty in Australia and the main study participants were 310 artists. The final 19-item scale identified five correlated factors, of which three were within the framework's individual system, one was within the social system, and one was within the environmental-societal system. McMahon, Watson, Foxcroft, and Dullabh (2008) conducted the study to explore influences on the career development of disadvantaged South African adolescents. They found that parents and working overseas were important influences in career decision making process. Additionally, MSCI was found a qualitative measurement that helps researchers get insight into context and process of career development. Albien (2013) aimed to examine the role individual, social and environmental-societal systems influences in career decision making of high school students living in South Africa. While Social systems influences were the most prominent influences while high self-efficacy beliefs and expectation in the individual system were found as influential factors on career-related choices. Cassó-Holmberg's qualitative (2013) study was conducted by utilizing a role theory perspective and STF theories. This study aimed to understand the role of influential factors on career decision making of self-initiated expatriates, within past, present and future perspectives. According to the findings family,

organization and employment market were three influential factors affecting career decision making of self-initiated expatriates. Schindler and Schreiber (2015) adapted MSCI to German for baccalaureate school students at upper secondary level II and found that MSCI could be used as a career assessment instrument while providing career counseling services. The STF was used by Lei (2016) a framework of qualitative study and thematic analysis revealed that friends and family members were a more influential factor in career decision of 10 Chinese Canadians with postsecondary education. Daud (2016) conducted a qualitative study that aimed to discuss the application of the STF in understanding school guidance and counseling services. The results obtained from interviews with 41 students, 2 teachers, 8 school counselors and 5 administrators in Malaysia showed that the school guidance and counseling services was viewed as a system. Albien and Naidoo (2016) used MSCI to understand the social-level influences on black high school students living in Kayamandi, South Africa. In Albien and Naidoo's (2016) study family, school and friend relationships, as well as media role models and cultural factors were found as prominent influences on the career decision making. Timar and Aslan (2017) discussed the dynamical relationship between perceived employment success and perceived employment assistance in career counseling process by utilizing STF. They found that perceived employment success was highly correlated with perceived employment assistance of 432 last year students and young graduates from Romania, Turkey, Hungary, and Cyprus.

Several studies investigated and found significant relationships between family influence and career indecision (Işık, 2013; Leung et al., 2011; Mao, 2017; Metheny & McWhiter, 2013); friend support and career development (Ulaş & Özdemir, 2017); career decision making self-efficacy and career exploration (Cheung & Arnold, 2010; Makki, Salleh, Memon, & Harun, 2015), career decision making self-efficacy and career indecision (Jadidian & Duffy, 2012; Pesch, 2014; Walker & Tracey, 2012) as well as career exploration and career

indecision (Cheung & Arnold, 2010; Park et al., 2017; Robitschek et al., 2012; Sadeghi, Baghban, Bahrami, Ahmadi, & Creed, 2011; Xu, Hou, & Tracey, 2014). However, there is still a gap in the literature regarding studies aiming to understand the role of these important career constructs on career indecision by adopting a theoretical approach. The present study adopted the STF (McMahon & Patton, 1995; Patton & McMahon, 1999; 2006) as a theoretical framework. This theory has adopted as a theory in current study since this framework has seemed as an integrative model that is effective with both quantitative and qualitative research in career development literature (Bridgstock, 2007).

In the present study, Osipow's (1983) career indecision perspective has been taken into consideration while conceptualizing the career decision making process. According to Osipow (1983), career-related choices should be analyzed from the social system perspective since a family background in the context of environmental influences, culture, social class, socioeconomic factors, race, and gender shapes career decision. Similar to Osipow (1983), McMahon and Patton (1995; 1997; 1999) underline the role of family influence located in the social system while making career indecision. Additionally, influences contained in the social system and the environmental/societal system have not been adequately researched or theorized in career psychology (McMahon, 2014). Based on this consensus among scholars in existing literature in the area of career indecision the current research intends to explore the family, friend and teacher influence in young adults' career indecision.

2.2 Career Exploration

Career exploration is perhaps the most widely studied construct in the career-related literature (Blustein, 1992; Holland, Gottfredson, & Power, 1980; Jadidian & Duffy, 2012; Stumpf et al., 1983; Walker & Tracey, 2012). Career exploration has been theoretically defined by Super (1957) and firstly supported by empirical data by Stumpf et al. (1983). From Super's (1957) life-span, life-space theory

perspective, career exploration was the fundamental activity necessary to make a satisfying career-related choice. Although career exploration may emerge at all ages, it is generally regarded as a prominent developmental task of the late adolescence/early adulthood period between the ages of 14 and 24 where the majority of exploratory behavior typically occurs (Super, 1957). Thus university students are in the exploration stage and they explore their personal characteristics and also a world of work to make a decision about their careers (Duffy & Sedlacek, 2010; Taveira, Silva, Rodriguez, & Maia, 1998). Not only Super's (1957) Life-Span, Life-Space Theory, but most major theories of career development also emphasize the importance of career exploration during the career decision making process. For instance, Parson's trait and factor theory underline the matching process including the combination of information about individual's self and the world of work. In literature, this process can be appropriately finalized by exploring the self and occupation information (Swanson & Gore, 2000). Another career development theory is Krumboltz's (1979) social learning theory. Career-related choices and career decision making skills can be developed by learning experiences that are associated with career exploration (Krumboltz, 1979). According to Social Cognitive Career Theory, learning experiences have a role in determining the self-efficacy beliefs or outcome expectations (Lent, Brown & Hackett, 1994). As underlined in literature, self-efficacy beliefs and outcome expectations are motivational influences that affect the behaviors and cognitions during the career decision making process (Swanson & Gore, 2000). As Blustein and Phillips (1988) stated, the role of career exploration has been widely endorsed among career development theories.

For many years, researchers have endeavored to define the term of career exploration. Gathering career-related information and also gaining self-awareness defined as a career exploration behavior (Greenhaus, Hawkins, & Brenner, 1983). Career exploration is also described as the act of obtaining the information about one's self and the business world. Career exploration also includes the process of

combining both career-related information gathered through career decision making process (Jordan, 1963; Porfeli & Skorikov, 2010; Van Reenen, 2010). Specifically, career exploration includes both career exploration behaviors and learning experiences (Bartley, 1998). Since career exploration allows individuals clarify their career interest and values by learning experiences (Betz, 1999), establish achievable career goals, plan their career (Zikic & Hall, 2009), brace themselves for coping with career transitions (Li et al., 2015) and deal with difficulties which individuals have in making a decision regarding career (Guan et al., 2015), it enhances the career decision making process (Bartley, 1998). In career exploration process, individuals explore their internal attributes and also external career options (Flum & Blustein, 2000) by making effort to answer questions such as “who are they?”, “What do they want?”, “Which kind of career alternatives satisfy them?” (Porfeli & Skorikov, 2010). Career exploratory behaviors help the individual cope with the career transitions (Blustein, 1997), develop a clear sense of identity (Flum & Blustein, 2000), clarify career interest and values (Geiken, 2009) and reduce career indecision (Van Reenen, 2010). Many career development theories and career decision making models have emphasized the importance of career exploration behaviors to make effective career-related decisions since it is a specific way of obtaining self-knowledge and occupational knowledge (Hirschi & Lage, 2007; Phillips, 1982) and (e.g. Blustein, 1997) a fundamental competence in order to make an effective career decision.

Career exploration refers to the extent of exploration activities in which individuals engage in order to obtain relevant information about personal and environmental characteristics from a variety of sources (Blustein, 1997). Career exploration activities consist of self and environmental exploration (Stumpf et al., 1983; Zikic & Klehe, 2006). Self-exploration is defined as exploratory behaviors of individuals who intentionally gather information about their personal characteristics, such as interests, personality, and values (Blustein, 1997; Stumpf et al., 1983). Individuals take a great opportunity to gain a deeper understanding

of themselves and reflect on their decision related to career by engaging in self-exploration activities (Sawitria & Dewia, 2015). The more individuals engage in exploration activities, the more they discover their values, personality, and skills. The other type of career exploration, environmental exploration refers to the extent of exploration activities in which individuals engage in order to gather relevant information about environmental characteristics, such as organizations, job requirements, industries (Blustein 1997; Stumpf et al., 1983). By engaging environmental exploration activities, individuals take advantage of collecting information relevant to possible career choices, job requirements, job opportunities and job benefits. Both environmental and self-exploration assist individuals to increase the awareness of themselves and the working life (Zikic & Hall, 2009). And this high level of awareness related to personal and environmental characteristics help individuals make well-informed career decision (Zikic & Klehe, 2006). On the other hand, Porfeli and Skorikov (2010) have created a slightly different model from the career exploration model developed by Stumpf et al (1983). In which career exploration can be divided into two main career exploration type: divisive career exploration (i.e., learning broadly about career options and the self, independently of each other), and specific career exploration (i.e., learning about career options and the self, in an attempt to gain a more in-depth understanding of specific careers that seem aligned with aspects of the self). Career exploration includes many activities, such as looking at job advertisements, talking to one or more professional working in an area which one wants to pursue, trying out a particular activity (Arnold, 1997) and gaining insight into the role of contextual influences in career development (Zikic & Hall 2009).

The majority of the career exploration literature in young adults indicated that career exploration is closely associated with career decision making (Blustein, Pauling, DeMania, & Faye, 1994; Rogers & Creed, 2011) and has been noted as an important precursor of career indecision (Porfeli & Skorikov, 2010; Vignoli, 2015). For some researchers (e.g. Zikic & Hall, 2009), individuals are able to find

a perfect fit with their desired career option by engaging in career exploration activities. Several variables that were examined with career exploration, including career decidedness (Park et al., 2017; Porfeli & Skorikov, 2010; Robitschek et al., 2012; Xu, Hou, & Tracey, 2014), career adaptability (Nilforooshan & Salimi, 2016), career barrier and social support (An & Lee, 2017), family and friend influence (Hellman, 2014); gender (Guan et al., 2017), career decision making self-efficacy (An & Lee, 2017; Cheung & Arnold, 2010; Kanten et al., 2016; Makki et al., 2015; Yoshizaki & Hiraoka, 2015) and anxiety (Park et al., 2017). Downing and Nauta (2010) conducted a study on attachment, career indecision, and career exploration with 285 college students and unexpectedly found that career indecision was positively correlated with career exploration. Conversely, the findings of a longitudinal study conducted by Park et al. (2017) indicated that career exploration was a strong predictor of career indecision. While career exploration draws attention in studies carried out in abroad, a limited number of studies conducted in Turkey have found a positive relationship between career exploration and career behavior and outcomes. For instance, in Sarı, Yazıcı and Şahin's (2017) study with a sample of 592 undergraduates, Career Search Efficacy Scale to Turkish culture and found that Career Search Efficacy Scale was a valid and reliable instrument for university students in Turkey. Additionally, they found that higher levels of locus of control were associated with higher levels of career search efficacy.

Although a large body of the literature on gender differences in career exploration has produced inconsistent findings, the most recent research suggests that male students significantly more actively engage in career exploration than their female counterparts. Specifically, males are more engaged in occupational exploration than their female counterparts (Bartley & Robitsche, 2000). Nauta (2007) found that women significantly more likely to engage in self-exploration than their male counterparts. Conversely, in a study of male and female undergraduates Kiener (2006) found no gender differences in general career exploration. Applying SCCT

in an empirical study focusing on the influence of social support, career decision making self-efficacy on career exploration (n = 285), An and Lee (2017) found that male student engaged in career exploration than female counterparts. Their research showed that career decision making self-efficacy had a statistically significant effect on career exploration behavior.

After reviewing the literature on career exploration, self-exploration and environmental exploration emerged as two main constructs that should be ideally measured in the same time in order to understand the notion of career exploration (Sampson et al., 2004; Stumpf et al., 1983). Some of the scholars (e.g. Cai et al., 2015; Guan et al., 2017) have treated career exploration as a multidimensional construct while others (e.g. Blustein et al., 1994; Kanten et al., 2016) prefer to focus on career exploration's sub-dimension. From 134 undergraduates in a career life and life planning course, Blustein et al., (1994) tested the relationship between intended-systematic exploration was related to three different conceptualizations of career decision making process: vocational self-concept crystallization, commitment to the process of making career choices, and the readiness to implement own career choice. It was found that intended- systematic career exploration behavior was consistently related to all three constructs of career decision making. Kanten et al. (2016) as they reported the statistically significant direct effect of career decision making self-efficacy on self-exploration and intended-systematic exploration in a sample of tourism and hotel management students (n=405) in Turkey.

2.3 Career Decision Making Self-Efficacy

In recent years, career decision making self-efficacy has been gained great interests from scholars and researchers. The term of career decision making self-efficacy is developed by Lent et al. (1994) who are the developers of Social Cognitive Career Theory. The notion of career decision self-efficacy is derived from earlier work of Bandura (1977). The term of self-efficacy is firstly defined as

individuals' judgements of their abilities to plan and implement actions to complete necessary tasks (Bandura, 1977). The self-efficacy beliefs, which are viewed as a dynamic set of self-beliefs, are the influential determinants of action and performance (Bandura, 1986a). Individuals' self-efficacy positively or negatively modified by observational or vicarious learning, physiological and affective states, personal performance accomplishments, feedback or responses from the social environment (Bandura, 19997). Self-efficacy beliefs have an influential role in motivating behavior since these beliefs determine how much effort one will be paid and whether one will insist on the dealing with the difficulties encounter through performance (Bandura, 1986b). The career decision making behaviors firstly addressed by Taylor and Betz (1983). Taylor and Betz (1983) explained the career decision making behavior by considering the five Career Choice Competencies outlined by Crites (1965;1978) which are accurate self-appraisal, goal selection, gathering occupational information, making plans for the future, and problem-solving. Later, Taylor and Betz (1983) developed a scale, namely Career Decision-Making Self-Efficacy Scale, to assess beliefs of individuals related to abilities for performing tasks required in the career choice process. The Crites's model regarded to career maturity was used to define and operationalize the self-efficacy while developing this scale by Taylor and Betz (1983). Then, within Social Cognitive Career Theory (SCCT), career decision making self-efficacy has been defined as the degree of individuals confidence in their capabilities to successfully perform tasks required for well-informed career decision (Betz, 2000). Career decision making self-efficacy beliefs together with outcome expectations and personal goals are the core concepts of the SCCT since all these concepts influence individuals career-related behaviors (Lent et al., 1994) such as performing a self-evaluation, gathering occupational information, making career plans, choosing career goal and persisting in career decision making process (Betz & Luzzo, 1996). All these concepts positively or negatively impacted by personal accomplishments and individual, background and contextual variables (Lent et al., 1996). Lent et al. (1994) posit that individual with higher

self-efficacy believes themselves to cope successfully with the new or threatening situations. On the other hand, individuals who have less self-efficacy beliefs are more likely to prefer staying in a safe and familiar situation rather than coping with the new situations. Vocational and education indecision is associated with career decision making self-efficacy beliefs (Bergeron & Romano, 1994).

Extensive studies have shown the positive relationship between career decision making self-efficacy and adaptive career behaviors and outcomes (Harlow & Bowman, 2016; Jadidian & Duffy, 2012). In Turkey, empirical research using mainly correlational studies of university students revealed that career decision making self-efficacy is potentially associated with the various variables (Bağlama & Uzunboylu, 2017; Büyükgöze-Kavas, 2011; Kanten et al., 2016; Ulaş, 2016). The first study aiming to understand the relationship between self-efficacy and vocational achievement was conducted by Hackett and Betz (1981). According to results of their study, self-efficacy beliefs affected the university students' career decision, vocational achievement and career-related behaviors (Hackett & Betz, 1981). More recent research findings supported these findings of the initial study (e.g. Jadidian & Duffy, 2012; Walker & Tracey, 2012). Many studies have examined variant cognitive, emotional, and behavioral factors to gain knowledge of individual differences in career decision making self-efficacy (e.g. Jadidian & Duffy, 2012; Walker & Tracey, 2012). Career decision making self-efficacy has been found to be associated with factors, including hopelessness and perceived career barriers (Ulaş, 2016); career maturity (Harlow & Bowman, 2016), life-satisfaction (Kırdök & Alibekiroğlu, 2016), social support (Garcia, Restubog, Bordia, Bordia, & Roxas, 2015), career exploration (Cheung & Arnold, 2010; An & Lee, 2017, Makki et al., 2015), trait anxiety (Işık, 2012), career indecision (Jadidian & Duffy, 2012; Penn & Lent, 2018; Pesch, 2014; Walker & Tracey, 2012), mother education level, age, academic achievement (Kapusızoğlu, Şengün, & Boz, 2017), hope and acculturation (In, 2016) and vocational outcome expectancies (Bağlama & Uzunboylu, 2017). Harlow and Bowman (2016) were interested in exploring the role of general status, college type, and socioeconomic

status in the career planning process. The researchers tested the relationship between general status, college type, socioeconomic status, career decision making self-efficacy and career maturity (n = 268) in the USA. Harlow and Bowman (2016) reported that first-generation students from high socioeconomic status reported the lower level of career decision making self-efficacy. Additionally, first-generation students' the level of career maturity was lower than nonfirst-generation students. Ulaş (2016) found in a sample of 729 senior students by SEM analysis that hopelessness and perceived career barriers directly affected the university students' confidence in their abilities to perform career-related tasks. University students' career decision making self-efficacy affected by the locus of control with the mediating role of hopelessness. In's study (2016) conducted a study on acculturation to the host culture, acculturation to the home culture, dispositional hope and career decision making self-efficacy with 213 Korean undergraduate students and found that hope was the strongest predictor of career decision making self-efficacy. The result of the study shows that acculturation to the home culture was positively associated with career decision making self-efficacy. In Turkey, career decision making self-efficacy was studied as a predictor of career exploration (Kanten et al., 2016) and career indecision (Büyükgöze-Kavas, 2011). The findings of Bağlama and Uzunboylu's (2017) study showed that their career decision making self-efficacy levels of university students changed according to grade level and socioeconomic status.

2.4 Career Influences

Since university students have limited experience, they need to take into consideration of environmental factors while making career decision (Patton & McMahon, 2006). According to Feldman (2003), three main factor influence the career decision of young adults: Political or social trends, booming economies, and current trends. From developmental career approach, career path is affected by an individual (e.g. physical abilities, personality types) and social (e.g.

socioeconomic status) factors (Arbona, 2000). In sum, many influences on one's career planning have been widely examined in the career-related literature. In the following section, only these factors will be explained as a career influence within career development literature since the role of parental support, friend support, teacher support, academic self-efficacy, career decision making self-efficacy, ethnic-gender expectations, and negative social events on career indecision were examined. The career influences classified by Fisher and Griggs's (1995) will be explained in this section. According to Fisher and Griggs (1995), there are six main factors that have a role in making a career decision: parental support, friend influence, teacher support, ethnic-gender expectations, high school academic experiences and academic self-efficacy, and lastly negative social events.

The parental, support and teacher support has been widely examined as types of social support. Sarason et al. (1983) defined social support refers to the support that assists individual to feel that they are cared for and loved. Malecki and Demaray (2003) identified four types of support: emotional, informational, appraisal, and instrumental. Emotional support is defined as a support that one who feel accepted and values regardless of personal characteristics and difficulties. Informational support refers to the provision of information or advice that helps someone understand specific events while appraisal support includes evaluative feedback. The provision of financial aid, material resources, or needed services was defined as instrumental support. Social support has been widely linked with numerous psychological and health outcomes (Malecki & Demaray, 2003; Zimet, Dahlem, Zimet, & Farley, 1988). Those who receive social support are more likely to have greater perseverance (Tinto, 2003), higher level of career certainty (Simmons, 2008), have positive career thoughts (Rodriguez, 2009), high self-esteem (Marcionetti, 2014), use active coping mechanisms when dealing with stressful life situations (Moos & Schaefer, 2003) and have less subsequent depression (Holohan, et al., 1995). Several studies have indeed highlighted the importance of the direct or indirect effect of perceived social

support on career decision making process has been widely acknowledged (Kenny & Bledsoe, 2005; Wolfe & Betz 2004). Işık (2013) conducted a research that aimed to explore the role of perceived social support in the career decision making process and he found that perceived social support from family, friends and significant others were positively related to vocational outcome expectations. However, parental support was the unique significant predictor of vocational outcome expectations (Işık, 2013).

Parental Support: Over the past decades, parental support for students' career development has become an important focus of study (Işık, 2013; Leung et al., 2011; Zhang, Yuen, & Chen, 2018; Mao, Hsu, & Fong, 2016). Fisher and Griggs (1995) defined the parental support as the parental support and expectation for their children during the career choice process. Many authors underline the vital role of parental support during the career planning process (e.g. Hartung, Porfeli, & Vondracek, 2005; Stărică, 2012). There are also studies that claimed the parental support is the most influential factor in the individual's career decision (Metheny & McWhirter, 2013). Furthermore, Fouad et al. (2010) underlined the importance of family-of-origin on understanding an individual's career development and added that examining the role of family-of-origin in career decision has become an increased point of interest in career-related literature. Blustein (2004) suggested researchers and practitioners focus on parental support from a vocational psychology perspective since individuals' abilities, dreams and career interest are influenced by their familial experiences. Previous research findings have supported Blustein's (2004) suggestion. Previous studies have indicated that individuals' career-related choices and also career indecision influence by factors related to family (e.g. Metheny & McWhirter, 2013; Starica, 2012; Raque-Bogdan et al., 2013; Öztemel, 2013; Chak-keung Wong & Liu, 2010). Parental supports seem as multidimensional and interactional construct in career development literature (Whiston & Keller, 2004). The parental support consists of the expectations and thoughts of parents, siblings, and extended family

members to have an influence on the career decisions of their relatives (Fouad et al., 2010). Splete (1985) identified factors related to family influence including socioeconomic status, race, gender, background, family control, birth order, geographic location, genetic inheritance, parental work-related attitudes, and parental styles. Some research studies aiming to understand the family role in one's career development have focused on the family backgrounds, such as socioeconomic status and job security (Nota, Ferrari, Solberg, & Soresi, 2007). Family and family dynamics have variant roles on career decision in different cultures. While very little research has been conducted on the relationship between parental support and career indecision of university students enrolled in the universities in Turkey, the few studies shed light on the influence of parental support on career choice process (Işık, 2013; Öztemel, 2013). Öztemel (2013) tested the relationship between perceived social support from family, teachers and friends, gender and career decision making difficulties. It was found by using multiple regression analysis that perceived social support and gender explained the variance (5 %) of the career decision making difficulties of 273 high school students.

College students, who grew up by Asian parents, perceived high parental educational and career expectations (Liu, 1998; Leung et al., 2011). As a result of higher parental expectations, university students had difficulties in making career decision (Leung et al., 2011). The role of the family in career decision changes in different cultures, as well as the career indecision level differently, is shaped by family members. In some culture, mothers have a greater role than fathers in career indecision and the presence of mothers' support is helpful for reducing the career indecision (Mojgan et al., 2013; Simmons, 2008). Conversely, having a supportive relationship with father is closely associated with a career choice in some culture (Sandhu, Singh, Tung, & Kundra, 2012). Parents' contribution to career decision making process enhance university students' understandings of

career decision making process and also assist university students to decrease the level of career indecision (Simmons, 2008).

There is a consensus among scholars that parents are perceived as an influential factor in the career development of university students (e.g. Fouad et al., 2010; Raque-Bogdan et al., 2013; Chak-keung Wong, & Liu, 2010), especially ethnic minority (Constantine, Wallace, & Kindaichi, 2005). In a quantitative study conducted by Fouad et al. (2010), students with families of collectivist culture perceived the greater role of parental support and expectations on their career selection than their counterparts. Chak-keung Wong and Liu's (2010) conducted the research focusing on students' perceptions of parental supports on career choice and found that 21 % of students claimed their career choice was made collaboratively with their parents. From a sample of 1957 first-year African American, Asian, Latino, and White college students, Raque-Bogdan et al. (2013) conducted multiple regression analyses on career barrier and career-related parent support. While examining the role of personal and contextual variables on career barriers and career-related parent support, they adopted a social cognitive career theory as a career development theory. They found that career-related parent support accounted for a significant portion of the variance for perceptions of career barriers.

Friend Support: The role of close friends and peers in career decision making has gained considerable attention in career development literature (e.g. Cheung & Arnold, 2014; Nawaz & Gilani, 2011; Özdemir & Ulaş, 2017), but has seldom been explored its connection to career indecision (Slaten & Baskin, 2014). Fisher and Griggs (1995) defined the friend support as the friend' expectations of friends, their support to their friends and the influence of expectation and support on friend' academic and career goals. Having more supportive friendships is crucially important to an effective career decision, especially in the exploratory stage in which university students are. Individual get chance to learn from their friends

how to plan their career (Fisher & Griggs, 1995) and this opportunity facilitate the career planning of students and also making career-related choices (Felsman & Blustein, 1999). While making a career decision, friend support their friends to take positive risks, such as taking control of their lives and developing new skills (Blustein et al., 1995). Encouraging and supportive friend relationship assist young adults developing a sense of freedom related to making career-related choices. This helps individuals explore self and world of work in greater depth (Felsman & Blustein, 1999).

Research conducted so far have shown that friend support is one of the influential environmental factors having a role on individual's career decision making (Cheung & Arnold, 2014; Işık, 2013, Ulaş & Özdemir, 2017). For instance, Öztemel (2013) reported no statistically significant direct effect of friend support on predicting career decision making difficulties, especially lack information and inconsistent information in a sample of high school students ($N = 273$) in Turkey. However, a study conducted by Cheung and Arnold (2014) found that Hong Kong Chinese university students' career decision making self-efficacy and the amount of career-related information gathered in the career decision making process were associated with friend support. However, teacher support contributed more to university students' career decision making self-efficacy and career exploration than friends and parental support. To test the relationships between career decision making difficulties and perceived belongingness, specifically peer and family belongingness Slasten and Baskin (2013) conducted a study on 436 undergraduates. Their results of the study demonstrated that family belongingness was significantly related to career decision making difficulties, while peer belonging was not significantly associated with any variable in the hypothesized model. From a sample of 3589 high school students college students, Li et al. (2015) conducted a canonical analysis on self and environmental exploration and found that friend support and teacher support have stronger effects on educational

aspirations for African American and non-Hispanic White students than for Hispanic students.

Teacher Support: Since there are changes in the nature of work in the twenty-first century, teacher support for students' career development has become increasingly important (Zhang et al., 2018). Fisher and Griggs (1995) defined the teacher support as the teachers' expectations of students, their support to students and the influence of expectation and support on students' academic and career goals during the career choice process. The assistance with gathering information, solving problems, or processing stressful events is also defined as a teacher support (Baker, Grant, & Morlock, 2008). Teachers serve as role models and assist the development of career goals. Since teachers have the opportunity to respond quickly their students when they need any guidance for their academic and career development, teacher support is important for students' career planning (Farmer, 1985). Teacher support may be helpful for students while developing intrinsic motivation, having a high level of self-efficacy beliefs and discovering their own interests (Deci & Ryan, 1987). Addition to school counselors and career counselors, teachers also take some responsibility for students who do not perceive support from their family or school counselors (Zhang et al., 2018). Since school is the one environment in which where students get the opportunity for shaping their personal motivation and behavior, the teacher has a role on their students' career development through interaction occurred between students and teacher (Bronfenbrenner, 1979). It is worth noting that teachers' high expectation of students related to academic and career-related goals may negatively influence individual's behavior and motivation while planning a future career path. For many university students, choosing a career is a source of great stress (Germeijs & Verscheuren, 2009). Young adults often experience social pressure and consequences of this pressure, they often feel overwhelmed (Sharf, 2010).

Much of the current literature on career indecision pays particular attention to the role of teacher support in international literature (Bonneville-Roussy, Vallerand, & Bouffard, 2013; Cheung, & Arnold, 2014; Garcia et al., 2015; Li, 2015; Perry, Liu, & Pabian, 2010). Additionally, in national literature, teacher support has been also noted to be closely related to adaptive career behaviors and outcomes of individuals living in Turkey (Işık, 2013; Öztemel, 2013). From a sample of 273 (114 girls and 159 boys) high school students, Öztemel (2013) conducted a multiple regression analysis on the role of social support and gender on career decision making difficulties. He found that social support from teachers was the most important predictor of the total career decision making difficulties, and lack of information and inconsistent information subscales. Cheung and Arnold (2014) found a sample of 271 undergraduates by cross-sectional analysis that higher levels of teacher support were associated with greater proportion of career decision making self-efficacy. Cheung and Arnold (2014) also found that the more Hong Kong Chinese University Students received teacher support, the more they acquired the amount of information. Garcia et al. (2015) reported that career optimism of 235 computer science majors was positively predicted by teacher support in the Philippines. Bonneville-Roussy et al.'s (2013) study on 144 music students in Canada demonstrated that teacher support was positively and significantly associated with high persistence into the chosen field of study. Although some research findings (e.g. Cheung & Arnold, 2014) reported that there are significant associations between teacher support and career-related outcomes, some studies (e.g. Kozan, Fabio, Blustein, & Kenny, 2014) failed to find these associations. For instance, Kozan et al. (2014) found a sample of 137 high school students from Central Italy that the teacher support was not correlated with motivation for career path planning.

Ethnic-gender expectations: The ethnic-gender expectations refers the degree of university students' perceived expectations which their parents and teachers expect from their children and students by taking their gender or ethnic group into

consideration. Actually, in literature, scholars have underlined for many years that university students make a career choice according to what significant others around them expect from them (Fisher, & Griggs, 1995). For instance, female students are more career undecided than male students since female students are tend to be influenced by significant others (Gati, Landman, Davidovitch, Asulin-Peretz, & Gadassi, 2010). Unlike their male counterparts, gender expectations negatively influence young women' career decision (Hackett & Byars, 1996) and gender expectations are perceived by many women as a barrier while coping with difficulties occurred in decision making process (Novack & Novack, 1996).

Previous studies aiming to understand the relationship between gender and career indecision have found mixed results. While some research findings indicated no significant gender differences in career indecision (e.g., Mansor & Rashid, 2013), others underlined the significant relationship between career indecision and gender (Chuang, 2010; Crişan & Turda, 2015; Mojgan et al., 2013; Smith, 2011). For instance, Crişan and Turda (2015) found that male students experienced career indecision more than their female counterparts. Houle, Staff, Mortimer, Uggen, and Blackstone (2011) have found similar research findings with Crişan and Turda's (2015) study. Furthermore, female students are more easily influenced by lack of career information than are males (Chuang, 2010). Although inconsistent results in the career-related literature, the role of gender on career indecision generally accepted by researchers (e.g., Chuang, 2010; Mohd, Salleh, & Mustapha, 2010). Under some circumstances, (e.g. gender discrimination and potential work-family conflicts) being women make some women disadvantageous while making career-related choices (Novack, & Novack, 1996; Luzzo, 1993). Some individuals perceive their gender as a barrier to their own career development and perceiving gender as a barrier negatively affects individuals' career decision making self-efficacy and contribute to their career indecision (Hackett & Byars, 1996). Similar to gender, ethnic sometimes has inhibitor role in career decision making process (Luzzo, 1993). Findings from

previous studies support these speculations (e.g. Gloria & Hird, 1999; Luzzo, 1993). Female students have difficulties in making career decision when their school counselor, teacher, and family do not support them choosing career path which they want to pursue because of their gender (Fouad et al. 2010; Schelmetic, 2013). Unlike male counterparts, receiving gender-based comments on their academic achievement and abilities is perceived by female students as a career barrier (Gunderson, Ramirez, Levine, & Beilock, 2012; Harackiewicz, Rozek, Hulleman, & Hyde, 2012). Family and teacher expectation differentiate according to their children gender as well as a gender role. When family expectations are low from their daughter and family members do not support their daughter since they do not believe that their daughter achieves her career goals, female students have problems in dealing with obstacles occurred through career decision making process (Wang & Degol, 2013).

Academic Self-Efficacy: Fisher and Griggs (1995) attempted to understand the high school academic experiences and career decision making by examining university student's academic self-efficacy. The notion of academic self-efficacy is derived from Bandura's (1986b) self-efficacy theory and refers to one's beliefs in her or his capability to complete tasks in the school environment. Making a well-informed career decision is closely related their academic self-efficacy. According to Schunk (1991) and Zimmerman (1995), individuals with higher academic self-efficacy believe themselves to successfully perform academic tasks at a designated level. Academic self-efficacy directly influence individuals' academic achievement while indirectly influence individual's developing of academic goals, and prosocial behaviors (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) and stimulating motivation and information sources (Wood & Bandura, 1989). An individual with higher academic self-efficacy put more effort into dealing with challenging tasks than individual with lower academic self-efficacy (Zimmerman & Martinez-Pons, 1990). Additionally, individuals with

high academic self-efficacy levels are more likely to develop more positive thoughts about themselves (Turner, Chandler, & Heffer, 2009).

Although existing studies indicate that self-efficacy beliefs are correlated with academic achievement (Aydın, 2010), motivation (Alemdağ, Öncü, & Yılmaz, 2014; Yıldırım, 2011), exam anxiety (Aydın, 2010; Yıldırım, 2011), academic locus of control (Satici, Uysal, & Akın, 2013), few studies have examined its influence on career development outcomes, especially career decision making self-efficacy (Avara, 2015), career aspiration (Kim & Yun, 2015) and career barriers (Wright, Perrone-McGovern, Boo, & White, 2014), career indecision (Yalim-Yaman, 2014). One study of studies, which aim to understand the link between academic self-efficacy and career-related outcomes, was conducted by Griffith (2006). A total of 275 freshmen and sophomore female college students from differing socioeconomic groups participated Griffith's (2006) study. Griffith (2006) conducted this study aiming to examine the relationship among academic self-efficacy, career decision making self-efficacy, and psychosocial identity development and found that socio-economic status had significant academic self-efficacy beliefs in adulthood relating to their careers. Ünlü and Kalemoglu's (2011) study on 518 physical education and sport school undergraduates demonstrated that university students' academic self-efficacy shows significant differences according to their preferred sports branches. The findings of a study conducted by Ünlü and Kalemoglu (2011) shown that students who were interested in team sports had significantly higher academic self-efficacy than those who were interested in individual sports. Additionally, they found that male students had higher academic self-efficacy than female counterparts. However, they failed to find significant differences between academic self-efficacy and gender, class level and sports branches with gender. Wright et al. (2014) reported that participants who were more securely attached perceived greater social supports and fewer career barriers and had higher efficacy in both academic and career domains in a sample of undergraduate psychology students from a small

university ($N = 486$) in the USA. Avara's (2015) study on 495 students (252 girls, 243 boys) studying at high school students in Konya demonstrated that academic self-efficacy, career decision making self-efficacy and school burnout variables accounted for a significant amount of variance in academic motivation. The study conducted by Avara (2015) shown that there is an average significant relationship between academic motivation and academic self-efficacy, career decision making self-efficacy.

Negative social events: The negative social events refers obstacles that the individual had experienced such as sudden death in the family, severe illness, experiencing addictions to drugs (Fisher & Stafford, 1995). Negative social events, such as sudden death of family member or friend or having a friend experiencing troubles in schools cause several problems for individual's mental health and their career development (Fisher & Stafford, 1995). Such negative social events cause the disappearance or reduction of resources for social support. The lack of social support resources for individuals due to negative social experiences leads to indecisiveness, since social support assist individuals to decrease level of stress (Rodriguez-Fernández, Droguett, & Revuelta, 2012), expand their career options (Phillips, Christopher-Sisk, & Gravino., 2001), and increase their level of career certainty (Cross, & Vick, 2001). Individual who perceive support from important others for their career choice is more likely to expand their career options and gain more information about themselves and world of work (Phillips et al., 2001). Not only disappearance or reduction of resources for social support but sudden or unexpected events also impact individual's career decision making process since making career-related choices are always not 100 % planned due to the complexity of an individual's life (McMahon, 2006). A few studies aiming to understand the nature of career indecision have failed to show the link between negative social events and career indecision. In correlation study conducted by Khasawneh (2010) with 558 undergraduate students, career planning of university students was lowly

influence by ethnic-gender expectations and negative social events. Both theory and research suggest that those encountered obstacles during the career decision making are more likely to experience career indecision (e.g., Fisher & Griggs, 1995; Khasawneh, 2010).

2.5 Overall Summary

The review of the literature demonstrated that studies focused on the relationship among career indecision, career exploration, and career influences are limited. The results of the research have shown that career influences (family support, career decision making self-efficacy, friend support) are associated with the career exploration and career indecision. However, the relationship among teacher support, negative social events, ethnic-gender expectations, career exploration and career indecision has not yet fully discovered. More study is needed in order to gain a deeper understanding of the overall impact of career influences and career exploration on career indecision of university students.

A thorough review of the career development literature confirmed that there is limited study focusing on the factors that influence the career planning of university students in Turkey. As evidenced in the career development literature reviewed above, career exploration is a fundamental component of career decision making process. Overall, it is very clear that career exploration assists university students to decide their career path by clarifying, choosing, and implementing career goals.

While research findings have clearly shown that career decision making self-efficacy is highly correlated with career indecision, the relationship between career decision making self-efficacy and types of career exploration is less clear. Similarly, the relationship between career indecision and types of career exploration has not yet fully discovered in career development literature.

CHAPTER 3

METHOD

This chapter consists of seven sections. The first section provides information about research design used in the current study. The second one is related to sampling procedure and participants. Next section presents instruments used in data collection. The data collection procedures were addressed in the fourth section. The fifth section includes descriptions of the variables. The structural equation modeling (SEM) with its basic terms was explained in the sixth section. Limitations of the study were addressed in the final section.

3.1 Overall Design of Study

In the current study, the correlational research was conducted to investigate the structural relationships among career decision making self-efficacy, academic self-efficacy, parental support, teacher support, friend support, negative social events, ethnic-gender expectations, environmental exploration, self-exploration, intended-systematic exploration and career indecision of university students. Fraenkel, Wallen, and Huyn (2012) have defined the correlational design as a research that aims to examine the associations between two or more variables with no attempt to manipulate them. Structural Equation Modeling as one of the analytic methods is commonly applied in the correlational studies (Thompson, Diamond, McWilliam, Snyder & Snyder, 2005). Structural Equation Modelling is a sophisticated method to depict relationships among observed variables or quantitatively test a theoretical model hypothesized by the researcher (Schumacker & Lomax, 2012). It also provides an appropriate inference framework for other types of causal analysis (Gunzler, Chen, Wu & Zhang 2013).

Therefore, Structural Equation Modeling was used to test the correlational relationships among variables in the current study.

3.2 Sampling Procedure and Participants

Sampling procedure and characteristics of participants were explained in this part. Firstly, it was given an account of which sampling method was used in the current study. Secondly, the characteristics of the participants were described.

3.2.1 Sampling Procedure

The approval from Middle East Technical University Human Subjects Ethics Committee was received before the data collection. Stratified random sampling was utilized to recruit the participants of the study from a public university in Turkey. This method was used to “subdivide the population into smaller homogeneous groups to get a more accurate representation” (Best & Kahn, 2006; p. 17). In the first stage of the sampling procedure, the faculties which represent the population of the study were selected. In this stage of sampling procedure, five faculties were selected among eleven faculties. Since Faculty of Dentistry have five years undergraduate program, and Faculty of Medicine have six years undergraduate education, these faculties were not included in the study. Furthermore, Faculty of Art and Design that has just opened up and newly accepted students to its programs; Agricultural Faculty that did not involve students studying at different class levels and Faculty of Theology in which students take courses at both Education Faculty and Theology Faculty were excluded from the study. In sum, the faculties included in the study were as follows: Faculty of Science and Letters, Faculty of Economics and Administrative Sciences, Faculty of Education, Faculty of Engineering and lastly Faculty of Health Sciences. In the second stage of sampling procedure, each undergraduate program students were randomly selected from each class level (freshmen, sophomore, junior, and senior) from selected faculties. The accessible population

of the study was 17688 students attending the five faculties (Faculty of Science and Letters, Faculty of Economics and Administrative Sciences, Faculty of Education, Faculty of Engineering and lastly Faculty of Health Sciences) of a public university in Turkey. In the population, 2406 of the students were studying at the Faculty of Education, 4006 were at Faculty of Science and Letters, 6745 were at the Faculty of Engineering, 3501 were at the Faculty of Economics and Administrative Sciences a lastly 1030 were at the Faculty of Health Sciences. The percentage of students studying at each faculty in the accessible population were as follows: % 14 from Faculty of Education, % 22 from Faculty of Science and Letters, % 38 from Faculty of Engineering, % 20 from Faculty of Economics and Administrative Sciences and % 6 from Faculty of Health Sciences. Therefore, by considering the proportion of students in five faculties, in the current study similar proportions were used to draw students from 17688 students. Thus, 140 data collection instruments were given to Faculty of Education, 220 to Faculty of Science and Letters, 380 to Faculty of Engineering, 200 to Faculty of Economics and Administrative Sciences and 60 to Faculty of Health Sciences. Consequently, a total of 1000 students was asked to participate in the current study. The measures were applied to participants during class hours by the researcher. Before the data collection, course instructors were visited by the researcher, the purpose and the procedure of the study were explained. Data were collected from students who volunteered to participate in the study.

3.2.2 Participants

In the current study, there were three different study groups. The data obtained from the first study group were used to adapt the Career Exploration Survey (CES). The pilot data for adaptation of CES were collected from 515 undergraduate who was studying at a public university. The data gathered from the second study group were used to adapt Career Influence Inventory. The participants for the pilot data for adaptation of Career Influence Inventory were

386 undergraduate students enrolled at a public university. The hypothesized model based on Systems Theory Framework was tested by analyzing the data obtained from the third study group. The participants of the pilot studies did not participate in the main study. The convenient sampling method was utilized for the adaptation studies while stratified random sampling procedure was used in the main study.

For the main study, data collection measures were administered to 1000 students studying at various departments of a public university in Eskişehir. A total of 855 completed questionnaires was received with a return rate of 85.5 %. Expectation maximization method (Schafer, 1997; Schafer & Olsen, 1998) was used in data analysis to manage missing data. It was examined whether the participants correctly filled out data collection instruments. During this review, it was found that some participants did not answer some items (especially the first two items of the Career Decision Scale), there were more than one markings on some of the scales, and some students also marked with a certain pattern. As a result of these examinations, the data obtained from 19 university students were excluded from the dataset. Consequently, a final number of students who participated in the study counted up to 836. Table 3.1 presented that the participants in this study were 836 college students (385 male and 451 female). Regarding the faculty, most of the participants were in Faculty of Engineering while students from Faculty of Health Sciences were least in number. In regard to class, 25.1 % (n = 210) were freshmen, 33.7 % (n = 282) were sophomore, 21.9 % (n = 189) were junior, and 19.3 % (n = 161) were senior. The age of the students ranged from 18 to 31, and with a mean of 21.12 (SD = 1.84). The majority of participants (64.1 %) had cumulative GPA between 2.00 and 2.99.

Table 3.1

Demographic Characteristics of the Participants

Variables	<i>f</i>	%
Gender		
Female	451	53,9
Male	385	46,1
Faculty		
Education	128	15,3
Science and Letters	146	17,5
Engineering	330	39,5
Economics and Administrative Sciences	174	20,8
Health Sciences	58	6,9
Grade Level		
Freshmen	210	25,1
Sophomore	282	33,7
Junior	183	21,9
Senior	161	19,3
Cumulative GPA		
1.00 – 1.99	103	12,3
2.00 – 2.99	536	64,1
3.00 – 3.99	194	23,2
4.00	3	,4

3.3 Data Collection Instruments

A total of five data collection instruments were used in the study. These were Career Decision Scale (see Appendix B), Career Influence Inventory (see Appendix D), and Career Decision Self-Efficacy Scale-Short Form (see Appendix E) and Career Exploration Survey (see Appendix C). Participants were also given a Demographic Information Form (see Appendix F). There are sample items from the Turkish version of all measures in Appendix B, D, E, C and F. A pilot study was conducted by the researcher to translate and adapt the two instruments to Turkish: Career Exploration Survey and Career Influence Inventory.

3.3.1 Demographic Information Form

A Demographic Information Form developed by the researcher was applied to gather demographic info of the participants. The form included 12 questions regarding gender, grade level, age, perceived socioeconomic status, cumulative GPA, parents' education level, parents' occupation, grade level, faculty, place of birth and department or program.

3.3.2 Career Exploration Survey

University students' degree of career exploration behaviors during the career decision making process was assessed using the three subscales of Career Exploration Survey (CES) developed by Stumpf et al., 1983. The CES was adapted to Turkish university students by the researcher. This multidimensional scale includes three main domains, 14 subscales, and 57 items. Three main domains are Beliefs about Exploration, Reactions to Exploration and Career Exploration Process. The 14 subscales are grouped together in three main domains. The first domain of this scale (Beliefs about Exploration) includes Employment Outlook, Certainty of Career Exploration Outcome, External Search Instrumentality, Internal Search Instrumentality, Method Search Instrumentality, and Importance of Obtaining Preferred Position. The second domain of this scale (Reactions to Exploration) consists of Satisfaction with Information, Explorational Stress, and Decisional Stress. The third domain of this scale (Career Exploration Process) includes Environmental Exploration (EE), Self-exploration, Number of Occupations, Intended-systematic Exploration, Frequency, Amount of Information, and Focus. The subscales of Number of Occupations and Frequency include open-ended questions.

The 6-item Environmental Exploration (EE) subscale; 5-item Self- Exploration (SE) subscale and 3-item Intended-systematic Exploration (ISE) subscale were used in the current study. Responses are obtained using a 5-point Likert-type scale

ranging from 1 (very little) to 5 (a great deal). Possible scores for EE, SE, and ISE ranges from 6 to 30; 5 to 25 and 3 to 15, respectively. The higher scores indicate greater use of respective career exploration behaviors. The 5-item SE subscale measures the extent of career exploration involving self-assessment and retrospection; the 6-item EE subscale measures the extent of career exploration regarding occupations, jobs, and organizations; and the 3-item ISE subscale measures the extent to which one acquires information on oneself and the environment in an intended or systematic manner. A sample item of the EE subscale is: "Obtained information on the labor market and general job opportunities in my career area." A sample item of the SE subscale is: "Understood a new relevance of past behavior for my future career.". Lastly, a sample item of the ISE subscale is: "Reflected on how my past integrates with my future career."

Research has revealed alpha coefficients ranging from .70 to .88 for the CES subscales (Bartley & Robitschek, 2000). The internal consistency for the SE subscale was found as .88, for ISE was found .74 while internal consistency for the EE subscale was found as. (Stumpf et al., 1983). Blustein (1989) reported test-retest reliability coefficient of .85 for the Environmental Exploration subscale. The internal consistency of German version of CES was satisfactory in a study conducted by Rowold and Staufienbiel (2010) with Cronbach Alphas ranging from .72 to .84. The factor loading of the German and the original version are similar, and a CFA confirmed Stumpf's (1983) empirical model. The Portuguese version of CES (Taveira et al., 1998) includes 43 items since they need to delete items because of lack of item reliability and validity and to content redundancy or evident cultural inadequacy. A Mandarin Chinese version of the CES was used in the study conducted by Xu, Hou and Tracey (2014) and this version was found as reliable and valid scale. The coefficients for the EE and SE subscales were found as .87 and .79, respectively. For validity, psychometrics of this Chinese version was equivalent to the original CES (Stumpf et al., 1983).

3.3.2.1 Adaptation Procedure of Turkish Version of Career Exploration Survey

The adaptation of the Career Exploration Survey (CES) and evaluation of its psychometrics were conducted by the researcher. The adaptation procedure of Turkish version CES consisted of three main stages: Translation, pilot study and establishing psychometric properties of CES. Before launching the translation process of CES, necessary permission was granted from Dr. Stumpf who is the developer of the scale.

3.3.2.1.1 Translation Procedure of Turkish Version of Career Exploration Survey

The translation procedure of Turkish version of Career Exploration Survey (CES) was based on five steps: 1) Forward translation 2) Comparison of the translations 3) Expert review 4) Getting the opinion of students in the target population 5) Cognitive interview.

Step 1- Forward translation: In the initial attempt of step 1, the researcher sent the original version of CES to 5 experts in order to translate items of scale from source language to target language. The original version of the CES was translated from English into Turkish by five independent experts. All experts had proficiency in both Turkish and English. In order to ensure cultural fit of the adaptation process, Beaton, Bombardier, Guillemin, and Ferraz (2000) and Hambleton's (2005) criteria for choosing translator was adopted. For this reason, all translators were fluent in English, native in Turkish and familiar with the assessed concept of career exploration.

Step 2 – Comparison of the translations: After completion of forward translation, five translations made by five experts were compared by researcher and her advisor. After comparison of items translated, the scale items translated into Turkish and closely matched the original English meaning were chosen by

the researcher. During the comparison of translations, experts made effort to check out the grammar and clarity of scale items. In this step, as suggested by Borsa, Damasio, and Banderia (2012, p.452), researcher and her advisor checked the consistency between the translated versions and the original scale in the semantic, idiomatic, experiential and conceptual equivalence. Although a consensus was reached on a great majority of scale items, they did not agree with each other on some of the items of a preliminary Turkish version of the CES.

Step 3 – Expert review: The both versions of scale (original English & translated Turkish) were given to six experts (two faculty members in Psychological Counseling and Guidance Department, two faculty members in English Language and Literature, two English teachers) to the examine grammar and cultural relevancy of Turkish scale items. Six experts rated the items of scale in terms of their relevancy and applicability in Turkish culture. Minor changes were made on the Turkish version of the CES based on the feedback provided by the experts.

Step 4 – Getting the opinions of students in the target population: The final form of Career Exploration Survey, which was finalized by six experts, was completed by 12 university students from the university where the study was conducted. Inclusion criteria for the participants included were being university students and studying at different faculties in public university. After completing the CES, the 12 university students were interviewed by the researcher to determine their views on the applicability and completeness of the CES. The participants stated that they had difficulty in recognizing the differences among meaning of job, career, and occupation. After receiving this feedback, the meaning of job, career, and occupation were described and examples of each concept were given in the instructions after getting the consent of the corresponding author (Dr. Stumpf) of The CES via e-mail. Additionally, there was no consensus on the layout of three items among participants, some modifications

were made after getting the consent of the corresponding author (Dr. Stumpf) of The CES via e-mail.

Step 5 – Cognitive interview: The cognitive interviews were conducted with eight university students studying at different programs of the university. The cognitive interviews were conducted where the study was conducted. The aim of cognitive interviews was to comprehend whether participants understand the question, both consistently across subjects and in the way (Collins, 2003). There are two ways of conducting cognitive interviews: think-aloud and verbal probing (Willis, 2005). In the present study, verbal probing was used. Participants were asked at the end of the interview to verbalize their thoughts about the measure including the directions, items, and the rating scale. Since researcher wanted to be sure before the pilot study that scale items are understandable for university students. The cognitive interview was helpful in terms of assessing whether the scale items and directions were clear and understandable for university students. Cognitive interviews indicated that all university students understood the survey questions and the response options provided; were able to accurately perform primary survey tasks (Willis, 2005) and lastly formed a judgment to a given question (Collins, 2003). Therefore no modifications were conducted on the scale.

3.3.2.1.2 Psychometric Properties of the Turkish Version of Career Exploration Survey – A Pilot Study

The whole set of pilot data (n = 515) was used in order to assess the validity and reliability of Turkish Version of Career Exploration Survey (CES). It was hypothesized that empirical structure would be similar to the theoretical structure developed by Stumpf, Colarelli, and Hartman (1983). A convenient sampling method was utilized for selection of the pilot study participants. Total of 515 students studying in a public university, 233 were male (45.2 %) and 282 were female (54.8 %) (see Table 3.2) composed the participants of the study. In regard to class status, 18.3 % (n = 94) were freshmen, 27.8 % (n = 143) were sophomore,

35.5 % (n = 183) were junior, and 18.4 % (n = 93) were senior. The participants were from four undergraduate programs [Theology (n = 156, 30.3 %), Public Finance (n = 130, 25.2 %), Counseling and Guidance (n = 123, 23.9 %), Geological Engineering (n = 74, 14.4 %) and Mining Engineering (n = 30, 6.2 %)].

Table 3.2

Demographic Characteristics of the Participants – Pilot Study

	<i>f</i>	%
Gender		
Female	282	54,8
Male	233	45,2
Grade Level		
Freshmen	94	18,3
Sophomore	143	27,8
Junior	183	35,5
Senior	93	18,4
Faculty		
Theology	156	30,3
Economics and Administrative Sciences	130	25,2
Education	123	23,9
Science and Letters	59	11,5
Engineering	47	9,1
Current Major		
Theology	156	30,3
Public Finance	130	25,2
Counseling and Guidance	123	23,9
Geological Engineering	74	14,4
Mining Engineering	30	6,2

3.3.2.1.2.1 Validity of Turkish Version of Career Exploration Survey

Confirmatory factor analysis (CFA) was used to evaluate the factor structure of all scales and their subscales which was used in the current study. The researcher

utilized several fit indices and the suggested cut-off values for each index (see Table 3.3). Model Chi-square value (χ^2) was used in current study since χ^2 statistic is the most widely used fit indices. However, as χ^2 is sensitive to sample size (Byrne, 2001), The Bentler Comparative fit index (CFI), Root Mean Square of Error Approximation (RMSEA), the standardized root mean square residual (SRMR), non-normed fit index (NNFI) were also used as suggested by Kline (2011) and (Schermelleh-Engel, Moosbrugger, & Müller, 2003) in order to assess the goodness of fit of the model.

Table 3.3

Fit Indices and Cut-off Criteria for Several Fit Indexes

Fit indices	Acceptable cut-off values
χ^2	> .05
χ^2/df -ratio	$2 < \chi^2/df < 5$ (Brown, 2006). $X^2/df < 3$ (Kline, 2011; Ullman, 2001). $X^2/df < 5$ (Schumacker & Lomax, 2004).
RMSEA	Mediocre fit: $.05 < RMSEA < .08$; Good fit: $.00 < RMSEA < .05$ (Schumacker & Lomax, 2010). $RMSEA < .06$ (Hu & Bentler, 1999). Poor fit: $RMSEA \geq .10$; Approximate fit: $RMSEA \leq .05$; Mediocre fit: $.08 < RMSEA < .10$ (MacCallum, Browne, & Sugawara, 1996). $RMSEA < .07$ (with CFI of .92 or higher, when $N > 250$ and $12 < m < 30$; with CFI of .90 or higher, $N > 250$ and $m \geq 30$) (Hair, Black, Babin, & Anderson, 2010)
SRMR	$SRMR < .05$ (Byrne, 1998). $SRMR \leq .08$ (with CFI above .92, when $N > 250$ and $12 < m < 30$; $N > 250$ and $m \geq 30$, with CFI above .92) (Hair et al., 2010). $SRMR < .08$ (Browne & Cudeck, 1993; Hu & Bentler, 1999).
NNFI	$NNFI \geq .95$ (Hu & Bentler, 1999; Schumacker & Lomax, 2010).
CFI	$CFI \geq .95$ (Hu & Bentler, 1999; Schumacker & Lomax, 2010). $CFI \geq .92$, (when $N > 250$ and $12 < m < 30$) (Hair et al., 2010). $CFI > .90$, (when $N > 250$ and $m \geq 30$) (Hair et al., 2010).

Note. *N*, sample size; *m*, number of variables.

CFA was first used to test the validity of Turkish version of CES by using LISREL 8.80 (Jöreskog & Sörbom, 1993) to test the fit of the theoretical model developed by Stumpf et al. (1983). The 14 subscale model (14-3-1) developed by Stumpf, Colarelli, and Hartman (1983), in which the general factor consists of three main domains and 14 subscales and 57 items. The 14 subscale model (14-3-1) was tested against the three-factor model (57-14-1), in which the 57 items represent three main domains and 14 subscales. The fit indices of the two models were examined and the results of CFA were shown in Table 3.4. Before carrying out the CFA, the necessary assumptions of the CFA were tested. The missing values, the accuracy of data, univariate normality, multivariate normality and linearity (Ullman, 2001) were checked with aim of testing the assumption of CFA. The data were also checked for the sample size adequacy to conduct CFA. Minimum 200 participants are evaluated as an adequate sample size for conducting a CFA (Kline, 2011). For this reason, 515 cases of the pilot study were found an enough to be able to conduct CFA for the pilot data. The pilot data were firstly screened and missing value analysis was conducted. There was no missing value for the pilot study. Secondly, for univariate normality, the skewness and kurtosis values were checked to see if there was a significant departure from normality. The skewness and kurtosis values should be between -3 to +3 (Tabachnick & Fidell 2013). Since values found for pilot data were between -3 to +3, it might be said that the data was normally distributed. Then, linearity assumption was tested via scatterplots. According to results, linearity assumption was not violated.

Table 3.4 presents the different fit indices for the hypothesized model and the alternative model tested in the pilot study. The fit indices of each model were summarized before giving detailed information about the unstandardized and standardized parameter estimates, t values and R^2 for CES for each model. According to CFA results, both the hypothesized and alternative model fit with data well in all indices (as seen in Table 3.4). As shown in Table 3.4, the fit of 57

items and 14 subscales model (57- 14- 1) was better than the hypothesized model (14 -3 -1) in terms of the accepted fit criteria (e.g Hair et al., 2010; Hu & Bentler, 1999). The 14 subscales model obtained the good fit [χ^2 (1445) = 4189.48, $p = .00$; χ^2/df - ratio = 2.10; $CFI = .98$ $NNFI = .97$ $RMSEA = .046$] with SRMR equal to .08 (Hair et. al., 2010), as well as CFI and NFI satisfying the criterion of .95 in the pilot study. For the 57 items and 14 subscales model (57-14-1), the results of the CFA indicated an adequate model fit for the pilot data [χ^2 (1519) = 3039.72, $p = .00$; χ^2/df - ratio = 2.76; $RMSEA = .058$]. Three reasonable error terms suggested by modification indices were allowed to be correlated with each other. These were on the same factor (item 28 – item 27; item 47 – item 46; item 59 – item 56). According to the cut-off criteria for fit indexes that shown in Table 3.3, the chi-square value (χ^2/df -ratio = 2.10) was lower than the recommended value of 5 (Brown, 2006; Schumacker & Lomax, 2010). $CFI = .98$, $NNFI = .97$, $RMSEA = .046$, $SRMR = .049$ were above the acceptable cut-off values (Byrne, 1998; Hu & Bentler, 1999). Building on the model-fit indices, the correlated 57 items and 14 subscales model of the factorial validity of the Turkish version of Career Exploration Survey was empirically supported.

Table 3.4

Results of the Confirmatory Factor Analysis for the Pilot Study (N=515)

Model	χ^2	df	χ^2/df	RMSEA	NNFI	SRMR	CFI
14- 3- 1	4189.48	1519	2.76	.058	.96	.082	.97
57- 14 – 1	3039.72	1445	2.10	.046	.97	.049	.98

Note. RMSEA = root mean square error of approximation; CFI = Bentler comparative fit index; SRMR=the standardized RMR (SRMR); NNFI = non-normed fit index. Models: 14 -3 -1 = 14 subscales loaded on three major factors and one general factor; 57-14 – 1 = 57 items loaded on 14 subscales

After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the three-factor structure of Turkish version of CES. Table 3.5 presented constructs, related items,

unstandardized factor loadings, standardized factor loadings and t values of the Turkish version of CES.

Table 3.5

Unstandardized and Standardized Parameter Estimates, t Values and R² for CES

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	t	R ²
F1 (Environmental exploration)	CES18	.79	.63	15.28	.40
	CES19	.62	.53	12.23	.28
	CES20	.91	.77	19.73	.59
	CES21	.94	.73	18.46	.53
	CES22	.95	.79	20.53	.62
	CES23	.87	.74	18.75	.54
	CES24	.84	.71	17.03	.50
F2 (Self-Exploration)	CES25	.79	.74	18.06	.55
	CES26	.72	.63	14.57	.39
	CES27	.78	.66	15.37	.43
	CES28	.79	.69	16.54	.48
F4 (Intended- Systematic Exploration)	CES15	.88	.76	18.86	.57
	CES16	.94	.80	20.14	.63
	CES17	.78	.65	15.42	.42
F6 (Amount Of Information)	CES1	.53	.66	15.15	.43
	CES2	.70	.70	16.22	.48
	CES3	.73	.76	17.95	.57
	CES10	.72	.70	16.89	.48
F7 (Focus)	CES11	.77	.78	19.53	.60
	CES12	.67	.65	15.34	.42
	CES13	.63	.65	15.34	.42
	CES14	.65	.64	15.09	.41
	CES4	.81	.75	19.20	.56
F8 (Satisfaction With Information)	CES5	.74	.73	18.47	.53
	CES6	.77	.74	19.09	.55
	CES7	.81	.76	19.74	.58
	CES8	.80	.76	19.80	.58
	CES9	.74	.72	18.22	.52
F9 (Explorational Stress)	CES53	1.05	.74	18.27	.55
	CES55	1.25	.84	21.60	.71
	CES56	1.29	.81	20.41	.65
	CES54	.98	.74	19.08	.55
F10 (Decisional Stress)	CES57	1.19	.89	24.49	.79
	CES58	1.21	.87	24.04	.77
	CES59	.90	.68	16.15	.46

Table 3.5 (continued)

Unstandardized and Standardized Parameter Estimates, t Values and R² for CES

F11(Employment Outlook)	CES30	.95	.87	24.08	.75
	CES31	.94	.87	24.00	.75
	CES32	.97	.88	24.72	.78
F12 (Certainty of Career Exploration Outcome)	CES33	.96	.88	24.12	.78
	CES34	.78	.72	18.03	.52
	CES35	.99	.83	22.25	.70
F13(External Search Instrumentality)	CES45	.88	.78	19.90	.61
	CES46	.89	.74	18.31	.54
	CES47	.84	.66	15.79	.44
	CES41	.84	.74	18.87	.55
F14 (Internal Search Instrumentality)	CES42	.86	.80	20.97	.64
	CES43	.80	.72	18.49	.53
	CES44	.81	.77	19.93	.60
	CES37	.83	.76	19.49	.58
F15 (Method Search Instrumentality)	CES38	.89	.82	21.78	.67
	CES39	.94	.79	20.48	.62
	CES40	.94	.78	20.21	.61
	CES48	.77	.87	24.25	.75
F16 (Importance of Obtaining Preferred Position)	CES49	.66	.74	19.24	.55
	CES50	.76	.88	25.03	.78
	CES51	.63	.73	18.82	.54
	CES52	.75	.85	23.34	.72

Note. All t values were significant. $P < .001$

As presented in Table 3.5, the unstandardized factor loadings of 14 subscales of career exploration Survey were between .53 and 1.29. The factor loadings of the 57 items and 14 subscales model were all statistically significant ($t > 3.00$), differing from .53 to .89. Standardized factor loadings range between .53 and .89 for the 57 items and 14 subscales model. All items of the Turkish version of CES had a factor loading higher than the suggested cutoff value .30. All t values for items were found significant for all sub-scales. R^2 explains how much variance is accounted for in each item and R^2 of each item were shown in R^2 column of Table

3.5. The variance explained by the items of CES subscales ranged from 11 % to 54 %. The variance explained by each item of Beliefs about Exploration sub-scale ranged from 28 % to 78 % as indicated in R2 column. Therefore, the results of CFA provided empirical evidence for the construct validity of 14 subscales model (57- 14- 1) (Figure 3.1) and the hypothesized model (14 -3 -1) (Figure 3.2) of CES among Turkish university students.

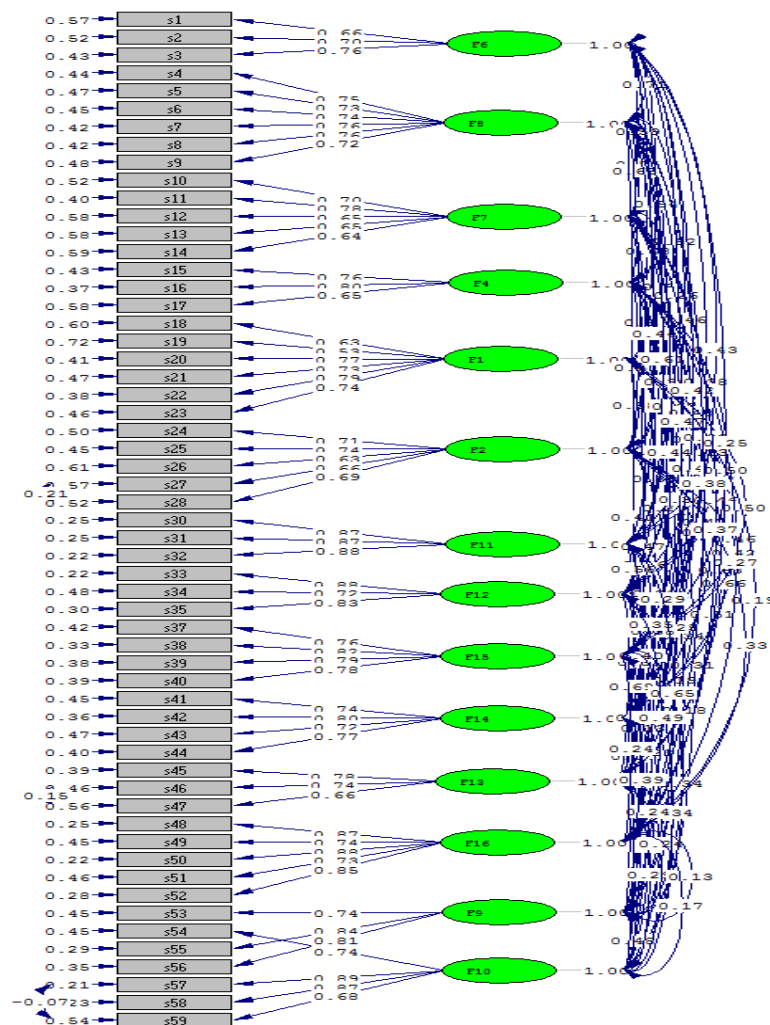


Figure 3.1. Estimates of parameters of confirmatory factor analysis for 14 subscales model (57- 14- 1) of Career Exploration Survey

Note. F1= Environmental Exploration, F2= Self-exploration, F4= Intended-systematic Exploration, F6= Amount of Information, F7= Focus, F8= Satisfaction with Information, F9=

Explorational Stress, F10= Decisional Stress, F11= Employment Outlook, F12= Certainty of Career Exploration Outcome, F13= External Search Instrumentality, F14= Internal Search Instrumentality, F15= Method Search Instrumentality, F16= Importance of Obtaining Preferred Position

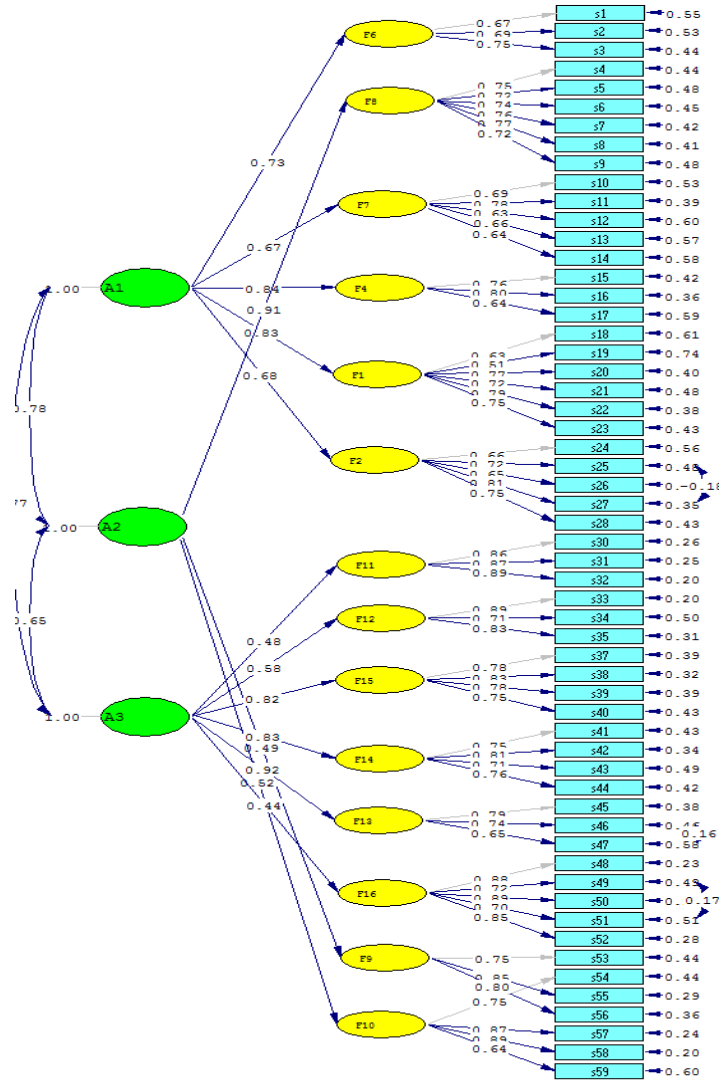


Figure 3.2. Estimates of parameters of confirmatory factor analysis for the hypothesized model (14 -3 -1) of Career Exploration Survey

Note. F1= Environmental Exploration, F2= Self-exploration, F4= Intended-systematic Exploration, F6= Amount of Information, F7= Focus, F8= Satisfaction with Information, F9= Explorational Stress, F10= Decisional Stress, F11= Employment Outlook, F12= Certainty of Career Exploration Outcome, F13= External Search Instrumentality, F14= Internal Search Instrumentality, F15= Method Search Instrumentality, F16= Importance of Obtaining Preferred

Position, A1= Career Exploration Process, A2= Reactions to Exploration, A3= Beliefs about Exploration.

The 6-item Environmental Exploration subscale (F1); 5-item Self- Exploration subscale (F2) and 3-item Intended-systematic Exploration (F4) subscale were used in the current study. Because of this, CFA was carried out to test the fit of the three-factor structure of Turkish version of CES Survey for the main study with 836 university students.

The missing values, the accuracy of data, univariate normality, multivariate normality and linearity (Ullman, 2001) were checked before the analysis. Firstly, it was decided whether the sample size was adequacy for main data to conduct CFA. 836 cases of the pilot study were found enough sample to conduct CFA for the pilot study since Kline (2011) suggested 200 participants were adequate in order to conduct a CFA. The total of 836 cases of the pilot study was found enough to conduct CFA. Following sample size evaluation, missing values were determined. Since the number of missing items were less than 5 % of the total, the missing cell replaced with mean by using the method of mean substitution. Secondly, the skewness and kurtosis values were inspected to test univariate normality. For the univariate normality, skewness and kurtosis values should be between -3 to +3. (Tabachnick and Fidell, 2013). The distribution is perfectly normal when Skewness and Kurtosis values are zero (Tabachnick & Fidell, 2013). The results indicated that values of skewness and kurtosis index were between -3 to +3. That means the data was normally distributed. The matrix scatterplot between the variables of the study was checked in order to check linearity assumption. The results indicated that the assumption of linearity was ensured. Maximum likelihood was used via Lisrel 8.80 in order to test the three-factor structure of the Turkish version of CES with the main sample (n=836). In order to test the fitness of the model, χ^2 , χ^2/df , CFI, RMSEA, SRMR, NNFI were used to test the fitness of the model. The researcher utilized several fit indices and the suggested cut-off values for each index (see Table 3.3) to validate the factor

structure of the three-factor structure of the Turkish version of CES in the current study. The results of the CFA indicated an adequate model fit for three-factor structure of the Turkish version of Career Exploration Survey with the main data [$\chi^2 (72) = 314.78$, $p = .00$; χ^2/df - ratio = 4.37; $CFI = .98$, $NNFI = .97$; $SRMR = .055$; $RMSEA = .064$] with some modifications between the error terms: item 27- item 25, item 23-item 22. For the three-factor structure of the Turkish version of CES, χ^2/df - ratio was less than 5 that indicated a good fit. Considering the RMSEA value (0.06), it was possible to state that the CES items suggested a very good fit for the indicated latent factors. Besides, since $CFI = .98$ and $NNFI = .97$ were higher than cut-off values suggested by Hu and Bentler (1999) and Schumacker and Lomax (2010), it can be concluded that the model fits the data well. As a result, the three-factor structure of the Turkish version of CES was confirmed. After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the three-factor structure of Turkish version of CES and t values for each indicator and explained variance were indicated in Table 3.6.

Table 3.6

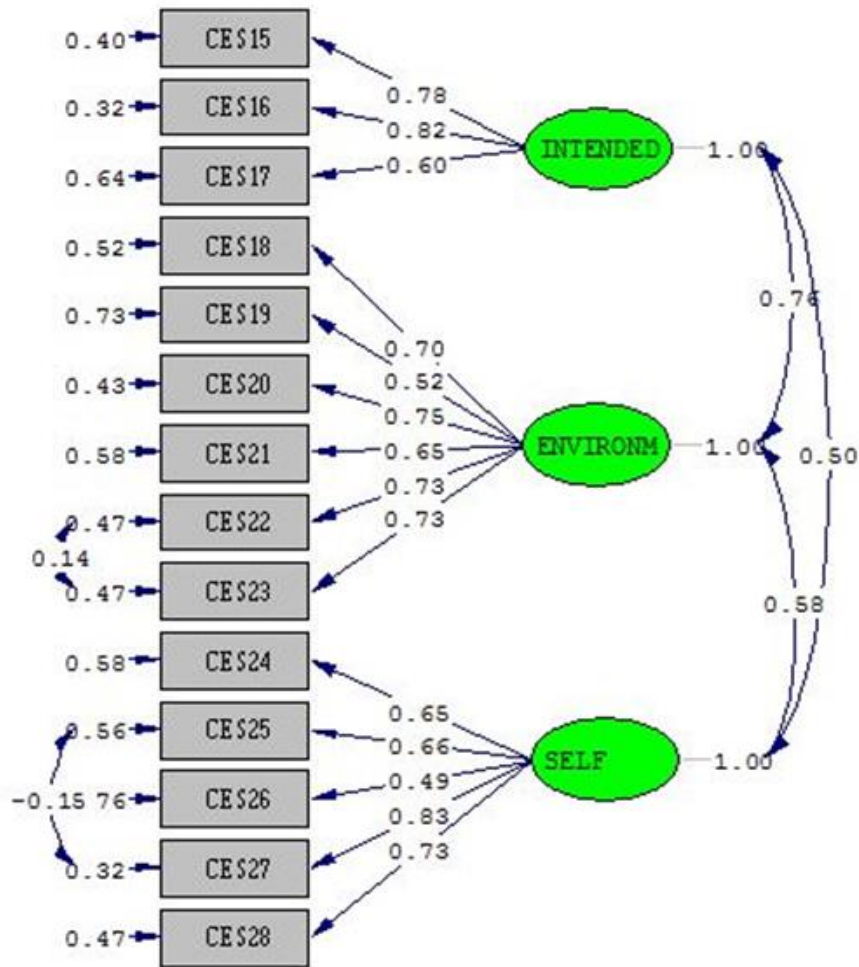
Unstandardized and Standardized Parameter Estimates, t Values and R² for CES for the Main Study

	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	t	R ²
Intended-systematic exploration	CES15	.82	.78	24.25	.60
	CES16	.88	.82	26.21	.68
	CES17	.63	.60	17.49	.36
Environmental exploration	CES18	.79	.70	21.63	.48
	CES19	.54	.52	15.09	.27
	CES20	.82	.75	24.06	.57
	CES21	.77	.65	19.60	.42
	CES22	.84	.73	22.83	.53
	CES23	.80	.73	22.84	.53
Self-exploration	CES24	.75	.65	19.70	.42
	CES25	.67	.66	18.67	.44
	CES26	.59	.49	14.24	.24
	CES27	.94	.83	15.80	.68
	CES28	.81	.73	22.59	.53

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

As illustrated in Table 3.6, the unstandardized factor loadings on the 3 items of the intended-systematic exploration subscale ranged between .63 and .82 and standardized factor loadings between .60 and .82. The unstandardized factor loadings on the 6 items of the environmental exploration subscale ranged between .54 and .84 and standardized factor loadings between .52 and .75. The unstandardized factor loadings on the 5 items of the self-exploration subscale ranged between .59 and .94 and standardized factor loadings between .49 and .83. Any item had a factor loading lower than the suggested cutoff value .30. All t values for items were found significant for all sub-scales. For all 3 items of the intended-systematic exploration subscale, t-values ranged between 17.49 and 26.21, for all 6 items of the environmental exploration subscale t-values ranged between 15.09 and 22.84, for all 5 items of the self-exploration subscale t-values ranged between 14.24 and 22.59. According to R² results that explained how

much variance is accounted for in each item, the values varied between 27 % and 68 %. So pulling together the results of all analysis, the results of CFA provided empirical evidence for the construct validity of three-factor of CES among Turkish university students (Figure 3.3).



Chi-Square=314.79, df=72, P-value=0.00000, RMSEA=0.064

Figure 3.3 Estimates of parameters of confirmatory factor analysis of Career Exploration Survey

Note. ENVIRONM= Environmental Exploration, SELF= Self-exploration, INTENDED= Intended-systematic Exploration

3.3.2.1.2.2 Reliability of Turkish Version of Career Exploration Survey

For the pilot study, Cronbach's alpha coefficient was used to evaluate the internal consistency of the Career Exploration Survey (CES). The reliability coefficients of the 14 subscales range from .74 to .91. The reliabilities of the three main domain, namely, career exploration process, reaction to exploration, beliefs were .91, .88, and .92, respectively; that of the total Career Exploration score was .95. In conclusion, results revealed that Turkish version of CES was found to be a reliable and valid instrument in a sample of university students.

The psychometric properties of CES were also checked for the main study. For the main study, Cronbach's alpha value for the scale was found to be .88. In terms of three subscales of CES, Cronbach's alpha values were as follows .77 for Intended-systematic Exploration, .84 for Environmental exploration and .79 for Self-Exploration

3.3.3 Career Decision Scale

The participants' career indecision was assessed using the 19-item Career Decision Scale (CDS) developed by Osipow, Carney, Winer, Yanico, and Koschier (1976), revised by Osipow (1987). The CDS has two subscales 2- item Certainty Scale and the 16-item Indecision Scale. Responses (except item 19) are obtained using a 4-point Likert-type scale ranging from 1 (not at all like me) to 4 (complete confidence). The 19th item is an open-ended question. Possible scores for Certainty Scale and Indecision Scale range from 2 to 8 and 16 to 64, respectively. Higher scores of Career Indecision Subscale indicate greater indecision while higher scores of Career Certainty Subscale indicate greater certainty. A sample item of the Certainty Scale is: "Several careers have equal appeal to me. I'm having a difficult time deciding among them." (Osipow, 1987). Since the development of the CDS, several studies have reported its reliability and validity with university students. The test-retest reliability coefficient was found .

90 for Career Indecision Scale after two weeks by Osipow (1980). On the other hand, the test-retest reliability coefficient was reported as .82 for Career Indecision Scale in the Slaney, Palko-Nonemaker, and Alexander's (1981) study. Hartman, Fuqua, and Hartman (1983) found the internal consistency for CDS to be approximately .80. Additionally, a study conducted by Stead and Watson (1993) established the convergent validity of the CDS. In addition, My Vocational Situation (Holland et al., 1980) revealed correlations with the CDS to be approximately .90. Adaptation of CDS to Turkish was carried out by Büyükgöze-Kavas (2012) with 336 participants. Results of confirmatory factor analysis revealed an inadequate model fit after testing a two-factor model. Test-retest reliability for the CDS total score was reported .81, for Career Indecision Subscale.84, and for Career Certainty Subscale.77 (Büyükgöze- Kavas, 2012).

3.3.3.1 Psychometric Properties of Career Decision Scale

3.3.3.1.1 Validity of Career Decision Scale

In the current study, a confirmatory factor analysis (CFA) was conducted with the sample of the main study (n=836) to test the two-factor structure of Career Decision Scale. The necessary assumptions of the CFA were tested before the analysis of data collected through pilot study for adaptation of the Career Decision Scale. The missing values, the accuracy of data, univariate normality, multivariate normality and linearity (Ullman, 2001) were checked before the analysis. After testing the assumptions for CFA, CFA was conducted with LISREL 8.80 software with Maximum likelihood as the estimation method.

In order to test the fitness of the model, χ^2 , χ^2/df , CFI, RMSEA, SRMR, NNFI were used to test the fitness of the model. The results of the CFA indicated an adequate model fit for six-factor structure of the Career Decision Scale with the main data [χ^2 (129) = 550.85, p =.00; χ^2/df - ratio = 4.27; CFI= .97, NNFI = 97; SRMR= .047; RMSEA = .063] with some modifications between the error terms:

CDS10- CDS5, CDS9- CDS 8, CDS8 – CDS7, CDS14- CDS13, and CDS18 – CDS16. These values indicated good model fit since RMSEA values smaller than .10 is considered favorable (Hair et al., 2010). The standardized RMR (SRMR) was found as .063, below than the suggested cutoff value (Byrne, 1998). Since CFI =.97 and NNFI =.97 were higher than cut-off values. By considering the other fit indices and their criteria (see Table 3.3), CFA results showed that there was a perfect fit between the scale and the main data collected from 836 university students As a result, the two-factor structure of the CDS was confirmed. After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the two-factor structure of CDS and *t* values for each indicator and explained variance were presented in Table 3.7.

Table 3.7

Unstandardized and Standardized Parameter Estimates, t Values and R² for CDS

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	<i>t</i>	R ²
CDS Career Certainty	CD1	.79	.88	30.29	.77
	CD2	.74	.85	28.90	.72
	CD3	.43	.43	12.29	.18
	CD4	.40	.41	11.86	.17
	CD5	.49	.52	15.30	.27
	CD6	.44	.44	12.80	.20
	CD7	.64	.66	20.66	.44
	CD8	.60	.64	19.66	.41
	CD9	.46	.51	14.82	.26
CDS Career Indecision	CD10	.56	.62	18.80	.38
	CD11	.80	.73	23.47	.53
	CD12	.57	.58	17.55	.34
	CD13	.52	.59	17.85	.35
	CD14	.61	.61	18.71	.38
	CD15	.46	.49	14.36	.24
	CD16	.45	.49	14.35	.24
	CD17	.50	.51	14.87	.26
	CD18	.41	.44	12.51	.19

Note. All *t* values were significant. *p*<.001

A summary of the standardized factor loadings, unstandardized factor loadings, t values and R^2 of all the CDS items of the two-factor model using CFA are presented in Table 3.7. The unstandardized factor loadings on the Career Certainty subscale (item CD1, CD2) had loadings ranging from 0.74 to 0.79 and the Career Indecision subscale (item CD3 – CD18) from 0.41 to 0.80, respectively. The standardized factor loadings in CFA were found to be between .41 and .88 for all items of CDS, .85 and .88 for Career Certainty subscale, and .41 and .73 for Career Indecision subscale of CDS. All CDS items are at significant levels ($t > 3$). As indicated in R^2 column of Table 3.7, variance values that each item explained within the Career Certainty subscale varied between .72 and .77 and Career Indecision subscale ranged from .17 to .53. The obtained results revealed that two-factor structure of Career Decision Scale for Turkish university students was compatible with the structure of current study sample (Figure 3.4).

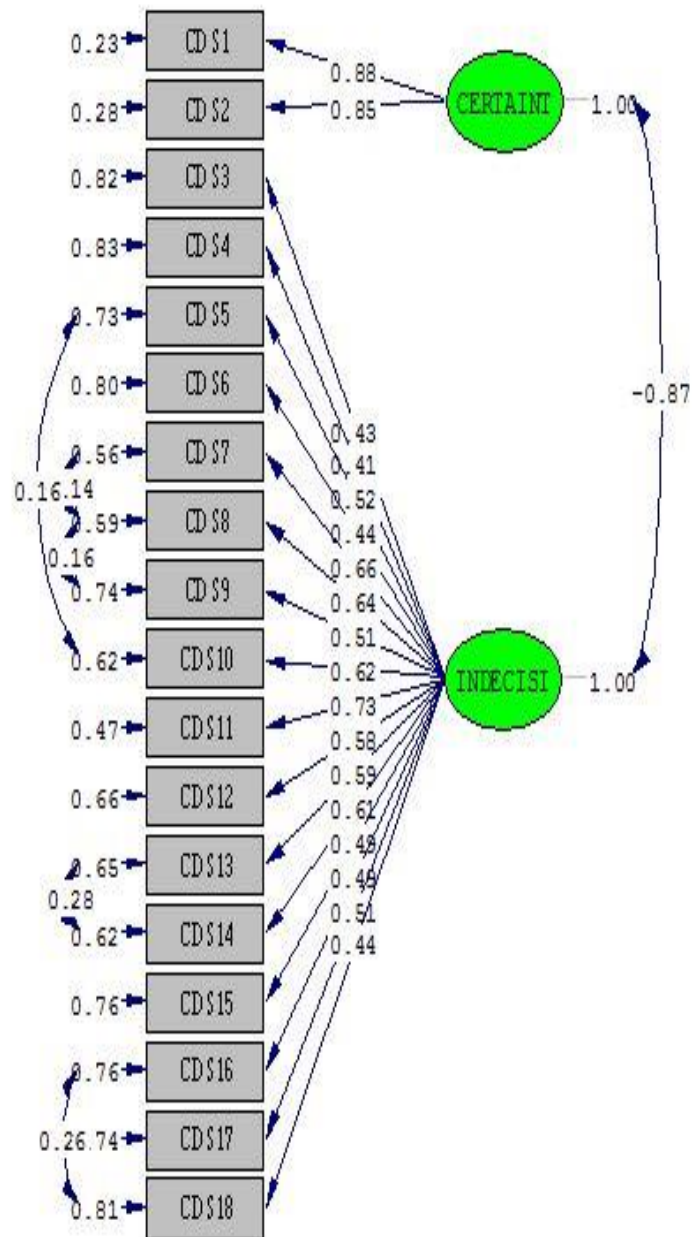


Figure 3.4. Estimates of parameters of confirmatory factor analysis of Career Decision Scale

Note. CERTAIN=Career Certainty, INDECISI= Career Indecision

3.3.3.1.2 Reliability of Career Decision Scale

The Cronbach alpha was calculated for the internal consistency coefficient and Cronbach's alpha (.78) value found for the whole scale in the main study. Internal reliability was evaluated by Cronbach alpha that produced .87 for Career Indecision Subscale and 0.86 for Career Certainty Subscale for the main study. These findings are line with the internal reliability values which obtained in the previous studies (Büyükgöze-Kavas, 2012).

3.3.4 Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)

University students' degree of belief related to university students'abilities to complete necessary tasks to make a career decision was assessed using the 25-item CDSE-SF. The scale developed by Betz, Klein, and Taylor (1996). The CDSE-SF has five subscales which are Goal Selection (GS), Occupational Information (OI), Planning (P), Problem Solving (PS), and Self-appraisal (S) (Betz & Luzzo, 1996). CDSE-SF uses a five-point Likert scale from 1 (no confidence at all) to 5 (complete confidence) for 25 items and raw scores ranging from 25 to 125. Higher scores obtained from CDSE-SF mean that the individual has great confidence in completing career-related tasks. A sample item of the CDSE-SF is: "Prepare a good resume.". Since a great deal of study using the CDSE-SF has been conducted with diverse samples, there are variant research findings related to reliability and validity of CDSE-SF. Regarding the psychometric properties of CDSE-SF, Cronbach's alpha value for the scale was found to be .94 for the whole scale. In terms of five subscales of CDSE-SF, Cronbach's alpha values ranged from .73 to .83 (Betz, Klein, & Taylor, 1996). The Turkish version of the CDSES-SF was found as a valid and reliable measure with a Cronbach alpha of .88 and correlated in expected directions with measures of vocational outcome expectations and locus of control (Işık, 2010). Mau (2000) reported a test-retest reliability coefficient of .83. Török, Tóth-Király, Bóthe, and Orosz (2017) indicated that all of the Cronbach's α values of Hungarian version

were above .69. Studies conducted with the Portuguese version of the CDSE-SF have shown that the internal coefficients ranged from .53 to .71 for the subscales (Kumar, Silva, & Paixão, 2007; Paixão, Leitão, Miguel, & Borges, 2004). For the validity of CDSE – SF, Betz et al.'s (1996) factor analysis identified five factors. In addition, the five-factor theoretical basis for the CDSE-SF was supported by Miller, Roy, Brown, Thomas and McDaniel's (2009) study in which English version of CDSE-SF, by Presti et al.'s (2013) study in which Italian version of CDSE-SF as well. However, some of the studies conducted by Jin, Ye, and Watkins (2012) and Miguel, Silva, and Prieto (2013) revealed that there is a single general career decision self-efficacy factor. While Jin et al. (2012) used the Chinese version of CDSE-SF, Portuguese version was used in a study done by Miguel et al. (2013). Since several authors (Işık, 2010; Jin et al. 2012; Nam, Yang, Lee, Lee, & Seol, 2011) indicated that the use of a single factor would be more adequate than the multi-factor solution, the one-factor solution of career decision making self-efficacy was chosen as final in this study.

3.3.4.1 Psychometric Properties of Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)

3.3.4.1.1 Validity of Career Decision Self-Efficacy Scale-Short Form

In the current study, a confirmatory factor analysis (CFA) was used to find out whether the five-factor structure of the CDSE- SF was compatible with the Turkish sample (n=836). The necessary assumptions of the CFA were tested before the analysis of data collected through pilot study for adaptation of the CDSE-SF. The missing values, the accuracy of data, univariate normality, multivariate normality and linearity (Ullman, 2001) were checked before the analysis. After testing the assumptions for CFA, CFA was conducted with LISREL 8.80 software, with Maximum likelihood estimation procedure.

In order to test the fitness of the model, χ^2 , χ^2/df , CFI, RMSEA, SRMR, non-normed fit index (NNFI) were used to test the fitness of the model. The results of the CFA indicated an adequate model fit for six-factor structure of the CDSE- SF [χ^2 (265) = 1011.23, $p = .00$; χ^2/df - ratio = 3.82; $CFI = .98$, $NNFI = .98$; $SRMR = .039$; $RMSEA = .058$] without modifications. The χ^2/df - ratio value, which was 3.82, indicated a reasonable fit as values less than 5 have been recommended as demonstrating reasonable fit (Schumacker & Lomax, 2004). $SRMR = .039$ and $RMSEA = .058$ also indicated close approximate fit of the model (Kline, 2011). Consistently, $CFI = .98$, $NNFI = .98$ indicated reasonably good fit of the model to the data as suggested by Hu and Bentler (1999) and Schumacker and Lomax (2010). As a result, the five-factor structure of the CDSE- SF was confirmed. After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the five-factor structure of CDSE- SF and t values for each indicator and explained variance were presented in Table 3.8.

Table 3.8

Unstandardized and Standardized Parameter Estimates, t Values and R² for CDSE-SF

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	t	R ²
CDSE- SF Occupational Information	CDSE- SF1	.42	.59	17.64	.35
	CDSE- SF10	.49	.60	17.93	.35
	CDSE- SF15	.41	.54	16.01	.29
	CDSE- SF19	.61	.69	21.41	.47
	CDSE- SF23	.47	.53	15.78	.29
CDSE- SF Goal Selection	CDSE- SF2	.51	.67	21.22	.45
	CDSE- SF6	.61	.73	23.60	.53
	CDSE- SF11	.59	.71	22.97	.51
	CDSE- SF16	.45	.50	14.76	.25
	CDSE- SF20	.64	.76	25.02	.58
CDSE- SF Planning	CDSE- SF3	.57	.62	19.77	.38
	CDSE- SF7	.48	.59	18.72	.35
	CDSE- SF12	.51	.57	17.81	.32
	CDSE- SF21	.55	.62	19.88	.39
	CDSE- SF24	.50	.57	17.86	.32
CDSE- SF Problem Solving	CDSE- SF4	.53	.70	22.08	.48
	CDSE- SF8	.50	.61	18.71	.37
	CDSE- SF13	.49	.65	20.02	.42
	CDSE- SF17	.51	.60	18.47	.37
	CDSE- SF25	.48	.58	17.66	.34
CDSE- SF Self- appraisal	CDSE- SF5	.53	.63	19.44	.40
	CDSE- SF9	.63	.69	21.92	.48
	CDSE- SF14	.46	.55	16.41	.30
	CDSE- SF18	.55	.60	18.38	.36
	CDSE- SF22	.43	.55	16.35	.30

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

Standardized and unstandardized factor loadings of each item are provided in Table 3.8. the unstandardized factor loadings for OI, GS, P, PS and S range from 41 to 61; 45 to 64; 48 to 57; 48 to 53; and 43 to 63, respectively. The standardized factor loadings were tested for significance using a significance level of .05, and loadings should be at least .40 (Martens & Webber, 2002). Standardized factor loadings for items in the four scales (.53–.76) were significantly different from

zero (t-values: 14.76–25.02, $p < 0.05$), supporting the validity of the CDSE-SF. The standardized factor loadings for OI, GS, P, PS and S range from 53 to 69; 50 to 76; 57 to 62; 58 to 70; and 55 to 69, respectively. Furthermore, the explained variance of each item was assessed. The variance explained by each item ranged from 29 % to 47 % in the OI subscale; from 25 % to 58 % in the GS subscale; from 32 % to 39 % in the P subscale; from 34 % to 48 % in the PS subscale; and from 30 % to 48 % in the S subscale. Finally, it can be concluded that indices and total model supported five-factor structure of CDSE- SF with the sample of current study composing of university students of a state university (Figure 3.5).



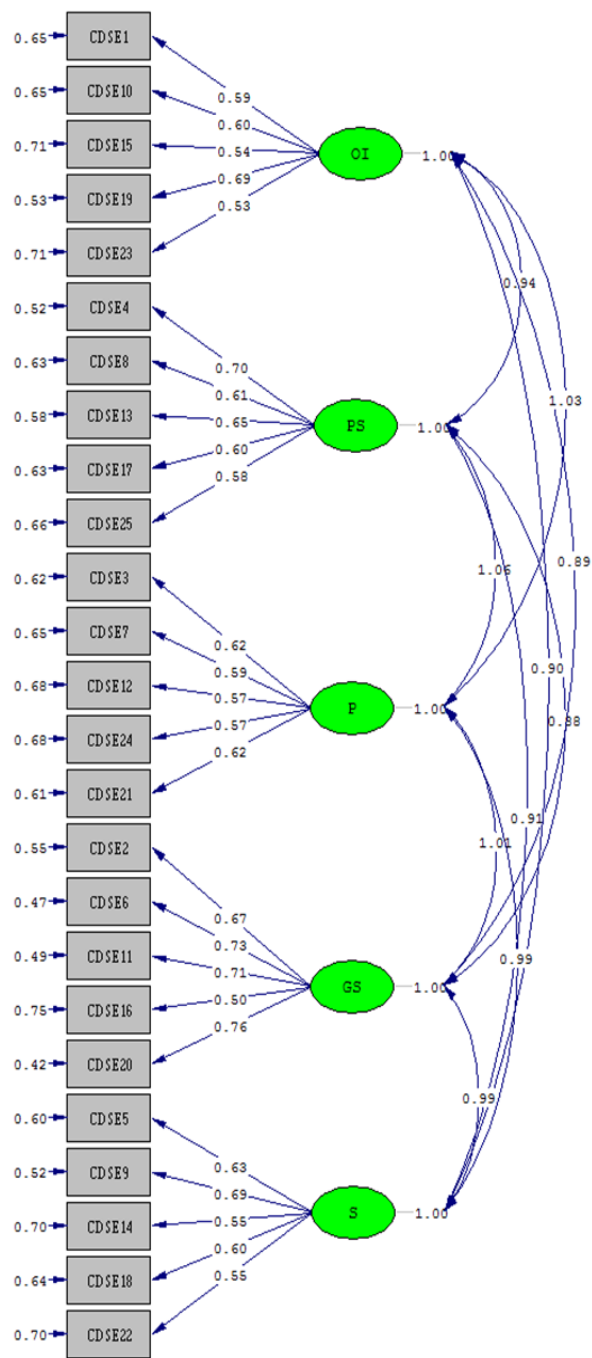


Figure 3.5 Estimates of parameters of confirmatory factor analysis of Career Decision Self- Efficacy Scale

Note. OI = Occupational Information, GS= Goal Selection, P=Planning, PS=Problem Solving, S= Self-appraisal

3.3.4.1.2 Reliability of Career Decision Self-Efficacy Scale-Short Form

Cronbach's alpha coefficients were computed to estimate internal consistency reliability for CDSE- SF. The overall internal consistency (Cronbach's alpha 0.94) of the 25 item CDSE- SF was satisfactory. In other words, the items possibly measure the same underlying concept. .80 for Goal Selection; .77 for Problem Solving; .72 for Occupational Information; .73 for Planning; .75 for Self-appraisal subscales respectively in the study conducted with university students.

3.3.5 Career Influence Inventory

University students' perceived career influences on career development and planning were assessed using the 35-item Career Influence Inventory developed by (Fisher & Stafford, 1999). Career Influence Inventory was adapted by the researcher to Turkish culture. The six Career Influence Inventory subscales are 1) Parents' Influence (PI), 2) Teachers' Influence (TI) 3) Friends' Influence (FI) 4) Ethnic-Gender Expectations (EGE) 5) High School Academic Experiences and Academic Self-Efficacy (HAS) and 6) Negative Social Events (NSE). Responses are obtained using a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Possible scores for PI, TI, FI, EGE, HAS and NSE subscales range from 7 to 28; 8 to 32; 4 to 16; 3 to 12; 6 to 24; and 7 to 28, respectively. Higher scores indicate a greater influence on career planning process of university students (Fisher & Stafford, 1999). Fisher and Stafford (1999) indicated that the Cronbach's alphas for the six subscales ranged from .74 to .91. Cronbach's alpha for the 35 items was .89. The subscales of PI (.91) and TI (.90) and NSE (.90) had the strongest internal consistencies. Moderate internal consistencies were found for the other three subscales: HSA (.85), EGE (.75), and FI (.74) (Fisher & Stafford, 1999). Grygo (2006) have conducted research and indicated that Cronbach's alpha for the entire scale of 35 items was .91. Cronbach alpha values for the PI, TI, FI and HSA ranged from .93; .92; .94; and .92, respectively. The remaining two subscales had moderate internal consistency; NSE (.85) and EGE

subscale (.79) (Grygo, 2006). Rogers, Creed, and Glendon (2008) have conducted research and indicated that internal reliability coefficient for the whole scale was .89.

3.3.5.1 Adaptation Procedure of Turkish Version of Career Influence Inventory

The adaptation procedure of Turkish version of Career Influence Inventory (CII) entailed five stages: 1) translation from the English (source language) into the Turkish (target language), 2) comparison and synthesis of the translated versions, 3) analysis of the preliminary version by experts, 4) getting opinion of students in the target population 5) conducting a pilot study and 6) establishing psychometric properties of CII. The process of adaptation of the CII was started with getting official permission from the second author (Dr. Stafford) of The CII. The second author was contacted via e-mail to receive permission for the translation and adaptation of the CII.

3.3.5.1.1 Translation Procedure of Turkish Version of Career Influence Inventory

The translation of the Career Influence Inventory was conducted in four steps: 1) Forward translation, 2) Comparison of the translations, 3) Expert review and 4) Getting the opinion of students in the target population

Step 1- Forward translation: The 35 item scale was independently translated into Turkish by five experts who are fully proficient in both Turkish and English and also familiar with Turkish culture, as suggested by Hambleton (2005). In the first stage, five experts made an effort to get equivalent meaning in Turkish as much as in English.

Step 2 – Comparison of the translations: In the second step, five translations made by five experts were compared by the researcher and her

advisor. Both have experiences in adapting scale to Turkish culture and conducting studies in career counseling field. During this step, the items translated were compared with the English version of Career Influence Inventory by assessing content validity. The discrepancies among five translate versions were resolved and a consensus was reached among experts after comparison of items translated. It was decided that the scale items translated into Turkish very well and then closely match the original meaning were chosen by the researcher. Finally, the Turkish version of the instrument was finalized.

Step 3 – Expert review: Following the Step 2, the Turkish and original versions of the Career Influence Inventory were given to six experts (two faculty members in Psychological Counseling and Guidance Department, two faculty members in English Language and Literature, two English teachers) to consolidate all the translated versions into preliminary one which two experts had difficulties in making decision about the final version of items. Six experts reviewed the preliminary version of CII and examined its' content, format, layout, grammar, and cultural relevancy. Six experts rated the scale items in terms of their relevance for university students. They also entered in scale items if they did not reach consensus on items of scale. Some changes were made on the Turkish versions of the Career Influence Inventory based on feedbacks of six experts.

Step 4 – Focus group discussion: A focus group was held with 11 participants who were students at the university. Focus group was done to ensure the CII's acceptability to university students. The date, time and a place for focus group discussion were decided by taking into consideration of participants' circumstances. In this step, the researcher tried to bring together diverse groups, in terms of their major and age. With this attempt, the researcher made an effort to explore the different perspectives on the CII. While conducting focus groups, university students were encouraged to verbalize their views on the processes of answering the questionnaire. Researcher allowed flexibility to them in order to get

reaction to the content, format, layout of scale items while participants were explaining themselves. There were no major changes in the items of Career Influence Inventory since participants did not have different comments or feedback on the scale itself. Finally, the Turkish version of the Career Influence Inventory was finalized for the pilot study.

3.3.5.1.2 Psychometric Properties of the Turkish Version of Career Influence Inventory - A Pilot Study

3.3.5.1.2.1 Validity of the Turkish Version of Career Influence Inventory

A pilot study was carried out in order to establish psychometric properties of Career Influence Inventory (CII). A convenient sampling method was for the sample selection of the pilot study. A total of 386 university students studying in public university voluntarily participated in a pilot study for adaptation of the CII. As seen in Table 3.9, in regard to grade status of 386 university students, one-third of the participants (n = 111, 28.8 %) were freshmen while almost one-fourth of university students (n = 91, 23.6 %) were senior. Additionally, 28.2 % (n=109) of participants were sophomore, and 19.4 % (n = 75) were junior. The participants represented diverse faculties. They were studying, 23.3 % (n = 90) at Faculty of Theology; 41.5 % (n = 160) at Faculty of Education; 35.2 % (n = 136) at Faculty of Economics and Administrative Sciences. The participants also were from diverse majors [Counseling and Guidance (n = 77, 19.9 %), Public Finance (n = 61, 15.8 %), Theology (n = 90, 23.3 %), Special Education (n = 83, 21.5 %), and International Relations (n = 75, 19.4 %)].

Table 3.9

Demographic Characteristics of the Participants – Pilot Study

	<i>f</i>	%
Gender		
Female	205	53,1
Male	181	46,9
Grade Level		
Freshmen	111	28,8
Sophomore	109	28,2
Junior	75	19,4
Senior	91	23,6
Faculty		
Theology	90	23,3
Economics and Administrative Sciences	136	35,2
Education	160	41,5
Current Major		
Counseling and Guidance	77	19,9
Public Finance	61	15,8
Theology	90	23,3
Special Education	83	21,5
International Relations	75	19,4

The necessary assumptions of the CFA were tested before the analysis of data collected through pilot study for adaptation of the Career Influence Inventory. The missing values, the accuracy of data, univariate normality, multivariate normality and linearity (Ullman, 2001) were checked before the analysis. Firstly, it was decided whether the sample size was adequacy for pilot data to conduct CFA. While determining whether the sample size is adequate, various rules-of-thumb for sample size requirements have been taken into consideration. According to Boomsma (1985) and Kline (2011), 200 participants are adequate in order to conduct a CFA. Based on this criteria, 386 cases of the pilot study were found enough sample to conduct CFA. After deciding that, the missing value analysis was conducted. The result of the missing value analysis indicated that the missing values were less than 5 % for all item measures. Therefore EM algorithm was preferred for the values missing (Tabachnick & Fidell, 2007). Secondly, the skewness and kurtosis values were checked to test univariate normality. Values

for the skewness and kurtosis statistics were within the acceptable range -3 and +3 (Kline, 2011), which ensured the assumptions of normality for this sample. Linearity assumption was checked through the examination of bivariate scatterplots over each individual item. According to Tabachnick and Fidell (2013), all the relations were linear in the plots when the scatterplot is oval-shaped. When the shape of bivariate scatterplots is examined considering this explanation, it is concluded that linearity assumption was met. Because bivariate scatterplots were oval-shaped, the linearity assumption was met.

In order to test the fitness of the model, χ^2 , χ^2/df , CFI, RMSEA, SRMR, NNFI were used to test the fitness of the model. Considering the fit indexes and cut-off criteria for several fit indexes shown in Table 3.3, the results of the CFA indicated an adequate model fit for six-factor structure of the Turkish version of Career Influence Inventory with the pilot data [$\chi^2 (542) = 1217.45$, $p = .00$; χ^2/df -ratio = 2.25; $CFI = .96$, $NNFI = .95$; $SRMR = .061$; $RMSEA = .057$] with three modifications between the error terms: CII22- CII16, CII31- CII8, CII26- CII2. χ^2 was statistically significant and χ^2/df -ratio was 2.25 that was below the cut-off criteria which is suggested by Kline (2011) as .3. $CFI = .96$ and $NNFI = .95$ indicated good fit (Hu & Bentler, 1999; Schumacher & Lomax, 2010). In addition to this fit indexes, $RMSEA = .057$ and $SRMR = .061$ showed good fit (Hair, Black, Babin, & Anderson, 2010; Schumacher & Lomax, 2010). As a result, the six-factor structure of the Turkish version of Career Influence Inventory was confirmed. After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the six-factor structure of Turkish version of CII and t values for each indicator and explained variance were indicated in Table 3.10.

Table 3.10

Unstandardized and Standardized Parameter Estimates, t Values and R² for CII

Construct	Item	Unstandardize <i>d</i> Factor Loadings	Standardized Factor Loadings	<i>t</i>	R ²
Teachers' Influence	CII1	.60	.77	17.53	.60
	CII7	.62	.77	17.51	.60
	CII13	.53	.58	12.05	.34
	CII19	.60	.78	17.77	.61
	CII24	.68	.84	20.08	.71
	CII27	.65	.73	16.31	.54
	CII30	.45	.64	13.56	.41
	CII33	.63	.69	14.86	.47
Negative Social Events	CII2	.56	.65	13.59	.42
	CII8	.66	.63	12.87	.40
	CII14	.79	.82	18.66	.67
	CII20	.80	.79	17.92	.63
	CII25	.46	.56	11.23	.31
	CII28	.60	.60	12.26	.36
	CII31	.60	.72	15.30	.51
Parents' Influence	CII3	.51	.77	17.21	.60
	CII9	.45	.73	15.84	.53
	CII15	.55	.84	19.63	.71
	CII21	.40	.55	10.93	.30
	CII26	.46	.69	14.65	.47
	CII29	.44	.51	10.07	.26
	CII32	.42	.66	13.92	.44
High School Academic Experiences and Academic Self-Efficacy	CIIA	.18	.40	7.51	.16
	CIIB	.33	.55	10.60	.30
	CII4	.44	.73	15.07	.53
	CII10	.53	.73	15.15	.53
	CII16	.35	.54	10.31	.29
	CII22	.55	.66	13.27	.44
Ethnic-Gender Expectations	CII5	.70	.76	15.77	.58
	CII11	.72	.82	17.17	.68
	CII17	.68	.72	14.83	.52
Friends' Influence	CII6	.48	.59	11.21	.34
	CII12	.48	.68	13.38	.46
	CII18	.69	.78	15.69	.60
	CII23	.44	.59	11.33	.35

Note. All *t* values were significant. $P < .001$

As shown in Table 3.10, the unstandardized factor loadings for Teachers' Influence; Negative Social Events; Parents' Influence; High School Academic Experiences and Academic Self-Efficacy; Ethnic-Gender Expectations and Friends' Influence range from 45 to 68; 46 to 80; 40 to 55; 18 to 55; 68 to 72; and 44 to 69, respectively. The standardized factor loadings for Teachers' Influence; Negative Social Events; Parents' Influence; High School Academic Experiences and Academic Self-Efficacy; Ethnic-Gender Expectations and Friends' Influence range from 58 to 84; 56 to 82; 51 to 84; 40 to 73; 72 to 82 and 59 to 78, respectively. The CFA revealed significant t values for all factor loadings ($p < .05$), ranging between .40 -.84. The square of a standardized factor loading (R^2) was used to assess the degree to which an item was a good measure of the factor (Hair et al., 2010). In the pilot study, R^2 values ranged between .16 -.71 in the Career Influences Inventory, .34 -.71 in the Teachers' Influence subscale; .31 -.67 in the Negative Social Events subscale; .26 -.71 in the Parents' Influence subscale; .16-.53 in the High School Academic Experiences and Academic Self-Efficacy subscale; .52 -.68 in the Ethnic-Gender Expectations subscale; and .34 -.60 in Friends' Influence subscale (Figure 3.6)

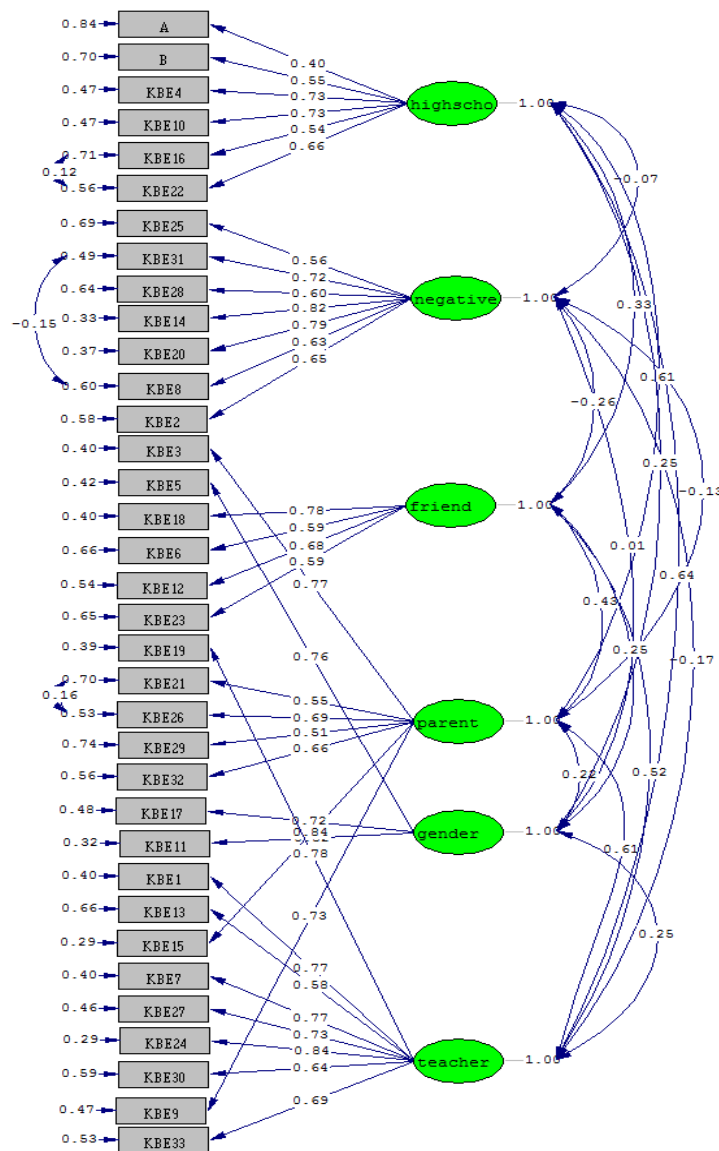


Figure 3.6. Estimates of parameters of confirmatory factor analysis of Career Influence Inventory

Note. Highscho= High School Academic Experiences and Academic Self-Efficacy, teacher=Teachers' Influence, negative= Negative Social Events, parent= Parents' Influence, gender= Ethnic-Gender Expectations, friend= Friends' Influence

Finally, CFA was conducted to test the factor structure of Turkish version of Career Influence Inventory for the main study with 836 university students. The missing values, the accuracy of data, univariate normality, multivariate normality

and linearity (Ullman, 2001) were checked before the analysis. Firstly, the sample size was adequacy for pilot data to conduct CFA was checked. When contemplating sample size, the criteria suggested by Kline (2011) was taken into consideration. Consequently, 836 cases of the main study were found enough sample to conduct CFA. Following the decision of adequacy of sample size, data screening procedures were conducted to inspect dataset for mistakes or missing values and correct them prior to conducting data analysis. Based on the number of missing values, various statistical techniques might be used for dealing with missing data. Schumacker and Lomax (2010) suggested different statistical techniques to a researcher such as mean substitution, regression imputation, and maximum likelihood parameter estimation. Since it is recommended to use mean substitution technique for data sets with a small number of missing values, mean substitution technique was utilized by replacing each missing value with the mean of the corresponding item in the current study. Secondly, the skewness and kurtosis values were checked to test univariate normality. According to Tabachnick and Fidell (2013), skewness and kurtosis values should be between -3 to +3. The results indicated the skewness and kurtosis values exceed the range of -3 and +3. For this reason, it is possible to say that normality of the items was ensured through the values found in the current study. The linearity assumption was checked through the visual examination of bivariate scatterplots since Tabachnick and Fidell (2013) suggested that. The results of assumption check indicated that most of the plots did not show any obvious evidence of non-linearity. For this reason, it was assumed that the assumption of linearity was not violated.

Maximum likelihood was used via Lisrel 8.80 in order to test the six-factor structure of the Turkish version of CII with the main sample (n=836) of the main study. In order to test the fitness of the model, χ^2 , χ^2/df , CFI, SRMR, RMSEA, NNFI were used. The results of the CFA indicated an adequate model fit for six-factor structure of the Turkish version of Career Influence Inventory with the

main data [$\chi^2 (545) = 1404.68, p = .00; \chi^2/df$ - ratio = 2.58; CFI= .98, NNFI = .98; SRMR= .040; RMSEA = .043]. SRMR was .08, less than the suggested cutoff value (Hair et al., 2010). A χ^2/df ratio less than 3 (Kline, 2011), a RMSEA value less than .06 (Hu & Bentler, 1999), a SRMR value close to .05, a CFI and NNFI greater than .95 (Hu & Bentler, 1999; Schumacker & Lomax, 2010) were chosen as the acceptable cut-off values (as shown in Table 3.3). As a result, CFA yielded six-factor structures, indicating the six-factor structure of the Turkish version of Career Influence Inventory was confirmed. After adjustment of error residuals between items, unstandardized and standardized parameter estimates were analyzed for the six-factor structure of Turkish version of CII and t values for each indicator and explained variance were indicated in Table 3.11.

Table 3.11

Unstandardized and Standardized Parameter Estimates, t Values and R² for CII

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	<i>t</i>	<i>R</i> ²
Teachers' Influence	CII1	.66	.73	23.76	.53
	CII7	.62	.73	23.64	.53
	CII13	.65	.75	24.64	.56
	CII19	.67	.78	26.24	.61
	CII24	.71	.78	26.07	.60
	CII27	.73	.80	27.17	.64
	CII30	.59	.71	23.05	.51
	CII33	.67	.71	23.16	.51
Negative Social Events	CII2	.63	.81	27.85	.65
	CII8	.77	.81	27.95	.65
	CII14	.82	.85	30.11	.72
	CII20	.78	.84	29.84	.71
	CII25	.65	.82	28.38	.67
	CII28	.77	.85	30.30	.73
	CII31	.68	.84	29.43	.70
Parents' Influence	CII3	.66	.83	29.17	.70
	CII9	.59	.80	27.22	.63
	CII15	.68	.88	31.73	.77
	CII21	.58	.77	25.99	.60
	CII26	.54	.77	26.11	.60
	CII29	.59	.79	26.95	.63
	CII32	.59	.77	25.83	.59
High School Academic Experiences and Academic Self- Efficacy	CIIA	.29	.49	13.45	.24
	CIIB	.40	.53	14.65	.28
	CII4	.47	.60	17.03	.36
	CII10	.57	.67	19.53	.45
	CII16	.43	.53	14.82	.29
	CII22	.45	.60	17.10	.37
Ethnic-Gender Expectations	CII5	.83	.79	24.34	.62
	CII11	.82	.83	25.99	.69
	CII17	.71	.73	22.23	.53
Friends' Influence	CII6	.64	.74	23.29	.54
	CII12	.67	.77	24.70	.59
	CII18	.73	.84	27.89	.70
	CII23	.65	.73	22.99	.53

Note. All *t* values were significant. $P < .001$

As presented in Table 3.11, the unstandardized factor loadings for Teachers' Influence; Negative Social Events; Parents' Influence; High School Academic Experiences and Academic Self-Efficacy; Ethnic-Gender Expectations and Friends' Influence range from .59 to .73; .63 to .82; .54 to .68; .29 to .57; .71 to .83; and .64 to .73, respectively. The items were loaded from moderate to high to the each related construct. The standardized factor loadings for Teachers' Influence; Negative Social Events; Parents' Influence; High School Academic Experiences and Academic Self-Efficacy; Ethnic-Gender Expectations and Friends' Influence range from .71 to .80; .81 to .85; .77 to .88; .49 to .67; .73 to .83 and .73 to .84, respectively). All *t* values of items were significant. The *t* values for Teachers' Influence; Negative Social Events; Parents' Influence; High School Academic Experiences and Academic Self-Efficacy; Ethnic-Gender Expectations and Friends' Influence range from 23.05 to 27.17; 27.85 to 30.30; 25.83 to 31.73; 13.45 to 17.10; 22.23 to 25.99; and 22.99 to 27.89, respectively. According to R^2 results, items accounted the variances between 51 % to 64 % in Teachers' Influence subscale; from 65 % to 73 % in Negative Social Events subscale; from 59 % to 77 % in Parents' Influence subscale; from 24 % to 45 % in High School Academic Experiences and Academic Self-Efficacy subscale; from 53 % to 69 % in Ethnic-Gender Expectations subscale; and from 53 % to 70 % in Friends' Influence subscale. That means the six-factor structure of Career Influences Inventory for Turkish university students was supported by the fit indices and the standardized estimates, *t* values and explained variance (Figure 3.7).

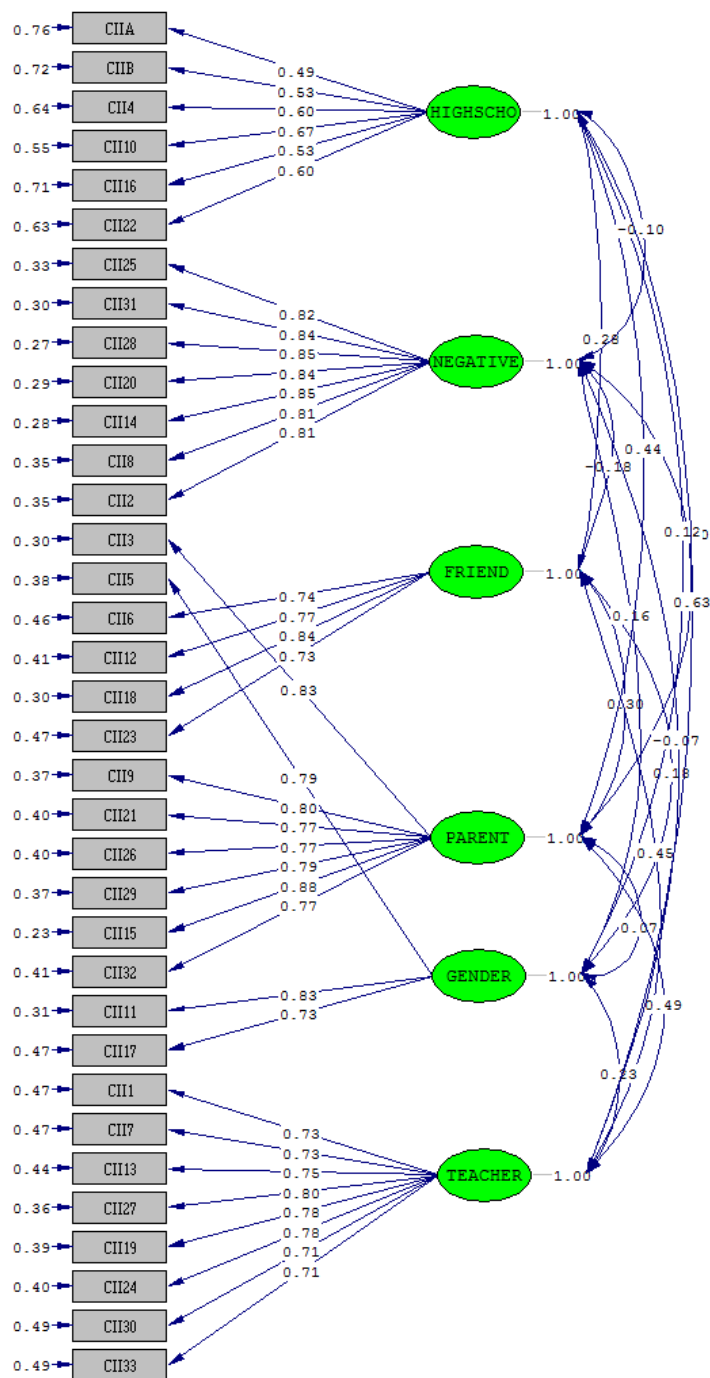


Figure 3.7. Estimates of parameters of confirmatory factor analysis of Career Influence Inventory

Note. HIGHSCHO= High School Academic Experiences and Academic Self-Efficacy, TEACHER=Teachers' Influence, NEGATIVE= Negative Social Events, PARENT= Parents' Influence, GENDER= Ethnic-Gender Expectations, FRIEND= Friends' Influence

3.3.5.1.2.2 Reliability of Turkish Version of Career Influence Inventory

For the pilot study, the internal consistency of the whole scale was assessed with coefficient alpha with a value of 0.86, which demonstrates adequate homogeneity of items in the scale. For each subscale, the following Cronbach alpha values were found as .85 for Parents' Influence; .90 for Teachers' Influence; .75 for Friends' Influence; .83 for Ethnic-Gender Expectations; .78 for High School Academic Experiences and Academic Self-Efficacy; and .85 for Negative Social Events. In conclusion, results revealed that Turkish version of CII yielded satisfactory reliability and validity results with the current study sample.

Internal reliability was evaluated by Cronbach alpha that produced .88 for the total CIII for the main study. .93 for Parents' Influence; .91 for Teachers' Influence; .85 for Friends' Influence; .82 for Ethnic-Gender Expectations; .74 for High School Academic Experiences and Academic Self-Efficacy; and .94 for Negative Social Events subscale for current use.

3.4 Data Collection Procedure

Participants in the current study were university students studying in various departments of a public university in Eskişehir. After getting necessary permission from Middle East Technical University, Human Subjects Ethics Committee the researcher first conducted the pilot study for the adaptation of Career Exploration Survey and Career Influence Inventory into Turkish. The pilot data were gathered in May 2016 and data collection process lasted for two weeks. The Career Exploration Survey and Career Influence Inventory were collected in the paper-pencil format in classrooms. The data for adaptation of both scales were collected from university students at different times according to the convenience of course instructors' schedule. Two surveys were administered at different times. Filling out each instrument lasted approximately 5 – 10 minutes.

For the main study, the data were collected between June and July 2016. The researcher contacted course instructors and informed them about the aims of the study and data collection procedure. The researcher visited classes of instructors who agreed about scale administration in their course. When the researcher arrived at the classes, she explained the purpose of the current study to all participants. Additionally, participants were informed that their responses would be anonymous and used only for the current study. Upon the participants' verbal approval, the informed consent form and questionnaire were distributed to the students who volunteered to participate in the study. The package of instruments that consisted of five data collection instruments was given to participants in a paper-and-pencil format. Filling out of all data collection instruments lasted approximately 15-20 minutes in the main study.

3.5 Description of Variables

The career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic and gender expectations and negative social events were defined as exogenous variables in the current study. Career indecision was the endogenous variable while self-exploration, intended-systematic and environmental exploration were the mediator variables.

3.5.1 Exogenous variables

A factor in a causal model whose value is not determined by the states of other variables in the system; contrasted with an endogenous variable. In other words, an independent variable that affects a model without being affected by it. Exogenous variables are always independent variables in the SEM equations. The exogenous variables have no direct (Gunzler et al., 2013). In the present study, the career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic and gender expectations and negative social events were defined as exogenous variables.

- *Career Decision Making Self-Efficacy*: The term of career decision making self-efficacy is related with individual's belief that she or he is able to complete the tasks necessary for career decision making (Taylor & Betz, 1983). In the current study, university students' career decision making self-efficacy beliefs were assessed with the total score of the Career Decision Self-Efficacy Scale-Short Form (Betz, Klein & Taylor, 1996) with 25 items on a 5-point scale.

- *Academic Self-Efficacy*: The academic self-efficacy is defined as student's academic self-efficacy beliefs (Fisher & Stafford, 1999). In the current study, university students' academic self-efficacy beliefs were assessed with the total scores of the High School Experiences and Academic Self-Efficacy subscale of Career Influence Inventory (Fisher & Stafford, 1995) with 6 items on a 4-point scale.

- *Teacher Support*: The teacher support is defined as the teachers' expectations of students, their support to students and the influence of expectation and support on students' academic and career goals (Fisher & Stafford, 1999). In the current study, the level of perceived teacher support by university students was assessed with the total score of the Teachers' Influence subscale of Career Influence Inventory (Fisher & Stafford, 1995) with 8 items on a 4-point scale.

- *Friend Support*: The friend support is defined as the friends' expectations of friends, their support to their friends and the influence of expectation and support on friends' academic and career goals (Fisher & Stafford, 1999). In the current study, the level of perceived friend support by university students was assessed with the total score of the Peers' Influence subscale of Career Influence Inventory (Fisher & Stafford, 1995) with 4 items on a 4-point scale.

- *Parental Support*: The parental support is defined as the family encouragement, expectation, accessibility of children and the influence of all of them on children' academic and career goals (Fisher & Stafford, 1999). In the current study, the level of perceived parental support by university students was

assessed with the total scores of the Parental Influence subscale of Career Influence Inventory (Fisher & Stafford, 1995) with 7 items on a 4-point scale.

- *Ethnic – Gender Expectations:* The ethnic-gender expectations are defined as the university students' perceived expectations of their high school personnel and parents based on their gender or ethnicity (Fisher & Stafford, 1999). In the current study, the level of perceived expectations of university students from their school personnel and parents based upon their gender or ethnicity was assessed with the total score of the Ethnic and Gender Expectations subscale of Career Influence Inventory (Fisher & Stafford, 1995) with 3 items on a 4-point scale.

- *Negative Social Events:* The negative social events are defined as the obstacles which individual experiences during one's whole life (Fisher & Stafford, 1999). In the current study, the level of negative social events' influence on career indecision of university students was assessed with the total score of the Negative Social Events section of Career Influence Inventory (Fisher & Stafford, 1995) with 7 items on a 4-point scale.

3.5.2 Endogenous variables

A factor in a causal model or causal system whose value is independent from the states of other variables in the system. In other words, endogenous variables have values that are determined by other variables in the model. Endogenous variables act as a dependent variable in at least one of the SEM equations (Gunzler et al., 2013). The endogenous variable was the career indecision in the current study.

- *Career Indecision:* Career indecision is defined as an inability of individuals to choose a career that they want to pursue (Guay et al., 2003). In the current study, university students' career indecision level was assessed with Career Indecision section of Career Decision Scale (Osipow et al., 1976) with 16 items on a 4-point scale.

3.5.3 Mediator variables

The variables that help explain how or why an independent variable influences an outcome. SEM can be used when extending a mediation process to multiple independent variables, mediators or outcomes (Gunzler et al., 2013). The mediation refers to a situation that includes three or more variables, such that there is a causal process between all three variables. In the present study, intended-systematic exploration, self-exploration, and environmental exploration were defined as mediator variables.

- *Self-Exploration:* The self-exploration refers to the extent of career exploration behavior regarding one's personal goals, interests, vocational values and skills (Stumpf, Colarelli & Hartman, 1983). In the current study, university students' self-exploration level was assessed with the total scores of the Self-Exploration section of Career Exploration Survey (CES) (Stumpf et al., 1983) with 5 items on a 5-point scale.

- *Environmental Exploration:* The environmental exploration is defined as career exploration behaviors including gathering and synthesizing information about job requirements, possible career paths and organizations (Stumpf et al., 1983). In order to assess university students' environmental exploration level, Environmental Exploration subscale of CES (Stumpf et al., 1983) with 6 items on a 5-point scale was used in the present study.

- *Intended-systematic Exploration:* The intended-systematic exploration refers to the extent to which individuals utilize an intentional, intensive and systematic approach to gather information relevant to personal and environmental characteristics and formulate specific career plans based on information (Stumpf et al., 1983). The Intended-systematic Exploration subscale of CES (Stumpf et al., 1983) with 3 items on a 5-point scale was selected as the measurement tool for the present study in order to assess the level of intended-systematic exploration level of university students.

3.6 Data Analyses

This pilot study set out to adapt the Career Exploration Survey and the Career Influence Inventory to Turkish culture and evaluate the psychometric of both scales. With this purpose, Statistical Package for Social Sciences (SPSS) 21.0 and Lisrel 8.80 was used to manage and analyze the pilot data.

The main aim of the study was to investigate the structural relationships among career indecision, career exploration (self-exploration, environmental exploration, and intended-systematic exploration) and career influences (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, negative social events, ethnic-gender expectations) of university students were examined. The structural equation modeling (SEM) technique was used to test the proposed model in the current study. SPSS 21.0, AMOS 22 and Lisrel 8.80 was used to manage and analyze the main data.

For both studies, the data cleaning procedure was done in order to identify missing values before running SEM. Then, influential outliers were examined. After that, descriptive analysis was done and reported for gender, current major, grade level and faculty of university students participated in the pilot study. Also, for the main study, descriptive analysis was reported for faculty, gender, grade level, age, cumulative GPA and homeland of university students. After that, bivariate correlations among variables [career indecision, career exploration (self-exploration, environmental exploration, and intended-systematic exploration) and career influences (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, negative social events, ethnic-gender expectations)] were calculated by using Pearson product-moment correlations. Then, the assumptions of SEM (independent observation, normality, linearity, homoscedasticity, and multicollinearity) were checked. After checking assumptions of SEM, the measurement model was established and tested in the current study before testing the structural model. Finally, structural equation

modeling was used to test the model that analyzes the relationships among career indecision, career exploration (self-exploration, environmental exploration and intended-systematic exploration) and career influences (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, negative social events, ethnic-gender expectations) of university students based on Systems Theory. There are several reasons for choosing the structural equation modeling. First, structural equation model is defined as a technique that tests the hypothesized relationship based on theory (Byrne, 2001). As mentioned above, the aim of this study was to test a model of career indecision among university students based on Systems Theory. Second, SEM is an applicable technique for examining a number of relationships between one or more exogenous and endogenous variables which are continuous or discrete (Kline, 2011). As mentioned above, the aim of this study was to examine the relationships between the career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic and gender expectations and negative social events (exogenous variables) and career indecision of university students (endogenous variable). For the pilot study, LISREL 8.80 was utilized for CFA for two scales: Career Exploration Survey and Career Influences Inventory. For the main study, the structural model was tested by using AMOS Version 22 and SPSS 21.0.

3.7 Limitations of the Study

The present study has a number of limitations. The reader should bear in mind the limitations of the present study while interpreting the results of this study. The first limitation was related to the generalizability of the findings. In this study, a total of 836 university students participated in the current study were recruited through stratified random sampling procedure. The participants were from five different faculties. This sampling method is not one of those techniques defined as pure randomization strategy (Fraenkel et al., 2012), this may have created a

possible threat to external validity. Therefore, the findings of the current study cannot be generalized to university students in other universities in Turkey studying in different faculties. In sum, the present findings should be interpreted by taking consideration of this issue.

The second limitation was related to the theoretical framework. The aim of current study was to examine the relationships among career indecision, career exploration (self-exploration, environmental exploration and intended-systematic exploration) and career influences (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, negative social events, ethnic-gender expectations) of university students based on Systems Theory. There are many theories that examine the factors playing a role in career indecision of university students (e.g. Social Cognitive Career Theory). Therefore, the findings of the current study should be interpreted by taking consideration of Systems Theory framework (STF). Similarly, any variable involved in STF, but not included in this research, may also affect the university students' career indecision such anxiety. Therefore, the current study is limited to career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic and gender expectations and negative social events.

The third limitation was related to data collection procedure. During the data collection, the researcher visited course instructors who agreed about scale administration in their class. When the researcher arrived at their classes, the purpose of the current study was explained to all participants who were volunteered. Both researcher and instructors were in the classroom while university students were filling out the data collection instruments. Although researcher asked instructors not to communicate with students while they were filling out the data collection instruments, a few instructors talked to students about the scale items. That could have impacted some responses of some participants.

The fourth limitation of the current study may lie in the sample of students used. Participants were drawn from undergraduate classes at one public university in one Turkey geographic region. The predictors of career indecision and also the level of career indecision may differ for university students from other universities in other cities. Therefore, it might be difficult to generalize findings of this study to university students studying at other universities or studying in other regions of Turkey.

The final limitation was related to research design. In the current study, the correlational research design was adopted to investigate the structural relationships among exogenous, endogenous and mediator variables. Although correlation research design was used in order to examine the associations between variables without manipulation them, it is very difficult to say that to establish cause and effect relationship is possible in this kind of study that uses the correlation research design. Among studies in which the research design used, only experimental studies provide conclusive information about causal relationships among variables since the independent variable is manipulated by the experimenter (Stangor, 2011).

CHAPTER 4

RESULTS

This chapter consists of five sections that present the results of the current study. The first section provides detailed information about preliminary data screening procedures including missing data, sample size and influential outliers. Afterwards, descriptive analysis was provided in the second section. Following this, the third section demonstrates the primary analysis. After primary analysis, the results of the Structural Equation Modeling analysis are presented. Finally, the summary of the results is given at the end of this chapter.

4.1 Preliminary Data Analysis

As the preliminary analyses, data screening were carried out before the application of any statistical procedure. Secondly, the data examined for possible assumption violations of the SEM analysis.

4.1.1 Data Screening

Data screening procedures are needed to ensure whether the data set is accurate to conduct further statistical analyses. Data screening procedures involved screening the data set in terms of accuracy of data, missing-value patterns, the presence of outliers and sample size (Tabachnick & Fidell, 2013).

4.1.1.1 Accuracy of Data

As the first step of data screening, the accuracy of the data was examined to understand whether there are any values out of range. The minimum and maximum values for all categorical and continuous variables were checked. The

results revealed that no mis-entry was observed or was no out-of-range values in the present study. Then, reverse scoring was done for an item in the High School Academic Experiences and Academic Self-Efficacy subscale of Career Influence Inventory, and an item in the Friend support subscale of Career Influence Inventory.

4.1.1.2 Missing Data

According to Schumacker and Lomax (2010), the missing data values in variables might affect the result of the study. Many methods mentioned in the literature (e.g. Kline, 2011; Schumacker & Lomax, 2010) for dealing with missing data. Vriens and Melton (2002) mentioned main four methods that help researchers deal with missing data. According to them, available case methods, single-imputation methods (expectation maximization), model-based imputation methods special form of full-information ML estimation are methods for dealing with missing data. Available case methods consist of listwise deletion and pairwise deletion. Mean substitution and regression imputation are utilized by researcher who want to use single-imputation method while dealing with data. Before deciding which method is appropriate for handling with missing data, Little Missing Completely at Random Test (Little & Rubin, 1987) was conducted to see if the data is randomly missing. The results indicated that data were missing completely at random since the p value for Little Missing Completely at Random Test was not significant $\chi^2 = 5.898$ ($df = 12$; $p = .92$). Therefore, an expectation-maximization algorithm was used (Tabachnick & Fidell, 2013) in data analysis to manage missing data by following Missing Values procedure of SPSS, which is suggested by Kline (2011).

4.1.1.3 Outliers

Schumacker and Lomax (2004) suggested that the data set for values that are different from the rest should be examined since outliers affect the mean, the

standard deviation, and correlation coefficient values, model significance. Additionally, Tabachnick and Fidell, (2013) indicated that the univariate outliers and multivariate outliers lead to both Type I and Type II errors. There are two type of outliers: univariate outliers and multivariate outliers. While univariate outlier has extreme scores on a single variable, a case can have a multivariate outlier if it is extreme on two or more variables (Kline, 2011). To understand whether the data set for values well above or below from the rest, outlier analysis was performed including examining box plots, standardized residual values of each subscale (Tabachnick & Fidell, 2013). The standardized scores (z scores) were examined to determine whether there are univariate outliers for each variable. If cases with z scores do not range between +3.29 to -3.29, these standardized residual values are viewed as potential outliers (Tabachnick & Fidell, 2013). Based on this criteria, there were a number of outliers in one item of Self-appraisal subscale of CDSME, one item of Occupational Information subscale of CDSME and one item of Problem Solving subscale of CDSME with standardized residual values of -4.00, -3.83 and -3.50 respectively. After finding the outliers, the outliers should be checked whether they are influential outliers (Stevens, 2002). In the present study, Cook's distances were utilized to find influential outliers. Since all measures of Cook distances were not higher than 1, there were no univariate outliers identified in the dataset. Therefore, researcher preferred to keep those three cases in data set of the current study. Mahalanobis distance was used in order to determine whether there are multivariate outliers for each variable. The present findings indicated that four cases were out of the Chi-square distance. However, researcher preferred to keep those cases in data set of the current study.

4.1.1.4 Sample Size

Sample size has an important role in SEM as almost every statistical technique as (Raykov & Marcoulides, 2000). In general, there is no consensus on this issue.

For example, a minimum sample size of 100 or 200 seems adequate sample size for conducting structural equation modeling (Boomsma, 1985) while 5 or 10 observations per estimated parameter (Bentler & Chou, 1987) is appropriate. A sample size over 200 cases are recommended by Kline (2011) and Garver and Mentzer (1999) while using SEM analysis. Since 836 university students participated in the present study, the proposed model included data from 836 cases. Therefore, the sample was satisfactory enough to perform SEM analysis based criteria mentioned above.

4.1.1.5 Assumptions

Before running SEM, the assumptions of SEM were checked. The assumptions underlying SEM analysis include data without missing and outliers, independence of observations, multicollinearity, linearity, and homoscedasticity, univariate and multivariate normality, and a reasonable sample size (Tabachnick & Fidell, 2013).

4.1.1.5.1 Univariate and Multivariate Normality

The univariate normality of data distribution was examined by using Skewness, Kurtosis indexes, as suggested by Raykov and Marcoulides (2000) and also Q-Q plots of the variables entered into SEM analysis, as suggested by (Marden, 1998). When Skewness and Kurtosis indexes were close to zero, it might be said that distribution is close to normal (Tabachnick & Fidell, 2013). Additionally, Kline (2011) indicated that variables with indexes larger than 3 are problematic for the assumption of univariate normality since these variables are described as “extremely” skewed. As illustrated in Table 4.1, the skewness indexes ranged between -.854 and .817 and kurtosis indexes ranged between -1.017 and .286. As can be concluded from the skewness and kurtosis indexes presented in Table 4.1, normality assumption of path analysis was confirmed. Additionally, the frequency distribution (histogram) and Q-Q plots (quantile-quantile plot) were examined for checking normality visually. According to Field (2009), Q-Q plots are very useful

for research to understand whether data are normally distributed in case of large sample sizes. According to visual inspection of the histograms and Q-Q plots, the data are normally distributed in the current study.

Table 4.12

Indices of Normality for Study Variables

Variable	Skewness	Kurtosis
Career Indecision	.104	-.795
Career Exploration		
Intended-systematic Exploration	-.011	-.385
Environmental Exploration	-.178	-.353
Self- Exploration	-.108	-.276
Career decision making Self-Efficacy	.089	-.327
Career Influences		
Parental support	-.854	.286
Teacher support	-.479	-.280
Friend support	-.426	-.753
Ethnic-Gender Expectations	.387	-1.017
Academic Self-Efficacy	-.384	.028
Negative Social Events	.817	-.054

The multivariate normality of data distribution was examined by utilizing Mardia's test. The result of Mardia's test showed that the Mardia's coefficient is 132.457. That means the variables are not normally distributed. Since Maximum Likelihood estimation is recommended to utilize in the existence of multivariate normality (Kline, 2011), Maximum Likelihood estimation was utilized throughout the present study.

4.1.1.5.2 Linearity and Homoscedasticity

An implicit assumption of structural equation modeling is linearity (Hair et. al., 2010). The most common way to determine nonlinear patterns in the data is the visual examination of bivariate scatterplots (Kline, 2011; Tabachnick & Fidell, 2013). When the residuals are normally distributed and have uniform variances across all levels of the predictors, that means the assumption of homoscedasticity is met (Kline, 2011; p.111). According to Tabachnick and Fidell (2013), the visual examination of scatterplots should be examined in order to check the assumptions of linearity and homoscedasticity. Therefore, the assumptions of linearity and homoscedasticity were controlled by examining the visual examination of scatterplots. According to Mertler and Vannatta (2010), scatterplots should demonstrate elliptical shapes if variable combinations are normal. Figure 4.1 illustrates scatterplot matrix and scatterplot matrix displayed elliptical shapes indicating multivariate normality assumption was met.

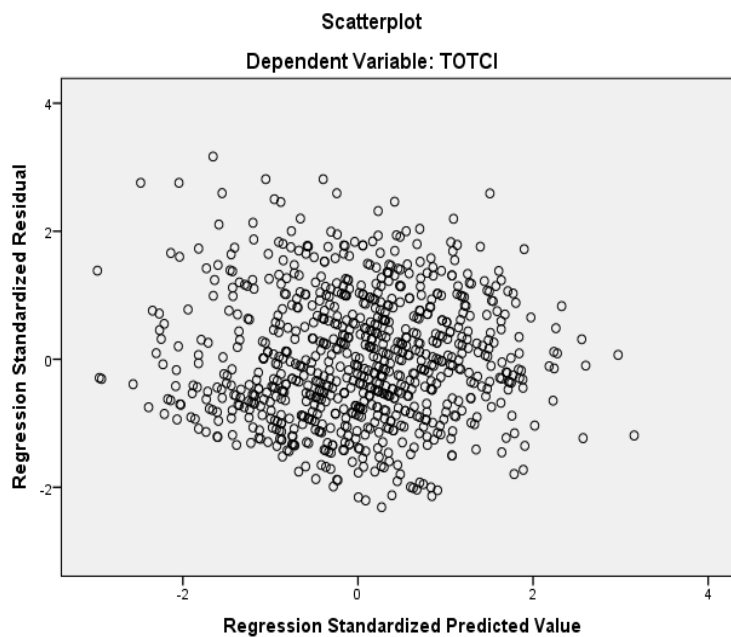


Figure 4.1 Scatterplot matrix of all study variables

Note. TOTCI: Career Indecision

As can be seen in Figure 4.2, the graphical evaluation of the residual plots indicated that residual values were equally and randomly spaced around the horizontal axis. In other words, a nonlinear relationship was not detected and also homogeneously distributed variances between variables. These results yielded that the assumptions of linearity and homoscedasticity were met.

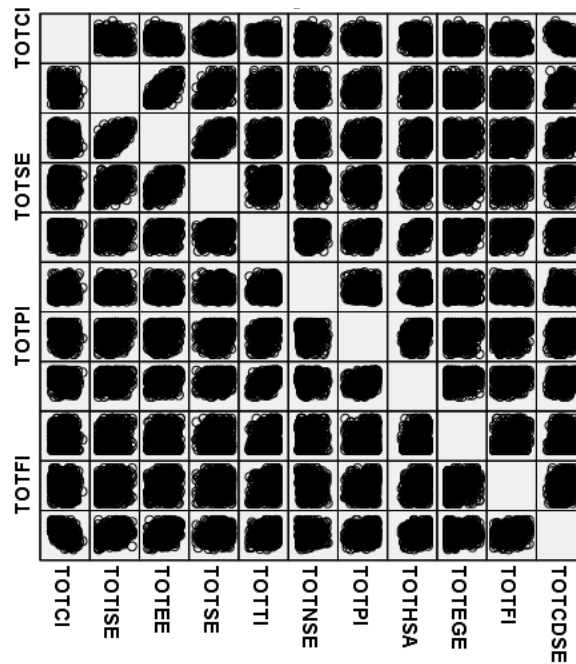


Figure 4.2 Scatterplots of standardized predicted values by standardized residuals

Note. TOTISE: Intended-systematic Exploration; TOTEE: Environmental Exploration; TOTSE: Self-Exploration; TOTCI: Career Indecision; TOTCDSE: Career decision making Self-Efficacy; TOTTI: Teacher support; TOTNSE: Negative Social Events; TOTPI: Parental support; TOTHS: Academic Self-Efficacy; TOTEG: Ethnic-Gender Expectations; TOTFI: Friend support

In other words, a nonlinear relationship was not detected. Additionally, the variances between study variables homogeneously distributed. These results revealed that the assumptions of linearity and homoscedasticity were met.

4.1.1.5.3 Multicollinearity

Multicollinearity means the level of the effect of any variable on another variable (Hair et al., 2010). Multicollinearity occurs when two or more independent variables are so highly correlated that they both essentially represent the same

underlying construct (Byrne, 2010; p. 68). Since multicollinearity might be a source of statistical and logical problems, the assumption of multicollinearity should be a check to understand whether there is a state of very high intercorrelations or inter-associations among the independent variables (Tabachnick & Fidell, 2013). As suggested by Tabachnick and Fidell (2013), the assumption of multicollinearity was checked by exploring bivariate correlation coefficients, the variance inflation factors (VIF) and tolerance values. According to Kline (2011), correlation coefficients must be lower than .85 while Stevens (2002) indicated that the correlation coefficients must be lower than .80. In the correlation matrix, the correlation coefficients ranged between .004 and .75. The highest value for VIF was 1.990 that far below the cut-off value 10 as suggested by Tabachnick and Fidell (2013). The tolerance values obtained in the present were from .10 to .92. That means all tolerance values were higher than .20 which is suggested by Tabachnick and Fidell (2013) for the assumptions of multicollinearity. In sum, the assumptions of multicollinearity were met.

4.1.1.5.4 Independent Observations

Hair et al. (1998, p. 667) defined the independent observation assumption as “a critical assumption” and they indicated that “the assumption of independent observation when measures obtained from each respondent are totally uncorrelated with the other responses in the sample”. In the current study, the researcher made an effort to ensure the data is independent while gathering data. Before collecting data, the researcher took the necessary precautions to avoid the situations that were a potential problem to violate independent observation assumption. As the data were gathered in the class, the researcher was in the classroom with the instructor while collecting data. The researcher made an endeavor to prevent any situation that might have to strive to prevent any action that might have caused the violation of this assumption. When researcher was in doubt about independent observation, the questionnaires fulfilled by each

participant had been in some way influenced by other participants were excluded. Data collection instruments were checked in order to understand whether participants completed all questionnaires after collecting data. The cases which were incomplete have been excluded.

In summary, preliminary data analysis were conducted in order to edit the data to prepare it for further analysis in the current study. Then, the assumptions of multicollinearity, homoscedasticity, independence of observations, the linearity of the relationships among variables, and normality were checked. The results indicated that all assumptions of SEM were met in the present study. Data collection measures were distributed to 1000 students studying at various departments of a public university in Eskisehir. Of the 1000 university students were invited to participate in the present study, 855 (85.5%) returned the data collection instruments. As a result of preliminary analyses, the data obtained from 19 university students were excluded from the dataset in the present study. The final sample of the present study involved the data obtained from 836 university students for descriptive statics, preliminary analysis, and structural equation modeling.

4.2 Descriptive Statistics

In this part, descriptive statistics for exogenous, endogenous and mediator variables were performed in order to examine minimum, maximum values, mean and standard deviation, relating to each subscale of all scales used in current study. SPSS 22 software was used to run the descriptive statistics and p value was adjusted as .005. The descriptive statistics appeared in Table 4.2.

4.2.1 Means and Standard Deviations

Before testing structural model, minimum, maximum values, mean and standard deviation for exogenous, endogenous and mediator variables were examined by performing the descriptive statistics. The name of study variable, the scale, and

subscale used in the present study, the number of scale items, variable name, scale name, minimum and maximum values of each study variable, the mean and standard deviation for each scale and subscale are provided in Table 4.2.



Table 4.2
Means and Standard Deviations of the Study Variables

Variable	Scale Name	Subscales Name	Sample	Item	Range				SD
					Potential		Actual		
					Min	Max	Min	Max	
Environmental Exploration	Career Exploration Survey	Environmental Exploration	836	6	30	6.00	29.00	17.42	4.50
Self-Exploration		Self-Exploration	836	5	25	5.00	25.00	16.39	4.15
Intended-systematic Exploration		Intended-systematic Exploration	836	3	15	3.00	15.00	8.19	2.63
Career Indecision	Career Decision Scale	Career Indecision	836	16	64	16.00	60.00	32.83	9.02
Career Decision Making Self-efficacy		Career Decision Self-efficacy Scale	836	25	75	58.00	125.00	93.28	13.08
Teacher support	Career Influence Inventory	Teachers' Influence	836	8	32	8.00	32.00	23.42	5.47
Negative Social Events	Career Influence Inventory	Negative Social Events	836	7	28	7.00	28.00	14.15	4.48
Parental Support	Career Influence Inventory	Parents' Influence	836	7	28	10.00	28.00	22.11	4.08
Academic Self-efficacy	Career Influence Inventory	High School Experiences and Self-efficacy	836	6	24	9.00	24.00	18.18	3.03
Ethnic-gender expectations	Career Influence Inventory	Ethnic-gender expectations	836	3	12	3.00	12.00	6.41	2.60
Friend Support	Career Influence Inventory	Friends' Influence	836	4	16	4.00	16.00	10.49	2.89

In the current study, university students' career exploration behaviors were measured by the Career Exploration Survey (Stumpf et al., 1983). Particularly, environmental exploration of university students was assessed by the Environmental Exploration subscale of Career Exploration Survey while self-exploration of university students was measured by Self-Exploration Subscale of Career Exploration Survey. Additionally, university students' intended-systematic exploration was assessed by the Intended-systematic Exploration subscale of Career Exploration Survey. The mean of environmental exploration score for the total sample was 17.42 ($SD = 4.50$) while the mean of self-exploration score was 16.39 ($SD = 4.15$). The mean score of 8.19 was found for intended-systematic exploration ($SD = 2.63$). That means participants of current study highly explore their own interests, values, skills and investigate the various career choices and acquire information about jobs, occupations, and organizations. However, university students did not tend to obtain information about their individual characteristics and the environment in an intended or systematic manner. In the present study, means of the Self-Exploration, Environmental Exploration and Intended-systematic Exploration subscale were compared to available means found in the previous studies (Esters, 2008; Kantén et al., 2016). These findings were similar to findings found in previous studies conducted with university students (Esters, 2008; Kantén et al., 2016).

Career indecision was assessed by Career Indecision subscale of Career Decision Scale (Osipow et al., 1976). In the current study, the descriptive analysis revealed that university students had a high level of career indecision ($M = 32.83$, $SD = 9.02$). A mean score of 32.83 was found for this 4-point Likert-type scale and it was similar to the level found by Büyükgoze- Kavas (2011) ($M = 31.43$, $SD = 8.68$) who conducted research with university students in Turkey ($N = 723$). Additionally, this finding was also similar to mean score found by Peng, Johanson, and Chang (2012) ($M = 37.10$, $SD = 8.76$), using the same scale in a sample of university students ($N = 647$) in China.

The career decision making self-efficacy of the university in Turkey ($N = 836$) was measured by using the CDSE-SF (Betz et al., 1996) and it was found that the mean score of decision making self-efficacy score was 93.28 ($SD = 13.08$). Consistent with previous studies which used the same scale in a sample of university students (Işık, 2012; Jin et al., 2012), this finding indicated the university students in Turkey generally held high career decision self-efficacy beliefs.

Career influences (Teacher support, Negative Social Events, Parental Support, Academic Self-efficacy, Ethnic-gender expectations, Friend Support) were measured by the Career Influence Inventory (Fisher & Stafford, 1999). In the current study, the mean of parental support score for the total sample ($N = 836$) was 22.11 ($SD = 4.08$). That means the strongest influential factor on the career indecision of university students was parental support. This finding is similar to finding found in the previous study conducted by Fisher and Stafford (1999) and Gyro (2006). Another influential factors on the career indecision of university students were academic self-efficacy ($M = 18.18$, $SD = 3.03$) and teacher support ($M = 23.42$, $SD = 5.47$). The factors of ethnic-gender expectations ($M = 6.41$, $SD = 2.60$), friend support ($M = 10.49$, $SD = 2.89$), and negative social events ($M = 14.5$, $SD = 4.48$) were perceived by university students as having low levels of influence on their career indecision level. These mean scores were similar to means scores obtained from university students in previous studies (Khasawneh, 2010).

4.2.2 Bivariate Correlations among variables

Before testing structural model, bivariate correlation analysis was performed in order to investigate how the relationships among the variables in the current study were related. A bivariate correlation described as a correlation between two variables (Field, 2009). According to Field (2009), the strength of relationship among variables can be assessed by these general guidelines;

- $.1 < | r | < .3$: The correlation coefficients between .10 and .30 represent the small/weak correlation

- $.3 < | r | < .5$: The correlation coefficients between .30 and .50 represent medium / moderate correlation

- $.5 < | r | \dots$: The correlation coefficients higher than .50 represent the large/strong correlation

Pearson correlations were calculated to comprehend relationships among study variables. In this study, the criterion suggested by Field (2009) was used to categorize the strength of correlation among study variables. Pearson correlation coefficients among scores of study variables were presented in Table 4.3. The results of bivariate correlation analysis were presented in Table 4.3.

Table 4. 3

Correlations among Study Variables (n = 836)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. ISE	1										
2. EE	.642**	1									
3. SE	.400**	.470**	1								
4. CI	-.186**	-.241**	-.034	1							
5. CDSE	.317**	.362**	.192**	-.472**	1						
6. TS	.173**	.207**	.163**	-.182**	.237**	1					
7. NSE	.030	.007	.069*	.047	.028	-.080*	1				
8. PS	.149**	.215**	.125**	-.240**	.237**	.485**	-.122**	1			
9. HSA	.186**	.249**	.181**	-.187**	.259**	.534**	-.082*	.379**	1		
10. EGE	.070*	.051	.052	.076*	.024	.200**	.131**	.062	.086*	1	
11. FS	.131**	.132**	.068*	-.135**	.196**	.401**	-.185**	.297**	.214**	.136**	1

Note. ISE: Intended-systematic Exploration; EE: Environmental Exploration; SE: Self-Exploration; CI: Career Indecision; CDSE: Career decision making Self-Efficacy; TS: Teacher support; NSE: Negative Social Events; PS: Parental support HSA: Academic Self-Efficacy; EGE: Ethnic-Gender Expectations; FS: Friend support * $p < .05$, ** $p < .01$

As shown in Table 4.3, career indecision was negatively associated with intended-systematic exploration ($r = -.17, p < .01$), environmental exploration ($r = -.25, p < .01$); teacher support ($r = -.19, p < .01$); parental support ($r = -.24, p < .01$); academic Self-efficacy ($r = -.19, p < .01$), ethnic-gender expectations ($r = .07, p < .01$) and friend support ($r = -.14, p < .01$); and unrelated to self-exploration ($r = -.03, p > .05$) and negative social events ($r = .05, p > .05$). Additionally, moderate negative associations between the career indecision and career decision making self-efficacy were observed when correlations were computed among study variables. ($r = -.47, p < .01$).

Correlations between three types of career exploration (intended-systematic exploration, environmental exploration, self-exploration), career influences (career decision making self-efficacy, teacher support, parental support, academic efficacy, friend support, negative social events and ethnic-gender expectations) and career indecision were calculated and presented in Table 4.3. As seen in Table 4.3, an increase in intended-systematic exploration was associated with an increase in environmental exploration ($r = .64, p < .01$) and self-exploration ($r = .40, p < .01$). In contrast, an increase in intended-systematic exploration ($r = -.19, p < .01$); environmental exploration ($r = -.24, p < .01$) was associated with a decrease in career indecision. Additionally, self-exploration was positively associated with environmental exploration ($r = .47, p < .01$). Also, moderate positive associations between the all career exploration types [intended-systematic exploration ($r = .32, p < .01$); environmental exploration ($r = .36, p < .01$); self-exploration ($r = .19, p < .01$)] and career decision making self-efficacy were observed when correlations were computed among study variables. The correlations among self-exploration and teacher support ($r = .16, p < .01$); negative social events ($r = .07, p < .01$); parental support ($r = .13, p < .01$); academic self-efficacy ($r = .18, p < .01$) were small and statistically significant. Intended-systematic exploration was positively associated with teacher support ($r = .17, p < .01$); parental support ($r = .15, p < .01$); academic self-efficacy ($r = .19, p < .01$), ethnic-gender expectations ($r = .07, p < .01$)

and friend support ($r = .13, p < .01$); and unrelated to negative social events ($r = .03, p > .05$). Similar to intended-systematic exploration, environmental exploration was positively associated with teacher support ($r = .21, p < .01$); parental support ($r = .22, p < .01$); academic self-efficacy ($r = .25, p < .01$) and friend support ($r = .13, p < .01$); and unrelated to negative social events ($r = .02, p > .05$) and ethnic-gender expectations ($r = .05, p > .05$).

Inconsistent with the expectations, negative social events [career indecision ($r = .05, p > .05$)] was unrelated to endogenous variable. These results indicated that university students participated in the current study did not perceive negative social events being associated with their career indecision. That means university students' experiences with external negative events or obstacles did not play a role in their career development and planning. In addition to this, university students did not perceive ethnic-gender expectations as a career influence since ethnic-gender expectations were found unrelated to career certainty and career indecision. That is to say, parents' and teachers' academic expectations of university students were not based upon their gender and/or ethnic group.

4.3 Model Testing

4.3.1 Measurement Model

Since validating the measurement model and testing the fitness of the structural model are two main steps of the structural equation modeling process; the measurement model was established and tested in the current study before testing the structural model. According to Byrne (1998), measurement model focuses on the link between latent variables and observed variables. As a first step, the twelve-factor confirmatory factor analysis (CFA) model was validated by conducting CFA to test the measurement model. In the current study, measurement model reflected the relationships among latent variables (intended-systematic exploration, self-exploration, environmental exploration, career

indecision, career decision making self-efficacy, parental support, teacher support, friend support, ethnic-gender expectations, academic self-efficacy, and negative social events) and their indicators. The posited measurement model comprised of 45 observed variables and twelve first-order latent constructs as shown in Figure 4.3. Maximum likelihood was used in measurement model estimation and evaluation process. As a second step, the generated model was tested for model-fit. The most common goodness-of-fit (GOF) indices were utilized to assess the model-fit, which explained in the following part.

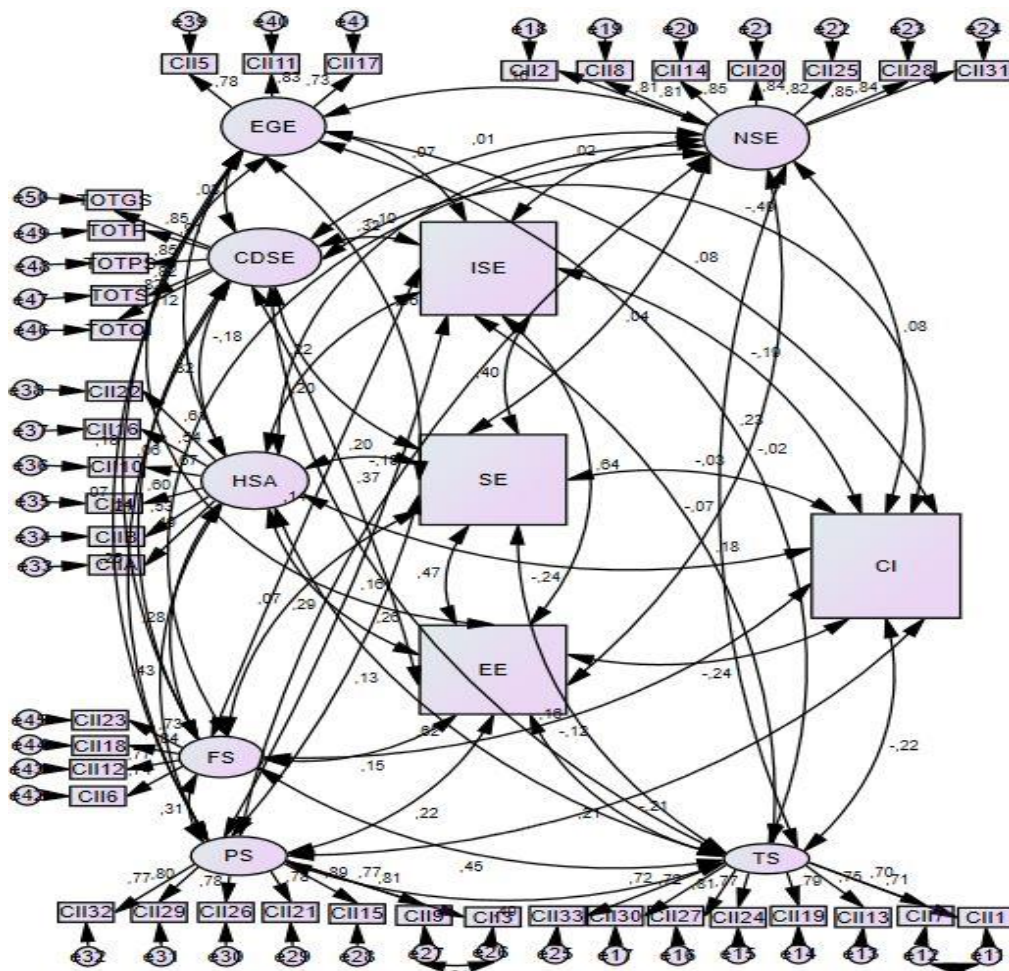


Figure 4.3. Measurement model

Note. ISE: Intended-systematic Exploration; EE: Environmental Exploration; SE: Self-Exploration; CI: Career Indecision; CDSE: Career decision making Self-Efficacy; TS: Teacher support; NSE: Negative Social Events; PS: Parental support; HSA: Academic Self-Efficacy; EGE: Ethnic-Gender Expectations; FS: Friend support

Initial results of CFA to test measurement model indicated that the model attained the acceptable estimates of the standardized parameters. The model indices were carefully examined in order to understand whether there were any changes could be made to improve the model. After a careful examination of the model indices, the existence of a large correlation between two error variables was discovered. The correlations were drawn among the error variables within their respective constructs (e11-e12; e26- e27). After efforts for improving the model fit were done, significant improvement was achieved. With the Table 3.3 which represent the fit indices in mind, to evaluate the overall model (measurement and proposed model), several fit indices were inspected in this part. χ^2 , χ^2/df , RMSEA, CFI, and SRMR fit indexes were utilized to assess the model-fit in the current study. Briefly, for, the χ^2/df ratio, Brown's (2006) ($2 < \chi^2/df < 5$) and Kline' (2011) ($\chi^2/df < 3$) recommendation were taken ($2 < \chi^2/df < 5$). Hair and et.al.'s (2010) suggestions were considered for evaluating the RMSEA (see Table 3.3). Hu and Bentler's (1999) suggestions were also taken into consideration while evaluating model fit. According to them, an SRMR should be less than .08, a CFI and an NNFI greater than .95. The results of CFA indicated that χ^2 was significant ($\chi^2(849) = 1745.356, p < .001$). χ^2/df value was 2.07, indicating a good fit as values lower than 3 have been recommended as a good fit (Kline, 2011). According to Hu and Bentler (1999), CFI should be ≥ 0.95 for good fit of the model. In the present study, CFA yielded that CFI value was .96 indicating good fit. The SRMR value was found .036 and RMSEA value was found as .036. RMSEA value was lower than a cut-off value (.06) suggested by Hu and Bentler (1999), indicating good fit. In addition to RMSEA, value for SRMR was .036 indicating the good fit (Byrne, 1998). Overall, CFA yielded that measurement model fits the data well since all values were acceptable values which explained in Table 3.3.

Additionally, unstandardized and standardized path coefficients were examined to validate the measurement model. The CFA results indicated that the unstandardized path coefficients indicated that all the indicators' loadings on their

respective constructs were statistically significant. All of the standardized regression coefficients were significant and ranged from .49 (medium) and .91 (large). A great majority of the standardized regression weights were above .70

In addition to unstandardized and standardized path coefficients, latent factor correlations among variables in the model were examined in order to interpret the results of the measurement model. The results of CFA revealed that 11 of 55 correlations were not statistically significant in current data. The significant correlations among variables were mostly low or moderate. The insignificant links were the ones between negative social events and self-exploration, intended-systematic exploration, environmental exploration. The links between friend support and self-exploration, ethnic-gender expectations and self-exploration, ethnic-gender expectations and intended-systematic exploration, ethnic-gender expectations and environmental exploration were also insignificant. In sum, the latent variables in the measurement model were related variables and distinct.

As a final step, standardized residual covariances were examined to understand whether there are any discrepancies existed between the proposed and estimated measurement model. Field (2009) indicated that values larger than -3.00 and +3.00 might be considered cause for concern. In the current study, standardized residuals fall between -3.00 and +3.00.

Table 4.4

Estimated Latent Correlations for Measurement Model (n = 836)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. ISE	1										
2. EE	.64***	1									
3. SE	.40***	.47***	1								
4. CI	-.19***	-.24***	-.03	1							
5. CDSE	.32***	.37***	.20***	-.49***	1						
6. TS	.19***	.21***	.16***	-.22***	.26***	1					
7. NSE	.02	-.02	.04	.08*	.01	-.07	1				
8. PS	.16***	.22***	.13***	-.21***	.25***	.49***	-.10**	1			
9. HSA	.22***	.29***	.20***	-.24***	.32***	.62***	.10*	.43***	1		
10. EGE	.07	.06	.06	.08*	.03	.23***	.17***	.07	.12***	1	
11. FS	.14***	.15***	.07	-.12**	.21***	.46***	.18***	.31***	.28***	.18***	1

Note. ISE: Intended-systematic Exploration; EE: Environmental Exploration; SE: Self-Exploration; CI: Career Indecision; CDSE: Career decision making Self-Efficacy; TS: Teacher support; NSE: Negative Social Events; PS: Parental support; HSA: Academic Self-Efficacy; EGE: Ethnic-Gender Expectations; FS: Friend support * $p < .05$, ** $p < .01$, *** $p < .001$.

In sum, the fit of the measurement model was acceptable since it had high fit index values, all factor loadings were strong, all subscale of each scale had significant intercorrelations among each other and no squared multiple correlations $<.20$ observed.

4.3.2 Structural Model

The structural equation modeling was employed to examine the direct and indirect associations among the career indecision, self-exploration, environmental exploration, intended-systematic exploration and career influences (career decision making self-efficacy, academic self-efficacy, parental support, friend support, teacher support, negative social events, and ethnic-gender expectation) of university students. The structural equation modeling (SEM) technique was used to test the proposed model in the current study. In other words, a model linking career indecision, self-exploration, environmental exploration, intended-systematic exploration and career influences (career decision making self-efficacy, academic self-efficacy, parental support, friend support, teacher support, negative social events, and ethnic-gender expectation) of university students (Figure 1.1) was tested. In this part, the structural model was established and tested. While interpreting the results of structural equation modeling, overall fit, parameter estimates and squared multiple correlation coefficients (R^2) were used as a criterion. χ^2 , χ^2/df , RMSEA, CFI, and SRMR fit indexes were utilized to assess the model-fit in the current study. Parameter estimates were calculated in order to examine total, indirect and direct effects. Squared multiple correlation coefficients latent factor correlations were conducted to ascertain variance in the mediator and outcome variables were accounted by the model.

4.3.3 Testing the Proposed Model

As shown in Figure 1.1, the model included seven exogenous variables. These were an individual system (career decision making self-efficacy, academic self-

efficacy), social system (teacher support, friend support, and parental support), and environmental/societal system (ethnic-gender expectations and negative social events). In addition to exogenous variables, the structural model consisted of one endogenous variable and three mediator variables. The endogenous variable was career indecision. The intended-systematic exploration, self-exploration and environmental exploration were defined as mediator variables in the current study. The latent correlations in the proposed model are demonstrated in Table 4.4 As presented in Table 4.5, the proposed model obtained the good fit [χ^2 (866) = 1985.692, $p = .00$; χ^2/df - ratio = 2.22; CFI= .95, NNFI = .95, RMSEA = .038] with SRMR .040 lower than the cut-off point suggested by Hair et. al. (2010), as well as CFI and NFI satisfying the criterion of .95.

Table 4.5

Summary of the Model Fit Statistics for the Hypothesized Model

	χ^2	<i>df</i>	χ^2/df	RMSEA	NNFI	SRMR	CFI
Proposed Model	1925.692	866	2.22	.038	.95	.038	.95

Note. RMSEA = root mean square error of approximation; CFI = Bentler comparative fit index; SRMR=the standardized RMR (SRMR); NNFI = non-normed fit index.

In the proposed model, all factor loadings of variables were statistically significant. The factor loadings were from .49 to .89. That means all factor loadings were large (see Appendix P).

In the structural part of the model, nine out of 16 regression coefficients (paths) were statistically significant. The significant coefficients ranged between .03 and .44, small to large in effect size magnitude. Among the significant nine paths, two paths were from exogenous (career decision making self-efficacy located in individual system; ethnic-gender expectations located in environmental/contextual system) to endogenous (career indecision), two paths were from exogenous (career decision making self-efficacy and academic self-efficacy

located in individual system to mediator (self-exploration), two paths were from exogenous (career decision making self-efficacy located in individual system, parental support located in social system) to mediator (environmental exploration), one path was from exogenous (career decision making self-efficacy located in individual system) to mediator (intended-systematic exploration), and two paths were from mediators (self-exploration and environmental exploration) to endogenous (career indecision). Among the non-significant seven paths, five paths were from exogenous (academic self-efficacy located in individual system; teacher support, friend support, parental support located in social system; negative social events located in environmental/ contextual system) to endogenous (career indecision), one path was from exogenous (ethnic-gender expectations located in environmental/ contextual system) to mediator (intended-systematic exploration), and one path was from mediators (intended-systematic exploration) to endogenous (career indecision). Figure 4.4 displays the standardized parameter estimates, significant and nonsignificant paths. The non-significant paths were shown in dashed arrows.

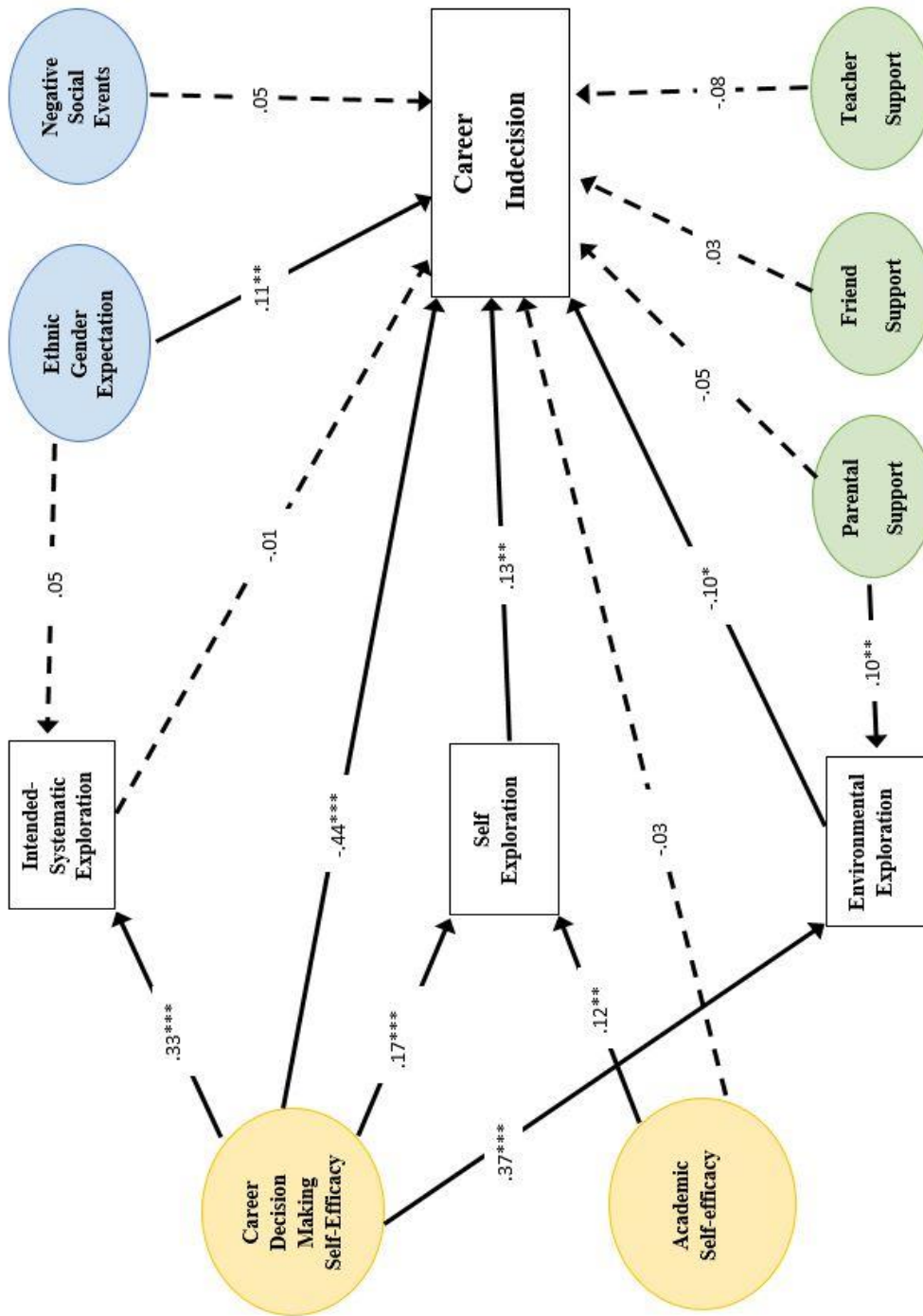


Figure 4.4 The hypothesized model with standardized estimates and significant and nonsignificant paths

Note. $- \rightarrow$ the line means the direct effect is non-significant \rightarrow line means the direct effect is significant,

The squared multiple correlation (R^2) coefficients for latent variables were examined for investigating the amount of variance in each latent variable that was explained by the model. The overall model explained 28 % of the variance in career indecision. The overall model also explained, 16 % of the variance in environmental exploration, 11 % of the variance in intended-systematic exploration, and 6 % of the variance in self-exploration (see Table 4.6).

Table 4.6
Squared Multiple Correlations for Latent Variables

	R^2	SE
Mediator variables		
Environmental Exploration	16***	,03
Intended-Systematic Exploration	11**	,02
Self-Exploration	6**	,02
Endogenous variable		
Career Indecision	28*	,03

Note. ** $p < .05$, *** $p < .01$, **** $p < .001$.

4.3.4 Direct and Indirect Effects

The direct and indirect associations among exogenous variables (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic-gender expectations, and negative social events), endogenous variable (career indecision) and mediator variables (intended-systematic exploration, self-exploration, environmental exploration) were examined. The bootstrap procedure was utilized for testing mediation since the assumption of multivariate normality was not met in the current study. Zhao, Lynch, and Chen (2010) suggested that the bootstrapping method should be conducted when the problem of multivariate normality occurs in studies. As suggested by Bollen and Stine (1990), Bias-corrected (BC) percentile intervals with 95 % confidence were also reported. As seen in Table 4.7, the bootstrapped

results of direct, indirect and total estimates without and with mediators were provided in Table 4.7.

Table 4.7

Bootstrapped Results of Direct, Indirect and Total Effects

Path	β	<i>p</i>	BC Interval
Direct Effects			
Career Decision Making Self-Efficacy → Career Indecision	-.440	.001	(-.510, .367)
Academic Self-Efficacy → Career Indecision	-.033	.514	(-.145, .071)
Teacher Support → Career Indecision	-.084	.089	(-.194, .014)
Friend Support → Career Indecision	.032	.429	(-.044, .108)
Parental Support → Career Indecision	-.051	.214	(-.128, .029)
Ethnic - Gender Expectations → Career Indecision	.105	.006	(.031, .176)
Negative Social Events → Career Indecision	.050	.121	(-.016, .117)
Career Decision Making Self-Efficacy → Self-Exploration	.171	.001	(.103, .249)
Career Decision Making Self-Efficacy → Environmental Exploration	.368	.001	(.299, .435)
Career Decision Making Self-Efficacy → Intended-Systematic Exploration	.331	.001	(.266, .401)
Ethnic - Gender Expectations → Intended-Systematic Exploration	.045	.159	(-.017, .107)
Academic Self-Efficacy → Self-Exploration	.124	.003	(.042, .204)
Parental Support → Environmental Exploration	.096	.002	(.037, .151)
Self-Exploration → Career Indecision	.125	.002	(.054, .191)
Environmental Exploration → Career Indecision	-.097	.034	(-.180, -.008)
Intended-Systematic Exploration → Career Indecision	-.008	.861	(-.089, .73)
Indirect Effects			
Parental Support → Environmental Exploration → Career Indecision	-.009	.019	(-.023, -.002)
Academic Self-Efficacy → Self-Exploration → Career Indecision	.015	.001	(.005, .033)
Career Decision Making Self-Efficacy → Self-Exploration → Career Indecision	.013	.006	(.004, .028)
Ethnic - Gender Expectations → Intended-Systematic Exploration → Career Indecision	.002	.644	(-.007, .003)
Career Decision Making Self-Efficacy → Environmental Exploration → Career Indecision	-.016	.024	(-.033, -.002)
Total Effects			
Parental Support → Career Indecision	-.061	.002	(-.138, .017)
Academic Self-Efficacy → Career Indecision	-.018	.696	(-.134, .088)
Career Decision Making Self-Efficacy → Career Indecision	-.457	.001	(-.516, -.390)
Ethnic - Gender Expectations → Intended-Systematic Exploration	.045	.159	(-.017, .107)

Note. Reported BC intervals are the bias-corrected 95 % confidence interval of estimates resulting from bootstrap analysis

Bootstrapped results indicated that the direct effects from exogenous variables to endogenous variable were statistically significant, except for friend support, academic self-efficacy, parental support, negative social events, and teacher support. Especially, the direct effects of ethnic gender expectation ($\beta = .11, p < .01$) on career indecision was significant, but small in effect. In addition, the direct effects of career decision making self-efficacy ($\beta = -.44, p < .001$) on career indecision was significant, moderate in effect.

One out of six direct effects of exogenous variables on mediator variables were statistically significant. Ethnic-gender expectations did not have direct effect on the intended-systematic exploration as a mediator variable ($\beta = .05, p > .05$). The direct effects of career decision making self-efficacy ($\beta = .17, p < .001$), academic self-efficacy ($\beta = .12, p < .01$) on self-exploration were significant, but small in effect. The direct effects of career decision making self-efficacy ($\beta = .37, p < .001$) and parental support ($\beta = .10, p < .01$) on environmental exploration were also significant. Only career decision making self-efficacy among exogenous variables ($\beta = .33, p < .001$) has direct effect on intended-systematic exploration. The direct effect of career decision making self-efficacy on intended-systematic exploration was moderate, while others were weak.

The indirect effect of career decision making self-efficacy to career indecision via environmental exploration was significant and negative ($\beta = -.016, p < .001$). In addition to this, the indirect effect of academic self-efficacy to career indecision via self-exploration was significant and positive ($\beta = .015, p < .001$). The indirect effects of parental support on the career indecision via environmental exploration were significant, negative and weak ($\beta = -.009, p < .001$). The indirect effect of ethnic-gender expectations to career indecision via intended-systematic exploration was non-significant ($\beta = .00, p > .05$). Contrary to expectations, intended-systematic exploration did not mediate the relationship between ethnic-gender expectations and career indecision. That is, variables located in the

individual system were closely related to university students' career indecision. Conversely, an only parental support located in the social system was statistically linked.

4.3.5 Hypotheses Testing

In this part, the research hypotheses mentioned earlier in introduction part were discussed.

4.3.5.1 Direct Effects

The Direct Effects from Exogenous Variables to Endogenous Variables

Individual system:

Hypothesis 1: Career decision making self-efficacy will significantly and directly be related to career indecision. The hypothesis as **supported** as there was a negative and significant relationship ($\beta = -.44, p < .001$).

Hypothesis 2: Academic self-efficacy will significantly and directly be related to career indecision. The hypothesis was **rejected** because academic self-efficacy was not significantly related to career indecision indirectly ($\beta = -.03, p > .05$)

Social system:

Hypothesis 3: Parental support will significantly and directly be related to career indecision. The hypothesis was **disapproved** because parental support was not related to career indecision directly ($\beta = -.05, p > .05$)

Hypothesis 4: Friend support will significantly and directly be related to career indecision. The hypothesis was **refuted** since friend support was not associated with career indecision directly ($\beta = .03, p > .05$)

Hypothesis 5: Teacher support will significantly and directly be related to career indecision. The non-significant path coefficient of -.08 clearly displays that there was no significant relationship between teacher support and career indecision. In other words, the hypothesis was **refuted**.

Environmental/Societal System:

Hypothesis 6: Ethnic-gender expectations will significantly and directly be related to career indecision. The results of the study indicated that ethnic-gender expectations were associated with career indecision directly ($\beta = .11, p < .01$). That means this hypothesis was **approved**.

Hypothesis 7: Negative social events will significantly and directly be related to career indecision. The hypothesis was **refuted** by the results. Accordingly, negative social events were not associated with career indecision directly ($\beta = .05, p > .05$).

The Direct Effects from Exogenous Variables to Mediator Variables

Individual system:

Hypothesis 8: Career decision making self-efficacy will significantly and directly be related to self-exploration. The hypothesis was **justified** since career decision making self-efficacy was positively associated with self-exploration ($\beta = .17, p < .001$).

Hypothesis 9: Career decision making self-efficacy will significantly and directly be related to environmental exploration. The hypothesis was **verified** as there was a significant relationship between career decision making self-efficacy and environmental exploration ($\beta = .37, p < .001$).

Hypothesis 10: Career decision making self-efficacy will significantly and directly be related to intended-systematic exploration. The results of the study indicated

that career decision making self-efficacy was related to intended-systematic exploration directly ($\beta = .33, p < .001$). That means this hypothesis was **validated**.

Hypothesis 11: Academic self-efficacy will significantly and directly be related to self-exploration. The hypothesis was **confirmed** as academic self-efficacy was positively associated with self-exploration ($\beta = .12, p < .01$).

Social system:

Hypothesis 12: Parental support will significantly and directly be related to environmental exploration. This hypothesis was **validated** as there was a significant relationship between parental support and environmental exploration ($\beta = .10, p < .01$).

Environmental/Societal system:

Hypothesis 13: Ethnic- gender expectations will significantly and directly be related to intended-systematic exploration. The hypothesis was **refuted** because ethnic- gender expectations were not related to intended-systematic exploration directly ($\beta = .05, p > .05$).

The Direct Effects from Mediator Variables to Endogenous Variables

Hypothesis 14: There will be a significant relationship between self-exploration and career indecision. The hypothesis was **justified** since self-exploration was positively associated with career indecision ($\beta = .13, p < .01$).

Hypothesis 15: There will be a significant relationship between environmental exploration and career indecision. The results **verified** this hypothesis that career indecision was related to environmental exploration ($\beta = -.10, p < .01$).

Hypothesis 16: There will be a significant relationship between intended-systematic exploration and career indecision. The hypothesis was **refuted** by the results. Accordingly, intended-systematic exploration was not associated with career indecision directly ($\beta = -.01, p > .05$).

4.3.5.2 Indirect Effects

Individual system:

Hypothesis 17: Career decision making self-efficacy will significantly and indirectly be related to career indecision through the environmental exploration. The hypothesis was verified. The mediation effect was significant and negative, $\beta = -.016, p = .024, 95\% [CI -.033, -.002]$, but partial.

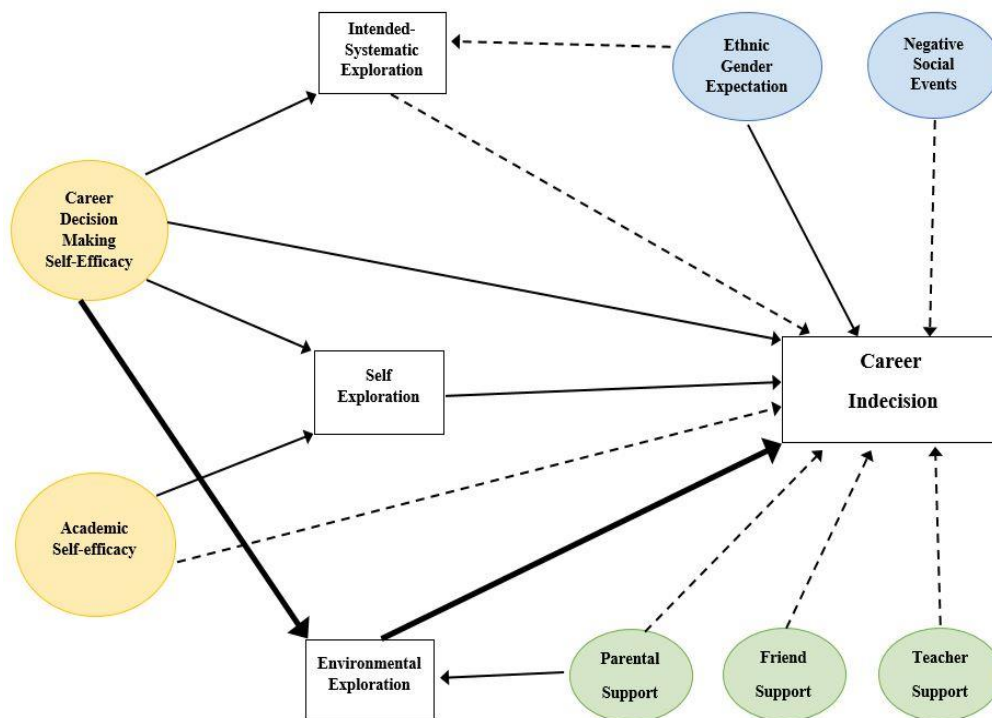


Figure 4.5 The path from Career decision making self-efficacy to career indecision through environmental exploration.

Note. $- \rightarrow$ the line means the direct effect is non-significant, \rightarrow the line means the direct effect is significant, the line shows the direction of the mediation effect

Hypothesis 18: Career decision making self-efficacy will significantly and indirectly be related to career indecision through the self- exploration. The hypothesis was approved. The mediation effect was significant and positive, $\beta = .013$, $p = .006$, 95 % [CI .004, .028], but partial.

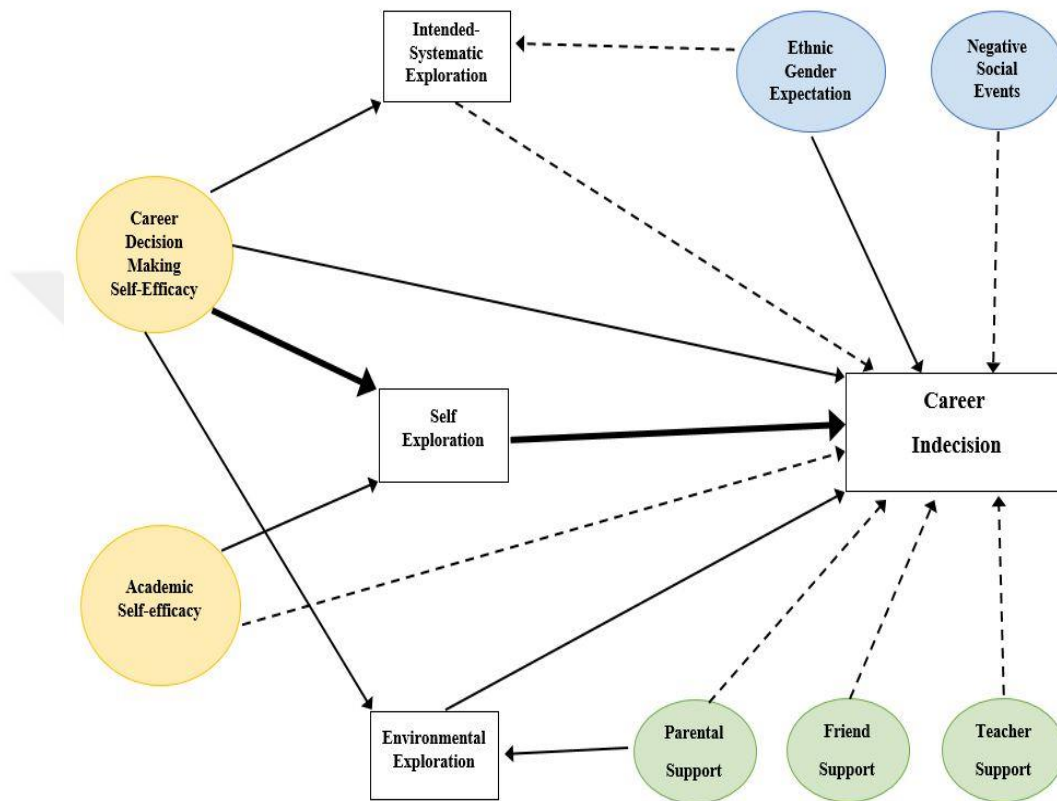


Figure 4.6 The path from career decision making self-efficacy to career indecision through self-exploration

Note. $- \rightarrow$ the line means the direct effect is non- significant, \rightarrow the line means the direct effect the is \Rightarrow significant, the line shows the direction of the mediation effect

Hypothesis 19: Academic self-efficacy will significantly and indirectly be related to career indecision through the self- exploration. The hypothesis was validated. The mediation effect was significant, positive and complete, $\beta = .015$, $p = .001$, 95 % [CI .005, .033].

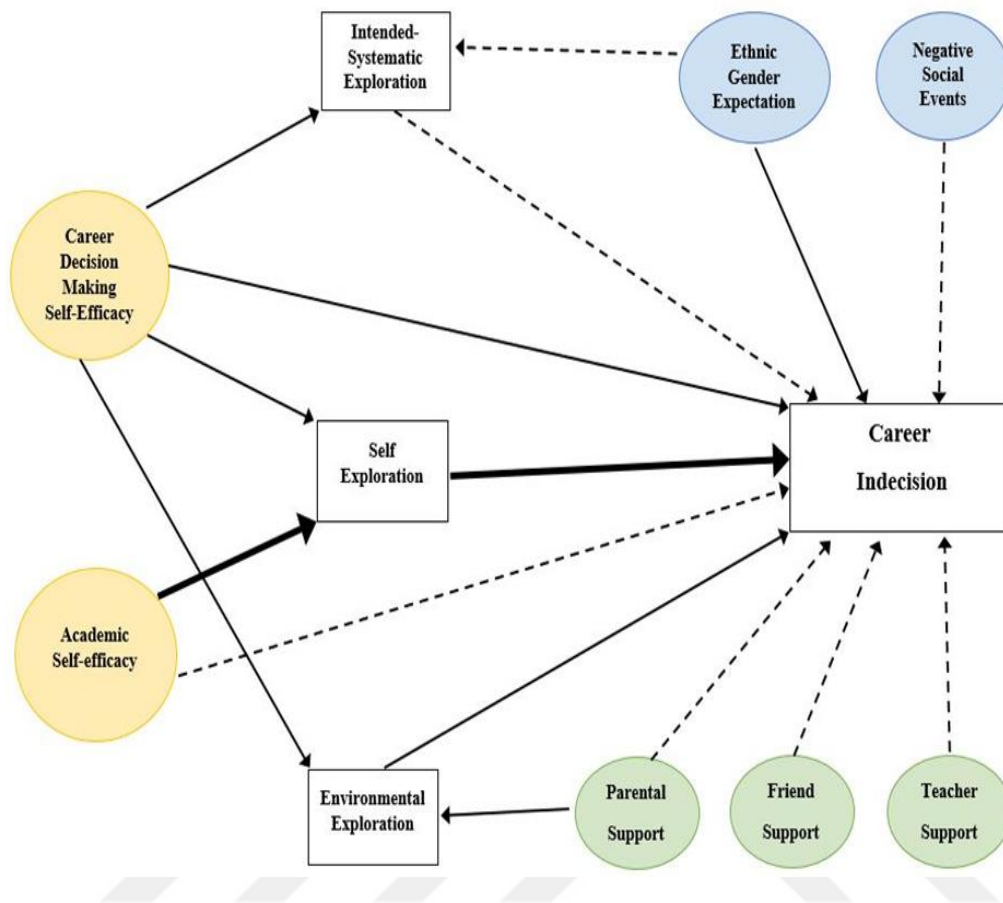


Figure 4.7 The path from academic self-efficacy to career indecision through self-exploration

Note. $- \rightarrow$ the line means the direct effect is non-significant, \rightarrow the line means the direct effect is significant, the line shows the direction of the mediation effect

Social system:

Hypothesis 20: Parental support will significantly and indirectly be related to career indecision through the environmental exploration. The hypothesis was approved. The mediation effect was significant, negative and full, $\beta = -.009$, $p = .019$, 95 % [CI -.023, -.002].

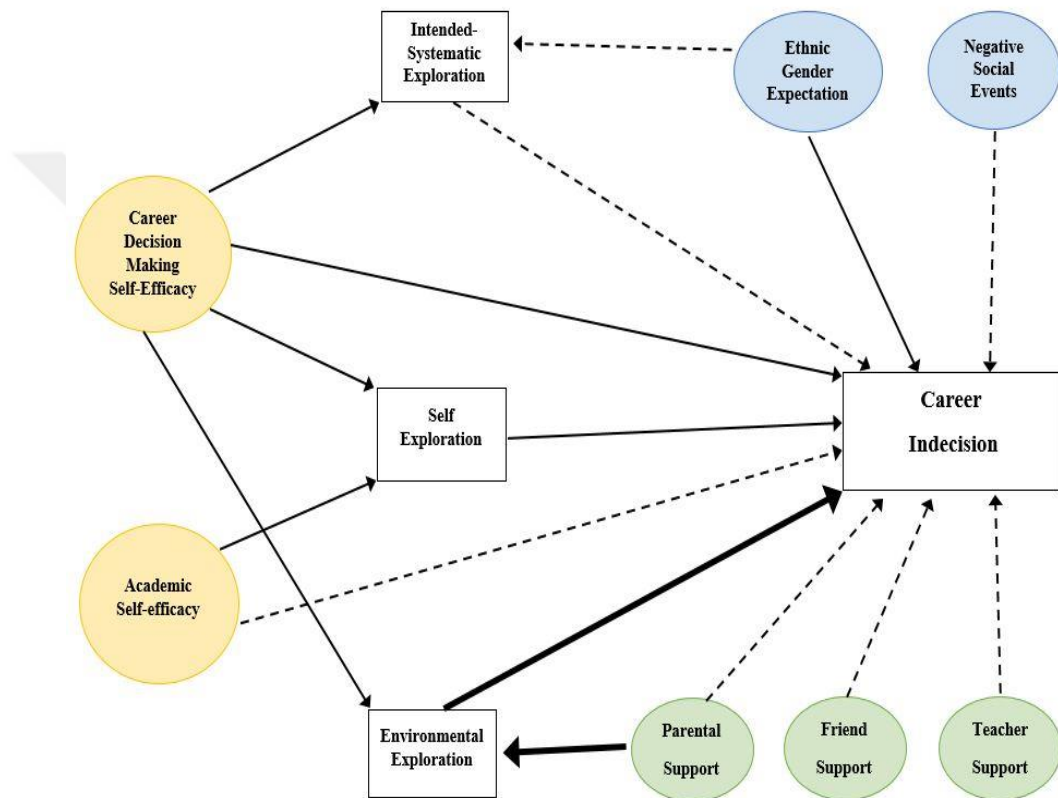


Figure 4.8 The path from parental support to career indecision through environmental exploration

Note. - -> the line means the direct effect is non- significant, → the line means the direct effect the is → significant, the line shows the direction of the mediation effect

Environmental/Societal system:

Hypothesis 21: Ethnic- gender expectations will significantly and indirectly be related to career indecision through the intended-systematic exploration. The hypothesis was rejected. The mediation effect was nonsignificant, $\beta = .002$, $p = .644$, 95 % [CI -.007, .003].

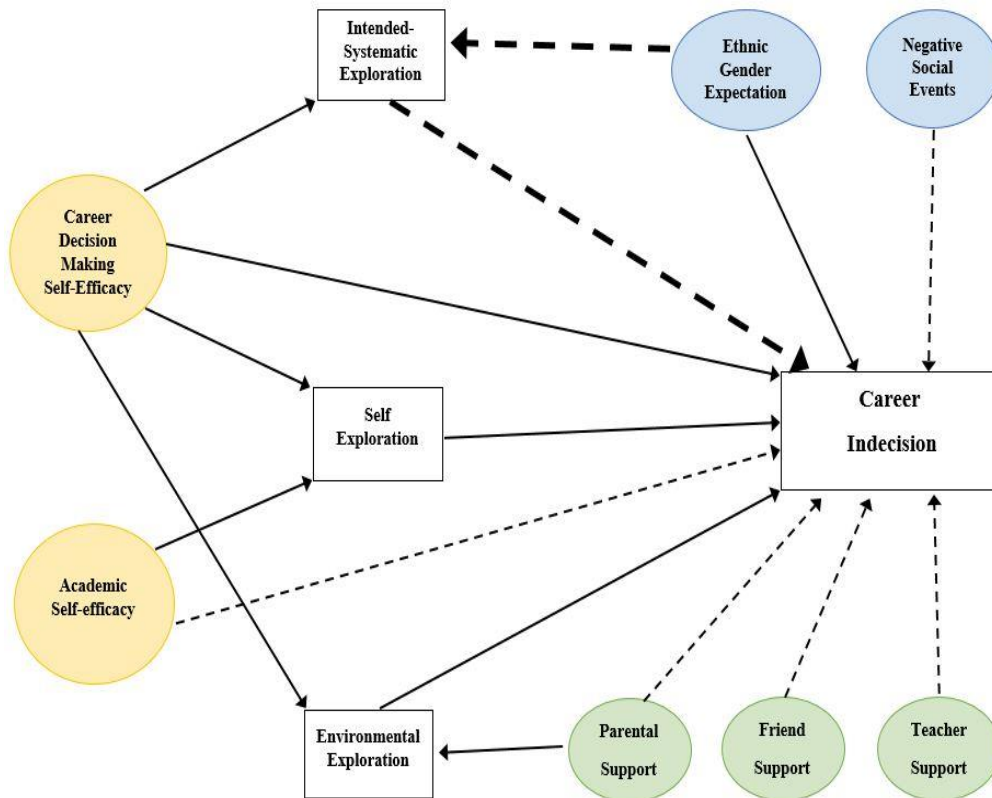


Figure 4.9 The path from ethnic-gender expectations to career indecision through intended-systematic exploration

Note. $- \rightarrow$ the line means the direct effect is non- significant, \rightarrow the line means the direct effect the is \rightarrow significant, the line shows the direction of the mediation effect

4.4. Summary of the Results

Structural equation modeling analysis indicated that all of the indicators in the model were explained by their corresponding factors significantly. The findings of the current study showed the measurement and structural models fitted data well. The findings indicated that the career decision making self-efficacy had a moderate total standardized effect on career indecision. However, ethnic-gender expectation, as an exogenous variable, and self-exploration and environmental exploration, as mediator variables, had a small total effect on explaining career indecision. Teacher support, friend support, parental support, negative social events and intended-systematic exploration was not associated with career indecision directly. According to results, university students who experienced greater self-confidence regarding career decision making were more likely to engage in activities related to self-exploration, environmental exploration, and intended-systematic exploration. The findings of the current study indicated that self-exploration consistently received a significant positive effect from academic self-efficacy while environmental exploration had significant positive on parental support. The ethnic-gender expectations were not related to intended-systematic exploration directly.

Although the direct effect between career indecision and parental support was not significant, this relationship became significant when environmental exploration was introduced as a mediating variable. Similarly, the direct effect between career indecision and academic self-efficacy was not significant, this relationship became significant when self-exploration was introduced as a mediating variable. However, this relationship between ethnic- gender expectations and career indecision did not become significant even when intended-systematic exploration was introduced as a mediating variable. Additionally, career decision making self-efficacy was significantly and indirectly related to career indecision through the self-exploration and environmental exploration. The role played by environmental

exploration, career decision making self-efficacy, academic self-efficacy, the ethnic-gender expectation in the analysis was in the expected direction. However, friend support, teacher support and negative social events, which are the career influences, deviated from expectation in a number of ways. The findings of the current study indicated that the individual system was more effective on university student's level of career indecision rather than social and environmental/societal system.



CHAPTER 5

DISCUSSION

The discussion chapter consists of two main parts. In the first part, the findings of the current study were summarized and, discussion of the findings in relation to career development literature was provided. In the second part, implications and recommendation for future research and practice were provided.

5.1 Discussion of Major Findings

Results indicated that Career Exploration Survey translated into Turkish is a valid and reliable measure to assess career exploration behaviors of university students. Additionally, Turkish translated Career Influence Inventory that aimed to assess university students' perceived career influences on career development and planning yielded satisfactory validity and reliability results in the current study. Leong and Hartung (2000) have underlined the necessity of examining the reliability and validity of career assessment instruments across diverse groups. When the results of current study examined from the perspective Leung and Hartung (2000), it can be concluded that this study contributed to the literature by adapting Career Exploration Survey and Career Influence Inventory to Turkish and making the cross-cultural assessment of these instruments. Zhang et al. (2018) discussed the issue of using subscales or scales that measure the career influences. They indicated that the subscales or scales, which assess the teacher support, generally used in studies for examining the influence of teacher support on student's academic achievement and well-being rather than career development. Thus this study aims to fulfill the gap in the literature which mentioned by Zhang et al. (2018).

Drawing on Systems Theory Framework, structural equation modeling was utilized to test proposed model in which there were seven exogenous variables and three mediators of career indecision. Particularly, the relationships among career indecision self-exploration, environmental exploration and intended-systematic exploration and career influences (career decision making self-efficacy, academic self-efficacy, teacher support, friend support, parental support, ethnic-gender expectations, negative social events) of university students were examined to gain insight into antecedents of career indecision among university students in Turkey. Consistent with the tenets of Systems Theory Framework (STF), results indicated that factors located in intercorrelated systems are directly or indirectly related to career indecision and career exploration of university students. For instance, it was found that environmental exploration was predicted by parental support located in the social system ($\beta = .10, p < .01$), while career decision making self-efficacy in individual system predicted negatively career indecision ($\beta = -.44, p < .001$). This finding is in agreement with findings of previous studies conducted by adopting STF (Bridgstock, 2007; Byrne, 2007; Cassó-Holmberg, 2013). In Bridgstock's (2007) study, individual system, social system, and the environmental/societal system found influences on career decision making of university students.

The individual system of influences purposefully locates at the center of systems in Systems Theory Framework of career development (STF) (McMahon, Watson, & Patton, 2014). The central location of the individual system of influences in the STF means that individual factors have a key role in career decision making process (McMahon, 2002). Therefore, it might be concluded that these findings are consistent with the assumptions of STF since career decision making self-efficacy and academic self-efficacy which are located in the individual system had the highest and statistically significant total effects on career indecision via all their presumed pathways. This finding supported the findings of previous studies done by Bridgstock (2007), Byrne (2007) who used STF as a theoretical approach

in order to understand the influential factors on career decision. For instance, Byrne (2007) found that factors in the individual and social systems were more influential than factors in the environmental/societal system of the STF. However, this finding is somewhat inconsistent with McMahon et al.'s (2008) and Albien and Naidoo's (2016) study. McMahon et al. (2008) and Albien and Naidoo (2016) found that parents in a social system are more influential than individual and environmental/ societal system of STF on career decision of disadvantaged South African adolescents. Similarly, Albien (2013) found that social systems influences were the most prominent influences while high self-efficacy beliefs and expectation in the individual system were found as influential factors on career-related choices. One possible explanation of the difference between the current study's finding and previous studies' findings might be related to age. Participants of the current study were university students while previous studies conducted to understand the career decision making of adolescents.

Additionally, the research aimed to determine if one's level of career exploration (intended-systematic exploration, self-exploration, environmental exploration) would mediate the relationships between career influences and career indecision of young adults. Most of the hypotheses were partially or fully supported. Similar to previous studies (Blustein et al., 1994), the present study has focused on sub-dimensions of career exploration, which are self-exploration, environmental exploration, and intended-systematic exploration, since the level of career influences might be shaped by different sub-dimensions of career exploration. Blustein et al (1994) have found that intended and systematic career exploratory activities are closely related to progress in career decision making. However, the findings related to intended-systematic career exploration is inconsistent with Blustein et al's (1994) study.

The findings revealed that participants were primarily driven by self-exploration, environmental exploration, career decision making self-efficacy, parental support

and ethnic-gender expectations while making a career decision. For the most part, findings of the current study were consistent with previous studies (Büyükgöze-Kavas, 2011; Cheung & Arnold, 2014; Jadidian & Duffy, 2012; Leung et al., 2011; Makki et al., 2015; Walker & Tracey, 2012,).

5.1.1 Discussion of Findings Related to the Individual System

University students' self-efficacy in career decision making was found as an important factor for explaining their career exploration behavior and career indecision. This finding meant that the four hypothesized relationships were supported: there would be a significant relationship between career decision making self-efficacy and career indecision; there would be a significant relationship between career decision making self-efficacy and self-exploration; there would be a significant relationship between career decision making self-efficacy and environmental exploration and finally, there would be a significant relationship between career decision making self-efficacy and intended-systematic exploration.

The significant and negative relationship between career indecision and career decision making self-efficacy showed that university students with higher level competence in career decision making reported that they were less career undecided about their career path. This finding was also supported by earlier studies (Büyükgöze-Kavas, 2011; Jadidian & Duffy, 2012; Penn & Lent, 2018; Walker & Tracey, 2012).

Following hypotheses were related to the relationship between academic self-efficacy and career development outcomes, including self-exploration behavior and career indecision. Firstly, it was hypothesized that there would be a direct significant relationship between academic self-efficacy and career indecision. The hypothesis was rejected because academic self-efficacy was not significantly related to career indecision. Secondly, it was hypothesized that self-exploration would consistently receive a significant positive effect from academic self-

efficacy. The higher academic self-efficacy beliefs register adequacy in self-career exploration. Lastly, it was hypothesized that academic self-efficacy would significantly and indirectly be related to career indecision through the self-exploration. The hypothesis was validated. The mediation effect was significant, positive and complete. Participants in the present study who had higher levels of academic self-efficacy beliefs reported higher levels of career exploration. This finding aligns with past research that has associated academic self-efficacy beliefs with career development outcomes (Avara, 2015; Kim & Yun, 2015, Wright, 2014). The development of academic self-efficacy of university students seems to be a strong factor preparing individuals to deal with career indecision by improving their career exploration skills (Kim & Yun, 2015, Wright, 2014).

Hypothesis 8, Hypothesis 9 and Hypothesis 10 proposed a significant relationship between career decision making self-efficacy and career exploration behaviors. Three sub-hypotheses were confirmed and all significant relationship was positive. The findings of the current study showed that university students who experienced greater self-confidence in regards to career decision making were more likely to engage in activities related to self-exploration, environmental exploration, and intended-systematic exploration. The notion of the importance of career decision making self-efficacy in the career exploration process has supported this finding (An & Lee, 2017; Gushue, 2006; Kanten et al., 2016 Rogers et al., 2008, Yoshizaki & Hiraoka, 2015). Lent, Brown, and Hackett (1994) indicated that university students with high career decision making self-efficacy are more proactive in obtaining career information from multiple sources. That means those with high career decision making self-efficacy in the current study were engaging in more career exploration activities. This finding was in line with Kanten et al. (2016) as they reported the statistically significant direct effect of career decision making self-efficacy on self-exploration and intended-systematic exploration in a sample of tourism and hotel management students in Turkey.

A common finding in the career-related literature is a correlation between career decision making self-efficacy and career exploration (e.g. Creed, Patton, & Prideaux, 2007; Henis, 2000; Yoshizaki & Hiraoka, 2015; Kanten et al., 2016). In the current study focused on the influence career decision making self-efficacy on career exploration behaviors. It was hypothesized that career decision making self-efficacy would significantly and indirectly be related to career indecision through the environmental exploration. The hypothesis was verified. The mediation effect was significant and negative but partial. This is somewhat inconsistent with previous studies reporting individual with high career decision making self-efficacy tend to engage in more career exploration behavior, which consequently decreased career indecision (Creed et al., 2017; Stringer, Kerpelman, & Skorikov, 2011; Park et al., 2017; Sadeghi et al., 2011; Vignoli, 2015). Participants in the current study may not have collected yet new information on jobs, organizations, occupations or industries. This might be due to the competence they have in gathering information and their high level of career decision making self-efficacy which might have enabled them to decide an occupational interest or career path.

Hypothesis 18 indicated that career decision making self-efficacy would significantly and indirectly be related to career indecision through the self-exploration. The hypothesis was approved. The mediation effect was significant and positive. A higher level of career decision making self-efficacy of university students facilitated their environmental exploration behavior and that facilitation did lead to a decrease in their career indecision level. This finding suggested that university students are more likely to have confidence in their abilities to complete the task when they engage self-exploration activities. This is consistent with previous studies reporting a positive relationship between career decision making self-efficacy and career exploration (An & Lee, 2017; Creed et al., 2007; Gushue, 2006; Kanten et al., 2016; Yoshizaki & Hiraoka, 2015). This research

finding supported by previous studies (Jadidian & Duffy, 2012; Stringer, Kerpelman, & Skorikov, 2011; Vignoli, 2015).

5.1.2 Discussion of Findings Related to the Social System

The first hypothesis related to the social system was that the variables involved in the social system (parental support, friend support, teacher support) would significantly and directly be related to career indecision. The findings of the current study did not verify these hypotheses; the variables involved in the social system (parental support, friend support, teacher support) were not significantly and directly associated with career indecision of university students.

It was hypothesized that there would be a significant relationship between parental support and career indecision. The hypothesis was disapproved because parental support was not related to career indecision directly. While this finding is consistent with existing literature (e.g., Büyükgöze-Kavas, 2011; Vignoli, 2009), some of studies are not in line with this finding (e.g., Cheung & Arnold, 2014; Fouad et al., 2010; Keny & Bledsoe, 2005; Koumoundourou, Tsaousis, & Kounenou, 2011; Marcionetti, 2014; Slaten & Baskin, 2014). Büyükgöze Kavas (2011) also failed to find a significant direct effect of parental strictness/supervision on career indecision of university students. Similarly, Vignoli (2009) reported that there is no significant effect of authoritarian parenting on career indecision and inadequate career exploration. One possible explanation for the unobserved differences between parental support and career indecision is using information and communication technology. The necessary information for making well-informed career decision may have been learned by university students from other electronic sources rather than parents. Another explanation for this finding may be related to types of support. As mention in Chapter two, there are four types of support: emotional, informational, appraisal and instrumental support. The items of Parent Influence subscale of Career Influence Inventory seems to examine the “emotional support” which means the perception

of feeling accepted and valued regardless of the weakness of individuals (Malecki & Demaray, 2003). Participants of the current study may not have got emotional support from their parents although they might have received informational, appraisal or instrumental support. Therefore, it is not sure whether participants of current study receive informational, appraisal or instrumental support from their parents since the scale items were not related to other types of support. Additionally, instrumental and appraisal support appear to have more benefits than emotional and informational support according to individuals' alignment with stressors (Cohen & Willis, 1985). Since the influence of emotional support from family examined in the current study, participants of the current study may not have perceived their support given by family as a beneficial. Consistent with this discussion, Mutlu and Oğur (2017) in their study designed based on Systems Theory Framework found that high school students perceived their family as career influence on their career-related choice when their family gave information or advice and evaluative feedback (instrumental support) or supported financial aid and material resources, namely (appraisal support). Another explanation for this finding may be related to the characteristics of the sample in the current study. In literature, parents' occupation, parents' education level, social economic status (SES) and the primary community in which one was raised has role in career indecision university students (Ali, McWhirter, & Chronister, 2005; Hsieh & Huang, 2014; McWhirter, Crothers & Rasheed, 2000; Roach, 2010). Further studies might focus on examining the role of parents' occupation, parents' education level, SES on career indecision of university students.

University students who perceived support from their friends were expected to have a lower level of career indecision than those did not get support from friends. The current study's results showed that friend support was not related to career indecision directly. This finding is somewhat inconsistent with previous studies in which friend support predicted the positive career outcomes (Blustein et al., 1995; Cheung & Arnold, 2014; Nawaz & Gilani, 2011) while a few previous studies

failed to find relationship between friend support and career indecision (e.g. Slaten & Baskin, 2014). Regarding the reason for this significant relationship is not apparent in the current study, a possible explanation for the unobserved relationship between friend support and career indecision might be related to Friend Influence subscale of Career Influence Inventory. All items on the Friend Influence subscale commonly are related to academic and career development. There is no item related to how friends deal with difficulties occurred during the career decision making process. Even if participants of current study perceived support from friends while high school, the influence of friends on career development was not examined because of an absence of this kind of item.

It was hypothesized that there would be a significant relationship between teacher support and career indecision. The hypothesis was disapproved because teacher support was not related to career indecision directly. This research finding did not support the Self-Determination Theory (Deci & Ryan, 1987) and Ecological Systems Theory (Bronfenbrenner, 1979). Ecological System Theory (Bronfenbrenner, 1979) proposes that interactions occur daily between teacher, friend and student and these interactions shape the behavior of individuals. Because of this effect, the school can be advantageous or disadvantageous for students during career decision making process (Zhang et al., 2018). The number of schools and teachers in Turkey in parallel with the increase in population have been increased (Ministry of National Education, 2016). However, the number of teachers is not enough to meet the developmental needs of students in schools (Doğan, 2005). Due to the high number of classroom size and the low number of teachers, teachers could not have recognized the needs of their students and respond them. Additionally, faculty in colleges who are teaching in large classes may not be interested in their students' career development and support them in developing intrinsic motivation. Therefore, as indicated by Zhang et al. (2018), the schools in which students attend could be disadvantageous for the students

regarding their career development. This might have been the case for the present study.

It was hypothesized that the variables involved in the social system (parental support) would significantly and directly be related to environmental exploration. This hypothesis was supported by the results indicating that parental support was significantly and positively related to environmental exploration. Past research has consistently supported this finding that shows the importance of parent in career exploration process (Ketterson & Blustein, 1997; Koumoundourou et al., 2011). This finding might be explained by taking into consideration of career exploration process that conceptualized by Blustein and Flum (1999) and Blustein (1997). Personally relevant social and cultural factors influence the level of career exploration of individuals who engage in career exploration during the career decision making process (Blustein 1997; Blustein & Flum, 1999; Flum & Blustein, 2000). Especially having supportive and encouraging relationships with parents and friend facilitate career exploration (Flum & Blustein, 2000). In support of the theoretical explanation of career exploration research has shown that parental support advances career exploration behavior of young adults (Ketterson & Blustein, 1997; Koumoundourou et al., 2011). The findings of the current study show that only parental support in the social system facilitated career exploratory behavior. University students participated in the current study might engage in environmental exploration activities since they have a supportive and encouraging relationship with their family.

In the current study, it was hypothesized that parental support would significantly and indirectly be related to career indecision through the environmental exploration. This hypothesis was verified. Although the direct effect between career indecision and parental support and the resulting career indecision was not significant, this relationship became significant when environmental exploration was introduced as a mediating variable. Therefore, when university students

encompass career exploration activities, directed toward enhancing the external environment, university students became more decided about their career and parental support became a career influence on their career decision. This research finding is consistent with theory and past research indicating that social support effect indirectly career decision making (Blustein, 2011; Cheung & Arnold, 2014; Leung et al., 2011; Slaten & Baskin, 2014) and social support is essential for career outcomes (Lent et al., 2003). Corkin, Arbona, Coleman, and Ramirez (2008) argued that only engaging in career exploration activities may not be enough for making a career decision for some students. Some students, who engage in career exploration activities but still are career undecided, may need to discuss their career concerns with parents. Earlier studies (Ketterson & Blustein, 1997) found similar findings which showed that young adults who feel close to their parents were more likely to report higher levels of environmental exploration.

5.1.3 Discussion of Findings Related to the Environmental/Societal System

It was hypothesized that there would be a significant relationship between ethnic-gender expectations and career indecision. The hypothesis was approved because ethnic-gender expectations were related to career indecision directly. This finding supports previous research into career-related literature, which has indicated that gender expectations influence the career adaptive behavior and outcomes (Gati et al., 2010; Fouad et al. 2010; Gunderson et al. 2012; Harackiewicz et al. 2012; Schelmetic 2013). This finding is also in line with Korkut-Owen and Mutlu's (2017) study. They found in their qualitative study that a large majority of women participated to study were affected by the gender expectation during career decision making.

The present study aims to fill the gap in literature related the relationship between negative social events and career indecision. The findings showed that negative social events were not related to career indecision directly. The negative social events refer obstacles that the individual had experienced such as sudden death of

friend, severe illness, having a friend who is addicted to drugs (Fisher & Stafford, 1995). From this definition, one possible explanation of this finding is that participants of the current study may have met with this kind of obstacles during high school years. Moreover, the obstacle mentioned above may be associated with a chance since chance events influence one's career development outcome and career choice process (Rojewski, 1999). Korkut- Owen, Demirtaş-Zorbaz, and Mutlu (2015) defined chance as extraneous actors which are largely beyond an individual's control and these factors influence the career decision making process. Similarly, McMahon (2006) indicated that sudden or unexpected events also impact individual's career decision making process since making career-related choices are always not 100 % planned due to the complexity of an individual's life. Therefore, the sudden death of a friend or having an illness might be considered chance events for many people. Bright, Pryor, and Harpham (2005) reported that 69.1 % of high school and university students reported that at least one 'chance event' which influenced their career path. However, the degree influence of chance events changes according to the way people perceive their past (Bright, Pryor, & Harpham, 2005). Therefore, participants of the current study may have had great control when they met this kind of unplanned, accidental or unpredictable events. For having greater control, participants of current study might not have perceived these unpredictable events as chance events.

This study failed to support the hypothesized significant relationship between ethnic-gender expectations and intended-systematic exploration. That is the ethnic-gender expectation was not related to intended-systematic exploration. In addition, it was hypothesized that ethnic-gender expectations would indirectly be related to career indecision through the intended-systematic exploration. The findings showed that this hypothesis was disapproved that high perceived individual expectation based on their ethnicity or gender reported less career indecision as they encompassed more career exploration activities in intendedly

and systematic manner. This finding is somewhat inconsistent with the findings of previous studies which have indicated that career development outcomes were affected by ethnic-gender expectations career adaptive behavior and outcomes (Hackett & Byers, 1996; Novack & Novack, 1996; Schelmetic 2013). A possible explanation of this finding might be that participants of the current study might not have engaged in career exploration in a systematic manner.

5.1.4 Discussion of Findings Related to Mediator Variables

Hypothesis 14 proposed a significant relationship between self-exploration and career indecision. The hypothesis was justified since self-exploration was positively associated with career indecision. The significant relationship between self-exploration and career indecision showed that the more participants reflect on themselves and focus on defining their own interest, values, personality, the more university student becomes undecided about their career. As unexpected, self-exploration predicted career indecision. However, there was a positive significant relationship between self-exploration and career indecision. This inverse relationship between self-exploration and career indecision differ from previous studies' findings (Park et al., 2017, Robitscheck et al., 2012; Stringer, Kargelman, & Skorikov, 2011). On the other hand, Kuzgun's (2000) explanation about career exploration process might explain this negative relationship. According to Kuzgun (2000), Lubinski, Webb, Morelock, and Benbow (2001) and Rysiew et al. (1999) the more individuals focus on defining their own interest, previous experiences, abilities, capabilities, the more they discover new abilities and interest. Exploring new abilities may sometimes lead to difficulties in career decision making. Rysiew et al. (1999) added that those have difficulties in identifying anyone career path have many vocational interests. Having more potential complicate career decision making process (Lubinski et al., 2001).

In the present study, it was hypothesized that environmental exploration would directly relate to career indecision. According to results, the hypothesis was

confirmed and the direction was negative. Specifically, university students engaging in more environmental exploration behaviors reported less career decidedness. This inverse relationship between environmental exploration and career indecision displays similarities with previous findings (Park et al., 2017, Robitscheck et al., 2012; Stringer, Kargelman, & Skorikov, 2011). As stated by Blustein and Phillips (1988) and Sadeghi et al. (2011), career exploration behaviors facilitated university students' career decision making process by selecting and implementing career goals. So, it might be concluded that knowledge of the world of work gathered through environmental exploration behavior positively influence career decision making process and reduce uncertainty related to a future career path.

It was hypothesized that there would be a significant relationship between intended-systematic exploration and career indecision. The hypothesis was refuted by the results. This finding is unexpected since it is inconsistent with previous studies which showed that intended-systematic exploration is predictive of adaptive career behavior and career outcomes (Blustein et al., 1995; Park et al., 2017; Porfeli, & Skorikov, 2010; Robitscheck et al., 2012; Stringer, Kargelman, & Skorikov, 2011). A possible explanation of this finding is that participants of the current study might not have engaged in career exploration activities that were not intended and conducted systematically.

5.2 Implications for Practice

The current study findings supported the Systems Theory, by indicating that at least one career influences located in systems were associated with career exploration or career indecision. Thus, taking consideration of the fact that individuals do not live in isolation, counselors might do well to emphasize both the social support and personal characteristics, since university students need to negotiate between what they want and what significant others want (Li, Hazler, & Trusty, 2017).

The present study highlights the supportive role of career exploration on university students' career decidedness. College students reported that they were not able to receive enough information from their counselors although they need to get information about their career and workplace knowledge (Simon & Tovar, 2004). Therefore, career practitioners by taking the results of the current study into consideration may provide opportunities for university students to communicate with professionals or to find out about scholarships. Practitioners may consider designing career interventions which aim to encourage clients' explorations of their personal characteristics (e.g interests, values) and external opportunities (Hellman, 2014). With this aim, career interventions may be beneficial for clients who are undecided. Especially, encouraging individuals who have low self-confidence in deciding related to career by supporting them focus on career exploration activities would be critical for career counselor who works at college counseling center. Receiving career interventions that focus on this issues may be helpful for those are not able to reach a satisfactory career decision.

Ketterson and Blustein (1997) suggest career practitioners examine and strengthen support systems of university students who want to make a career decision. In the current study, parental support was significantly and positively related to environmental exploration. So, career practitioners might design career interventions focusing on defining support systems of the university and enhancing university students' career decision making self-efficacy and career certainty while providing essential information related to occupations, organizations or working life. Additionally, career counselors might use Career Influence Inventory in order to understand whether clients perceive support from their teacher, family or friend in pre-counseling sessions.

5.3 Recommendations for Further Research, Practice and Policy Makers

5.3.1 Recommendations for Further Research

The model tested in the current study was built by taking into consideration variables that underlined in Systems Theory Framework of career development (STF). The proposed model based on STF that included individual system (career decision making self-efficacy, academic self-efficacy), social system (parental support, teacher support, and friend support), environmental/societal system (negative social events, ethnic-gender expectations), career exploration (environmental exploration, self-exploration, and intended-systematic exploration) explained 28 % of the variance in career indecision. The explained variance in the current study was closed to previous studies (Büyükgöze-Kavas, 2011). However, any variable which is not included in the current study, but mentioned in other career development theories may also influence the university students' career indecision. This is an important issue for the future studies which help researcher learn more about the unexplained 72 % of the variance in career indecision of university students. In further investigations, it might be possible to choose different variables (age, gender, socioeconomic status, media, geographical location, historical trends, perceived support from peers) in order to understand predictors of career indecision which were found closely related to career indecision in literature.

A total of 836 university students participated in the current study were recruited through stratified random sampling procedure. The participants were from five different faculties at a public university. So, the findings of the current study can not be generalized to university students in other universities studying in different faculties. Therefore, in the future, researchers should attempt to replicate results of the current study with other populations, such as students with the different cultural background, a student at different ages and students with disabilities. Pending further study might take into consideration of homogeneity of the

characteristics of the sample. Unfortunately, in the current study, the participants of the study were to some extent homogenous regarding parents' education level, parents' occupation, SES, and community one raised in. Further study may examine the influences of family and socioeconomic status in career decision making the process of university students.

Flum and Blustein (2000), who have expanded the conceptualization of career exploration, underlined that contextual factors have a critical role in encompassing career exploration. The current study investigated the role of some contextual factors including parental support, friend support, teacher support, negative social events and ethnic-gender expectations. However, there are a few studies aiming to comprehend the role of the contextual factors on career exploration process of university students. There are limited studies aiming to understand the link between culture-specific variables and sub-dimension of career exploration. Although Flum and Blustein (2000) have explained how the role of cultural and relational context influence one's career exploration behavior, limited study empirically test this relationship. So, for future studies of career exploration, the culture-specific variables such as attitudes toward family, culture-specific beliefs, gender roles might be adopted and the link between career exploration and cultural context might be explored.

Results indicated that Career Exploration Survey and Career Influence Inventory provided valid and reliable scores for university students in Turkey. It might be said by taking into consideration of Leong and Hartung's (2000) suggestion that this study contributed to the literature by adapting Career Exploration Survey and Career Influence Inventory to Turkish and making the cross-cultural assessment of these instruments. Pending further research might replicate findings of the current study to test psychometrics of Career Exploration Survey and Career Influence Inventory with other populations, such as students at different ages, from a cultural background and with disabilities.

5.3.2 Recommendations for Practice

Finding significant relationships between the factors of career exploration and career indecision is encouraging for anyone who serves career counseling services to university students. Career counselors would do well by providing opportunities that help university students successfully deal with difficulties in career choice process. Career counselors might assist university students to use the resources in which they are able to find available jobs in their fields.

The results of the current study showed that university students were undecided regarding their career path. In order to decrease career indecision or prevent career indecision, career counselors have a role and they assist clients in clarifying values career goals by providing appropriate career interventions (Gordon, 1981). In the current study, parental support mediating by environmental exploration, academic self-efficacy mediating by self-exploration and career decision making self-efficacy and career exploration seems to be influential factors on career indecision level of university students. It may therefore that, in preventive and intervention perspective, career interventions including the activities that facilitate the strength of parental support, academic self-efficacy, career exploration and career decision making self-efficacy of university students may be helpful for decreasing the level of career indecision. Career counselors may design career interventions for career undecided students who may be experiencing parental pressures. During the developing career interventions, career counselors may take into consideration of formulating a plan which provides university students discuss their career concerns with their parents.

The findings of the current study show that many intraindividual and interindividual factors are influential in the level of career indecision among university study. This finding is line with theoretical approaches (Bronfenbrenner, 1979; Lent et al., 2003; McMahon & Patton, 1995) and past research findings (Cheung & Arnold, 2014; Li et al., 2017). However, traditional career counseling

approaches and some counselors failed to consider both intra-individual and inter-individual factors while conducting career counseling sessions (Blustein, Kenna, Gill, & DeVoy, 2008). Counselors may not only define personal characteristics such as interests, values, and skills but also analyze the expectations of significant others of clients and how clients perceive their wishes and take them into account while making their career-related choices.

5.3.3 Recommendations for Policy Makers

Career exploration activities might be included in school curricula so that teachers may contribute to the career development of their students. Commonly, school counselors are seen to be mainly responsible for facilitating students' career development (Gysbers & Lapan, 2009). School counselors are best-known people who are knowledgeable about school curricula and career development goals at different stages of student development. School counselors conduct counseling and guidance services in cooperation with teachers, school personnel, family and students based on their knowledge (Akpınar & Bengisoy, 2017). Hence, policymakers may develop and design in-service training programs that give the opportunity to school counselors share their knowledge with teachers. That may assist teachers to comprehend how to use school curricula to support the career development of their students. Such programs may not be only useful for teachers but also allow all staff in the school to have supportive relationships.

The results of the current study showed that university students were undecided regarding their career path. Additionally, it was found that career exploration was negatively related to career indecision in the current study. That means the more university students engage in career exploration activities the more university students are decided regarding their career path. Considering the negative consequences of career indecision for individual and society, it is necessary to make some effort in order to reduce the career indecision of university students. According to Feldman (2003), the issue of career indecision should be taken into

consideration before career indecision results in problems in mental health and society since the career indecision becomes more a problematic situation over year. Counselors who help the student establish career goals assist university students while they are at exploration stage (McDonough, 2006). Brown, Bimrose, Barnes, and Hughes (2012) indicated that counselors help students be more decided regarding their career path by providing career counseling services, including helping in adjusting to work and managing one's career and making and implementing career-related decisions. However, counselors have often difficulties in helping their clients due to their lack of knowledge and training (Hilling, 2017). Therefore, counselors should be trained related to career counseling skills and knowledge even while providing counseling services for effectively helping their clients who have difficulties in planning their career. Policy makers in Turkey may ensure that counselors in universities equip themselves with necessary skills and strategies in order to assist and encourage university students in engaging career exploration activities. Additionally, policymakers may conduct research that helps them to identify counselors' needs of additional training. Based on counselor's needs in service. Policy makers may develop and implement in-service training.

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APPENDICES

Appendix A: Approval of the Ethics Committee

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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03 MAYIS 2016

Gönderilen: Prof.Dr. Oya Yerin GÜNERİ

Eğitim Bilimleri Bölümü

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

İlgi: Etik Onayı

Sayın Prof.Dr. Oya Yerin GÜNERİ'n danışmanlığını yaptığı Tansu MUTLU'nun "Sistemler Kuramı'na dayalı kariyer kararsızlığı modelinin üniversite öğrencilerinde sınanması" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay 2016-EGT-080 protokol numarası ile 13.05.2016-04.07.2016 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

(Bulunamadı)
Prof. Dr. Meliha ALTUNİŞİK

İAEK Üyesi

Prof. Dr. Mehmet UTKU

İAEK Üyesi

Yrd. Doç. Dr. Pınar KAYGAN

İAEK Üyesi

Prof. Dr. Ayhan SOL

İAEK Üyesi

Prof. Dr. Ayhan Gürbüz DEMİR

İAEK Üyesi

Yrd. Doç. Dr. Emre SELÇUK

İAEK Üyesi

Appendix B: Sample Items of Career Decision Scale
Kariyer Karar Ölçeği Örnek Maddeleri

KARİYER KARAR ÖLÇEĞİ*

Bu ölçek insanların eğitim ve mesleki planlarına ilişkin genel olarak dile getirdikleri bazı ifadeleri içermektedir. Bu ifadelerden bazıları size uygun olabilir; bazıları ise olmayabilir. Lütfen ifadelerin tümünü okuyunuz ve her bir maddenin sizin kariyer ya da eğitim ile ilgili bir seçime ilişkin düşüncelerinize ne kadar yakın olduğunu, uygun olan sayıyı işaretleyerek belirtiniz. Aşağıda bir örnek verilmiştir.

	Beni tamamıyla yansıtıyor	Beni büyük ölçüde yansıtıyor	Beni sadece biraz yansıtıyor	Beni hiç yansıtıyor
Mezun olma ve işe başlama konusunda heyecanlıyım.				

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 hiç yansıtmıyor	Beni sadece biraz yansıtmıyor	Beni büyük ölçüde yansıtmıyor	Beni tamamıyla yansıtmıyor
1. Eninde sonunda işe girmek zorunda olacağımı biliyorum. Fakat bildiğim kariyer alanlarının hiçbirisi bana cazip gelmiyor.				
2. Bir kariyer alanını seçmeyle ilgili her şey çok belirsiz görüldüğü için cesaretimin kırıldığını hissediyorum. Öylesine cesaretim kırıldı ki şu an için bir karar vermek istemiyorum.				

*According to publisher agreement, only two sample items are illustrated.

Appendix C: Sample Items of Career Exploration Survey

Kariyer Araştırma Ölçeği Örnek Maddeleri

KARİYER ARAŞTIRMA ÖLÇEĞİ

Aşağıda kariyerinizle ilgili yaptığınız davranışlara yönelik bazı maddeler yer almaktadır. Bu maddeleri okuduktan sonra sizin için en uygun olan seçeneği işaretleyiniz.

<i>Son üç aydan fazla aşağıda verilen davranışları gösterme düzeyiniz...</i>	Çok az (1)	Biraz (2)	Orta (3)	Çok (4)	Çok fazla (5)
1. Kariyerle ilgili davranışlarda bulunma.					
2. Yeteneklerin sergilenebileceği fırsatları kollama.					
3. Sadece isteyip istemeyeceğini keşfetmek için belirli mesleki rolleri deneme.					
4. Kariyer alternatiflerini araştırma.					

Appendix D: Sample Items of Career Influence Inventory
Kariyer Belirleyicileri Envanteri Örnek Maddeleri

KARİYER BELİRLEYİCİLERİ ENVANTERİ

Lütfen lise yaşantılarınızı düşünerek aşağıdaki maddelere ne ölçüde katılıp katılmadığınızı uygun kutucuğa “X” işareti koyarak belirtiniz. Lütfen tüm maddeleri yanıtlayınız.

	Kesinlikle Katılmıyorum	Katılmıyorum	Katılıyorum	Kesinlikle Katılıyorum
1. Öğretmenlerim bana okulda başarılı olabildiğimi hissettirdiler.				
2. Bazı arkadaşlarımla kurallarla başı dertteydi.				
3. Ailem/velim bana okulda başarılı olabileceğimi hissettirdi.				
4. Lisede başarılı olabilmek için gerekli olan yeteneklerime güvenirdim.				

**Appendix E: Sample Items of Career Decision Self-efficacy Scale - Short
Form**

Kariyer Kararı Yetkinlik Beklentisi Ölçeği Kısa Formu Örnek Maddeleri

KARİYER KARARI YETKİNLİK BEKLENTİSİ ÖLÇEĞİ KISA FORMU

Aşağıda kariyer kararlarına ilişkin çeşitli görevler yer almaktadır. Lütfen her bir ifadeyi okuyun ve her bir görevi yerine getirmede kendinize ne ölçüde güvendiğinizi aşağıdaki 5 aralıklı ölçek üzerinde işaretleyiniz.

	Güvenmiyorum Hiç	Güvenmiyorum	Çok Az Güveniyorum	Güveniyorum	Çok Güveniyorum
1.İlginizi çeken işlerle ilgili bilgi toplamak için interneti kullanabilme	1	2	3	4	5
2.İlgilendiğiniz alanda kendinize bir bölüm seçebilme	1	2	3	4	5
3.Önünüzdeki 5 yıla ilişkin hedeflerinizle ilgili bir plan yapabilme	1	2	3	4	5
4.Seçtiğiniz alanda akademik sorunlar yaşarsanız atmanız gereken adımları belirleyebilme	1	2	3	4	5

Appendix F: Demographic Information Form

KİŞİSEL BİLGİ FORMU

Değerli Öğrenci,

Bu araştırma, üniversite öğrencilerinin kariyer seçimlerinde karşılaştıkları kararsızlığı etkileyen faktörleri anlamak için tasarlanmıştır. Sizden istenilen ölçeklerdeki tüm maddeleri okuyarak kendiniz için en uygun cevabı işaretlemenizdir. Yanıtlarınız araştırma kapsamında kullanılacak olup kesinlikle gizli tutulacaktır.

Katkılarınız için teşekkür ederim...

Tansu Mutlu

Orta Doğu Teknik Üniversitesi, Doktora adayı

e-mail: tansu.mutlu@metu.edu.tr

Cinsiyet:	Sınıf:
Yaş:	
Sosyo-ekonomik düzey: () Alt () Orta () Orta üst () Üst	
Genel not ortalaması:	
Anne öğrenim durumu: () Okuma- yazma bilmiyor () Okur-yazar () İlkokul mezunu () Ortaokul () Lise mezunu () İki yıllık yüksekokul mezunu () Dört yıllık lisans mezunu () Lisans üstü mezunu	Baba öğrenim durumu: () Okuma- yazma bilmiyor () Okur-yazar () İlkokul mezunu () Ortaokul () Lise mezunu () İki yıllık yüksekokul mezunu () Dört yıllık lisans mezunu () Lisans üstü mezunu
Annenizin Mesleği (Lütfen Belirtiniz):	
Babanızın Mesleği (Lütfen Belirtiniz):	

Appendix G: CFA for Career Decision Scale

The Goodness of Fit Statistics for Career Decision Scale

Degrees of Freedom = 129
Minimum Fit Function Chi-Square = 503.78 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 550.85 (P = 0.0)
Chi-Square Difference with 1 Degree of Freedom = 64.98 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 421.85
90 Percent Confidence Interval for NCP = (353.03 ; 498.21)

Minimum Fit Function Value = 0.60
Population Discrepancy Function Value (F0) = 0.51
90 Percent Confidence Interval for F0 = (0.42 ; 0.60)
Root Mean Square Error of Approximation (RMSEA) = 0.063
90 Percent Confidence Interval for RMSEA = (0.057 ; 0.068)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00
Expected Cross-Validation Index (ECVI) = 0.76
90 Percent Confidence Interval for ECVI = (0.68 ; 0.85)
ECVI for Saturated Model = 0.41
ECVI for Independence Model = 18.17

Chi-Square for Independence Model with 153 Degrees of Freedom =
15139.46
Independence AIC = 15175.46
Model AIC = 634.85
Saturated AIC = 342.00
Independence CAIC = 15278.58
Model CAIC = 875.45
Saturated CAIC = 1321.60

Normed Fit Index (NFI) = 0.97
Non-Normed Fit Index (NNFI) = 0.97
Parsimony Normed Fit Index (PNFI) = 0.82
Comparative Fit Index (CFI) = 0.97
Incremental Fit Index (IFI) = 0.98
Relative Fit Index (RFI) = 0.96
Critical N (CN) = 281.57

Root Mean Square Residual (RMR) = 0.042
Standardized RMR = 0.047
Goodness of Fit Index (GFI) = 0.93
Adjusted Goodness of Fit Index (AGFI) = 0.91
Parsimony Goodness of Fit Index (PGFI) = 0.70

Appendix H: CFA for Career Influence Inventory

The Goodness of Fit Statistics for Career Influence Inventory

Degrees of Freedom = 545
Minimum Fit Function Chi-Square = 1346.02 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 1404.68 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 859.68
90 Percent Confidence Interval for NCP = (752.79 ; 974.24)

Minimum Fit Function Value = 1.61
Population Discrepancy Function Value (F0) = 1.03
90 Percent Confidence Interval for F0 = (0.90 ; 1.17)
Root Mean Square Error of Approximation (RMSEA) = 0.043
90 Percent Confidence Interval for RMSEA = (0.041 ; 0.046)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00
Expected Cross-Validation Index (ECVI) = 1.89
90 Percent Confidence Interval for ECVI = (1.76 ; 2.02)
ECVI for Saturated Model = 1.51
ECVI for Independence Model = 48.70

Chi-Square for Independence Model with 595 Degrees of Freedom = 40597.83
Independence AIC = 40667.83
Model AIC = 1574.68
Saturated AIC = 1260.00
Independence CAIC = 40868.33
Model CAIC = 2061.62
Saturated CAIC = 4869.04

Normed Fit Index (NFI) = 0.97
Non-Normed Fit Index (NNFI) = 0.98
Parsimony Normed Fit Index (PNFI) = 0.89
Comparative Fit Index (CFI) = 0.98
Incremental Fit Index (IFI) = 0.98
Relative Fit Index (RFI) = 0.96
Critical N (CN) = 388.55

Root Mean Square Residual (RMR) = 0.029
Standardized RMR = 0.040
Goodness of Fit Index (GFI) = 0.91
Adjusted Goodness of Fit Index (AGFI) = 0.90
Parsimony Goodness of Fit Index (PGFI) = 0.79

Appendix I: CFA for Career Exploration Survey

The Goodness of Fit Statistics for Career Exploration Survey

Degrees of Freedom = 72
Minimum Fit Function Chi-Square = 320.24 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 314.79 (P = 0.0)
Chi-Square Difference with 0 Degree of Freedom = 0.00 (P = 1.00)
Estimated Non-centrality Parameter (NCP) = 242.79
90 Percent Confidence Interval for NCP = (191.59 ; 301.54)

Minimum Fit Function Value = 0.38
Population Discrepancy Function Value (F0) = 0.29
90 Percent Confidence Interval for F0 = (0.23 ; 0.36)
Root Mean Square Error of Approximation (RMSEA) = 0.064
90 Percent Confidence Interval for RMSEA = (0.056 ; 0.071)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00098
Expected Cross-Validation Index (ECVI) = 0.46
90 Percent Confidence Interval for ECVI = (0.39 ; 0.53)
ECVI for Saturated Model = 0.25
ECVI for Independence Model = 12.44

Chi-Square for Independence Model with 91 Degrees of Freedom =
10362.21
Independence AIC = 10390.21
Model AIC = 380.79
Saturated AIC = 210.00
Independence CAIC = 10470.41
Model CAIC = 569.83
Saturated CAIC = 811.51

Normed Fit Index (NFI) = 0.97
Non-Normed Fit Index (NNFI) = 0.97
Parsimony Normed Fit Index (PNFI) = 0.77
Comparative Fit Index (CFI) = 0.98
Incremental Fit Index (IFI) = 0.98
Relative Fit Index (RFI) = 0.96
Critical N (CN) = 269.08

Root Mean Square Residual (RMR) = 0.068
Standardized RMR = 0.055
Goodness of Fit Index (GFI) = 0.95
Adjusted Goodness of Fit Index (AGFI) = 0.93
Parsimony Goodness of Fit Index (PGFI) = 0.65

Appendix J: CFA for Career Decision Self-Efficacy Scale

The Goodness of Fit Statistics for Career Decision Self-Efficacy Scale

Degrees of Freedom = 265
Minimum Fit Function Chi-Square = 946.34 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 1011.23 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 746.23
90 Percent Confidence Interval for NCP = (652.46 ; 847.56)

Minimum Fit Function Value = 1.13
Population Discrepancy Function Value (F0) = 0.89
90 Percent Confidence Interval for F0 = (0.78 ; 1.02)
Root Mean Square Error of Approximation (RMSEA) = 0.058
90 Percent Confidence Interval for RMSEA = (0.054 ; 0.062)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00024
Expected Cross-Validation Index (ECVI) = 1.35
90 Percent Confidence Interval for ECVI = (1.24 ; 1.48)
ECVI for Saturated Model = 0.78
ECVI for Independence Model = 42.13

Chi-Square for Independence Model with 300 Degrees of Freedom = 35124.93
Independence AIC = 35174.93
Model AIC = 1131.23
Saturated AIC = 650.00
Independence CAIC = 35318.15
Model CAIC = 1474.95
Saturated CAIC = 2511.80

Normed Fit Index (NFI) = 0.97
Non-Normed Fit Index (NNFI) = 0.98
Parsimony Normed Fit Index (PNFI) = 0.86
Comparative Fit Index (CFI) = 0.98
Incremental Fit Index (IFI) = 0.98
Relative Fit Index (RFI) = 0.97
Critical N (CN) = 284.65

Root Mean Square Residual (RMR) = 0.027
Standardized RMR = 0.039
Goodness of Fit Index (GFI) = 0.91
Adjusted Goodness of Fit Index (AGFI) = 0.89
Parsimony Goodness of Fit Index (PGFI) = 0.74

Appendix K: CFA for Career Influence Inventory – Pilot Study

The goodness of Fit Statistics for Career Influence Inventory – Pilot Study

Degrees of Freedom = 542
Minimum Fit Function Chi-Square = 1185.51 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 1217.45 (P = 0.0)
Chi-Square Difference with 1 Degree of Freedom = 29.42 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 675.45
90 Percent Confidence Interval for NCP = (578.07 ; 780.54)

Minimum Fit Function Value = 3.08
Population Discrepancy Function Value (F0) = 1.75
90 Percent Confidence Interval for F0 = (1.50 ; 2.03)
Root Mean Square Error of Approximation (RMSEA) = 0.057
90 Percent Confidence Interval for RMSEA = (0.053 ; 0.061)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0042
Expected Cross-Validation Index (ECVI) = 3.62
90 Percent Confidence Interval for ECVI = (3.37 ; 3.89)
ECVI for Saturated Model = 3.27
ECVI for Independence Model = 41.28

Chi-Square for Independence Model with 595 Degrees of Freedom = 15821.59
Independence AIC = 15891.59
Model AIC = 1393.45
Saturated AIC = 1260.00
Independence CAIC = 16065.05
Model CAIC = 1829.56
Saturated CAIC = 4382.18

Normed Fit Index (NFI) = 0.93
Non-Normed Fit Index (NNFI) = 0.95
Parsimony Normed Fit Index (PNFI) = 0.84
Comparative Fit Index (CFI) = 0.96
Incremental Fit Index (IFI) = 0.96
Relative Fit Index (RFI) = 0.92
Critical N (CN) = 202.84

Root Mean Square Residual (RMR) = 0.038
Standardized RMR = 0.061
Goodness of Fit Index (GFI) = 0.85
Adjusted Goodness of Fit Index (AGFI) = 0.82
Parsimony Goodness of Fit Index (PGFI) = 0.73

Appendix L: CFA for Career Exploration Survey – Pilot Study (57-14-1)

The Goodness of Fit Statistics for Career Exploration Survey – Pilot Study

Degrees of Freedom = 1519
Minimum Fit Function Chi-Square = 3806.21 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 4189.48 (P = 0.0)
Chi-Square Difference with 3 Degrees of Freedom = 157.62 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 2670.48
90 Percent Confidence Interval for NCP = (2481.52 ; 2866.98)

Minimum Fit Function Value = 7.41
Population Discrepancy Function Value (F0) = 5.20
90 Percent Confidence Interval for F0 = (4.83 ; 5.58)
Root Mean Square Error of Approximation (RMSEA) = 0.058
90 Percent Confidence Interval for RMSEA = (0.056 ; 0.061)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00
Expected Cross-Validation Index (ECVI) = 8.67
90 Percent Confidence Interval for ECVI = (8.30 ; 9.05)
ECVI for Saturated Model = 6.43
ECVI for Independence Model = 131.51

Chi-Square for Independence Model with 1596 Degrees of Freedom = 67483.53
Independence AIC = 67597.53
Model AIC = 4457.48
Saturated AIC = 3306.00
Independence CAIC = 67896.44
Model CAIC = 5160.20
Saturated CAIC = 11974.61

Normed Fit Index (NFI) = 0.94
Non-Normed Fit Index (NNFI) = 0.96
Parsimony Normed Fit Index (PNFI) = 0.90
Comparative Fit Index (CFI) = 0.97
Incremental Fit Index (IFI) = 0.97
Relative Fit Index (RFI) = 0.94
Critical N (CN) = 223.84

Root Mean Square Residual (RMR) = 0.10
Standardized RMR = 0.082
Goodness of Fit Index (GFI) = 0.78
Adjusted Goodness of Fit Index (AGFI) = 0.76
Parsimony Goodness of Fit Index (PGFI) = 0.71

Appendix M: CFA for Career Exploration Survey – Pilot Study (14-3-1)

Goodness of Fit Statistics for Career Exploration Survey – Pilot Study

Degrees of Freedom = 1445
Minimum Fit Function Chi-Square = 3034.77 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 3039.72 (P = 0.0)
Chi-Square Difference with 0 Degree of Freedom = 0.00 (P = 1.00)
Estimated Non-centrality Parameter (NCP) = 1594.72
90 Percent Confidence Interval for NCP = (1440.16 ; 1756.97)

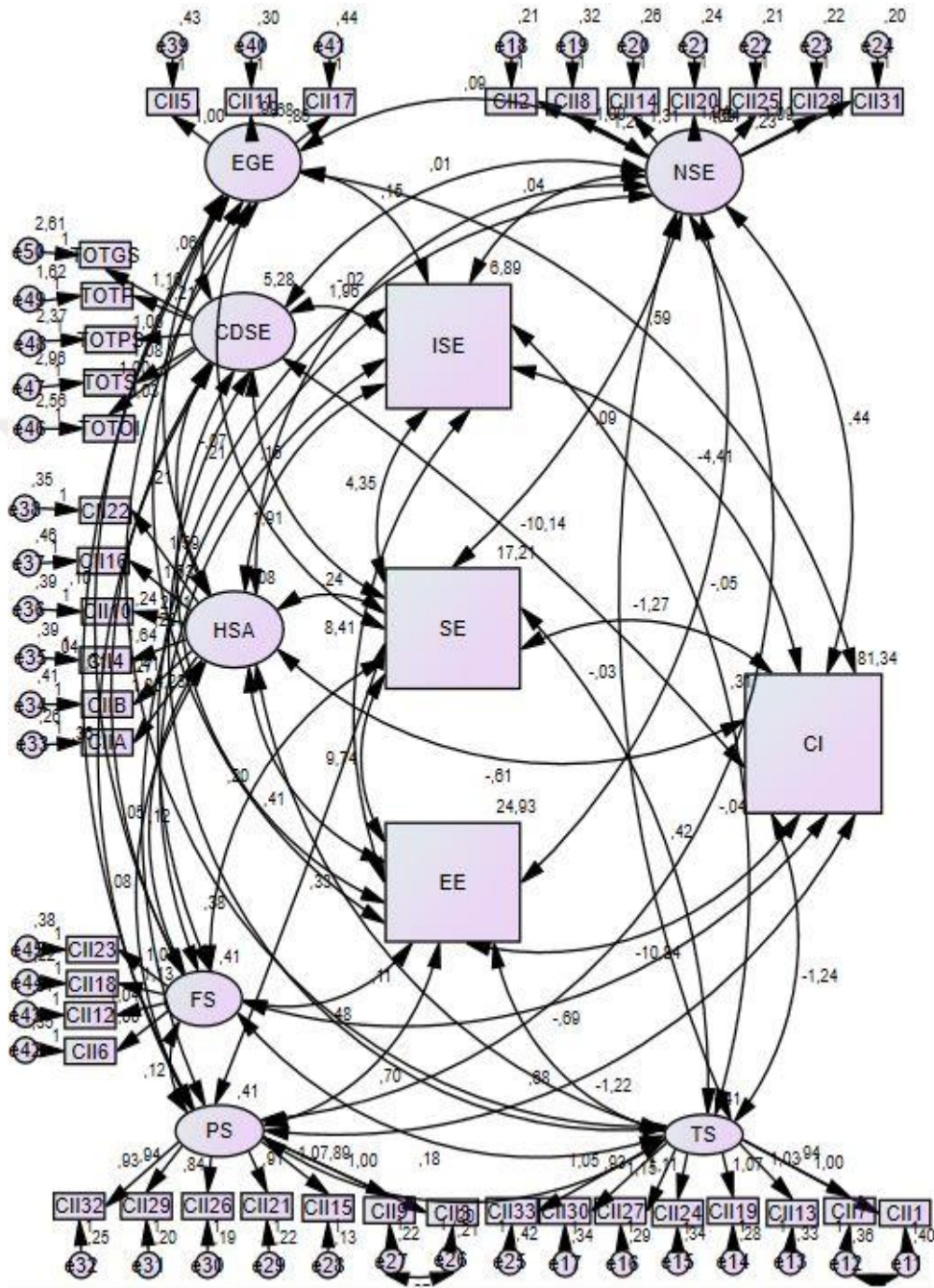
Minimum Fit Function Value = 5.90
Population Discrepancy Function Value (F0) = 3.10
90 Percent Confidence Interval for F0 = (2.80 ; 3.42)
Root Mean Square Error of Approximation (RMSEA) = 0.046
90 Percent Confidence Interval for RMSEA = (0.044 ; 0.049)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00
Expected Cross-Validation Index (ECVI) = 6.72
90 Percent Confidence Interval for ECVI = (6.42 ; 7.04)
ECVI for Saturated Model = 6.43
ECVI for Independence Model = 131.51

Chi-Square for Independence Model with 1596 Degrees of Freedom = 67483.53
Independence AIC = 67597.53
Model AIC = 3455.72
Saturated AIC = 3306.00
Independence CAIC = 67896.44
Model CAIC = 4546.51
Saturated CAIC = 11974.61

Normed Fit Index (NFI) = 0.96
Non-Normed Fit Index (NNFI) = 0.97
Parsimony Normed Fit Index (PNFI) = 0.86
Comparative Fit Index (CFI) = 0.98
Incremental Fit Index (IFI) = 0.98
Relative Fit Index (RFI) = 0.95
Critical N (CN) = 267.42

Root Mean Square Residual (RMR) = 0.064
Standardized RMR = 0.049
Goodness of Fit Index (GFI) = 0.83
Adjusted Goodness of Fit Index (AGFI) = 0.80
Parsimony Goodness of Fit Index (PGFI) = 0.72

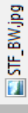
Appendix N: Measurement Model Unstandardized Results



Appendix O: Permission for Figure of System Theory Framework

19.4.2018 Per 08:39
Mary McMahon <marymcmahon@uq.edu.au>
Re: Permission for figures related to Systems Theory Framework

Kime Tansu MUTLU
Bilgi w.patton@qut.edu.au
Bu iletiyi 19.4.2018 14:37 tarihinde yantıladım.

 **STF_BW.jpg**

Dear Tansu
Thank you for your email and for your interest in Wendy and my work. You may reproduce our figure with appropriate acknowledgement to us in your work. I have attached a copy of the figure for you.
Best wishes with your research.

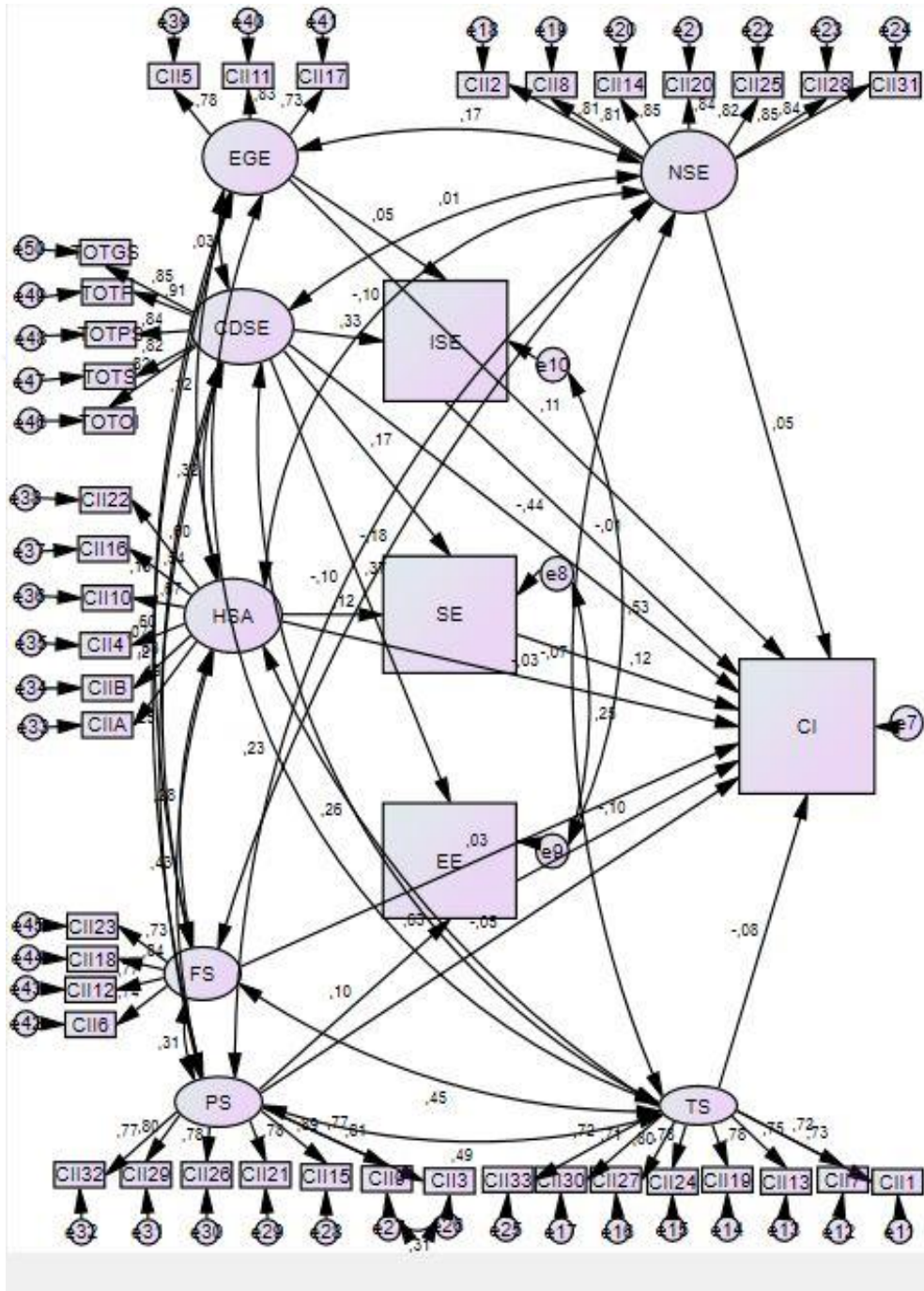
Konu: regards
Mary

Dr Mary McMahon | Honorary Senior Lecturer | School of Education | The University of Queensland | Brisbane 4.072 | Australia | CRICOS Provider No. 000359

From: Tansu MUTLU <tansumutlu@qut.edu.au>
Sent: Thursday, 19 April 2018 1:19 AM
To: w.patton@qut.edu.au; Mary McMahon
Subject: Permission for figures related to Systems Theory Framework

Dear Dr. Patton and Dr. McMahon;
I hope this e-mail finds you very well.
I'm a Ph. D. candidate at Psychological Counseling and Guidance Department of Middle East Technical University. As I mentioned before, I'm really interested in System Theory Framework. I have designed my research based on the Systems Theory Framework. Drawing on Systems Theory Framework, structural equation modelling was utilized to test proposed model in which there were seven predictors and three mediators of career indecision. Particularly, the relationships among career decision status, career decision-making self-efficacy, career exploration and career influences of university students were examined to gain insight into antecedents of career indecision among university students studying in Turkey. According to results, the measurement and structural models fitted data well.
I would like to reproduce the figure for the purpose of including them in my dissertation. Could you please give permission for reproducing your figure that illustrate process influences, recursiveness, change over time and chance?
Best Regards, ..

Appendix P: Structural Equation Model



Appendix R: Curriculum Vitae

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Mutlu, Tansu
Nationality: Turkish (TC)
Date and Place of Birth: 18 August 1987, Silistre / Bulgaria
email: tansu.mutlu@metu.edu.tr

EDUCATION

Degree	Institution	Year of Graduation
MS	Hacettepe University, Guidance and Psychological Counseling	2011
BS	Ankara University Guidance and Psychological Counseling	2009
High School	Hoca Ahmet Yesevi Anadolu High School, Eskişehir	2005

WORK EXPERIENCE

Year	Place	Enrollment
2011- Present	Eskişehir Osmangazi University, Guidance and Psychological Counseling Department	Research/Teaching Assistant
2014- 2015	University of Wisconsin-Milwaukee, Counseling Psychology Department	Visiting Scholar

FOREIGN LANGUAGES

Advanced English

SELECTED PUBLICATIONS

Erdur-Baker, Ö, Serim-Yıldız, B. & Mutlu, T. (2015). Afetler, Krizler, Travmalar ve Psikolojik Yardım. Türk Psikolojik Danışmanlık ve Rehberlik Derneği: Ankara.

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- Korkut-Owen, F., Demirtaş-Zorbaz, S., & Mutlu, T. (2015). Career Sailboat Model as a tool for the Guidance Counsellor in School Guidance Handbook. Ireland: National Centre for Guidance in Education
- Korkut-Owen, F., Mutlu, T., Arıcı, F. & Demirtaş-Zorbaz, S. (2012, November). *Career Sailing Boat Model*. Paper presented at the MSERA: 2012 Annual Meeting, Lexington, KY, USA.
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- Mutlu, T. & Korkut-Owen, F. (2011, October). *Kariyer Kararı Verme Güçlük Düzeyini Etkileyen Etmenler*. Paper presented at the XI. Ulusal Psikolojik Danışmanlık ve Rehberlik Kongresi. İzmir, Türkiye.
- Mutlu, T., & Korkut-Owen, F. (2017). Sosyal Bilişsel Kariyer Kuramı Açısından Bilim, Teknoloji, Mühendislik ve Matematik Alanlarındaki Kadınlar. *Elektronik Sosyal Bilimler Dergisi*, 16(60), 87-103.
- Mutlu, T., & Ogur, D. (2017, October). *Exploring the Influences on Educational and Career Attainment in STEM: Systems Theory Framework Analysis*. Paper presented at the International Academic Research Congress, Antalya, Turkey.

Mutlu, T., Özdemir, S., Ulas, O., & Korkut-Owen, F. (2017, October). *Adaptation of the Strategies for Coping with Career Indecision: Preliminary findings*. Paper presented at the International Academic Research Congress, Antalya, Turkey.



Appendix S: Turkish Summary

KARİYER BELİRLEYİCİLERİ, KARİYER ARAŞTIRMA VE KARİYER KARARI VERME DURUMLARI ARASINDAKİ İLİŞKİLERİN İNCELENMESİ: SİSTEMLER KURAMININ TEST EDİLMESİ

1. GİRİŞ

Kariyer hakkında karar verme, alan yazında yaşam boyu başarıyla tamamlanması gereken gelişimsel bir görev olarak nitelendirilmektedir. (Lancaster, Rudolph, Perkins ve Patten, 1999). Ayrıca yaşamın her döneminde daha sağlıklı bir ruh haline sahip olabilmeyi (Hinkelman ve Luzzo, 2007), topluma etkin bir şekilde katkı sağlayabilmeyi (Desjarlais, Eisenberg, Good ve Kleinman, 1995), işlevsel olmayan kariyer inançlarına daha az sahip olarak daha az depresyon belirtileri gösterebilmeyi (Walker ve Peterson, 2012) sağlayan bir beceri olarak da ele alınmaktadır. Bu becerinin kullanılabilmesi günümüzün hızla değişen ve teknolojik olarak gelişen dünyasında daha karmaşık hale gelmiştir.

Gelişimsel süreç açısından değerlendirildiğinde üniversite yılları, bireylerin çeşitli kariyer fırsatlarını keşfettikleri, kendilerini iş arama sürecine hazırladıkları, ileri eğitim ihtiyaçlarını belirledikleri, aynı zamanda da kariyer karar verme sürecinde topladıkları bilgiyi sentezledikleri ve bunun bir sonucu olarak kariyer kararı verme becerisini gösterebildikleri bir dönem olarak tanımlanmaktadır (Gati, Krausz ve Osipow, 1996). Ancak, kariyer kararı verme süreci değişen günümüz koşullarında daha karmaşık hale geldiği için pek çok üniversite öğrencisi bu dönemde gelişimsel olarak yapması gerekenleri tamamlamada güçlük çekmekte ve kariyer kararı verirken zorluklar yaşamaktadır (Gati, Krausz ve Osipow, 1996). Herr, Cramer ve Niles (2004) üniversite öğrencilerinin neredeyse yarısının kariyer gelişimleri sırasında kariyerleriyle ilgili problemler yaşadıklarını ifade etmektedir. Bu ifadeyi destekleyecek bir biçimde, üniversitelerde hizmet sunan psikolojik danışma merkezlerine başvuran öğrencilerin hizmet almak istedikleri alanlar

içerisinde en fazla kariyer gelişim alanının yer aldığı dile getirilmektedir (Lucas ve Berkel, 2005). Benzer bir biçimde, psikolojik danışma merkezine başvuran öğrencilerin çoğunluğunun kariyer kararsızlığı yaşadıkları için kariyer kararı verme süreciyle ilgili yardım almak istedikleri görülmüştür (Kelly ve Pulver, 2003). Sonuç olarak kariyer kararsızlığının üniversite öğrencilerinin yaşadığı bir sorun olduğu söylenebilir.

Kariyer kararsızlığı bireylerin kariyer alanında karar verme becerisini sergileyememe durumu olarak tanımlanmaktadır (Guay, Senecal, Gauthier ve Fernet, 2003). Chartrand ve arkadaşları (1994) kariyer kararsızlığını gelişimsel bir problem olarak ele almakta ve kariyer kararsızlığının bireylerin kendisi ve iş dünyası hakkında yeterli bilgiye sahip olmadıklarında ortaya çıktığını ifade etmektedir. Chartrand ve arkadaşları (1994) gibi kariyer kararsızlığını gelişimsel bir olgu olarak ele alan Hawkins Breaux (2004) da kariyer kararsızlığını, bireylerin kariyer gelişim sürecinde karar verememesi olarak tanımlamaktadır. Bu tanımlar doğrultusunda alan yazın incelendiğinde, hem lise hem de üniversite öğrencilerinin kariyer kararsızlığı yaşadığını gösteren pek çok araştırma dikkati çekmektedir (Corkin, Arbona, Coleman ve Ramirez, 2008). Bu araştırmalar incelendiğinde, pek çok değişkenin hem lise öğrencilerinin (Bacanlı, 2012; Marcionetti, 2014; Öztemel, 2013; Santos ve Ferreira, 2012; Şahin ve ark., 2015) hem de üniversite öğrencilerinin (Robitschek ve ark., 2012; Walker ve Peterson, 2012; Zhou ve Xu, 2013) kariyer kararsızlığıyla ilişkili olduğu bulunmuştur. Üniversite öğrencilerinin katılımıyla yapılan araştırmalarda, üniversite öğrencilerinin kariyer kararsızlık düzeyleriyle kariyer kararı verme öz yetkinliği (Creed, Patton ve Prideaux, 2006), kariyer araştırma (Robitschek ve ark., 2012; Xu, Hou ve Tracey, 2014), depresyon belirtileri ve işlevsel olmayan kariyer inanışları (Walker ve Peterson, 2012), psikolojik iyi oluş (Hartung, 2011; Viola ve ark., 2017; Zhou ve Xu, 2013), kaygı (Saka ve ark., 2008), umut (Wilkins ve ark., 2014) ve yaşam doyumu (Hirschi, 2011) düzeyleri arasında manidar ilişkiler olduğu görülmektedir. Hem araştırma bulguları (örn. Hartung, 2011; Viola ve

ark., 2017; Walker ve Peterson, 2012) hem de alan yazındaki açıklamalar kariyer kararsızlığı yaşayan üniversite öğrencilerinin kaygı ve stres düzeylerinin yüksek olduğunu, kariyer kararsızlığı sonucunda iş bulamama ve kariyer kararı vermeyi erteleme davranışlarını gösterdiklerini vurgulamaktadır (Miller ve Rottinghaus, 2014; Zhou ve Xu, 2013). Hatta kariyer kararsızlığı yaşayan bazı bireyler kariyer kararı verme sorumluluğunu başka bireylere devredebilmektedir (Gati ve Saka, 2001). Çoğu üniversite öğrencisi kariyer kararsızlığı yaşadığında kendisini kaybolmuş gibi hissetmekte ve kariyerleri hakkında karar verebilecek becerilere sahip olmadıklarını düşünmektedir (Miller ve Rottinghaus, 2014). Örnekleri verilen bu araştırma bulguları aracılığıyla kariyer kararsızlığı yaşayan bireylerin yaşamayan bireylere göre daha düşük yetkinlik beklentisine sahip oldukları, ayrıca kaygı ve depresyon düzeylerinin yüksek olması sebebiyle ruh sağlığına ilişkin daha fazla sorun yaşadıkları sonucuna ulaşılmaktadır. Buna ek olarak, kariyer kararı verebilme ve kariyer kararında emin olabilmenin olumlu ruh sağlığı belirtileriyle ilişkili olduğu öte yandan kariyer kararı verememe ve kariyer kararında emin olamamanın depresyon, kaygı ve işlevsel olmayan inançlar gibi olumsuz ruh sağlığı belirtileriyle yakından ilişkili olduğu söylenebilir.

Kariyer kararı verme sürecini ve bu süreçte etkili olduğu düşünülen etmenlerin rolünü açıklamaya yönelik pek çok yaklaşım bulunmaktadır (Hijazi ve ark., 2004; Gati ve ark., 2001). Bu yaklaşımlar içerisinde Super'in Yaşam Boyu, Yaşam Alanı Kuramı (Super, 1953), Holland'ın Tipler, Birey-Çevre Etkileşimi Kuramı (Holland, 1959; 1997), Sosyal Bilişsel Kariyer Kuramı (Lent, Brown ve Hackett, 1994), Gottfredson'ın Sınırları Belirleme, Uzlaşma, Kendini Yaratma Kuramı (Gottfredson, 2002, 2005), Krumboltz'un Kariyer Psikolojik Danışmanlığında Öğrenme Kuramı (Krumboltz ve Henderson, 2002, Mitchell ve Krumboltz, 1996), Savickas'ın Kariyer Yapılandırma Kuramı (Savickas, 2005; 2009), Bilişsel Bilgi İşleme Yaklaşımı (Sampson ve ark., 1992; Peterson ve ark., 1996) ve Sistemler Kuramı (McMahon ve Patton, 1995; 2006) yer almaktadır. Bu yaklaşımlar içerisinde "kariyer kararsızlığı" terimi ilk kez kullanan ve kariyer kararsızlığına

dair ilk kez bir model geliştiren Gati, Krausz ve Osipow (1996) dur. Alan yazında kariyer karar verme sürecini açıklayan yaklaşımlar arasında sıklıkla benimsenen kuramlardan birisi de Sosyal Bilişsel Kariyer Kuramı (Lent, Brown, ve Hackett, 1994) dır. Sosyal Bilişsel Kariyer Kuramı kariyer kararı yetkinlik beklentisi ile kişisel hedefler ve sonuç beklentileri olmak üzere üç sosyal bilişsel mekanizma üzerinde odaklanarak kariyer kararı verme sürecini açıklamaktadır. McMahon ve Patton'ın (1995; 2006) Bronfenbrenner'in ekolojik yaklaşıma dayalı olarak geliştirdikleri Sistemler Kuramı, kariyer gelişim sürecini Super (1956) gibi yaşam boyu devam eden, değişime açık bir süreç olarak değerlendirmektedir. Bu bakış açısıyla McMahon ve Patton'ın (1995; 2006) geliştirmeye devam ettikleri Sistemler kuramında, bireyin kariyer kararını etkileyen etmenler kategorileştirilmiştir. Kariyer kararını etkileyen etmenlerin kategorileştirilmesi sonrasında birbiriyle ilişkili ve yaşam boyu birbiriyle etkileşim halinde olan üç sistem belirlenmiştir. Belirlenen bu sistemler bireysel sistem, sosyal sistem ve çevresel/toplumsal sistem olarak isimlendirilmiştir. Her bir sistem içerisinde bireyin kariyer kararını etkileyen etmenler yer almaktadır. Örneğin sosyal sistem içerisinde öğretmenler, arkadaşlar ve aileler yer alırken bireysel sistem içerisinde yaş, cinsiyet, akademik öz-yeterlilik gibi bireyi doğrudan etkileyen bireysel özellikler bulunur. Çevresel/toplumsal sisteminin içerisinde eğitim kurumları, coğrafi konum, olumsuz sosyal yaşantılar, toplumdaki gruplar gibi etmenler yer almaktadır.

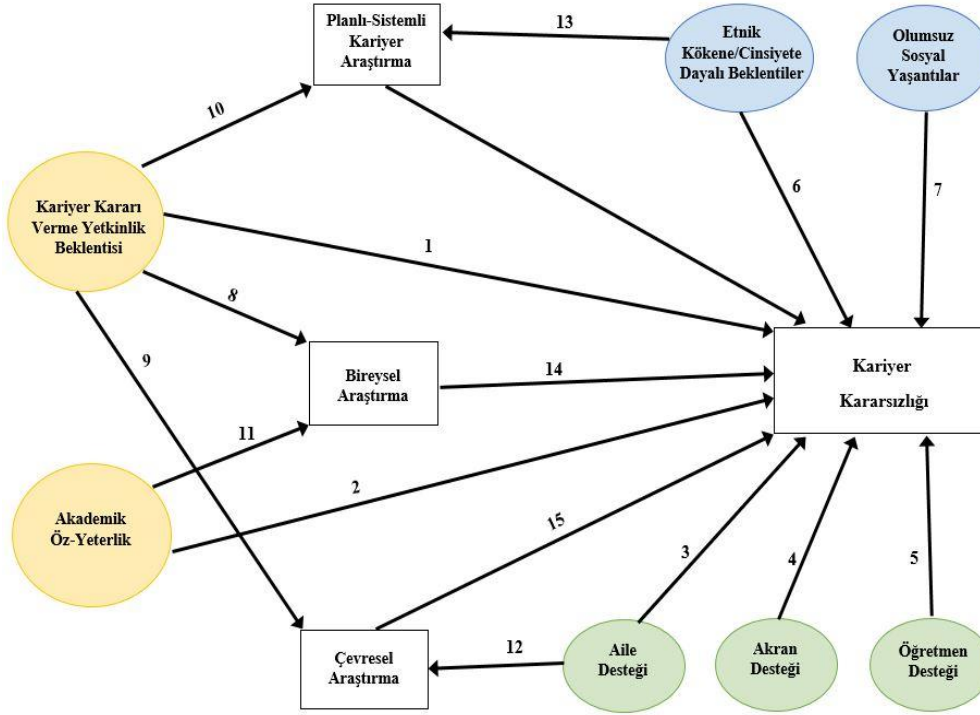
Sistemler kuramının bir meta-kuram olması (Korkut-Owen ve Niles, 2011), günümüzde bireylerin kariyer kararı verirken güçlük çekme nedenlerini farklı kültürel gruplarla çalışarak ortaya koyması (Patton, McMahon ve Watson, 2005), kariyer kararı sürecinde cinsiyete dayalı beklentilerin etkileri yönünde açıklamalar getirmesi (Fitzgerald ve Harmon, 2001; McMahon ve Patton, 1997), Asya, Avrupa ve Amerika kökenli bireyler gibi pek çok farklı kültürel bağlamda yetişmiş bireylerin kariyer kararı verme sürecini açıklamada kapsamlı bir model olması (Dullabh, 2004) ve özellikle farklı bağlamsal faktörlerin kariyer kararı

verme sürecinde nasıl rol oynadığını açıklaması (Dunn, 1997) sebebiyle bu araştırmada Sistemler Kuramı kuramsal çerçeve olarak benimsenmiştir. Sistemler Kuramı'nın yurtdışındaki alan yazında pek çok araştırmada kuramsal çerçeve olarak benimsenmesine karşın Türkiye'deki alan yazında yurtdışındaki yerini bulamamıştır.

Kariyer kararı verme süreci incelendiğinde pek çok araştırmada bireylerin bireysel özelliklere ve iş dünyasına dair araştırma davranışlarını sistemli bir biçimde sürdürmesinin kariyer kararı verme sürecini desteklediğini ifade edilmektedir (Porfeli ve Skorikov, 2010; Stumpf ve ark., 1983; Xu, Hou ve Tracey, 2014). Hatta bireysel ve çevresel özellikler hakkında yeteri kadar araştırma yapmadan kariyer kararsızlığının azalmayacağı ve kariyer kararı verilemeyeceği ifade edilmektedir (Xu, Hou ve Tracey, 2014). Hem bireysel hem de çevresel kariyer araştırma davranışı bireylerin kariyer kararını şekillendirmektedir (Blustein, 1992). Sistemler Kuramı (McMahon ve Patton, 1995; 2006) da bireysel özellikler ile ilgili farkındalığı ve iş dünyası hakkında sahip olunan bilgileri bireysel sistem içerisinde yer alan etmenler olarak değerlendirmektedir. Ayrıca kariyer kararsızlığında olduğu gibi hem kişilerarası hem de kültürel etmenler kariyer araştırma düzeylerinde rol oynamaktadır (Blustein, 1997). Yukarıda anlatıldığı gibi Sistemler Kuramı sosyal sisteme vurgu yaparak kişilerarası etmenlerin kariyer kararı verme sürecindeki rolünü incelemektedir. Araştırmada sosyal sistem içerisinde aile, arkadaş ve öğretmen desteği yer almaktadır. Bu inceleme aracılığıyla bireylerin hem kariyer araştırma düzeylerinde hem de kariyer kararsızlığında sosyal sistemin içeriğinde yer alan kişilerarası etmenlerin rolü açıklanmak istenmiştir. Ayrıca araştırmada çevresel/toplumsal sistem içerisinde yaşanan olumsuz sosyal yaşantılar ve toplumdaki grupların, bireylerin etnik kökenine ve cinsiyetine dayalı beklentileri de yer almaktadır. Bu değişkenlerin önerilen kavramsal modele dâhil edilmesinin sebebi Blustein'in (1997) de ifade ettiği gibi kültürel etmenlerin kariyer araştırma davranışlarında ve kariyer kararsızlığı üzerindeki etkisini incelemektir. Hem araştırma bulguları hem de

kavramsal açıklamalar kariyer araştırmanın kariyer kararı vermenin öncüsü olarak gördüğü için bu çalışmada kariyer araştırma aracı değişken olarak bireylerin kariyer kararsızlığını nasıl etkilendiğini incelemektedir.

Sonuç olarak, bu çalışmada, üniversite öğrencilerinin kariyer kararsızlığını etkileyen etmenleri anlamak için, Sistemler Kuramı çerçevesinde bireysel sistem (kariyer kararı yetkinlik beklentisi ve akademik öz- yeterlilik), sosyal sistem (aile, arkadaş ve öğretmen desteği) ve çevresel/toplumsal sistem (olumsuz sosyal yaşantılar ve etnik kökene ve cinsiyete dayalı beklentiler) ile ilgili değişkenler dışsal değişkenler (exogenous variables) olarak belirlenmiştir. Çalışmada Blustein'in (1992; 1995), Stumpf ve ark. (1993) ve Jordan'ın (1963) kariyer araştırma davranışlarına ilişkin yaptıkları kavramsal açıklamalarından esinlenerek çevresel, bireysel ve planlı-sistemli kariyer araştırma aracı değişkenler (mediator variables) olarak belirlenmiştir. Kariyer kararsızlığıyla ilgili olabilecek değişkenlerin belirlenmesi sırasında Gati ve arkadaşlarının (1996) yaptıkları açıklamalar ve varsayımlar göz önünde bulundurulmuştur ve kariyer kararsızlığı içsel değişken (endogenous variable) olarak belirlenmiştir. Söz edilen kavramsal açıklamalar göz önünde bulundurularak çalışmanın kavramsal modeli tasarlanmıştır (Şekil 1).



Şekil 1. Hipotez Model

Not. Sarı dolgulu dairelerin içinde yazan değişkenler bireysel sistemde yer almaktadır. Mavi dolgulu daireler içinde yazan değişkenler çevresel/toplumsal sistemde bulunmaktadır. Yeşil dolgulu daireler içinde yer alan değişkenler sosyal sistemde yer almaktadır.

Türkiye’de bireylerin kariyer kararsızlığıyla ilgili yapılan çalışmaların sayısı oldukça azdır (örn. Büyükgöze-Kavas, 2011; Öztemel, 2012; Yalın-Yaman, 2014) ve yapılan bu çalışmaların büyük bir çoğunluğu lise öğrencileri üzerinde gerçekleştirilmiştir (Akkoç, 2012; Bacanlı, 2012; Öztemel, 2012; Şahin ve ark., 2015). Üniversite öğrencilerinin kontrol odağı, algılanan anne-baba tutumu, kariyer karar verme öz-yeterliği ve kariyer sonuç beklentileri ile kariyer kararsızlığı arasındaki doğrudan ve dolaylı ilişkileri yapısal eşitlik modeli kullanarak test eden Büyükgöze-Kavas (2011) da Sosyal Bilişsel Kariyer Kuramı’nı kavramsal çerçeve olarak benimsemiştir. Kariyer kararsızlığıyla ilgili yapılan araştırmaların sayısına ilişki benzer bir durum da bireylerin kariyer araştırma düzeylerini inceleyen araştırmalarda gözlemlenmektedir. Kariyer

araştırma düzeylerini değerlendirmede kullanılacak ölçme aracı ihtiyacını gidermek için Sarı ve Şahin (2016) tarafından Kariyer Araştırma Öz-yeterliliği Ölçeği üniversite öğrencileri, Bacanlı (2006) tarafından Kariyer Araştırma Yetkinlik Beklentisi Ölçeği lise öğrencileri için Türk kültürüne uyarlanmıştır. Bununla birlikte her iki ölçek de kariyer araştırma düzeylerinin kariyer gelişiminde özellikle kariyer kararsızlığında nasıl bir rol oynadığını incelememiştir. Kariyer kararı verme öz yetkiliği ise son zamanlarda Türkiye’de yapılan pek çok çalışmada incelenmiştir (Bağlama ve Uzunboylu, 2017; Kırdök ve Alibekiroğlu, 2016, Kapusuzoğlu, Şengün ve Boz, 2017; Ulaş, 2016). Bununla birlikte bu araştırmalar arasında sadece Büyükgöze-Kavas (2011) üniversite öğrencilerinin katılımıyla yaptığı çalışmada çeşitli değişkenler ile kariyer kararsızlığı arasındaki ilişkiler incelenmiştir. Diğer çalışmalarda ise kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı arasındaki ilişki incelenmemiştir. Benzer bir biçimde Kanten ve ark. (2016) da kariyer kararı yetkinlik beklentisi ile kariyer araştırma düzeyleri arasındaki ilişkiyi incelemiştir. Sonuç olarak, kariyer gelişimiyle ilgili alan yazında, bu çalışmada yer alan değişkenlerinin herhangi bir kuramsal çerçeveye dayanarak yapısal ilişkilerin test edildiği bir çalışmanın alana önemli katkılar sağlayacağı umulmaktadır.

1.1 Araştırmanın Amacı

Bu araştırmanın genel amacı; üniversite öğrencilerinin kariyer belirleyicileri (kariyer kararı yetkinlik beklentisi, akademik öz-yeterlilik, aile desteği, öğretmen desteği, arkadaş desteği, olumsuz sosyal yaşantılar, etnik kökene ve cinsiyete dayalı beklentiler), kariyer araştırma düzeyleri (çevresel araştırma, bireysel araştırma, planlı-sistemli çevresel araştırma) ve kariyer kararsızlığı arasındaki yapısal ilişkilerin yapısal eşitlik modeli kullanılarak incelenmesidir. Bu genel amaç doğrultusunda aşağıdaki soruya yanıt aranmıştır:

Sistemler Kuramı’na dayalı olarak oluşturulan modelde, üniversite öğrencilerinin kariyer kararsızlığı bireysel sistem (kariyer kararı yetkinlik beklentisi ve akademik

öz- yeterlilik), sosyal sistem (aile, arkadaş ve öğretmen desteği) ve çevresel/toplumsal sistem (olumsuz sosyal yaşantılar ve etnik kökene ve cinsiyete dayalı beklentiler), çevresel, bireysel ve planlı-sistemli kariyer araştırma tarafından ne ölçüde açıklanmaktadır?

Yukarıda belirtilen amaç doğrultusunda aşağıdaki hipotezler test edilmiştir:

1.1.1 Doğrudan İlişkiler

Dışsal Değişkenler ile İçsel Değişkenler Arasındaki İlişkiler

Bireysel sistem:

Hipotez 1. Kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 2. Akademik öz-yeterlilik ile kariyer kararsızlığı arasında bir ilişki vardır.

Sosyal sistem:

Hipotez 3. Aile desteği ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 4. Arkadaşı desteği ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 5. Öğretmen desteği ile kariyer kararsızlığı arasında bir ilişki vardır.

Çevresel/toplumsal sistem:

Hipotez 6. Etnik kökene ve cinsiyete dayalı beklentiler ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 7. Olumsuz sosyal yaşantılar ile kariyer kararsızlığı arasında bir ilişki vardır.

Dışsal Değişkenler ile Aracı Değişkenler Arasındaki İlişkiler

Bireysel Sistem:

Hipotez 8. Kariyer kararı yetkinlik beklentisi ile bireysel kariyer araştırma arasında bir ilişki vardır.

Hipotez 9. Kariyer kararı yetkinlik beklentisi ile çevresel kariyer araştırma arasında bir ilişki vardır.

Hipotez 10. Kariyer kararı yetkinlik beklentisi ile planlı-sistemli kariyer araştırma arasında bir ilişki vardır.

Hipotez 11. Akademik öz-yeterlilik ile bireysel kariyer araştırma arasında bir ilişki vardır.

Sosyal sistem:

Hipotez 12. Aile desteği ile çevresel kariyer araştırma arasında bir ilişki vardır.

Çevresel/toplumsal sistem:

Hipotez 13. Etnik kökene ve cinsiyete dayalı beklentiler ile planlı-sistemli kariyer araştırma arasında bir ilişki vardır.

Aracı Değişkenler ile İçsel Değişkenler Arasındaki İlişkiler

Hipotez 14. Bireysel kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 15. Çevresel kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.

Hipotez 16. Planlı-sistemli kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.

1.1.2 Dolaylı İlişkiler

Bireysel sistem:

Hipotez 17. Kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı çevresel kariyer araştırma ile dolaylı olarak ilişkilidir.

Hipotez 18. Kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı bireysel kariyer araştırma ile dolaylı olarak ilişkilidir.

Hipotez 19. Akademik öz- yeterlilik ile kariyer kararsızlığı bireysel kariyer araştırma ile dolaylı olarak ilişkilidir.

Sosyal sistem:

Hipotez 20. Aile desteği ile kariyer kararsızlığı çevresel kariyer araştırma ile dolaylı olarak ilişkilidir.

Çevresel/toplumsal sistem:

Hipotez 21. Etnik kökene ve cinsiyete dayalı beklentiler ile kariyer kararsızlığı planlı-sistemli kariyer araştırma ile dolaylı olarak ilişkilidir.

1.2 Araştırmanın Önemi

Kariyer kararı verme yalnızca belli bir dönem değil yaşamın her döneminde yerine getirilmesi gereken bir görev olarak nitelendirilmektedir (Gati ve ark., 1996). Luzzo ve Severy (2009) de Gati ve arkadaşlarına (1996) katılarak her bireyin yaşamının herhangi bir döneminde kariyer kararı verme durumunda olduğunu bu nedenle kariyer kararı verme sürecinin süreklilik gösteren bir yapıya sahip olduğunu dile getirmektedir. Devamlılık gösteren bu süreçte üniversite öğrencilerinden çalışmak istedikleri alanı seçmeleri ve iş dünyasına hazırlanmaları beklenmektedir (Ranta ve ark., 2014). Dolayısıyla kariyer kararı verme sadece bölüm seçmeyi değil aynı zamanda da iş dünyasına giriş yapabilmek için

hazırlanmayı, bu süreçte yeni beceriler kazanmayı, çalışmak istenilen alanı belirlemeyi ifade etmektedir. Türkiye’de yapılan kariyer kararsızlığıyla ilgili pek çok araştırma lise öğrencilerinin katılımıyla gerçekleştirilmiştir (Bacanlı, 2012; Öztemel, 2012; Şahin ve ark., 2015). Araştırmanın bu örnekleme yoğunlaşması Sharf’ın (2002) da dediği gibi ergenlik döneminin kariyer gelişimin temelini oluşturması açısından kritik bir dönem oluşuyla ilgili olabileceği gibi bu yoğunlaşmanın nedeni Türkiye’deki eğitim ve sınav sistemi de olabilir. Çünkü Türkiye’deki eğitim sisteminde lise öğrencileri 10. sınıfa geçerken alan seçmektedirler (MEB, 2016). Seçtikleri alanlarla birlikte lise öğrencileri kariyerleriyle ilgili önemli bir karar almakta ve bir nevi üniversitede okuyacakları bölümleri sınırlamış olmaktadır (Büyükgöze Kavas, 2011). Ortaöğretim yıllarında verilen bu kararın birey için uygunluğu ve isabetliliği hem üniversitede okurken hem de iş dünyasına katıldığında iş ve yaşam doyumu ve mutluluğunu doğrudan etkilemektedir (Yılmaz, 2004). Bu doğrudan etkinin bir uzantısı olarak Türkiye’de öğrenim gören lise öğrencileri alan seçerken ve kariyer kararı verirken güçlükler çekmektedir (Çakır, 2003; Yazıcıoğlu, 2008). Türkiye’deki eğitim ve sınav sistemi kariyer kararı verme süreci açısından değerlendirildiğinde bireylerin kariyerleriyle ilgili aldığı kararların verildiği ikinci aşama üniversite giriş sınavından elde edilen puana göre üniversite öğrenim görülmek istenilen bölüme karar vermektir. Türkiye Cumhuriyeti Ölçme, Seçme ve Yerleştirme Merkezi Ölçme, Seçme ve Yerleştirme Sistemi’nin 2010-2017 yılları arasındaki başvuru ve yerleştirme sayıları incelendiğinde, yıllar geçtikçe üniversiteye girmek için başvuran lise mezunu öğrencilerin sayısının arttığı görülmektedir. Üniversite girmek için başvuran lise mezunu öğrencilerin sayısının gittikçe artmasına rağmen üniversiteye yerleşen öğrenci sayısının başvurulara oranla oldukça az olduğu göze çarpmaktadır. 2017 ÖSYS Yerleştirme Sonuçlarına ilişkin sayısal bilgiler incelendiğinde; 1.846.880 öğrencinin tercih yapma hakkı bulunduğu ancak bu öğrenciler arasında 825.397 kişinin üniversiteye yerleşebildiği görülmüştür (ÖSYM, 2017). Sayısal bilgiler “Öğrenim Durumuna Göre Başvuran ve Yerleşen Aday Sayıları” açısından değerlendirildiğinde; yerleşen 825.397 öğrencinin %

40,6'sı lise son sınıf düzeyinde öğrenim gören öğrenci olduğu diğer yerleşenlerin önceki yıllarda yerleşmemiş, daha önce yerleşmiş, bir yükseköğretim kurumunu bitirmiş veya yükseköğretimden kaydının silinmiş konumunda olduğu görülmektedir. Bu sayısal verilerin öğrencilerin üniversiteye yerleşmiş olsalar bile hala kararsızlık yaşadığına işaret ettiği söylenebilir. Kariyerleri hakkında kararsızlık yaşayan öğrenciler herhangi bir lisans programına yerleştikten sonra ancak yatay ya da dikey geçiş, çift anadal programları gibi haklar aracılığıyla program değiştirebilmektedir. Fakat Türkiye'deki eğitim sisteminde bu haklar sınırlı bir biçimde üniversite öğrencilerine verilmektedir. Üniversite öğrencileri istediği her programda çift anadal programına katılamamakta veya yatay ya da dikey geçiş için kontenjan açılrsa dahi öğrencilerin düşük genel not ortalamaları bu hakkın kullanılmasına engel olmaktadır. Dolayısıyla, yükseköğretim kurumlarına yerleşen ve hala kararsızlık yaşayan bireylere sunulan seçenekler ve hizmetler sınırlı olduğu için bireyler tekrar üniversite giriş sınavına girip istediği programa yerleşebilmek için istenilen puanı elde etmeye çaba göstermektedir. Dolayısıyla, üniversite giriş sınavından elde edilen puanın öğrencilerin kariyer kararlarından memnun olma düzeylerini doğrudan etkilemediği söylenebilir. Kaldı ki Türkiye'de yapılan çalışmaların sonucuna göre, bu süreçte alınan kararlar daha çok akademik başarı ve üniversite giriş sınavından elde edilen puana göre alındığı (Ayık ve ark., 2007; Sarıkaya ve Khorshid, 2009) için öğrencilerin yerleştikleri bölümden memnun olmamaları olası bir durumdur. Bununla birlikte tekrar üniversite giriş sınavına girebilmek pek çok desteği (aile, arkadaş, öğretmen desteği) ve koşulu (ekonomik kazanç) gerektirmektedir. Bu koşullara sahip olmayan ve ailesinden, arkadaşlarından destek alamayan öğrenciler istedikleri dışında hareket etmekte, istemediği halde farklı bir bölüme yerleşebilmektedir. Bu nedenle üniversite öğrencilerinin yaşadığı kariyer kararsızlığının olası nedenlerini bulunarak ve kariyer kararı verme sürecindeki dinamikleri keşfedilerek öğrencilerin tekrar sınava girmek zorunda kalmadan istediği bölümde okuyabilme fırsatı sunabilir.

Kariyer kararı vermek yaşamın her döneminde bireylerin başarıyla tamamlaması gereken bir gelişim görevi olarak görülse de 18-29 yaş aralığında olan genç yetişkinlerin kariyer kararı verme sürecinde bu görevleri yerine getirmekte güçlük çektikleri araştırma bulguları tarafından ortaya konmaktadır (Choi et al., 2011; Feldman, 2003; Lee, 2005; Miller ve Rottinghaus, 2014; Rowh, 2008). Üniversite öğrencileri özellikle mezun olduktan sonra yapmak istediklerine ilişkin karar verememekte veya olası kariyer seçeneklerini araştırmakta güçlük çekmektedirler (DuPre ve Williams, 2011; Viola et al., 2017). Kariyer kararsızlığı sürecinde yaşanan bu güçlükler sonucunda deneyimledikleri kaygı, üniversitelerdeki psikolojik danışma merkezlerine başvuran öğrencilerin en sık dile getirdiği problemler arasında yer almaktadır (Lucas ve Berkel, 2005; Multon ve ark., 2001). Yaşanılan bu güçlükler kaygı, depresyon gibi olumsuz ruh sağlığı göstergelerine neden olduğu gibi üniversiteyi bırakmalarına da neden olabilmektedir (Tinto, 2003). Üniversite öğrencileri okuduğu bölümlerin kariyer amaçlarını gerçekleştirmede yardımcı olamayacağını düşündüklerinde üniversiteden uzaklaşma eğilimi göstermektedirler (DuPre ve Williams, 2011). Üniversiteyi bırakmalar bile üniversite öğrencilerinin % 50'den fazlası eğitim hayatları boyunca en azından bir kez bölüm değiştirmeyi istemektedir (Grier-Reed ve Skaar, 2010). Bölüm değiştirme isteği üniversite öğrencilerinin mezuniyet tarihlerinin ertelenmesine ve öğrenim yılları içerisinde ödedikleri öğrenim kredilerinin giderek zorlayıcı bir rol üstlenmesine neden olmaktadır (Tressler, 2015, sf. 4). Kariyer kararsızlığının yukarıda bahsedilen olumsuz sonuçları düşünüldüğünde, Türkiye'de öğrenim gören üniversite öğrencilerinin kariyer kararsızlığına neden olabilecek etmenlerin belirlenmesi bu tür olumsuz sonuçların ortaya çıkmadan önlenmesine katkı sağlayabilir.

Ülkeler arasındaki kültürel farklılıklar bireylerin birbirinden farklı algılara, farklı yaşam tarzlarına ve farklı davranış biçimlerine sahip olmalarını sağlamaktadır. Örneğin bireyci kültürlerde bireyler toplulukların ihtiyaçlarının doyumak yerine kendi ihtiyaçları doyumayı ön plana almaktadır (Taylor, Welch, Kim ve

Sherman, 2007). Oysa toplulukçu kültürlerde sosyal bütünlük ve grup üyelerine bağlılık ön planda olduğu için topluluğun ihtiyaçlarının doyurulması daha önceliklidir (Markus ve Kitayama, 1991). Bireyci ve toplulukçu kültürlerin sınıflandırıldığı ülkeler göz önünde bulundurulduğunda Batı Avrupa ve Kuzey Amerika (Triandis, 1993), Türk kültürüne (Mocan Aydın, 2000) ve Çin kültürüne (Triandis, 1995) göre daha bireyci topluluklar olarak değerlendirilmektedir. Kültürlerarası bu tür farklılar bireylerin gelişim alanlarındaki davranışlarını ve tutumlarını değiştirdiği gibi bireylerin kariyer gelişimleri süresince gösterdiği davranışları ve tutumları da etkilemektedir. Örneğin benliğin toplumda yer alan diğer bireylere göre şekillendiği toplulukçu kültürlerde (Chadda ve Deb, 2013) aile üyelerin beklentileri ve çocuklarından istekleri çocuklarının kariyer kararında büyük öneme sahiptir (Mao ve ark., 2016; Hou ve Leung, 2011). Çünkü toplulukçu kültürlerde alınan kariyer kararı aileye, toplumsal gruplara ve toplumsal normlara göre şekillenmektedir (Xu, Hou ve Tracey, 2014). Kültürlerin kariyer kararı üzerindeki bu etkisi Türkiye'deki alan yazın açısından incelendiğinde, Türkiye'de öğrenim gören ve bu kültürde yetişmiş öğrencilerin kariyer kararını nasıl verdiklerini veya toplumsal normları, aile beklentilerini ne derece dikkate aldıklarını inceleyen az sayıda çalışmaya rastlanmaktadır. Oysa bu çalışmada kültürel faktörlerin önemi vurgulayan Sistemler Kuramı benimsenerek kavramsal model oluşturmuştur. Oluşturulan kavramsal model aracılığıyla Türkiye'deki üniversite öğrencilerinin ailelerinden, öğretmenlerinden ve arkadaşlarından destek alıp almadıkları ve bu desteğin kariyer kararları üzerinde nasıl bir etkisi olduğu araştırılmaktadır. Dolayısıyla araştırmanın bulgularının ruh sağlığı çalışanlarına bu kültürde yetişen bireylere kariyer psikolojik danışmanlığı hizmetini sunarken nelere dikkat edebileceğine dair önemli ipuçları sunacağı umulmaktadır.

Kültürel bağlam bireylerin kariyer gelişimleri üzerinde önemli bir etkiye sahiptir. Kariyer gelişimiyle ilgili yapılan çalışmaların bu etkiyi göz önünde bulundurarak yürütülmesi gerekmektedir (Byars-Winston, 2010). Günümüze kadar pek çok

arařtırmacı kariyer kararı verme sürecinde kültürel faktörlerin rolünü incelerken (örn. Gati ve ark., 2010; Mau, 2000) aynı zamanda da çok kültürlü psikolojik danışman yeterliliklerinin kariyer psikolojik danışmanlığı hizmeti sunulurken nasıl işlevsel hale getirilebileceđi konusunda çeşitli açıklamalarda (Fouad ve Bingham, 1995; Hartung et al., 1998) bulunmuşlardır. Bununla birlikte yıllardır kariyer gelişimiyle ilgili yapılan açıklamaların ve tartışmaların mevcut kariyer gelişim kuramları üzerinden yapıldığı görülmektedir. Oysa mevcut kariyer gelişim kuramları beyaz, orta sosyo-ekonomik düzeydeki bir Amerikalın kültürel bağlamı göz önünde bulundurularak geliştirilmiştir. Yapılan tartışmalar söz edilen kültür bağlamında değerlendirildiğinden farklı kültürlerde yetişen bireylerin kariyer gelişimini açıklamakta yetersiz kaldığı görülmektedir (Hendricks, 1994; Preskill ve Donaldson, 2008). Bu nedenle, bu çalışmada Türkiye'deki alan yazında daha önce benimsenmemiş, kültürel ve bireysel etmenlerin etkileşimine vurgu yapan Sistemler Kuramı benimsenmiştir. Bu şekilde beyaz, orta sosyo-ekonomik düzeydeki bir Amerikalın kültürel bağlamından farklı bir kültürel bağlamda var olan bireylerin kariyer gelişimleri incelenerek alan yazındaki bu boşluk doldurulmaya çalışılmaktadır.

Kariyer kararı verme sürecini inceleyen arařtırmalar incelendiğinde son zamanlarda yapılan çalışmalarda kariyer araştırma düzeyleri üzerinde odaklanıldığı ve kariyer araştırma davranışlarının bilgilendirilmiş ve bireysel özelliklere uygun kariyer kararı verme üzerinde önemli bir role sahip olduğunu ifade ettiklerini görülmektedir (Cheung ve Arnold, 2010; Sadeghi ve ark., 2011, Porfeli ve Skorikov, 2010; Xu, Hou ve Tracey, 2014). Kariyer araştırma tıpkı kariyer kararı verme gibi bireylerin yaşamlarının her döneminde, özellikle geç ergenlik ve erken yetişkinlik dönemlerinde, yapması gereken gelişimsel görev olarak nitelendirilmektedir (Jordan, 1963; Super, 1990). Bununla birlikte alan yazında pek çok arařtırmanın kariyer davranışlarının kariyer kararı üzerindeki etkisini incelemek yerine daha çok bireysel özellikler ile seçilen kariyer uyumu (örn. Nauta, 2010) arasındaki ilişkiye odaklandığı görülmektedir (Rogers ve

Creed, 2011; Xu, Hou ve Tracey, 2014). Türkiye'deki alan yazın incelendiğinde kariyer araştırma düzeyleriyle ilgili arařtırmaların sınırlı olduđu ve dođrudan kariyer araştırma düzeylerinin deđerlendirilmesine yönelik ölçme araçlarının olmadığı görölmektedir. Oysa pek çok bilim insanı kariyer gelişimiyle ilgili deđişkenlerin ölçümü amacıyla geliştirilen ölçeklerin farklı kültürlerde ve farklı yaş gruplarında psikometrik özelliklerinin incelenmesi gerektiđine vurgu yapmaktadır (örn. Leong ve Hartung, 2000). Bu araştırma aracılıđıyla Kariyer Arařtırma Ölçeđi Türkçeye uyarlayarak alan yazındaki bu boşluk doldurulmaya çalışılmaktadır. Ayrıca alan yazındaki kariyer araştırma düzeyleriyle ilgili yapılan arařtırmalar daha çok lise öğrencileri ve yetişkin bireylerin katılımıyla yapılmıştır (Rogers ve Creed, 2011). Buna ek olarak aile beklentileri, arkadaş desteđi ve aile kontrolü gibi öznel deneyimlerin kariyer araştırma üzerindeki rolünü inceleyen araştırma oldukça azdır. Bu arařtırmada algılanan aile desteđinin çevresel kariyer araştırma arasındaki ilişki yapısal eşitlik modeli ile test edilerek alan yazına katkı sağlanması hedeflenmektedir.

Pek çok çalışma ailenin veya arkadaşların üniversite öğrencilerinin kariyer gelişimleri üzerindeki etkisini incelemesine rağmen (örn. Leung, Hou, Gati, ve Li, 2011; Metheny ve McWhirter, 2013; Nawaz ve Gilani, 2011; Ulaş ve Özdemir, 2017), kariyer gelişimleri üzerinde etkili olan aile, arkadaş, öğretmen, akademik öz- yeterlilik gibi etmenleri bütüncül olarak ölçen geçerli ve güvenilir bir ölçme aracı alan yazında bulunmamaktadır (Fisher ve Stafford, 1999). Söz konusu etmenleri bütüncül bir biçimde ölçen ve ilgili çalışmalarda geçerli ve güvenilir ölçme aracı olarak bulunan Kariyer Belirleyici Envanteri bu araştırma kapsamında Türkçeye uyarlayarak alan yazına katkı sağlanması umut edilmektedir. Kariyer Belirleyici Envanteri'nin uyarlanması gelecek arařtırmacılar için kariyer gelişiminde etkili olan etmenleri aynı anda ölçen bir ölçme aracını kullanmasını sağlayabilir. Ayrıca, kariyer kararı verme sürecinde etkili olan etmenlerin bireysel düzeyde belirlenmesi kariyer psikolojik danışmanlarının danışmanlık sürecini etkili bir biçimde planlamasına yardımcı olabilir.

Ruh sađlığı alıřanlarının kariyer geliřimleriyle ilgili sorunlarla yardım almaya gelen danıřanlara daha etkili bir biimde yardımcı olabilmesi iin bireylerin kendi kariyer geliřim ihtiyalarının ve bireysel zelliklerinin hakkında farkında olması ve bu konular hakkında bilgi sahibi olmaları gerekmektedir (Gadassi, Gati, ve Wagman-Rolnick, 2013). rneđin Biliřsel Bilgiyi İřleme yaklařımını (Peterson, Sampson ve Reardon, 1991) benimseyen kariyer psikolojik danıřmanları danıřma srecinde takip edeceđi mdahale planını oluřturmadan nce danıřanın kariyer kararı vermeye hazır olma dzeyini lmesi gerekmektedir (Sampson ve ark., 2004). Kariyer psikolojik danıřmalıđı srecinde hangi yaklařım benimsenirse benimsensin, ncelikle danıřanların bireysel farklılıklarını ve kariyer geliřim ihtiyalarının belirlenmesi birincil kariyer psikolojik danıřmanlıđı yeterliliđidir (Brown ve Rector, 2008). Bu nedenle bu arařtırmada kariyer kararsızlıđına neden olabilecek olası etmenler zerinde durularak kariyer psikolojik danıřmanlarının mdahale programı oluřturmadan nce kullanabileceđi ipularını sađlaması hedeflenmektedir.

Alan yazında yapılan alıřmalar arasında kariyer geliřimi ve ruh sađlığı arasındaki iliřkiyi inceleyen arařtırmalar sınırlı sayıdadır (Hinkelman ve Luzzo, 2007). Arařtırmaların sınırlılıđına rađmen kariyer kararsızlıđının olumsuz ruh sađlığı belirtileriyle iliřkili olduđu arařtırma bulgularıyla desteklenmektedir (rn. Hirschi, 2011; Uthayakumar ve ark., 2010; Viola ve ark., 2017; Walker ve Peterson, 2012). Dolayısıyla, kariyer kararsızlıđına neden olan etmenlerin belirlenmesi ruh sađlığı alıřanlarının nleyici hizmetler aracılıđıyla ruh sađlığını destekleyen mdahaleleri oluřturulmasını sađlayabilir. Hinkelman ve Luzzo (2007) etkili ruh sađlığı hizmetlerinin sunulması iin hem mesleki hem de bireysel etmenlerin incelenmesi gerektiđini vurgulamaktadır. Bu arařtırmada Sistemler Kuramı'nda yer alan her bir sisteme iliřkin bireysel ve evresel dzeyde etmenler belirlenmiř aynı zamanda da mesleki etmenlerden kariyer arařtırma dzeyleri modele eklendiđir. Dolayısıyla bu alıřma ruh sađlığı alıřanlara kariyer kararsızlıđıyla

ilişkili bulunan bireysel ve çevresel düzeyde etmenlere ve mesleki etmenlere ilişkin bulguları sağlaması açısından faydalı olabilecektir.

2. YÖNTEM

2.1 Araştırma Deseni

Üniversite öğrencilerinin kariyer belirleyicileri (kariyer kararı yetkinlik beklentisi, akademik öz-yeterlilik, aile desteği, öğretmen desteği, arkadaş desteği, olumsuz sosyal yaşantılar, etnik kökene ve cinsiyete dayalı beklentiler), kariyer araştırma düzeyleri (çevresel araştırma, bireysel araştırma, planlı-sistemli çevresel araştırma) ve kariyer kararsızlığı arasındaki yapısal ilişkileri inceleyen bu çalışmada ilişkisel araştırma deseni (Fraenkel, Wallen ve Huyn, 2012) kullanılmıştır.

2.2 Örneklem Yöntemi

Araştırmada yer alacak katılımcıların belirlenmesi aşamasında tabakalı küme örnekleme yöntemi kullanılmıştır. Örneklem sürecinin ilk aşamasında, evreni temsil edecek fakültelerin seçimi yapılmıştır. Araştırmaya bir devlet üniversitesinde eğitim gören öğrenciler katılmıştır.. Fen ve Edebiyat Fakültesi, İktisadi ve İdari Bilimleri Fakültesi, Mühendislik-Mimarlık Fakültesi, Eğitim Fakültesi ve Sağlık Bilimleri Fakültesi araştırmaya dahil edilmiştir. Her bir fakültenin öğrenci sayısı ve beş fakültede öğrenim gören toplam öğrenci sayısındaki oran göz önünde bulundurularak; Eğitim Fakültesinden 140, Fen ve Edebiyat Fakültesinden 220, Mühendislik-Mimarlık Fakültesinden 380, İktisadi ve İdari Bilimleri Fakültesinden 200 ve Sağlık Bilimleri Fakültesinden 60 öğrenciye veri toplama araçları dağıtılmıştır.

2.2 Çalışma Grubu

Uygulanan ölçme araçlarını toplam 855 üniversite öğrencisi yanıtlamıştır ve geri dönüş oranı % 85.5 olmuştur. Yapısal eşitlik modellemesi için gerekli olan

varsayımlar incelendikten sonra 19 üniversite öğrencisinden elde edilen verilerin araştırmaya dâhil edilmemesine karar verilmiştir. Araştırmaya katılan 836 üniversite öğrencisinin 385'i erkek 451'i kadın öğrencidir. Mühendislik Fakültesinde öğrenim gören katılımcılar çoğunluğunu oluştururken, en az katılımcı Sağlık Bilimleri Fakültesinden olmuştur. Katılımcıların yaşları 18 ile 31 arasında değişirken, yaş ortalaması 21.12'dir (SD = 1.84).

2.3 Veri Toplama Araçları

Araştırmada Kişisel Bilgi Formu, Kariyer Karar Ölçeği, Kariyer Belirleyicileri Envanteri, Kariyer Kararı Yetkinlik Beklentisi Ölçeği-Kısa Form ve Kariyer Araştırma Ölçeği veri toplama araçları olarak kullanılmıştır.

2.3.1 Kişisel Bilgi Formu

Kişisel Bilgi Formunda katılımcıların yaş, sınıf düzeyi, yaş, algılanan sosyo-ekonomik düzey, genel not ortalaması, anne-baba eğitim düzeyi, anne-baba mesleği, fakülte, doğum yeri ve bölümlerine ilişkin sorular yer almaktadır.

2.3.2 Kariyer Araştırma Ölçeği

Üniversite öğrencilerinin çevresel kariyer araştırma, bireysel kariyer araştırma ve planlı-sistemli kariyer araştırma düzeylerini ölçmek amacıyla Stumpf ve arkadaşları (1983) tarafından geliştirilen Kariyer Araştırma Ölçeği kullanılmıştır. Ölçek, “Çok az”, “Biraz”, “Orta”, “Çok”, “Çok Fazla” şeklinde 5’li Likert tipinde derecelendiren 2 açık uçlu soru olmak üzere toplamda 59 madde içermektedir. Kariyer Araştırma Ölçeği üç temel ve 14 alt kategoriden oluşmaktadır. Kariyer Araştırma Ölçeğinin Türkçeye çevirisi, geçerlik ve güvenirlik çalışmaları bu araştırma kapsamında gerçekleştirilmiştir. Bu amaca yönelik olarak, bir devlet üniversitesinin farklı fakültelerde öğrenim gören 515 üniversite öğrencisinin katılımıyla bir pilot uygulama yapılmıştır. DFA sonuçları orijinal ölçekte (Stumpf ve ark., 1983) olduğu gibi Türkçe Kariyer Araştırma Ölçeğinin de üç temel ve 14

alt kategoriden oluştuğunu göstermiştir [$\chi^2 (1445) = 4189.48, p = .00; \chi^2/df$ - ratio = 2.10; CFI= .98 NNFI = 97 RMSEA = .046]. Türkçe Kariyer Araştırma Ölçeği'nin güvenirliği ile ilgili olarak iç tutarlılık katsayıları hesaplanmış ve iç tutarlık katsayıları Çevresel Kariyer Araştırma alt kategorisi için .84, Bireysel Kariyer Araştırma alt kategorisi için .79, Planlı-Sistemli Kariyer Araştırma alt kategorisi için .77 ve toplam puan için .88 olarak bulunmuştur.

2.3.3 Kariyer Karar Ölçeği

Üniversite öğrencilerinin kariyer kararsızlık düzeylerini ölçmek amacıyla Osipow ve arkadaşları tarafından (1976) geliştirilen ve sonradan Osipow (1987) tarafından revize edilen Kariyer Karar Ölçeği kullanılmıştır. Ölçek, “Hiç benim gibi değil”, “Sadece biraz benim gibi”, “Büyük ölçüde benim gibi”, “Büyük ölçüde benim gibi” şeklinde 4'lü Likert tipinde derecelendiren biri açık uçlu soru olmak üzere 19 madde içermektedir. Kariyer Karar Ölçeği bir açık uçlu soru olmak üzere kariyer kesinliği alt ölçeği (2 madde) ve kariyer kararsızlığı (16 madde) olmak üzere iki alt ölçekten oluşmaktadır. Ölçeğin yapı geçerliliğine ilişkin yapılan çeşitli araştırmalar incelendiğinde ölçeğin geliştirildiği sırada önerilen iki faktörlü yapının farklı kültürlerde doğrulandığı görülmektedir. Türkçe'ye uyarlanması Büyükgöze-Kavas (2012) tarafından yapılan Kariyer Karar Ölçeğinin iki boyutlu faktör yapısı bu çalışmada da doğrulanmıştır [$\chi^2 (129) = 550.85, p = .00; \chi^2/df$ - ratio = 4.27; CFI= .97, NNFI = 97; SRMR= .047; RMSEA = .063]. Bu araştırmada Kariyer Karar Ölçeğinin sadece Kariyer Kararsızlığı alt ölçeği kullanılmıştır. Ölçeğin geliştirildiği çalışmada Osipow (1980) kariyer kararsızlığı alt ölçeğinin iç tutarlılık katsayısı .90 bulunmuştur. Bu çalışmada ise ölçeğin iç tutarlılık katsayısı .87 olarak hesaplanmıştır.

2.3.4 Kariyer Kararı Yetkinlik Beklentisi Ölçeği-Kısa Form

Üniversite öğrencilerinin kariyer kararı yetkinlik beklenti düzeylerini ölçmek amacıyla Betz, Klein ve Taylor (1996) tarafından geliştirilen ve Işık (2010)

tarafından Türkçe'ye uyarlanan Kariyer Kararı Yetkinlik Beklentisi Ölçeği-Kısa Formu kullanılmıştır. Ölçek, “Hiç Güvenmiyorum”, “Güvenmiyorum”, “Çok Az Güveniyorum”, “Güveniyorum”, “Çok Güveniyorum” şeklinde 5’li Likert tipinde derecelendiren 25 maddeden oluşmaktadır. Ölçeğin yapı geçerliliğine ilişkin yapılan çeşitli araştırmalar incelendiğinde ölçeğin geliştirildiği sırada önerilen beş faktörlü yapının doğrulanmadığı görülmektedir. Bu nedenle bu araştırma Betz ve ark. (1996) ve Taylor ve Popma’nın (1990) önerdiği gibi kariyer kararı verme öz-yeterliliğin değerlendirilmesinde toplam puan kullanılmıştır. Türkçe’ye uyarlanması Işık (2010) tarafından yapılan Kariyer Kararı Yetkinlik Beklentisi Ölçeği-Kısa Formunun beş faktörlü yapısı bu çalışmada da doğrulanmıştır [$\chi^2(265) = 1011.23$, $p = .00$; χ^2/df - ratio = 3.82; $CFI = .98$, $NNFI = .98$; $SRMR = .039$; $RMSEA = .058$]. Ölçeğin içsel tutarlığına ilişkin katsayı .94, test-tekrar test güvenilirlik katsayısı ise .83 olarak bulunmuştur (Betz ve ark., 1996; Luzzo, 1993). Bu çalışmada ise içsel tutarlılık .94 olarak hesaplanmıştır.

2.3.5 Kariyer Belirleyicileri Envanteri

Araştırmada üniversite öğrencilerinin kariyer karar verme sürecinde etkili olan etmenleri belirlemek amacıyla Fisher ve Stafford (1999) tarafından geliştirilen Kariyer Belirleyicileri Envanteri kullanılmıştır. Ölçek, “Kesinlikle Katılmıyorum”, “Katılmıyorum”, “Katılıyorum”, “Kesinlikle Katılıyorum” şeklinde 4’lü Likert tipinde derecelendiren 35 maddeden oluşmaktadır. Kariyer Belirleyicileri Envanteri Öğretmen Etkisi, Olumsuz Sosyal Yaşantılar, Aile Etkisi, Lisedeki Akademik Deneyimler ve Akademik Öz-yeterlilik, Etnik Kökene ve Cinsiyete Dayalı Beklentiler ve Arkadaş Etkisi olmak üzere toplam altı alt ölçekten oluşmaktadır. Kariyer Belirleyicileri Envanteri’nin Türkçeye çevirisi, geçerlik ve güvenilirlik çalışmaları bu araştırma kapsamında gerçekleştirilmiştir. Bu amaca yönelik olarak, bir devlet üniversitesinde farklı fakültelerde öğrenim gören 386 üniversite öğrencisinin katılımıyla bir pilot uygulama yapılmıştır. DFA sonuçları orijinal ölçekte (Fisher ve Stafford, 1999) olduğu gibi Türkçe Kariyer

Belirleyicileri Envanteri'nin de altı alt ölçekten oluştuğunu göstermiştir [χ^2 (545) = 1404.68, p =.00; χ^2/df - ratio = 2.58; CFI= .98, NNFI = .98; SRMR= .040; RMSEA = .043]. Kariyer Belirleyicileri Envanteri'nin güvenilirliği ile ilgili olarak iç tutarlılık katsayıları hesaplanmış ve Öğretmen Etkisi, Olumsuz Sosyal Yaşantılar, Aile Etkisi, Lisedeki Akademik Deneyimler ve Akademik Özyeterlilik, Etnik Kökene ve Cinsiyete Dayalı Beklentiler ve Arkadaş Etkisi alt ölçeklerine dair iç tutarlılık katsayıları sırasıyla .91, .94, .93, .74, .82 ve .85 olarak bulunmuştur. Ölçeğin tamamı için iç tutarlılık katsayısı .88 olarak bulunmuştur.

2.4 Veri Toplama Süreci ve İşlem

Araştırma kapsamında üniversite öğrencilerinden veri toplayabilmek için ilk olarak Orta Doğu Teknik Üniversitesi Etik Kurul'undan gerekli izinler alınmıştır. Hem pilot çalışma hem de ana çalışma 2015-2016 bahar yarıyılında gerçekleştirilmiştir. Üniversite öğrencilerinin pilot çalışmalar için veri toplama araçlarını doldurması 5 -10 dakika sürerken ana çalışmada ise bu sürenin 15 - 20 dakika olduğu gözlemlenmiştir.

2.5 Verilerin Analizi

Verilerin çözümlenmesi SPSS 21, LISREL 8.8 ve AMOS 22 istatistik paket programlarından yararlanılarak yapılmıştır. Üniversite öğrencilerinin kariyer kararsızlık düzeyleriyle ilişkili etmenlerin yer aldığı hipotez model AMOS 22 (Arbuckle, 2009) ile Yapısal Eşitlik Modeli kullanılarak test edilmiştir. Elde edilen sonuçlar ki-kare, CFI, RMSEA, NNFI, SRMR ve RMSEA olmak üzere farklı model indekslerine bakılarak yorumlanmıştır.

3. BULGULAR

Üniversite öğrencilerinin kariyer kararsızlığına dair önerilen model test edilmeden önce yapısal eşitlik modellemesi için gerekli olan varsayımların sağlanıp sağlanmadığı incelenmiştir. Yapısal eşitlik modellemesi için gerekli olan

varsayımlar (örneklem büyüklüğü, kayıp veri, normallik, doğrusallık, eş varyanslılık ve çoklu bağlantı) kontrol edilirken SPSS 21 programı kullanılmıştır. Araştırma 836 üniversite öğrencisinin katılımıyla gerçekleştirildiği için örneklem büyüklüğünün yeterli olduğu düşünülmektedir. Örneklem büyüklüğünün yeterliliğine karar verildikten sonra kayıp veriler incelenmiştir. Kayıp veriler araştırılırken bu verilerin miktarına ve dağılımına bakılmıştır. Katılımcıların veri toplama araçlarını sağlıklı bir şekilde doldurup doldurmadığı incelenmiştir. Bu inceleme sırasında, bazı katılımcıların bazı soruları (özellikle Kariyer Karar Ölçeğinin ilk iki sorusunu) cevaplamadıkları, bazı ölçeklerin maddelerinde birden fazla işaretleme olduğu ve bazı öğrencilerin de belirli bir örüntü ile işaretleme yaptıkları bulunmuştur. Bu incelemeler sonucunda 19 üniversite öğrencisinden elde edilen veriler veri setinden çıkartılmıştır. Uç değerlerin incelenmesi için z istatistiğinden yararlanılmıştır. Elde edilen veriler uç değerlerin olmadığını göstermektedir. Çok değişkenli uç değer incelemesi için Mahalonobis uzaklık değeri hesaplanmıştır. Normallik varsayımını incelemek için çarpıklık ve basıklık katsayıları hesaplanmıştır. Ayrıca bu varsayım için sütun grafiklerinden yararlanılmıştır. Sonuç olarak verilerin normal dağılım gösterdiği tespit edilmiştir. Değişkenler arasındaki ilişkiler Pearson korelasyon katsayıları hesaplanmış, değişkenler arasında aşırı yüksek ilişki olup olmadığına bakılmıştır. Elde edilen sonuçlar çoklu bağlantı problemi olmadığını göstermektedir. Sonuç olarak, yapısal eşitlik modellemesi için gerekli olan tüm varsayımların sağlandığı bulunmuştur.

3.1 Betimsel Analizler

Betimsel analizler aracılığıyla modelde yer alan değişkenlere ait ortalama, standart sapma değerleri ve değişkenler arasındaki korelasyonlar hesaplanmıştır. Elde edilen korelasyon katsayılarına göre; üniversite öğrencilerinin kariyer kararsızlık düzeyleri planlı-sistemli kariyer araştırma, kariyer kararı yetkinlik beklentisi, çevresel araştırma, aile desteği, öğretmen desteği, arkadaş desteği,

akademik öz- yeterlilik ile negatif; etnik kökene ve cinsiyete dair beklentiler ile pozitif yönde ilişkilidir. Ancak, olumsuz sosyal yaşantılar ile kariyer kararsızlığı arasında anlamlı bir ilişki göstermemektedir. Kariyer araştırmanın alt boyutları kendi içinde pozitif korelasyon gösterirken, bu araştırma davranışlarının hepsi kariyer kararı yetkinlik beklentisi, aile desteği, öğretmen desteği, arkadaş desteği, akademik öz- yeterlilik ile pozitif korelasyon göstermiştir. Bununla birlikte, olumsuz sosyal yaşantılar ile çevresel ve planlı-sistemli kariyer araştırma arasında anlamlı bir ilişki bulunmamıştır. Benzer bir biçimde etnik kökene ve cinsiyete dayalı beklentiler ile bireysel ve çevresel kariyer araştırma arasında istatistiksel olarak anlamlı bir ilişki bulunmamıştır.

3.2 Yapısal Eşitlik Modeli Analizi

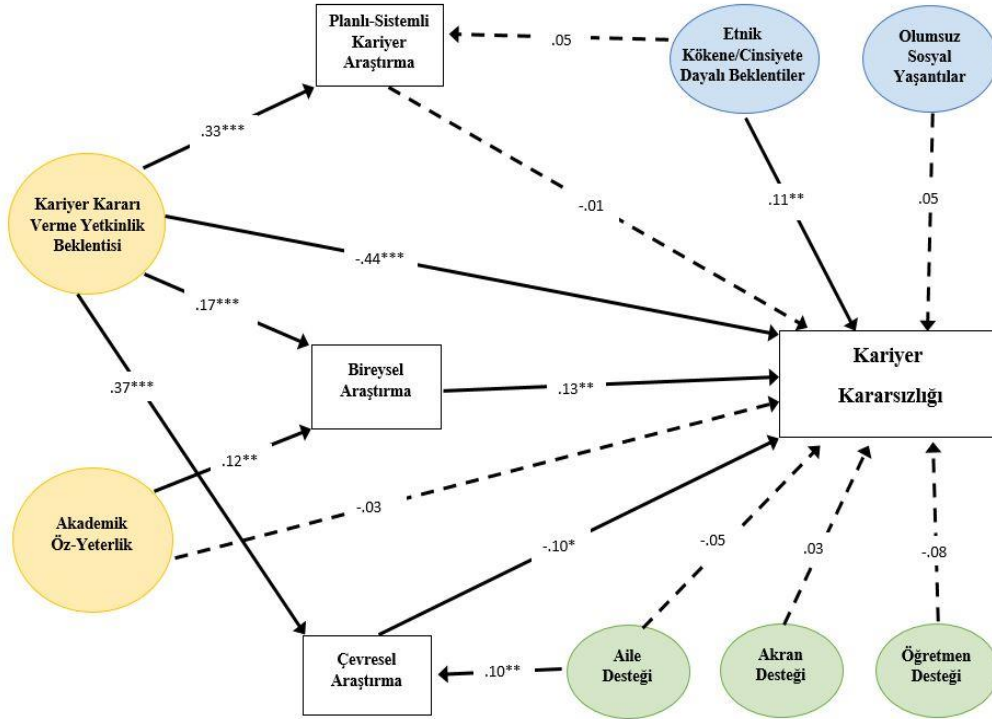
Araştırma kapsamında uyarlanan ölçeklerin psikometrik özellikleri incelendikten sonra araştırma sorularının cevaplarını bulmak ve üniversite öğrencilerinin kariyer kararsızlığına ilişkin oluşturulan modeli test etmek amacıyla yapısal eşitlik modellemesi (YEM) analizi gerçekleştirilmiştir. Hipotez edilen modelin öncelikle ölçme modeli test edilmiş, sonrasında yapısal modeli test edilmiştir. Her iki modelin test edilmesi sonrasında analiz sonuçlarını yorumlamak için alan yazın dikkate alınarak ki-kare, CFI, RMSEA, NNFI, SRMR ve RMSEA olmak üzere farklı model indekslerine bakılmıştır. Ölçme modelinin test edildikten sonra elde edilen sonuçlara göre; Ki-kare/ serbestlik derecesi 2.00, RMSEA değeri .035, NNFI değeri .96, SRMR değeri .036 ve CFI değeri .96 olarak bulunmuştur. Buna göre, hipotez edilen ölçme modelinin elde edilen verilerle iyi uyum gösterdiği sonucuna ulaşılmıştır (Kline, 2011).

Dışsal değişkenlerin içsel değişkeni yordama gücünü sınamak ve kariyer araştırma değişkenlerinin aracı rolünü incelemek amacıyla yapısal eşitlik modellemesi kullanılmıştır. Elde edilen sonuçlara göre ki-kare değeri istatistiksel olarak anlamlı bulunmuştur, $\chi^2 (866) = 1985.692$, $p = .00$. Diğer model uyum indeksleri incelendiğinde RMSEA değeri .038, NNFI değeri .95, SRMR değeri .040 ve CFI

değeri .95 olarak bulunmuştur. Elde edilen bu değerler hipotez edilen yapısal modelin araştırma verilerine iyi uyum gösterdiği anlamına gelmektedir (Kline, 2011). Hipotez modelde yer alan değişkenlerin içsel değişkeni ne kadar yordadığını anlamak, doğrudan ve dolaylı yolların anlamlılığını değerlendirmek için bootstrapping yöntemi kullanılarak elde edilmiş standardize edilmiş beta yükleri (β) incelenmiştir. İnceleme sonrasında hipotez modelde yer alan değişkenler arasındaki ilişkiyi gösteren 16 yoldan dokuzunun istatistiksel olarak anlamlı olduğu bulunmuştur. Bir başka deyişle kuramsal olarak bağlantılı olması beklenen bütün yollar istatistiksel olarak anlamlı bulunmamıştır (Şekil 2). Anlamlı yollar arasında en yüksek ilişki kariyer kararı yetkinlik beklentisi ile kariyer kararı arasında (-.44) iken en düşük ilişki ise aile desteği ile çevresel kariyer araştırma arasında (.10) dır. Test edilen modeldeki doğrudan ve dolaylı etkiler incelendiğinde; kariyer kararı yetkinlik beklentisinin kariyer kararsızlığı ile doğrudan ilişkisinin ($\beta = -.44, p < .01$), bireysel kariyer araştırma üzerinden dolaylı ilişkisinin ($\beta = .01, p < .01$) ve çevresel araştırma üzerinden dolaylı ilişkisinin ($\beta = .01, p < .01$) anlamlı düzeyde olduğu bulunmuştur. Bu nedenle çalışmadan elde edilen bu bulgular, '*Kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı arasında bir ilişki vardır*', '*Kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı a. bireysel kariyer araştırma b. çevresel kariyer araştırma ile dolaylı olarak ilişkilidir.*' hipotezlerini doğrulamaktadır. Aracı değişken olan bireysel kariyer araştırma ($\beta = .13, p < .01$) ve çevresel araştırma ($\beta = -.10, p < .01$) kariyer kararsızlığı ile doğrudan ilişkisi anlamlı bulunurken, diğer aracı değişken planlı-sistemli kariyer araştırmanın ($\beta = -.01, p > .05$) kariyer kararsızlığıyla doğrudan ilişkisi anlamlı değildir. Dolayısıyla, bulgular, '*Çevresel kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.*', '*Bireysel kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.*' hipotezlerini doğrularken, '*Planlı-sistemli kariyer araştırma ile kariyer kararsızlığı arasında bir ilişki vardır.*' hipotezini doğrulamamaktadır. Ayrıca akademik öz-yeterliliğin kariyer kararsızlığı üzerine olan doğrudan ilişkisi anlamlı değildir ($\beta = -.03, p > .05$). Bununla birlikte, akademik öz-yeterliliğin bireysel kariyer araştırma üzerine

olan doğrudan ilişkisi anlamlıdır ($\beta = .12, p < .01$). Sonuç olarak, araştırmanın bu bulguları ile *'Akademik öz- yeterlilik ile kariyer kararsızlığı arasında bir ilişki vardır'*, hipotezi doğrulanmış, fakat *'Akademik öz- yeterlilik ile kariyer kararsızlığı bireysel kariyer araştırma ile dolaylı olarak ilişkilidir.'* hipotezi doğrulanmamıştır. Benzer bir biçimde aile desteğinin kariyer kararsızlığı üzerine doğrudan ilişkisi anlamlı değilken ($\beta = .10, p < .01$), çevresel kariyer araştırma üzerinden dolaylı ilişkisi istatistiksel olarak anlamlıdır ($\beta = -.009, p < .05$). Dolayısıyla, çalışmadan elde edilen bu bulgular *'Aile desteği ile kariyer kararsızlığı arasında bir ilişki vardır'* hipotezini doğrulamamaktadır. Öte yandan *'Aile desteği ile kariyer kararsızlığı çevresel kariyer araştırma ile dolaylı olarak ilişkilidir.'* hipotezini doğrulamaktadır. Ayrıca aile desteğinin çevresel kariyer araştırma üzerine doğrudan ilişkisi anlamlıdır ($\beta = .10, p < .01$). Çalışmadan elde edilen bulgu *'Aile desteği ile çevresel kariyer araştırma arasında bir ilişki vardır'* hipotezini doğrulamaktadır. Sosyal sistemde yer alan arkadaş desteği ($\beta = .03, p > .05$) ile öğretmen desteğinin ($\beta = -.08, p > .05$) kariyer kararsızlığı üzerine doğrudan ilişkisi anlamlı değildir. Benzer biçimde, olumsuz sosyal yaşantıların kariyer kararsızlığı üzerine doğrudan ilişkisi anlamlı değildir ($\beta = .05, p > .05$).Araştırmanın bu bulguları ile *'Arkadaş desteği ile kariyer kararsızlığı arasında bir ilişki vardır'*, *'Öğretmen desteği ile kariyer kararsızlığı arasında bir ilişki vardır.'*, *'Olumsuz sosyal yaşantılar ile kariyer kararsızlığı arasında bir ilişki vardır.'* hipotezleri doğrulanmamaktadır. Bireysel sistemde yer alan değişkenlerden biri olan kariyer kararı yetkinlik beklentisinin planlı-sistemli kariyer araştırma ($\beta = .33, p < .001$), bireysel kariyer araştırma ($\beta=.17, p < .001$) ve çevresel kariyer araştırma ($\beta = .37, p < .001$) ile doğrudan ilişkisi anlamlı bulunmuştur. Dolayısıyla, çalışmadan elde edilen bu bulgular, *'Kariyer kararı yetkinlik beklentisi ile bireysel kariyer araştırma arasında bir ilişki vardır.'*, *'Kariyer kararı yetkinlik beklentisi ile çevresel kariyer araştırma arasında bir ilişki vardır.'*, *'Kariyer kararı yetkinlik beklentisi ile planlı-sistemli kariyer araştırma arasında bir ilişki vardır.'*, hipotezlerini doğrulamaktadır. Çevresel/toplumsal sistemde yer alan etnik kökene ve cinsiyete dayalı

beklentilerin kariyer kararsızlığı ile doğrudan ilişkisi ($\beta = .11, p < .01$) anlamlı olduğu bulunurken, söz konusu beklentilerin planlı-sistemli kariyer araştırma üzerinden dolaylı ilişkisinin istatistiksel olarak anlamlı olmadığı görülmektedir ($\beta = .00, p > .05$). Araştırmadan elde edilen bu bulgular 'Etnik kökene ve cinsiyete dayalı beklentiler ile kariyer kararsızlığı arasında bir ilişki vardır.' hipotezini doğrularken 'Etnik kökene ve cinsiyete dayalı beklentiler ile kariyer kararsızlığı planlı-sistemli kariyer araştırma ile dolaylı olarak ilişkilidir.' hipotezini doğrulamamaktadır. Araştırmada, etnik kökene ve cinsiyete dayalı beklentilerin planlı-sistemli kariyer araştırma üzerindeki doğrudan ilişkisinin istatistiksel olarak anlamlı olmadığı bulunmuştur ($\beta = .05, p > .05$). Araştırmada elde edilen bu bulgu, 'Etnik kökene ve cinsiyete dayalı beklentiler ile planlı-sistemli kariyer araştırma arasında bir ilişki vardır.' hipotezini doğrulamamaktadır.



Şekil 2 Yapısal Model

Not: Sarı dolgulu dairelerin içinde yazan değişkenler bireysel sistemde yer almaktadır. Mavi dolgulu dairelerin içinde yazan değişkenler çevresel/toplumsal sistemde bulunmaktadır. Yeşil dolgulu dairelerin içinde yazan değişkenler sosyal sistemde yer almaktadır.

Son olarak her bir deęişken için model tarafından açıklanan varyanslar, çoklu korelasyon katsayısının karesine (R^2) bakılarak incelenmiştir. Buna göre, test edilen modelinin bütün faktör varyanslarını istatistiksel olarak anlamlı derece açıkladığı ve çalışmanın içsel deęişkeni olan kariyer kararsızlığının deęişkeni olan kariyer kararsızlığı varyansının % 28'ini, aracı deęişkenler olan çevresel kariyer araştırmanın % 16'sını, bireysel kariyer araştırmanın % 11'ini ve son olarak planlı-sistemli kariyer araştırmanın % 6'sını açıkladığı bulunmuştur.

4. TARTIŞMA

Bu araştırma kapsamında Türkçeye çevirisi, geçerlik ve güvenilirlik çalışmaları yapılan Kariyer Araştırma Ölçeği (Stumpf ve ark., 1983) ve Kariyer Belirleyicileri Envanteri (Fisher ve Stafford, 1999), ölçme araçlarının hem geliştirildiği orjinal çalışmalarda belirlenen hem de uyarlama çalışmalarında (örn. Rowold, ve Staufenbiel, 2010; Taveira ve ark., 1998; Xu, Hou ve Tracey, 2014) doğrulanan ölçeklerin faktör yapısı bu çalışmada elde edilen verilerle doğrulanmıştır. Ayrıca güvenilirlik katsayıları da bu ölçeklerin veri toplama aracı olarak kullanıldığı çalışmalarda (Bartley ve Robitschek, 2000; Grygo, 2003; Rogers, Creed ve Glendon, 2008) hesaplanan güvenilirlik katsayıları ile tutarlılık göstermektedir. Bu nedenle uyarlanan Kariyer Araştırma Ölçeği'nin üniversite öğrencilerinin kariyer araştırma düzeylerini ölçmek kullanabilecek geçerli ve güvenilir bir ölçme aracı olduğu söylenebilir. Kariyer Belirleyicileri Envanteri'ne dair yapılan geçerlik ve güvenilirlik çalışmaları da bu veri toplama aracının üniversite öğrencilerinin kariyer kararı verme sürecinde etkili olduğunu düşündüğü etmenleri ve bu etmenlerin gücünü belirlemek için kullanabilecek geçerli ve güvenilir bir ölçme aracı olduğunu göstermektedir. Kariyer psikolojik danışmanlığı alanındaki araştırmacılar (Leong ve Hartung, 2000; Zhang ve ark, 2018) özellikle bireylerin kariyer gelişimleriyle ilgili geliştirilen ölçme araçlarının psikometrik özelliklerinin farklı gruplarla çalışılarak test edilmesi gerekliliğine vurgu yapmaktadır. Her iki ölçme aracının da daha önce Türkçeye çevirisi ve geçerlilik-güvenirlik çalışmaları

bu arařtırmadan önce yapılmamıřtır. Bu yönüyle bu arařtırmanın alan yazına katkı sađladıđı düşünölmektedir.

Bu arařtırmada, üniversite öđrencilerinin kariyer kararsızlıđını etkileyen etmenleri anlamak için, Sistemler Kuramı (McMahon ve Patton, 1995; Patton ve McMahon, 1999; 2006) benimsenerek bireysel sistem (kariyer kararı yetkinlik beklentisi ve akademik öz- yeterlilik), sosyal sistem (aile, arkadaş ve öđretmen desteđi) ve çevresel/toplumsal sistem (olumsuz sosyal yařantılar ve etnik kökene ve cinsiyete dayalı beklentiler) ile ilgili deđiřkenler dıřsal deđiřkenler olarak belirlemiřtir. Blustein (1992; 1995), Stumpf ve ark. (1993) ve Jordan (1963) kariyer arařtırma davranıřlarına iliřkin yaptıkları kuramsal açıklamalarından esinlenerek çevresel, bireysel ve planlı-sistemli kariyer arařtırma aracı deđiřkenler olarak belirlenmiřtir. Arařtırma sonuçları test edilen hipotez modelde yer alan yolların çođunun istatistiksel olarak anlamlı olduđunu göstermektedir. Kuramsal olarak bađlantılı olması beklenen yolların anlamlı olması Sistemler Kuramı'nın (McMahon ve Patton, 1995; Patton ve McMahon, 1999; 2006) kariyer karar verme sürecini açıklamaya yönelik bir yaklařım olduđuna dair ipuçları sunmaktadır. Sistemler Kuramı'nda (McMahon ve Patton, 1995; Patton ve McMahon, 1999; 2006) da ifade edildiđi gibi her sistem birbiriyle iliřkili olduđu için bireysel sistemde yer alan bireysel ve iř dünyasına yönelik bilgiler diđer sosyal ve çevresel/toplumsal sistemlerde yer alan deđiřkenlerle bir řekilde iliřkili bulunmuřtur. Test edilen modele dair sonuçlar genel olarak deđerlendirildiđinde bireysel sistem iđerisinde yer alan kariyer kararı yetkinlik beklentisi ile akademik öz-yeterlilik kariyer kararsızlıđı üzerine toplam etki deđerleri en fazla olan deđiřkenlerdir. Sistemler Kuramı'nda ifade edildiđi gibi bireysel sistem diđer iki sisteme göre daha kapsamlı ve kariyer kararı verme sürecinde daha etkin bir role sahiptir (Arthur ve McMahon, 2005; McMahon ve Patton, 2009). Arařtırmada üniversite öđrencilerinin kariyer kararsızlıđı üzerinde en fazla role sahip olan etmenler; bireysel kariyer arařtırma, çevresel kariyer arařtırma, kariyer kararı yetkinlik beklentisi, aile desteđi ve etnik kökene ve cinsiyete dayalı beklentiler olarak

bulunmuştur. Elde edilen bu bulgu alan yazında yer alan pek çok araştırmanın bulgularıyla örtüşmektedir (Büyükgöze-Kavas, 2011; Cheung ve Arnold, 2014; Jadidian ve Duffy, 2012; Işık, 2013; An ve Lee, 2017; Park ve ark., 2017; Xu, Hou, ve Tracey, 2014).

Araştırma sonuçları kariyer kararı yetkinlik beklentisi ile kariyer kararsızlığı arasındaki doğrudan ve dolaylı ilişkileri doğrular niteliktedir. Bu araştırma bulgusu alan yazında yer alan önceki araştırma bulgularıyla paralellik göstermektedir (Creed ve ark., 2007; Henis, 2000; Kanten ve ark., 2016; Yoshizaki ve Hiraoka, 2015). Buna karşın kariyer kararı yetkinlik beklentisinin çevresel araştırma üzerinden dolaylı etkisinin anlamlı düzeyde olduğu bulunmuştur. Dolaylı etki negatif yöndedir. Bu bulgu bir şekilde alan yazında yer alan bireylerin kariyer karar yetkinlik beklentisi yükseldikçe kariyer araştırma düzeylerini arttırdığını ve bu artış sonucunda kariyer kararsızlığının azaldığını gösteren araştırma bulgularıyla örtüşmemektedir (Creed ve ark., 2017; Stringer, Kerpelman, ve Skorikov, 2011; Park et al., 2017; Sadeghi ve ark., 2011; Vignoli, 2015). Bu bulgunun önceki araştırma bulgularıyla paralellik göstermemesinin nedeni araştırmaya katılan öğrencilerin kariyer kararı yetkinlik beklentilerinin yüksek olmasıyla ilgili olabilir. Üniversite öğrencileri bilgi toplama boyutunda kendilerine güvendikleri için iş, kurum, kuruluşlar hakkında yeni bilgi edinmek için çaba göstermemiş olabilirler. Halihazırda topladıkları iş dünyası hakkındaki bilgileri yeterli buldukları için ve yeni araştırma davranışları göstermedikleri için kariyer kararsızlık düzeyleri azalmamış olabilir. Bu araştırmada kariyer kararı yetkinlik beklentisinin bireysel araştırma üzerinden dolaylı etkisinin anlamlı düzeyde olduğu bulunmuştur. Dolaylı etki istatistiksel olarak anlamlı olduğu gibi pozitif yöndedir. Bu bulgu üniversite öğrencilerinin kariyer kararı yetkinlik beklentileri yükseldikçe bireysel özellikleri hakkında daha fazla bilgi topladıkları ve topladıkları bilgiler aracılığıyla kariyer kararları hakkında daha emin oldukları şeklinde yorumlanabilir. Dolayısıyla bu bulgunun daha önce yapılan araştırma bulgularıyla paralellik gösterdiği söylenebilir (An ve Lee, 2017; Betz ve Voyten,

1997; Creed ve ark., 2007; Gushue, 2006; Kanten ve ark., 2016; Yoshizaki ve Hiraoka, 2015).

Bu araştırma kapsamında bireysel sistemde yer alan kariyer kararı yetkinlik beklentisi ile kariyer araştırmanın alt boyutları arasında doğrudan ve dolaylı ilişkiler incelenmiştir. Araştırma sonuçlarına göre daha önce yapılan çalışmalara (An ve Lee, 2017; Gushue, 2006; Kanten ve ark., 2016; Rogers ve ark., 2008, Yoshizaki, ve Hiraoka, 2015) benzer şekilde kariyer kararı verme sürecinde kariyerle ilgili görevlerini gerçekleştirmede kendine güveni olan üniversite öğrencilerinin kendileri ve iş dünyası hakkında daha fazla araştırma yaptıkları ve bu araştırmaları planlı ve sistemli bir biçimde yaptıkları bulunmuştur.

Avara'yla (2015), Kim ve Yun'la (2015) ve Wright'la (2014) paralel olarak akademik öz- yeterlilik ve bireysel kariyer araştırma arasında istatistiksel olarak pozitif yönde doğrudan etki bulunmuştur. Akademik öz-yeterliliğin bireysel kariyer araştırma üzerinden kariyer kararsızlığı üzerindeki dolaylı etkisi istatistiksel olarak anlamlıdır ve pozitif yöndedir. Bununla birlikte akademik öz-yeterliliğin kariyer kararsızlığı üzerine olan doğrudan etkisi anlamlı değildir. Bu sonuç Yalın-Yaman (2014) tarafından bulunan sonuçla çelişmektedir.

Sosyal sistem içerisinde aile desteği kariyer kararsızlığı üzerine doğrudan etkisi anlamlı değilken, çevresel kariyer araştırma üzerine doğrudan etkisi anlamlıdır. Aile desteği çevresel kariyer araştırma üzerinden dolaylı etkisi istatistiksel olarak anlamlıdır. Aile desteğinin kariyer kararsızlığı üzerinde doğrudan etkisinin olmayışı alan yazındaki bazı araştırma bulgularıyla (örn. Büyükgöze-Kavas, 2011; Vignoli, 2009) paralellik gösterirken bazı araştırma bulgularıyla (örn., Cheung ve Arnold, 2014; Koumoundourou ve ark., 2011; Slaten ve Baskin, 2014) da çelişmektedir. Bunun nedeni olarak üniversite öğrencilerinin kariyer kararı verme sürecinde aile üyelerinden beklediği desteği farklı kaynaklardan almış olabileceği düşünülmektedir. Bir diğer nedense günümüzde iletişim ve bilgi teknolojilerinin gelişmesiyle birlikte ailelerin bilgi vermesini bekledikleri alanlarda kendilerinin

bu teknolojileri kullanarak bu bilgilere ulaşmış olabileceğidir. Aile desteğinin çevresel kariyer araştırma üzerinden dolayı olarak kariyer kararsızlığını azaltan bir yapıya sahip olduğunun bu araştırma tarafından bulunması da bu yoruma destek niteliktedir. Aile üyeleri çocuklarını bilgiye ihtiyaç duyduklarında iş dünyası hakkında bilgi edinecekleri kaynaklara yönlendirerek onların kariyer kararsızlığının azalmasına yardımcı olmuş olabilir. Aile desteğinin çevresel kariyer araştırma üzerinden dolayı olarak kariyer kararsızlığını azaltan bir yapıya sahip olduğunun bulunması daha önceki araştırma bulgularıyla (Blustein, 2011; Cheung ve Arnold, 2014; Leung ve ark., 2011; Slaten ve Baskin, 2014) ve kuramsal açıklamalarla da (Blustein 1997; Blustein ve Flum, 1999; Flum ve Blustein, 2000) paralellik göstermektedir

Araştırmada sosyal sistemde yer alan arkadaş desteğiyle ilgili bulguya göre, arkadaş desteğinin kariyer kararı üzerinde doğrudan etkisi yoktur. Alan yazında doğrudan arkadaş desteği ile kariyer kararsızlığı arasındaki ilişkiyi inceleyen araştırmaların sayısı az olsa da, genellikle destekleyici arkadaş ilişkilerinin olumlu kariyer gelişimiyle ilişkilendirilebileceğine dair araştırmalar bulunmaktadır. Bu bakış açısıyla alan yazın incelendiğinde, bu bulgu bazı araştırmaların bulgularıyla (e.g. Slaten ve Baskin, 2014) paralellik gösterirken bazı araştırma bulgularıyla çelişmektedir (Blustein ve ark., 1995; Cheung ve Arnold, 2014; Nawaz ve Gilani, 2011). Bu bulgunun alan yazındakilerle paralellik göstermemesinin bir sebebi olarak arkadaş ilişkilerinin yapısı gösterilebilir. Kariyer Belirleyicileri Envanteri'nin Arkadaş Etkisi alt ölçeği incelendiğinde arkadaş ilişkilerinin yapısına ve içeriğine dair bir soru bulunmamaktadır. Oysa “arkadaşlarım kararsızlık yaşadığımda beni yönlendirir” gibi maddelerin ölçekte yer alması ilişkilerin doğasına ilişkin bilgi edinmemize yardımcı olabilirdi. Dolayısıyla, bu araştırmaya katılan öğrenciler arkadaşlarından destek görmüş olsalar bile ölçeğin yapısı gereği arkadaş desteğinin kariyer kararsızlığı üzerinde doğrudan etkisi anlamlı çıkmamış olabilir.

Öğretmen desteğinin kariyer kararsızlığıyla doğrudan ilişkili olmayışı alan yazındaki kuramsal açıklamaları (Öz-belirleme Kuramı, Sistemler Kuramı ve Ekolojik Yaklaşım) desteklememektedir. Ekolojik yaklaşıma göre öğretmen ve öğrenci arasındaki iletişim ve etkileşim bireylerin davranışlarını şekillendirir. Dolayısıyla bu etkileşimin yapısı, kariyer kararı verme sürecinde okulun öğrenciler için destekleyici veya engelleyici bir role sahip olmasını belirlemektedir (Zhang ve ark., 2018). Bu kuramsal açıklamalar doğrultusunda araştırma bulgusu incelendiğinde, öğretmen desteğinin kariyer kararsızlığıyla doğrudan ilişkili olmayışı Türkiye'deki eğitim sisteminin mevcut koşullarıyla ilişkilendirilebilir. Türkiye'de yıllar geçtikçe nüfusun artmasına paralel olarak okul ve öğretmen sayısı artmış olmasına rağmen (MEB, 2016), öğretmen başına düşen öğrenci sayısının hala yüksek olması sebebiyle öğretmenler sınıf içinde öğrencilerin ihtiyaçlarını fark etme yönünde bir takım sıkıntılar yaşamaktadır (Doğan, 2005). Bu nedenle bu araştırmaya katılan üniversite öğrencilerinin lise yıllarında yeteri kadar öğretmenlerinin olmayışı veya sınıf mevcudunun yüksek olması öğretmenlerin öğrencilerinin kariyer gelişim ihtiyaçlarını fark edememesine dolayısıyla yeteri kadar destek olamayışına neden olmuş olabilir. Yeteri kadar öğretmen olmayışı öğrenciler için aynı zamanda da örnek alabilecekleri rol modellerin sayısının azalmasına da neden olmuş olabilir. Bu durum onların kariyer kararı verme sürecinde motivasyonlarının düşmesine neden olmuş olabilir. Zhang ve arkadaşlarının (2008) da dediği gibi okuldaki bu tür sorunlar öğrencilerin destek almamasına neden olmuş olabilir.

Çevresel/toplumsal sistemde yer alan etnik kökene ve cinsiyete dayalı beklentilerin kariyer kararsızlığıyla doğrudan ilişkili olduğu bulgusu alan yazındaki araştırma bulgularıyla paralellik göstermektedir (Fouad ve ark., 2010; Gunderson ve ark., 2012; Harackiewicz ve ark., 2012; Schelmetic, 2013). Bununla birlikte etnik kökene ve cinsiyete dayalı beklentiler planlı-sistemli kariyer araştırmayla doğrudan ilişkili olmadığı bulgusu alan yazındaki araştırma bulgularıyla paralellik göstermemektedir. Bu bulgunun olası açıklaması

araştırmanın katılımcılarının kariyer araştırma davranışlarını planlı ve sistemli bir biçimde sürdürmemiş olması olabilir.

Alan yazında kariyer araştırma kavramının alt boyutlarının bireylerinin kariyer kararı verme sürecini farklı düzeylerde etkileyebileceğini vurgulamaktadır (Blustein ve ark., 1994). Bu nedenle bu çalışmada kariyer araştırmanın üç alt boyutu ele alınmıştır. Bu boyutlar: bireysel, çevresel ve planlı-sistemli araştırmalardır. Araştırma sonuçları da kariyer araştırma davranışının alt boyutlarının kariyer kararsızlığı üzerinde farklı düzeylerde etkileri olduğunu göstermektedir. Dolayısıyla araştırmanın bu bulgusunun alan yazındaki diğer araştırma bulgularıyla benzerlik taşıdığı söylenebilir (Blustein ve ark., 1994; Xu, Hou ve Tracey, 2014). Bu benzerlikle birlikte Blustein ve arkadaşları (1994) planlı ve sistemli bir şekilde yürütülen kariyer araştırmanın kariyer kararsızlık düzeyini azaltan bir role sahip olduğunu söylemektedir. Bu çalışmada planlı-sistemli kariyer araştırmanın kariyer kararsızlığıyla doğrudan etkisi anlamlı olmadığı için bu açıklamayla çelişmektedir. Alan yazındaki araştırma bulgularıyla (Park ve ark., 2017, Robitscheck ve ark., 2012; Stringer, Kargelman ve Skorikov, 2011) paralellik göstermeyen bir diğer bulgu ise bireysel kariyer araştırmanın kariyer kararsızlığı üzerindeki doğrudan etkinin pozitif yönde olmasıdır. Kuzgun'a (2000) göre bireyler kendileri, ilgileri, yetenekleri ve mesleki değerleri hakkında araştırma yaptıkça bir başka deyişle bireysel kariyer araştırma davranışı sergiledikçe kariyer kararsızlığı artabilir. Özellikle yeteneklerle ilgili yeni keşifler bireylerin hangi kariyeri seçeceğine karar verememesine neden olabilir. Dolayısıyla, bu çalışmaya katılan öğrenciler kendileri hakkında bilgi edindikçe kariyer kararsızlıkları artmış olabilir.

5. SONUÇ VE ÖNERİLER

Sonuç olarak bu çalışmada üniversite öğrencilerinin kariyer araştırma düzeylerini belirleyen “Kariyer Araştırma Ölçeği” ve kariyer kararı verme sürecinde etkili olan etmenleri tespit eden “Kariyer Belirleyicileri Envanteri”

uyarlanarak, bu iki ölçek alan yazına kazandırılmıştır. Üniversite öğrencilerinin kariyer kararsızlığına yönelik tasarlanan model, araştırmada elde edilen veriler ile iyi uyum sağlamıştır. Bu çalışmadan elde edilen bulgular ışığında araştırmacılara, psikolojik danışmanlara ve karar vericilere bazı önerilerde bulunulmuştur. Bu kapsamda gelecekte üniversite öğrencilerinin kariyer kararsızlığıyla ilgili çalışmalar yürütecek araştırmacılara yaş, etnik köken, özel gereksinimi olan bireylerle ve farklı demografik özelliklere sahip bireylerle çalışmalar yürütmeleri, farklı örnekleme yöntemi kullanarak evreni temsil edebilecek örnekleme ulaşmaları önerilebilir. Ayrıca, bu araştırmada elde edilen bulguları değerlendirirken verilerin elde edildiği grubun özelliklerini göz önünde bulundurmaları, özellikle kariyer araştırma düzeyleri ile bağlamsal ve ilişkisel etmenlerin rolünü dikkate alarak araştırmalar tasarlamaları, araştırmanın nicel bulgularını nitel bulgularla desteklemeleri ve Sistemler Kuramı'nda yer alan fakat bu araştırmada modele dâhil edilmeyen sosyo-ekonomik düzey, coğrafi konum, eğitim ve sınav sistemi gibi etmenleri kendi tasarladıkları modele dâhil ederek modeli test etmeleri önerilebilir.

Araştırmada elde edilen bulgular ışığında üniversitelerin psikolojik danışma ve kariyer merkezlerinde çalışan uygulayıcıların; kariyer kararsızlığının çok boyutlu bir yapıya sahip olduğunun farkına varmaları, kariyer kararsızlığının nedenlerini bilmeleri, kariyer kararsızlığı sonucunda ortaya çıkan olumsuz ruh sağlığı belirtileri hakkında bilgiye sahip olmaları yönünde öneriler getirilmiştir. Uygulayıcıların farklı ölçme ve değerlendirme teknikleri kullanarak öğrencilerin bireysel ve çevresel kariyer araştırma davranışlarını desteklemeleri ve öğrenciler için en uygun olan kariyer yolunu belirlemeleri yönünde tavsiyelerde bulunulmuştur. Üniversitelerin psikolojik danışma ve kariyer merkezlerinde çalışan uygulayıcılara, kariyer kararsızlığı yaşayan bireylerin kararsızlık nedenlerini ortaya çıkarmak için çaba göstermeleri yönünde öneriler sunulmuştur. Bu çabayı gösterirken ailesel ve çevresel beklentiler ile kendi beklentileri arasında uyumsuzluk olan bireylerin bu beklentiler ile kendi beklentilerini sağlıklı bir

biçimde karşılaştırabilecekleri ortamlar sağlamaları ve bireylerin kariyer kararsızlığını azaltmak için oturumlar planlamaları önerilmektedir. Ayrıca uygulayıcılara kariyer karar sürecinde sadece ilgi, beklenti ve yeteneklerin değil bireyle ilgili olabilecek kişisel ve kişiler arası etmenleri tanımlamaları ve bu etmenler arasındaki ilişkinin danışan tarafından fark edilmesi için uygun terapötik ortamları sağlamaları önerilmiştir.



Appendix T: Tez Fotokopisi İzin Formu

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

YAZARIN

Soyadı : Mutlu

Adı : Tansu

Bölümü : Eğitim Bilimleri

TEZİN ADI (İngilizce): The Relationships among Career Influences, Career Exploration and Career Indecision: A Test of Systems Theory Framework

TEZİN TÜRÜ : Yüksek Lisans

Doktora

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

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: