

RESEARCH

Open Access

ARAŞTIRMA

Açık Erişim

Cognitive Flexibility and Positivity as Predictors of Career Future in University Students

Üniversite Öğrencilerinde Kariyer Geleceğinin Yordayıcısı Olarak Bilişsel Esneklik ve Pozitiflik

Elvan Yıldız-Akyol , Mehmet Boyacı 

Abstract. The purpose of this study is to examine whether the career future of university students can be predicted significantly by cognitive flexibility and positivity. The study designed for this purpose consists of 401 participants (290 female, 111 male) who attended two different universities in Ankara and Istanbul. The data of this research were collected by using Turkish adaptation of the "Career Futures Scale (CFS)", "Cognitive Flexibility Inventory (CFI)", and "Positivity Scale (PS)". Besides these, a personal information form was used for collecting various demographic variables. The findings of this research demonstrated that there is a positive and significant relationship between career future, cognitive flexibility, and positivity. As a result of the analyses conducted in order to test the predictability of the career future by cognitive flexibility and positivity, they were found to be a significant predictor of the career future of university students ($R^2 = .48, p < .01$). In addition to these findings, fourth-year students' career future scores were found to be significantly higher than the second and third grade students. Moreover, the career future scores of students who voluntarily selected their major of study were significantly higher than those who unwillingly chose it.

Keywords: Career future, cognitive flexibility, positivity, career counseling, career adaptability

Öz. Bu araştırmanın amacı, bilişsel esneklik ve pozitifliğin üniversite öğrencilerinin kariyer geleceğini anlamlı biçimde yordayıp yordamadığını incelemektir. Araştırmanın çalışma grubu, Ankara ve İstanbul ilinde yer alan 2 farklı üniversitede öğrenimine devam eden 290'ı kadın ve 111'i erkek olmak üzere toplam 401 üniversite öğrencisinden oluşmaktadır. Araştırma kapsamında veri toplamak için katılımcılara, araştırmacılar tarafından oluşturulan Kişisel Bilgi Formu (KBF), Kariyer Geleceği Ölçeği (KARGEL), Bilişsel Esneklik Envanteri (BEE) ve Pozitiflik Ölçeği (PÖ) uygulanmıştır. Sonuçlar, kariyer geleceği, bilişsel esneklik ve pozitiflik arasında pozitif ve anlamlı bir ilişki olduğunu göstermiştir. Bilişsel esneklik ve pozitifliğin kariyer geleceğini ne düzeyde yordadığını test etmek amacıyla yapılan analizler neticesinde bilişsel esneklik ve pozitifliğin, üniversite öğrencilerinin kariyer geleceklerinin anlamlı bir yordayıcısı olduğu sonucuna ulaşılmıştır ($R^2 = .48, p < .01$). Bu bulguların yanı sıra dördüncü sınıf öğrencilerinin kariyer geleceği puanlarının ikinci ve üçüncü sınıf öğrencilerinden anlamlı biçimde daha yüksek olduğunu bulunmuştur. Ayrıca sonuçlar, bölümüne isteyerek gelen öğrencilerin kariyer geleceği puanlarının kendi isteği dışında gelenlerden anlamlı biçimde daha yüksek olduğunu göstermiştir.

Anahtar Kelimeler: Kariyer geleceği, bilişsel esneklik, pozitiflik, kariyer danışmanlığı, kariyer uyumu

Elvan Yıldız-Akyol (Corresponding Author)

Gazi University, Faculty of Education, Ankara, Turkey
e-mail: elvanyldz@hotmail.com

Mehmet Boyacı

Medeniyet University, Faculty of Education, Istanbul, Turkey
e-mail: mehmet.boyaci@medeniyet.edu.tr

Received: 21 March 2019

Revision: 13 April 2020

Accepted: 18 April 2020



Suggested Citation: Yıldız-Akyol, E., & Boyacı, M. (2020). Cognitive flexibility and positivity as predictors of career future in university students. *Turkish Psychological Counseling and Guidance Journal*, 10(57), 297-320.

INTRODUCTION

Nowadays, the new tendencies in the world of work caused by the social, cultural, technological and economic changes have a great impact not only on occupational structures but on the understanding of having a job (Johnston, 2018; Nota, Ginevra & Soresi, 2012). Depending upon these changes, individuals are required to keep on learning new skills and adapt to the new demands of the changing business world in order to manage their careers effectively. Moreover, they are also expected to establish effective communication and work cooperatively with people whom they work with even if they have different qualities (Amundson, Harris-Bowlsbey & Niles, 2005; Savickas, 2005). As the literature review shows clearly, the students who have not stepped in the world of work yet need to improve their flexibility and develop adaptability skills that will make it easier for them to move from student life to the world of work while they are dealing with choosing an occupation, finding a job, getting into it and adapting to it after high-school and university education (Guan et. al., 2013; Yeşilyaprak, 2011). The rapid changes in the world of work have led to increasing stress for individuals at work such as role conflicts, heavy workload, uncertainty, time pressure, difficulty in adapting to changes and worry about being fired (Yeşilyaprak, 2011). An individual's ability to adapt to these rapid changes in his career development has turned out to be an important factor to keep healthy their psychological well-being (Griffin & Hesketh, 2003). All these aforementioned changes and developments have brought up the concepts of career adaptability and career optimism, both of which are of vital importance in planning career future.

Career adaptability, which is one of the cornerstones of career construction theory, refers to an individual's readiness to tackle changes and developments faced not only in business life but in other domains of life. Moreover, career adaptability means that individuals are ready to cope with current and oncoming career development tasks, occupational changeovers and personally-faced problems (Savickas, 1997). According to Savickas (2005), career adaptability consists of four basic attitudes. These are attitudes of concern, curiosity, confidence and control. Career concern is related to an individual's thinking and planning about his future life and career choices. Career curiosity means that an individual does research about and explores suitable career

choices. Career confidence refers to the state that an individual is good at solving career problems, and career control implies that an individual assumes responsibility for her/his career decision and believes that s/he is competent about this. The skill of career adaptability begins to develop at early ages (Hartung, Porfeli & Vondracek, 2008). Besides this, those individuals who have a higher level of adaptive skills are expected to make more planned and realistic career decisions when compared to others (Ebberwein et al., 2004). Career optimism, which is another important factor in planning career future, signifies that an individual always has positive expectations as to his career future or that s/he feels at ease about career planning as s/he always focuses on the positive sides of events (Rottinghaus, Day & Borgen, 2005). Optimist individuals put more effort in overcoming the problems they face on the way to their goals when compared to pessimist individuals, and so they can become more successful (Scheier, Carver & Bridges, 2001; Rand, 2009). Because of that reason, having optimistic personal traits plays an important role in developing career adaptability.

The study group in this study was composed of university students. Career planning is fairly crucial especially in the last years of university education, which are the years when individuals start to step in adulthood. This study focuses on the concepts of cognitive flexibility and positivity, which are thought to be the possible predictors of planning career future. The impact of cognitive flexibility cannot be denied when it is considered that cognitive flexibility refers to the skills of intelligence to come up with multidimensional solutions for various situations (Silver et al., 2004). Individuals come across gradually developing social environment and gradually increasing various stimuli in time. They need to learn how to cope with these new stimuli to lead a life of high quality, and they should learn to adjust themselves to these stimuli. The skill to make these necessary adjustments requires cognitive flexibility (Crone et al., 2004). Cognitive flexibility comes out when a usual course of events ends up unexpectedly, and when an uncertainty or conflict arises. Those individuals who have a higher level of cognitive flexibility can find the way to overcome these uncertainties in the best way more easily (Çuhadaroğlu, 2013). It can be stated that the skill of cognitive ability plays an important role in coping with these crises considering the rapid changes appearing in the world of work.

Positivity, which is the other variable of the study, is accepted to be the building block of personal well-being and self-confidence, and it is defined as the positive approaches adopted by individuals in all domains of their lives (Diener et al., 2000). Positive feelings and expectations about the future life encourage individuals to struggle with uncertainties faced in life (Caprara et al., 2010). It can be stated that the more positive viewpoint people have about the problems they come across in this rapidly changing and developing world without dreading these problems, the more successful they will be in planning their career future.

There are only few relational or experimental studies on planning career future, and so, on career adaptability and career optimism, whereas these few studies have been carried out in western societies. On the other hand, there are only a limited number of studies on career adaptability that have been done in Turkey (Büyükgöze- Kavas, 2014, 2016; Karacan-Ozdemir & Yerin-Guneri, 2017). The researchers who anticipate that the world of work will witness a twofold increase in size in the next 20 years (Hattie, 2008; Kao, 2007) underline the fact that a lot of new occupations that require expertise and a great number of new industries will come out, while new markets, new consumers and a young pool of skills will appear accordingly. Not only those people who currently have a job and who are included in the world of work but also the individuals who have not gained employment yet and who are university students now need to be entrepreneur, skilled, decisive and talented more than before, and they are required to deal with the hard conditions of business life (Kao, 2007).

Recently, the issue of examining people's career development by means of increasing their level of personal well-being and positive development has attracted much attention (Büyükgöze- Kavas, 2016; Santilli et al., 2017; Taber & Blankemeyer, 2015; Zacher, 2014). Considering the fact that career adaptability has an important potential to improve young people's positive development and career readiness shows the importance of examining cognitive flexibility and positivity. There are young adults who have difficulty in stepping in the business life because of the increasing unemployment, and they need to learn how to build up their career, foresee the possible difficulties they might face about their career in the future before determining the ways to overcome these difficulties and steer their future positively. In this context, this study aims at identifying if cognitive flexibility and positivity predict the career future or not. Moreover, the relation of career future with the variables of

satisfaction with the current university, motivation to choose major of study and year of schooling at university has been examined within the framework of this study.

METHOD

In this study, a correlational research design was used to determine the relationships between cognitive flexibility, positivity and career future.

Study Group

The study group consists of students from a total of 401 university students, 290 women and 111 men, who are studying in two different state universities in Ankara and Istanbul. The average age of the participants was calculated as 20.83. Descriptive information about the participants is presented in Table 1.

Table 1. Descriptive statistics of the study group

<i>Variables</i>	<i>Category</i>	<i>n</i>	<i>%</i>
Gender	Female	290	72.3
	Male	111	27.7
Living place	With Family	119	29.7
	Dorm/hostel	216	53.8
	Own Home	66	16.5
Grades	First	66	16.5
	Second	63	15.7
	Third	112	27.9
	Fourth+	160	39.9
Choosing Department Willingly	Yes willingly	281	70.1
	No unwillingly	76	18.9
	Not Sure	44	11
Total		401	100

Ethical Statement

The authors declare that they have carried out the research within the framework of the Helsinki Declaration and with the participation of volunteer students.

Data Collection Tools

The data of this research were collected by using “*Personal Information Form (PIF)*”, Turkish adaptation of the “*Career Futures Scale (CFS)*”, “*Cognitive Flexibility Inventory (CFI)*” and “*Positivity Scale (PS)*”.

Personal Information Form (PIF). In order to collect demographic information from the study group, a personal information form created by the researchers was used. The form includes questions about the study groups' gender, age, satisfaction with the university, satisfaction with the department, romantic relationships and grade levels.

Career Futures Scale (CFS). CFS developed by Rottinghaus, Day and Borgen (2005) was used to evaluate the positive career planning attitudes of the study group. The adaptation of the CFS to Turkish was done by Kalafat (2012). The CFS consists of three sub-scales referred to Perceived Knowledge (PK), Career Optimism (CO) and career adaptability (CA). In addition, the CFS is five point likert-type scale consists of 25 items. The adaptation study of CFS 555 university students from different universities participated in Turkey (Kalafat, 2012). In internal consistency analysis to evaluate the reliability of CFS, the reliability coefficient is *Career Adaptability 0.83; Career Optimism 0.82; Perceived Knowledge was 0.62* and 0.88 in total. The suitability of the three-factor structure of CFS in its origin for the Turkish sample was confirmed as a result of confirmatory factor analysis to test the validity of the scale (Kalafat, 2012). For this study, the reliability coefficients of the CFS were recalculated. The Cronbach's alpha coefficients were found CA, CO, PK and total as .84, .81, .60 and .89. The Cronbach's alpha coefficient for the reliability of instruments should be over .70 (Tabachnick & Fidell, 2013). In this context, it can be said that The CFS is reliable in terms of both the subscales CO, CA and the whole scale except PK.

Cognitive Flexibility Inventory (CFI). The Cognitive Flexibility Inventory (CFI) developed by Dennis and Vander Wal (2010) was used to measure the cognitive flexibility of the study group. Adaptation of CFI to Turkish was done by Gülüm and Dağ (2012). CFI developed to test the adaptive, alternative, balanced and appropriate thinking abilities of individuals who encounter difficult life events. Designed as a 5-point Likert-type measurement tool, CFI consists of two sub-scales, *Alternatives* (13 items) and *Control* (7 items). As the score obtained from CFI increases, cognitive flexibility increases. The reliability

of the CFI was evaluated with the Cronbach alpha test. The Cronbach alpha value for the total of scale was .90; the alternatives subscale was 0.91 and the control subscale was 0.84 (Gülüm & Dağ, 2012). For this study, the reliability coefficients of the CFS were recalculated. The Cronbach's alpha coefficients were found adaptability, control and total as .87, .77 and .86.

Positivity Scale (PS). The Positivity Scale (PS) developed by Caprara et al. (2012) was used to measure the positivity levels of the study group. PS was adapted to Turkish by Çıkrıkçı, Çiftçi and Gençdoğan (2015). PS is a 5-point Likert-type measurement instrument consisting of 8 items. Cronbach alpha coefficient applied to test the internal consistency of PS was determined as .73 additionally, the test-retest reliability coefficient of PS was determined as .91. The construct validity of the PS was examined by confirmatory factor analysis and it was concluded that the goodness of fit indices were sufficient. Also, criterion-related validity was examined and it was concluded that there was a positive relationship between PS, happiness and life satisfaction (Çıkrıkçı, Çiftçi & Gençdoğan, 2015). For this study, the reliability coefficient of the PS was recalculated and the Cronbach's alpha coefficients was found .75.

Process and Data Analysis

Within the scope of the research, legal and ethical permissions required for the implementation of measuring instruments were obtained. Then, the data collection form (PIF, CFS, CFI and PS) created within the scope of the research was applied to the study group by the researchers at different times in the classroom environment within an average of 20 minutes. The data were obtained from a total of 427 university students studying in different classes and departments. Before the data analysis started, the forms filled out by the study group were coded into the SPSS 21 package program. While the data was transferred to the computer environment, 9 of them was removed from dataset that were filled in incorrectly or incompletely. After the coding process, it was evaluated whether the data were suitable for the multiple regression analysis. At this stage the z test performed before starting the analysis, a total of 12 data that were determined to deviate from the range of +3 and -3 were also taken out of the data set in order to maintain normal distribution. Also, Mahalanobis distance coefficients were examined and 5 data were excluded from the analysis considering the Mahalanobis distance coefficients. As a result of the analysis,

the distributions were accepted as normal because the skewness and kurtosis coefficients (highest = .243 lowest = -.324) were within acceptable limits, and variable errors were normally distributed in the histogram and p-plot charts examined (George & Mallory, 2016; Tabachnick & Fidell, 2013).

Before starting the regression analysis, the assumption of multiple linearity was tested, the Variance Inflation Factors (VIF) were checked by examining the VIF values so that it was examined whether variance inflation occurred. It was observed that there was no problem in VIF, all values were below 10 and there was no value approaching 0.10. After the Durbin-Watson test results in which auto-correlation between variables was tested showed that there was no auto-correlation risk in the research (DW = 1.193), data were analyzed in the data set in line with the research problem by frequency, percentage and multiple regression analysis. The analysis of the data was performed on the remaining 401 data.

FINDINGS

Firstly, correlation analysis was conducted in order to test the relationship between career futures, cognitive flexibility and positivity. The relationships between variables were examined by *Pearson Product-Moment Correlation analysis* and test results are presented in Table 2 below.

Table 2. Pearson correlations among career future, cognitive flexibility and positivity

Variables	\bar{X}	ss	<i>r</i>					
			1	2	3	4	5	6
1. Career future-total	86.09	12.90	-	.89**	.89**	.55**	.62* *	.56**
2. CA	38.86	6.35		-	.62**	.42**	.59* *	.49**
3. CO	38.37	6.76			-	.34**	.51* *	.50**
4. PK	8.84	2.16				-	.35* *	.26**
5. Cognitive flexibility	74.58	9.21						.45**
6. Positivity	28.43	4.54						-

*: $p < .05$, **: $p < .01$

As can be seen in Table 2, there is a positive and moderately significant relationship between "career future" and their "cognitive flexibility" scores ($r = .62, p < .01$). Similarly, there is a positive significant relationship between "career future" and "positivity" scores ($r = .56, p < .01$). Also, there are positive and significant relationship among the sub-dimensions of the career future and cognitive flexibility scores of the study group, "CA" ($r = .59, p < .01$), "CO" ($r = .51, p < .01$) and "PK" ($r = .35, p < .01$). As presented in Table 2, there is a positively significant relationship between positivity and sub-dimensions of career future scale, "CA" ($r = .49, p < .01$), "CO" ($r = .50, p < .01$) and "PK" ($r = .26, p < .01$). After the correlation analysis, multiple regression analysis was applied to determine whether the variables "cognitive flexibility" and "positivity" predict the "career future" variable significantly. In the model created to perform hierarchical multiple regression analysis, *cognitive flexibility* was first entered into the model as a predictive variable, and in the second stage *positivity* was included in the model and it was analyzed at what level the variables predicted the career future of university students. The results of the applied stepwise multiple regression analysis are given in Table 3 below.

Table 3. Result of stepwise multiple regression

<i>Dep. variable</i>	<i>Indep. Variables</i>	<i>B</i>	<i>SH_B</i>	β	<i>t</i>	<i>F</i>	<i>R</i>	<i>R²</i>	ΔR^2
Career Future	Constant	21.25	4.14	.62	5.13**	248.62**	.62	.38	.38
	Cognitive Flexibility	.86	.05		15.76**				
	Constant	9.17	4.04		2.26**	184.77**	.69	.48	.48
	Cognitive Flexibility	.65	.05	.46	11.51**				
	Positivity	.99	.11	.34	8.65**				

*: $p < .05$, **: $p < .01$

As seen in Table 3, "cognitive flexibility" scores explain %38 of the variance of the "career future" scores [$F: 248.62, R = .62, R^2 = .38, p < .01$]. In the second stage, with the inclusion of positivity in the independent variable group

explaining rate of career future variance of the independent variables rises to %48 [$F: 28.41$, $R = .69$, $R^2 = .48$, $p < .01$]. In other words, cognitive flexibility have a higher predictive effect compared to positivity. Besides cognitive flexibility and positivity scores together explain %48 of the total variance of career future.

Examining career future, cognitive flexibility and positivity scores according to satisfaction with undergraduate education, department choosing motivation and grades.

According to the results of ANOVA test, career future and cognitive flexibility scores don't differ significantly according to the satisfaction from undergraduate education. On the other hand, positivity was found to be significantly higher in students who are satisfied with university education than those who are not satisfied. According to the grade level, the career future scores of the participants differ significantly in favor of those studying in the fourth grade. The results of the ANOVA test is presented in Table 4 below.

Table 4. One-way ANOVA analysis results of career future scores by grades

<i>Grades</i>	<i>N</i>	\bar{X}	<i>sd</i>	<i>F</i>	<i>p</i>	<i>Difference (Scheffe)</i>
First (1)	66	86.28	3	4.66	.00**	4-2, 4-3
Second (2)	63	82.82	397			
Third (3)	112	84.03	400			
Fourth (4)	160	88.73				

*: $p < .05$, **: $p < .01$

In Table 4, whether the career future scores of university students differ according to university grades is analyzed with one-way ANOVA test and it is seen that there is a statistically significant difference [$F(3-397) = 4.66$, $p = .00 < .01$]. Scheffe test was performed to determine the source of the difference. According to Scheffe test results, there was a significant difference between 2nd grade, 3rd grade and 4th grade in favor of 4th grade. In other words, fourth-year students' career future scores are significantly higher than second- and third-year students. Whether there is a significant difference between the career future scores of the participants according to the

motivation to the department was tested with one-way ANOVA and the results are presented in table 5 below.

Table 5. One-way ANOVA analysis results of career future scores according to motivation to department

Motivation to the department	<i>N</i>	\bar{X}	<i>sd</i>	<i>F</i>	<i>p</i>	<i>Difference (Scheffe)</i>
Yes willingly (1)	282	87.53	2	7.55	.00**	1-2
Unwillingly (2)	76	81.21	398			
Not sure (3)	43	85.29	400			

*: $p < .05$, **: $p < .01$

In Table 5, whether the career future scores of university students differ according to their motivation to the department was analyzed with the one-way ANOVA test and it was seen that there was a statistically significant difference [$F(2-398) = 7.55, p = .00 < .01$]. Scheffe test was performed to determine the source of the difference. According to Scheffe test, there was a significant difference between those who willingly selected the department and those who unwillingly selected in favor of willingly.

DISCUSSION, CONCLUSION AND SUGGESTIONS

In recent years, the number of experimental studies on career adaptability has been increasing in many countries while the western countries take the lead in that, and it is possible to see studies that examine the relation between career adaptability on one side and many other variables on the other side (Büyükgöze- Kavas, 2016; Karacan-Özdemir & Yerin-Güneri, 2017; Rudolph, Lavigne & Zacher, 2017; Santilli et al., 2017; Taber & Blankemeyer, 2015; Zacher, 2014). This study focuses on the relation between planning career future on one side and cognitive flexibility and positivity on the other side in order to examine the contributions of these factors to planning career future. Besides these variables, it has been investigated if people's year of schooling at university and their motivation to choose the major of study willingly creates a significant difference in planning their career futures.

The study findings show that students' career future is related to their cognitive flexibility and positivity at a relatively high level. In other words, the students

who have a high level of cognitive flexibility and positivity can be said to plan their career future better. In addition to these findings, it has been found out in this study that fourth-grade students' score of career future is higher than that of third-grade and second-grade students at a statistically significant level. Moreover, the score of those students who have chosen their major of study on their own will is higher than others at a statistically significant level. In general terms, these findings show that the students who have a high level of cognitive flexibility and positivity, who are fourth-grade university students and who have chosen their major of study willingly have a higher score of career future. The findings of the study are discussed respectively.

One of the study findings shows that cognitive flexibility is the most statistically significant predictor of career adaptability. This result of the current study is in line with the result of a meta-analysis study carried out by Rudolph and others (2017), who took career adaptability and adaptive behaviours as a base in their study and found out that "career adaptability has a statistically significant positive relation with cognitive flexibility." Similarly, Schmidt and Hunter (2004) carried out a study in which they examined the impact of general mental ability on individuals' occupational gains and performances and they found out that cognitive flexibility has a statistically significant positive relation with people's adaptability and performance at work. Moreover, Savickas and Porfeli (2012) emphasized in their study that adaptive behaviour, which constitutes the basis of career construction theory, is a personal quality that requires individuals to be flexible in cognitive terms and to welcome changes. In line with the results of this study, Griffin and Hesketh (2003) also carried out a study that aimed at revealing the relation between adaptive behaviours on one side and success at work and career adaptability on the other side, and they concluded that cognitive flexibility, which is an important component of behavioural adaptability, has a statistically significant positive relation with success at work and career adaptability. In the light of these studies, it is clear that the result of this study, which signifies that university students' level of cognitive flexibility predicts their career future plans at a statistically significant level, is consistent with the findings of other studies in the literature. With reference to these findings, it can be stated that cognitive flexibility has a great impact on individuals' career adaptability and career future planning accordingly, and that an increase in individuals' level of cognitive flexibility leads to an increase in their career adaptability as well.

Another finding of the study is that positivity is a significant predictor of career future. As far as the literature review shows, there isn't any study that directly supports this study finding; however, there are studies that support the study finding indirectly. This result obtained in the current study is similar to other studies that have examined the relation between career adaptability and other positive tendencies such as optimism (Büyükgöze-Kavas, 2016; Duffy, 2010; Karacan-Ozdemir & Yerin-Guneri, 2017), hope (Büyükgöze-Kavas, 2016) and well-being (Plimmer et al., 2000). Creed, Patton and Bartrum (2002) also carried out a study in which they concluded that high school students who have a high level of optimism has a higher level of career planning and career search as well. Moreover, Bohemn and Lyubomirsky (2008) aimed at revealing the impact of happiness on various variables about work in their study and they found out that happiness has a statistically significant relation with career success. Considering the fact that positivity is the building block of personal well-being, and so, positive tendencies such as happiness, optimism and hope (Diener et al., 2000), the finding of the current study is consistent with the other study findings in the literature. In this sense, positivity can be said to be an important variable in individuals' planning their career future.

The study findings show that fourth-grade students' score of career future is significantly higher than the score of third-grade and second-grade students. University students' ability to make career decisions in line with their values, areas of interest and personal qualities, which are all very important for career choice, towards the end of their undergraduate education is accepted to be a factor that makes career development easier (Ulaş, 2016). Also, it is emphasized in the literature that towards the end of the university education, career adaptability influences individuals positively in terms of finding a job (Guan et al., 2013; Johnston, 2018). According to another finding of the current study, career future scores of those students who have chosen their major of study on their own will have higher scores at a statistically significant level than those who have chosen their major of study unwillingly. Similarly, academic satisfaction and job satisfaction are issues that attract the attention of researchers all over the world (Duffy, Douglass & Autin, 2015). Johnston (2018) carried out a correlational survey on career adaptability and concluded that academic satisfaction has a positive relation with career adaptability and job satisfaction. Because of that reason, when psychological counsellors who

work at schools as a school counsellor help students know themselves better and contribute to their life in terms of ensuring them to receive education in a field from which they will derive satisfaction, this comes forward as a significant variable for their career futures.

Adult teenagers start to think seriously about what kind of a job they would like to have all throughout their life and they make attempts to construct their career plans (Arnett, 2007). The studies on career adaptability put forward that the individuals who have a high level of career adaptability are more likely to find better job opportunities, make more successful transitions as to their jobs and be more successful at work (Klehe et al., 2012; Koen, Klehe & Van Vianen, 2012). The competitive education system in Turkey causes a gradual increase in the number of graduates each and every day, but the fact that job opportunities do not increase in line with the increasing number of graduates makes the problem of unemployment worsen every day (TUIK, 2017). Today, requirements of a job change very quickly and this change leads to an uncertainty. This causes individuals to experience more difficulties during transition periods in their career path. Because of this reason, career adaptability is of vital importance for young individuals to adapt to new conditions easily, overcome the transition periods more comfortably and healthily. It is essential to identify the factors that influence the planning of career future in order to help university students to have a successful career in the future in terms of deciding on a job and receiving education in that field so as to get ready for the world of work, and it is also crucial to provide students with career counselling about these identified factors.

It is recommended in the light of the study findings to focus on psychoeducation activities for the sake of bringing up individuals with a high level of cognitive flexibility and positivity under the leadership of Guidance and Psychological Counselling Services at schools starting from the pre-school education. Moreover, university students who have chosen their major of study willingly have higher career future scores when compared to others. Because of that reason, this study once more underlies the importance of vocational guidance and career counselling activities that are performed in order to help people know themselves better and choose the most suitable job for themselves. These results reveal the necessity of guidance and psychological counselling services at schools to carry out activities on career development

and vocational guidance starting from the preschool period, but especially during the secondary education.

This study also has some limitations besides its significant contribution to the literature of career future. Firstly, this study focuses on the variables that might be related to the career future. In other words, this study has a correlational survey model and it does not give a clue about which variables are causes and which are results. Because of that reason, a future study might be designed to be experimental, and the impact of cognitive flexibility and positivity on career future can be investigated experimentally. Moreover, the study group is composed of university students who have not stepped in the world of work yet. Future studies might focus on participants who have a job.

About Authors / Yazarlar Hakkında

Elvan Yıldız-Akyol. She earned two B.S. degrees in Psychological Counseling and Guidance program in 2016 at Both Middle East Technical University and Gazi University. She is currently continuing her doctorate program at Gazi University in Psychological Counseling and Guidance program and is in the thesis period. At the same time, she has been working as a research assistant at Gazi University in Psychological Counseling and Guidance program since 2013. Her research interests include career counseling, positive psychology and women's studies.

2016 yılında hem Ortadoğu Teknik Üniversitesi hem de Gazi Üniversitesi Psikolojik Danışma ve Rehberlik Anabilim Dalında yüksek lisans eğitimini tamamlamıştır. Şuanda Gazi Üniversitesi Psikolojik Danışma ve Rehberlik Anabilim Dalında doktora eğitimine devam etmekte olup tez döneminde. Aynı zamanda 2013 yılından bu yana Gazi Üniversitesi Psikolojik Danışma ve Rehberlik Anabilim Dalında araştırma görevlisi olarak çalışmaktadır. Çalışma alanları arasında, kariyer psikolojik danışma, pozitif psikoloji ve kadın çalışmaları yer almaktadır.

Mehmet Boyacı. He holds a bachelor degrees in Psychological Counseling and Guidance program at Ankara University. He has a master's degree in Psychological Counseling and Guidance from Gaziosmanpaşa University, Turkey. Mr. Boyacı earned his doctorate degree in Counseling and Guidance from Hacettepe University. He currently serves as a full-time scholar at the department of Psychological Counseling and Guidance in Istanbul Medeniyet University, Istanbul, Turkey. His research has been mainly in positive psychology, career counseling, family counseling and school counseling.

Ankara Üniversitesi, Psikolojik Danışma ve Rehberlik programında lisans eğitimini tamamlayan Mehmet Boyacı, Gaziosmanpaşa Üniversitesinde, Psikolojik Danışma ve Rehberlik alanında yüksek lisans derecesini almıştır. Doktora eğitimini ise Hacettepe Üniversitesinde, Psikolojik Danışma ve Rehberlik programında tamamlamıştır. Mehmet Boyacı halen İstanbul Medeniyet Üniversitesi, Psikolojik Danışma ve Rehberlik Anabilim Dalında tam zamanlı öğretim üyesi olarak görev yapmaktadır. Boyacı'nın ilgili duyduğu çalışma konuları arasında pozitif psikoloji, aile danışmanlığı, kariyer danışmanlığı ve okul danışmanlığı bulunmaktadır.

Author Contributions / Yazar Katkıları

This study was conducted by all the authors working together and cooperatively. All of the authors substantially and equally contributed to this work in each step of the study.

Bu çalışma tüm yazarların işbirliği içinde çalışması ile gerçekleştirilmiştir. Tüm yazarlar çalışmanın her aşamasında önemli derecede ve eşit şekilde katkı sağlamıştır.

Conflict of Interest/ Çıkar Çatışması

It has been reported by the authors that there is no conflict of interest.

Yazarlar tarafından herhangi bir çıkar çatışması olmadığı rapor edilmiştir.

Funding / Fonlama

No funding support was received.

Bu çalışma sırasında herhangi bir kurum tarafından maddi destek sağlanmamıştır.

REFERENCES

- Amundson, N. E., Harris-Bowlsbey, J., & Niles, S. G. (2005). *Essential elements of career counseling: Processes and techniques*. Pearson/Merrill/Prentice-Hall.
- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for?. *Child Development Perspectives*, 1(2), 68-73. <https://doi.org/10.1111/j.1750-8606.2007.00016.x>
- Boehm, J. K., & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment*, 16, 101-116. <https://doi.org/10.1177/1069072707308140>
- Büyüköze-Kavas, A. (2014). Validation of the Career Adapt-Abilities Scale-Turkish form and its relation to hope and optimism. *Australian Journal of Career Development*, 23(3), 125-132. <https://doi.org/10.1177/1038416214531931>
- Büyüköze- Kavas, A. (2016). Predicting career adaptability from positive psychological traits. *The Career Development Quarterly*, 64(2), 114-125. <https://doi.org/10.1002/cdq.12045>
- Caprara, G. V., Alessandri, G., Eisenberg, N., Kupfer, A., Steca, P., Caprara, M. G., ... & Abela, J. (2012). The positivity scale. *Psychological Assessment*, 24(3), 701-712. <https://doi.org/10.1037/a0026681>
- Caprara, G. V., Steca, P., Alessandri, G., Abela, J. R., & McWhinnie, C. M. (2010). Positive orientation: Explorations on what is common to life satisfaction, self-esteem, and optimism. *Epidemiology and Psychiatric Sciences*, 19(1), 63-71. <https://doi.org/10.1017/S1121189X00001615>
- Creed, P. A., Patton, W., & Bartrum, D. (2002). Multidimensional properties of the LOT-R: Effects of optimism and pessimism on career and well-being related variables in adolescents. *Journal of Career Assessment*, 10(1), 37-52. <https://doi.org/10.1177/1069072702010001003>
- Crone, E. A., Ridderinkhof, R. K., Worm, M., Somsen, R. J., & Van Der Molen, M. W. (2004). Switching between spatial stimulus-response mappings: a developmental study of cognitive flexibility. *Developmental science*, 7(4), 443-455. <https://doi.org/10.1111/j.1467-7687.2004.00365.x>
- Çıkrıkçı, Ö., Çiftçi, M., & Gençdoğan, B. (2015). Pozitiflik ölçeği Türkçe formu'nun psikometrik özellikleri [The psychometric properties of the Turkish form of the positivity scale]. *The Journal of Happiness & Well-Being*, 3(1), 57-76.
- Çuhadaroğlu, A. (2013). Bilişsel esnekliğin yordayıcıları [Predictors of cognitive flexibility]. *Cumhuriyet Uluslararası Eğitim Dergisi*, 2(1), 86-101.
- Dennis, J. P., & Vander Wal, J. S. (2010). The cognitive flexibility inventory: Instrument development and estimates of reliability and validity. *Cognitive Therapy and Research*, 34(3), 241-253. <https://doi.org/10.1007/s10608-009-9276-4>
- Diener, E., Napa-Scollon, C. K., Oishi, S., Dzokoto, V., & Suh, E. M. (2000). Positivity and the construction of life satisfaction judgments: Global happiness is not the sum of its parts. *Journal of Happiness Studies*, 1(2), 159-176. <https://doi.org/10.1023/A:1010031813405>

- Duffy, R. D. (2010). Sense of control and career adaptability among undergraduate students. *Journal of Career Assessment* 18(4), 420-430. <https://doi.org/10.1177/1069072710374587>
- Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self-efficacy as mediators. *Journal of Vocational Behavior*, 90, 46-54. <https://doi.org/10.1016/j.jvb.2015.07.007>
- Ebberwein, C. A., Krieshok, T. S., Ulven, J. C., & Prosser, E. C. (2004). Voices in transition: Lessons on career adaptability. *The Career Development Quarterly*, 52(4), 292-308. <https://doi.org/10.1002/j.2161-0045.2004.tb00947.x>
- George, D., & Mallery, P. (2016). *IBM SPSS Statistics 23 Step by Step: A Simple Guide and Reference, 23.0 update (14 ed.)* New York & London: Routledge.
- Griffin, B., & Hesketh, B. (2003). Adaptable behaviours for successful work and career adjustment. *Australian Journal of Psychology*, 55(2), 65-73. <https://doi.org/10.1080/00049530412331312914>
- Guan, Y., Deng, H., Sun, J., Wang, Y., Cai, Z., Ye, L., ... & Li, Y. (2013). Career adaptability, job search self-efficacy and outcomes: A three-wave investigation among Chinese university graduates. *Journal of Vocational Behavior*, 83(3), 561-570. <https://doi.org/10.1016/j.jvb.2013.09.003>
- Gülüm, I. V., & Dağ, İ. (2012). Tekrarlayıcı Düşünme Ölçeği ve Bilişsel Esneklik Envanterinin Türkçeye uyarlanması, geçerliliği ve güvenilirliği [The Turkish adaptation, validity and reliability study of the Repetitive Thinking Questionnaire and the Cognitive Flexibility Inventory]. *Anadolu Psikiyatri Dergisi*, 13(3), 216-223.
- Hartung, P. J., Porfeli, E. J., & Vondracek, F. W. (2008). Career adaptability in childhood. *Career Development Quarterly*, 57, 63-74. <https://doi.org/10.1002/j.2161-0045.2008.tb00166.x>
- Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Johnston, C. S. (2018). A systematic review of the career adaptability literature and future outlook. *Journal of Career Assessment*, 26(1), 3-30. <https://doi.org/10.1177/1069072716679921>
- Kalafat, T. (2012). Kariyer Geleceği Ölçeği (KARGEL): Türk örnekleme için psikometrik özelliklerinin incelenmesi [Career Futures Inventory (CFI): The examination of psychometric properties in Turkish sample]. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 4(38), 169-179.
- Kao, J. (2007). *Innovation nation: How America is losing its innovation edge, why it matters, and what we can do to get it back*. Simon and Schuster.
- Karacan-Ozdemir, N., & Yerin-Guneri, O. (2017). The factors contribute to career adaptability of high school students. *Eurasian Journal of Educational Research*, 67, 183-198.
- Klehe, U. C., Kleinmann, M., Hartstein, T., Melchers, K. G., König, C. J., Heslin, P. A., & Lievens, F. (2012). Responding to personality tests in a selection context: The role of

- the ability to identify criteria and the ideal-employee factor. *Human Performance*, 25(4), 273-302. <https://doi.org/10.1080/08959285.2012.703733>
- Koen, J., Klehe, U. C., & Van Vianen, A. E. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior*, 81(3), 395-408. <https://doi.org/10.1016/j.jvb.2012.10.003>
- Nota, L., Ginevra, M. C., & Soresi, S. (2012). The Career and Work Adaptability Questionnaire (CWAQ): A first contribution to its validation. *Journal of Adolescence*, 35(6), 1557-1569. <https://doi.org/10.1016/j.adolescence.2012.06.004>
- Plimmer, G., Smith, M., Duggan, M., & Englert, P. (2000). Career adaptability, well-being, and possible selves. *Career Planning and Adult Development Journal*, 15(4), 83-92.
- Rand, K. L. (2009). Hope and optimism: Latent structures and influences on grade expectancy and academic performance. *Journal of Personality*, 77(1), 231-260. <https://doi.org/10.1111/j.1467-6494.2008.00544.x>
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment*, 13(1), 3-24. <https://doi.org/10.1177/1069072704270271>
- Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98, 17-34. <https://doi.org/10.1016/j.jvb.2016.09.002>
- Santilli, S., Ginevra, M. C., Sgaramella, T. M., Nota, L., Ferrari, L., & Soresi, S. (2017). Design my future: An instrument to assess future orientation and resilience. *Journal of Career Assessment*, 25(2), 281-295. <https://doi.org/10.1177/1069072715621524>
- Savickas, M. L. (1997). Career adaptability: An integrative construct for life- span, life- space theory. *The Career Development Quarterly*, 45(3), 247-259. <https://doi.org/10.1002/j.2161-0045.1997.tb00469.x>
- Savickas, M. L. (2005). The theory and practice of career construction. *Career Development and Counseling: Putting Theory and Research to Work*, 1, 42-70.
- Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661-673. <https://doi.org/10.1016/j.jvb.2012.01.011>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. *Optimism and Pessimism: Implications for Theory, Research, and Practice*, 1, 189-216. <https://doi.org/10.1037/10385-009>
- Schmidt, F. L., & Hunter, J. (2004). General mental ability in the world of work: Occupational attainment and job performance. *Journal of Personality and Social Psychology*, 86(1), 162-173. <https://doi.org/10.1037/0022-3514.86.1.162>
- Silver, J. A., Hughes, J. D., Bornstein, R. A., & Beversdorf, D. Q. (2004). Effect of anxiolytics on cognitive flexibility in problem solving. *Cognitive and Behavioral Neurology*, 17(2), 93-97. <https://doi.org/10.1097/01.wnn.0000119240.65522.d9>
- Tabachnick, B. G. & Fidell, L. S. (2013) *Using Multivariate Statistics (Sixth ed.)* Pearson, Boston.

- Taber, B. J., & Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *Journal of Vocational Behavior, 86*, 20-27. <https://doi.org/10.1016/j.jvb.2014.10.005>
- TÜİK (2017). Ağustos 2017 işgücü istatistikleri. Türkiye İstatistik Kurumu (TÜİK) haber bülteni [August 2017 labor statistics. Turkey Statistical Institute (TSI) newsletter]. Retrieved from <http://www.tuik.gov.tr/HbGetirHTML.do?id=24633#>, 24.11.2018.
- Ulaş, Ö. (2016). *Kariyer kararı verme öz-yetkinliği: Bir model testi*. Yayınlanmamış doktora tezi, Hacettepe Üniversitesi, Ankara.
- Yesilyaprak, B. (2012). The Paradigm Shift of Vocational Guidance and Career Counseling and Its Implications for Turkey: An Evaluation from Past to Future. *Educational Sciences: Theory and Practice, 12*(1), 111-118.
- Zacher, H. (2014). Individual difference predictors of change in career adaptability over time. *Journal of Vocational Behavior, 84*(2), 188-198. <https://doi.org/10.1016/j.jvb.2014.01.001>

Genişletilmiş Türkçe Özet

Giriş: Bu araştırmanın amacı, bilişsel esneklik ve pozitifliğin üniversite öğrencilerinin kariyer geleceğini anlamlı biçimde yordayıp yordamadığını incelemektir. Kariyer geleceği, kariyer uyumluluğu, iyimserlik ve kariyerle ilgili bilgi birikimini tanımlamak için kullanılan bir kavramdır. Modern eğitim anlayışına sahip ülkelerin gelişimini sağlamak için iş yaşamında, bireylerin kariyerlerini etkili bir şekilde yönetebilmeleri, sürekli yeni beceriler öğrenmeyi sürdürmeleri ve gelişmekte olan iş dünyasının taleplerine uyum sağlayabilmeleri gerekmektedir. Bu nedenle bireyler kendilerini iyi tanımalı, kendilere uygun mesleğe yönelebilmeli ve bu meslekte potansiyellerini en üst düzeyde sunabilmelidirler. Günümüzde, bir mesleğin gerektirdiklerinin hızla değiştiği ve bu değişimin günden güne daha belirsiz hale geldiği düşünüldüğünde bu durum bireylerin kariyer geçişlerinde çok daha fazla zorlanmalarına neden olmaktadır. Bu bağlamda, kariyer danışmanlığı ve mesleki rehberlik çalışmaları önem kazanmaya başlamıştır.

Yöntem: Bu çalışmada bilişsel esneklik, pozitiflik ve kariyer geleceği arasındaki ilişkileri belirlemek amacıyla nicel araştırma modellerinden ilişkisel desen kullanılmıştır. Araştırmanın çalışma grubu, Ankara ve İstanbul ilinde yer alan 2 farklı üniversitede öğrenimine devam eden 290'ı kadın ve 111'i erkek olmak üzere toplam 401 üniversite öğrencisinden öğrenciden oluşturmaktadır. Veriler toplanırken kolaylıkla ulaşılabileni örnekleme yöntemi kullanılmıştır. Araştırma kapsamında veri toplamak için katılımcılara, araştırmacılar tarafından oluşturulan Kişisel Bilgi Formu (KBF), Kariyer Geleceği Ölçeği (KARGEL), Bilişsel Esneklik Envanteri (BEE) ve Pozitiflik Ölçeği (PÖ) uygulanmıştır. Verilerin analizinde frekans, yüzde, ANOVA, korelasyon and çoklu lineer regresyon analizlerinden yararlanılmıştır. Elde edilen verilerin analizinde IBM SPSS 21 paket programları kullanılmıştır.

Bulgular, Tartışma ve Sonuç: Araştırmanın bulguları, öğrencilerin kariyer geleceklerinin, bilişsel esneklikleri ve pozitiflikleri ile göreceli olarak yüksek düzeyde ilişkili olduğunu göstermektedir. Bilişsel esneklik ve pozitifliğin kariyer geleceğini ne oranda yordadığını test etmek adına çoklu regresyon analizi uygulanmıştır. Sonuçlar, “kariyer geleceği” puanlarının yordanmasında, “bilişsel esneklik” ve “pozitiflik” puanlarının birlikte “kariyer geleceği” puanlarına ait varyansın toplam % 48'ini açıkladığını ortaya koymuştur. Yapılan ANOVA testinin sonuçlarına göre üniversite öğrencilerinin lisans eğitiminden memnuniyet durumuna göre kariyer geleceği ve bilişsel esneklik puanları anlamlı olarak farklılaşmamaktadır. Ancak, pozitifliğin üniversite eğitiminden memnun olan kişilerde memnun olmayanlara göre anlamlı biçimde daha yüksek olduğu görülmüştür. Ayrıca, dördüncü sınıfta okumakta olan katılımcıların kariyer geleceği puanlarının ikinci ve üçüncü sınıf öğrencilerine göre anlamlı biçimde daha yüksek olduğu bulunmuştur. Bunların yanı sıra, bölümlerini

isteyerek seçen öğrencilerin kariyer geleceği puanları, istemeyerek seçenlere oranla anlamlı derecede yüksek çıkmıştır. Araştırma bulgularına göre, öğrencilerin bilişsel esnekliklerinin ve pozitifliklerinin yüksek olması kariyer geleceklerini olumlu yönde etkilemektedir. Bu bağlamda, araştırmadan elde edilen bulgular bağlamında okul öncesi eğitimden başlanarak Okul Psikolojik Danışma ve Rehberlik (PDR) servisleri öncülüğünde bilişsel esnekliği ve pozitifliği yüksek bireyler yetiştirmeye yönelik psiko-eğitim çalışmalarına ağırlık verilebilir. Ayrıca öğrenimine devam ettiği programa kendi isteğiyle gelenlerin istemeyerek gelenlere göre kariyer geleceği puanları daha yüksektir. Bu sebeple insanların kendilerini tanıyarak kendilerine en uygun alanlara yönelmesi amacıyla yürütülen mesleki rehberlik ve kariyer danışmanlığı çalışmalarının önemi bu araştırmayla bir kez daha ortaya çıkmıştır. Bu sonuçlar okul PDR servislerinin okul öncesi dönemden itibaren başlayarak özellikle ortaöğretimde kariyer gelişimi ve mesleki rehberlik konusunda çalışmalar yapmasının gerekliliğini ortaya koymuştur. Bu araştırmanın kariyer geleceği ile ilgili literatüre önemli katkılarının yanı sıra bazı sınırlılıkları da vardır. Öncelikle mevcut araştırma ilişkisel bir araştırma olup hangi değişkenlerin neden veya sonuç olduğu hakkında bir fikir vermemektedir. Bu nedenle ileride yapılacak araştırmalarda deneysel desende bir araştırma tasarlanıp bilişsel esnekliğin ve pozitifliğin kariyer geleceği üzerindeki etkisi deneysel olarak sınanabilir. Ayrıca, bu çalışmanın örneklemini henüz çalışma dünyasına adım atmamış üniversite öğrencileri oluşturmaktadır. Gelecek araştırmalarda hali hazırda bir işte çalışmakta olan bireyler gibi farklı katılımcı gruplarına odaklanılabilir.

Ethical Statement

In the writing process of the work titled "**Cognitive Flexibility and Positivity as Predictors of Career Future in University Students**", the scientific, ethical and citation rules were followed, there was no falsification on the data collected, the "Turkish Psychological Counseling and Guidance Journal Editorial Board" had no responsibility for all ethical violations, and all the responsibility belongs to the authors. I undertake that it has not been sent to another academic publishing medium for evaluation.

Arş.Gör. Elvan YILDIZ-AKYOL
Dr.Öğr.Üyesi Mehmet BOYACI