

## RESEARCH

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## ARAŞTIRMA

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## Predicting Career Decision-Making Difficulties: The Role of Barriers, Self-Efficacy, and Decision Status

*Kariyer Karar Verme Güçlüklerinin Yordanması: Engeller, Öz-Yetkinlik ve Karar Durumunun Rolü*

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### ABSTRACT

The aim of this research was to investigate the relationship between career decision-making difficulties and career barriers, career decision-making self-efficacy, and decision status of university students. The participants were 426 (284 female, 142 male) university students. Data of the study were collected by using the Career Decision Making Difficulties Questionnaire (CDDQ), Perceived Career Barriers Scale (PCBS), Career Decision Self-Efficacy Scale–Short Form (CDESES-SF), and Personal Information Form. Multiple linear regression analysis was used for data analysis. Correlation values were examined to check whether there was multicollinearity among variables. The analyses propounded that perceived career barriers, career decision-making self-efficacy, and decision status (decision-making / not making) explained 45% of the total variance related to career decision-making difficulties. It was found that decision status was the most important predictor of the total career decision-making difficulties, and lack of readiness, lack of information, and inconsistent information subscales.

### Article Information

#### Keywords

University Students  
Career Decision-Making Difficulties  
Career Barriers  
Career Decision-Making Self-Efficacy  
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#### Anahtar Kelimeler

Üniversite Öğrencileri  
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### ÖZET

Bu araştırmanın amacı, üniversite öğrencilerinin kariyer karar verme güçlükleri ile kariyer engelleri, kariyer karar verme öz-yetkinlikleri ve karar durumları arasındaki ilişkilerin incelenmesidir. Araştırma 426 üniversite (284 kadın, 142 erkek) öğrencisi üzerinde gerçekleştirilmiştir. Araştırmanın verileri Kariyer Karar Verme Güçlükleri Ölçeği (CDDQ), Algılanan Kariyer Engelleri Ölçeği (PCBS), Kariyer Kararı Öz-Yetkinlik Ölçeği-Kısa Form (CDESES-SF) ve Kişisel Bilgi Formu aracılığıyla toplanmıştır. Verilerin analizinde çoklu doğrusal regresyon analizi kullanılmıştır. Değişkenler arasında çoklu ortak doğrusallığın olup olmadığını kontrol etmek için ise korelasyon değerleri incelenmiştir. Analizler sonucunda algılanan kariyer engelleri, kariyer karar verme öz-yetkinliği ve karar durumlarının (karar verme/vermeme) birlikte kariyer karar verme güçlüklerine ilişkin toplam varyansın %45'ini açıkladığı görülmüştür. Karar durumlarının, toplam kariyer karar verme güçlüklerinin ve hazırlık eksikliği, bilgi eksikliği ve tutarsız bilgiler alt ölçeklerinin en güçlü yordayıcısı olduğu bulunmuştur.

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## INTRODUCTION

People face many decision-making situations throughout their lives. One of the most important decision-making situations could be associated with career decisions as this type of decision have the power to determine people's future lifestyles (Amir & Gati, 2006). Thus, many scholars have conducted research aiming to determine the factors related to career decision-making. According to the results of the existing study, it was understood that the career decision was influenced by the individuals' interests, abilities, personality traits (Di Fabio, Palazzeschi, Asulin-Peretz, & Gati, 2013; Di Fabio, Palazzeschi & Bar-On, 2012; Kırdök & Korkmaz, 2018; Newman, Gray, & Fuqua, 1999; Öztemel, 2012; Öztemel, 2014; Page, Bruch, & Haase, 2008; Penn & Lent, 2019; Sweeney & Schill, 1998); relationships with family and people who are close to them (Dursun & Kara, 2019; Hamamcı, Bacanlı, & Doğan, 2013; Hirschi, Niles, & Akos, 2011; Işık, 2013; Kim, Ahn, & Fouad, 2016; Metheny & McWhirter, 2013); developments in the business world (Arthur, Khapova, & Wilderom, 2005; Neault, 2002) and many other factors.

Based on the previous studies, it can be said that deciding on a career is a complex process that requires organizing a lot of information about the self and the business world and choosing among various alternatives based on this information (Fuqua & Hartman, 1983; Jepsen, 1984; Sauermann, 2005). This situation causes many individuals to have difficulties in choosing a career. The difficulties experienced result in negativities such as not being able to make a decision or making an inappropriate choice (Gati, Krausz, & Osipow, 1996). This often results in low job performance, low job satisfaction, unhappiness, and failure (Kırdök, 2010). One of the most important goals of career counseling is to help these individuals make the most appropriate decision by dealing with the difficulties they face (Cochran, 1994; Gati, Kleiman, Saka, & Zakai, 2002; Swank & Jahn, 2018). In order to achieve this goal, the difficulties experienced by the individuals need to be determined first. Accordingly, Gati, Krausz, and Osipow (1996) developed the "Career Decision Making Difficulties Taxonomy" in order to enable individuals to make more effective decisions.

According to the career decision-making difficulties taxonomy, the difficulties encountered in the process of decision-making consists of three main categories labeled as lack of readiness, lack of information, and inconsistent information. The first mentioned main category, lack of readiness includes subcategories as lack of motivation, general indecisiveness, and dysfunctional beliefs. While lack of information category involves subcategories of lack of information about the decision-making process, lack of information about the self, lack of information about occupations, and lack of information about ways of obtaining additional information. The third main category, inconsistent information, on the other hand, consists of unreliable information, internal conflicts, and external conflicts subcategories (Gati et al., 1996). These three main categories depict that career indecision does not depend on a single reason. That is to say, an individual in the career decision-making process is faced with many internal or external events and conditions that make the decision process difficult. These events and conditions, referred to as "career barriers" by Swanson and Woitke (1997), were studied in a wide spectrum, including ethnic differences (Cardoso & Marques, 2008; Luzzo, 1993; McWhirter, 1997; Meija-Smith & Gushue, 2017), low self-esteem (Patton, Creed, & Watson, 2003; Creed, Patton, & Bartrum, 2004), gender (Cardoso & Marques, 2008; Luzzo, 1995; McWhirter, 1997), discrimination, and insufficient support (Lent, Brown, & Hackett., 2000; Li, Wang, & Kim, 2020; Swanson & Woitke, 1997).

In addition to career barriers, career decision-making self-efficacy, which is defined as the belief that individuals can complete the tasks required to make career decisions (Taylor & Betz, 1983), is also

considered one of the most important concepts in terms of the decision process. Studies (Cardoso & Moreira, 2009; Kelly & Hatcher, 2013; Lam & Santos, 2018; Luzzo, 1996; Patton, Creed & Watson, 2003; Quimby & O'Brien, 2004; Santos, Wang & Levis, 2018; Storme, Celik & Myszkowski, 2019) showed that low-level career decision self-efficacy has a positive relationship with career decision making difficulties. To put it more clearly, it can be said that low-level career self-efficacy eliminates possible career options for individuals, and this situation causes difficulties in the career selection process and prevents a suitable career choice (Amir & Gati, 2006; Betz & Hackett, 1981; Brown & Rector, 2008; Coon, 2008; Creed & Yin, 2006; Lam, 2016; Morgan & Ness, 2003; Storme & Celik, 2017).

Once the literature on career decision-making is scrutinized, it was understood that the concepts of career decision-making difficulties, career barriers, and career decision-making self-efficacy have a significant role in individuals making a suitable career choice (Anghel & Gati, 2019; Betz & Voyten, 1997, Gati et al., 1996; Guay, Ratelle, Sénécal, 2006; Jiang, 2016; Larose & Deschênes, 2006; Nota, Ferrari, Solberg & Soresi, 2007; Öztemel, 2012; Patton, Creed & Watson, 2003; Pulliam, Ieva & Burlew, 2017; Vertsberger & Gati, 2016). In addition, findings show that both career barriers and career decision-making self-efficacy are related to career decision-making difficulties. To illustrate, the previous studies showed that career barriers make career progression difficult for individuals (Özyürek, 2013) by limiting professional research behavior (Balın, 2008; Leal-Muniz & Constantine, 2005) and selection goals (Sürücü, 2011). Similarly, research has revealed that low-level career decision self-efficacy is associated with career decision-making difficulties and career indecision (Fouad, Cotter, & Kantamneni, 2009; Jemini-Gashi, Duraku, & Kelmendi, 2019; Morgan & Ness, 2003; Öztemel, 2012). Additionally, it was observed that the situation of making a decision about career choice or not is important in terms of the career decision-making process, and those who have made a decision about career choice experience less career decision-making difficulty and career indecision (Bacanlı, 2012; Öztemel, 2012; Tien, 2001).

Accordingly, it can be said that these aforementioned concepts need to be taken into consideration at any stage of career selection during the career development process. Considering that especially university students who are in the transition from school life to business life face many uncertainties and therefore experience indecision (van Vianen, De Pater, & Preenen, 2009), it is necessary to examine the relationship between these individuals' career decision-making difficulties, career barriers, career decision-making self-efficacy, and decision status. In addition, career decision-making difficulties consist of three different categories: lack of readiness, lack of information, and inconsistent information, and each category has different qualities (lack of readiness is related to difficulties that arise before the decision-making process, lack of information, and inconsistent information are difficulties in the decision-making process); therefore, it is thought to be important to examine the relationships of these variables with the categories of career decision-making difficulties.

In line with this significance and necessity for research, the current study scrutinized the possible relationships between career decision-making difficulties, career barriers, career decision-making self-efficacy, and university students' decision status in Turkey. Accordingly, the following research questions were sought:

Do perceived career barriers total scores, career decision-making self-efficacy total scores, and decision status (decision making/not making) together;

1. Significantly predict career decision-making difficulties total scores?

2. Significantly predict lack of readiness, lack of information, and inconsistent information subcategory scores?

## METHOD

### Research Model

The current research is a relational study conducted to examine whether university students' perceived career barriers, career decision-making self-competencies, and decision-making situations (decision making / not making) predict career decision-making difficulties.

### Study Group

This research was conducted on 426 undergraduate students (average age: 22.13) enrolled in various departments of a state university in Ankara in the academic year of 2017-2018. The research group consisted of students at the university on the day of data collection and volunteered to participate in the study. 284 (66.7%) of the participants were female, and 142 (33.3%) were male. 30 (7%) of the students were freshmen, 20 (4.7%) of them were sophomores, 145 (34%) of them were juniors, and 231 (54.2%) of them were seniors.

### Ethical Statement

The ethics committee of Gazi University was consulted for ethical approval of this study. With the document dated 14.05.2018 and numbered E.76235, it was decided that the study was ethically appropriate. The participants were informed of the goals of the study and they were told that their identities would be kept confidential.

### Data Collection Tools

***Career Decision Making Difficulties Questionnaire-University Form (CDDQ-UF)***. The original scale developed by Gati and Saka (2001) was adapted to university students in Turkey by Bacanlı & Öztemel (2017). The results of the analysis showed that, as in the original scale, CDDQ-UF is divided into three main categories: Lack of Readiness (LR), Lack of Information (LI), and Inconsistent Information (II).

CDDQ-UF is a nine-point Likert-type scale consisting of 34 items, two of which are controlling ones. The high scores obtained from the scale indicate the intensity of individuals' career decision-making difficulties. The Cronbach alpha reliability coefficients of the Turkish version of the scale were calculated as  $\alpha=.64$  for the lack of readiness category,  $\alpha=.95$  for the lack of information category,  $\alpha=.93$  for the inconsistent information category, and  $\alpha=.94$  for the entire scale (Bacanlı & Öztemel, 2017). In addition, Cronbach alpha reliability coefficients for current research were found to be  $\alpha=.51$  for lack of readiness category,  $\alpha=.92$  for lack of information category,  $\alpha=.88$  for inconsistent information category, and  $\alpha=.92$  for the whole scale.

***Perceived Career Barriers Scale (PCBS)***. PCBS developed by Sürücü (2011) is a 33-item five-point Likert type scale which consists of eight dimensions: gender discrimination, the future of the profession and labor market limitations, difficulties regarding professional education and working conditions of the profession, lack of aptitude and interest, lack of motivation and inadequate preparation, moving, personal problems, and the influence of family and environment. High scores obtained from the scale indicate the

intensity of career barriers that the individuals perceive. The total score can be calculated from the PCBS and the scores related to its dimensions.

Cronbach alpha reliability coefficient and test-retest reliability were examined in order to determine the reliability of PCBS and its sub-dimensions. Within the process of the test-retest reliability, PCBS was applied to 61 participants studying in the departments of Mathematics Teaching and History Teaching at two-week intervals (Sürücü, 2011).

Cronbach alpha reliability coefficients of PCBS was calculated as  $\alpha=.91$  for the gender discrimination,  $\alpha=.89$  for the future of the profession and labor market limitations,  $\alpha=.79$  for the difficulties regarding professional education and working conditions of the profession,  $\alpha=.75$  for the lack of aptitude and interest,  $\alpha=.72$  for the lack of motivation and inadequate preparation.  $\alpha=.72$  for the moving,  $\alpha=.65$  for the personal problems,  $\alpha=.53$  for the influence of family and environment, and  $\alpha=.92$  for the whole scale. The test-retest reliability results were found to be  $\alpha=.67$  for the gender discrimination,  $\alpha=.45$  for the future of the profession and labor market limitations,  $\alpha=.50$  for the difficulties regarding professional education and working conditions of the profession,  $\alpha=.62$  for the lack of aptitude and interest,  $\alpha=.47$  for the lack of motivation and inadequate preparation,  $\alpha=.75$  for the moving,  $\alpha=.73$  for the personal problems,  $\alpha=.46$  for the influence family and environment, and  $\alpha=.75$  for the whole scale (Sürücü, 2011). In addition, the internal consistency coefficient was calculated for the entire scale within the scope of this research and was found as  $\alpha=.91$ .

***Career Decision Self-Efficacy Scale-Short Form (CDSES-SF)***. The Career Decision Self-Efficacy Scale-Short Form (Betz et al., 1996), which was created by removing 25 items from the Career Decision Making Self-Efficacy Scale developed by Taylor and Betz (1983), was adapted into Turkish by Büyükgöze-Kavas (2014). CDSES-SF is a five-point Likert-type scale consisting of 25 items.

The original form created by Betz et al. (1996) consists of five components: self-appraisal, occupational information, goal selection, planning, and problem-solving. However, factor analysis studies conducted by different researchers regarding the construct validity of the scale did not confirm the five-component structure in the original form (Gaudron, 2011; Hampton, 2005). Therefore, it is recommended to use the total score in evaluating the self-efficacy of making career decisions (Creed, Patton, & Watson, 2002; Watson, Brand, Stead, & Ellis, 2001).

Betz et al. (1996) calculated the original form's Cronbach alpha reliability coefficient as  $\alpha=.94$  and the test-retest reliability coefficient as  $\alpha=.83$ . In order to determine the reliability of the Turkish form of the scale, Cronbach alpha reliability coefficient and test-retest reliability were examined. Within the process of the test-retest reliability, CDSES-SF was conducted with 52 participants at two weeks intervals. As a result, the Cronbach alpha coefficient of the Turkish form was calculated as  $\alpha=.92$  and test-retest reliability as  $\alpha=.91$  (Büyükgöze-Kavas, 2014). In addition, the internal consistency coefficient was calculated for the entire scale within the scope of this research and was found as  $\alpha=.91$ .

***Personal Information Form***. The personal information form prepared by the researcher includes questions about gender, department of education, grade level, and decision status (Did you make the final decision about your career choice?).



## **Data Collection**

During the data collection process, various departments from the Education and Technology faculties of the university selected for the research group were determined. The necessary permission letters from Gazi University Ethics Committee (14/05/2018-E.76235) were obtained, and the faculty members in the departments where data would be collected were contacted, and their permission was asked to practice in their courses. After this process, the application battery consisting of a total of 107 items (CDDQ-UF, PCBS, CDSES-SF, and Personal Information Form) was administered by the researcher to the students who were present in class on the data collection day and volunteered to participate in the study. Before the administration, the instructions of the measurement tools were explained by the practitioner, and the participants were informed about the purpose of the research. The administration of the measuring tools lasted approximately 20 minutes.

## **Data Analysis**

The data collected from the participants were transferred to the electronic environment. SPSS 21.0 package program was used to analyze the data. In this study, multiple linear regression analysis was applied to the data to examine whether career barriers, career decision-making self-efficacy, and decision-making (decision making / not making) predicted career decision-making difficulties. Before starting the regression analysis, correlation values were examined to check whether there was multiple common linearity between variables. Thus, Pearson product moment correlation coefficient was calculated between continuous variables, and the binary correlation coefficient between continuous variables and categorical variables was calculated.

## **Limitations**

There are several limitations of the current study. To begin with, this study is limited to university students studying in various departments of a state university in Ankara. Thus, the findings obtained within the scope of the study can only be generalized to university students with similar characteristics. In addition, career decision-making difficulties, perceived career barriers, and career decision-making self-efficacy levels of university students participating in this study are limited by the dimensions and measurements calculated by the measurement instruments developed to measure these variables. Hence, this situation can be regarded as a limitation of the research.

## **RESULTS**

Firstly, this section discusses whether career barriers, career decision-making self-efficacy, and decision-making (decision-making / not-making) predict career decision-making difficulties are included.

The total scores of the students in the study group from CDDQ and its subscales, PCBS, CDSES-SF, and the averages, standard deviations, and correlation values of the decision status (decision making / not making) are presented in Table 1.

**Table 1. Correlation coefficients between variables in the regression model**

Variables	$\bar{x}$	SS	1	2	3	4	5	6	7
1.CDDQ	123.43	38.09	-	.66***	.93***	.89***	.43***	-.42***	.61***
2.LR	48.13	9.93		-	.47***	.41***	.19***	-.14**	.30***
3.LI	41.57	19.00			-	.74***	.38***	-.44***	.58***
4.II	33.73	15.69				-	.48***	-.41***	.59***
5.PCBS	68.40	19.31					-	-.24***	.13*
6.CDSES	84.91	13.89						-	-.28***
7.Decision Status.****									-

\* $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ ,  
 \*\*\*\* Not making decision

The results of multiple linear regression analysis conducted to the data to determine the predictive power of the total scores obtained from the PCBS and CDSES-SF and the decision status to the total scores obtained from the CDDQ are presented in Table 2.

**Table 2. Multiple regression analysis results for the prediction of CDDQ scores**

Variables	B	SE	$\beta$	t	P
Constant	120.508	11.584		10.403	.000
PCBS	.650	.074	.330	8.814	.000*
CDSES-SF	-.682	.105	-.249	-6.509	.000*
Decision Status**	30.576	2.845	.401	10.748	.000*

$R = .67$ ,  $R^2 = .45$ ,  $F(3,422) = 113.302$ , \* $p < .001$   
 \*\* Not making decision

As it is depicted in Table 2, total scores from PCBS and CDSES-SF and decision status significantly predict the total scores from CDDQ (Multiple  $R = .67$ ;  $R^2 = .45$ ;  $F(3-422) = 113.302$ ,  $p < .001$ ). This finding showed that PCBS and CDSES-SF scores and decision status explained 45% of the total variance regarding the scores of CDDQ. According to the ' $\beta$ ' coefficients of the predictive variables, it was understood that decision status ( $\beta = .401$ ) is the strongest predictor of career decision-making difficulties among the three predictor variables. In addition, it was understood that the perceived career barriers ( $\beta = .330$ ) and the career decision-making self-efficacy ( $\beta = -.249$ ) each significantly predicted the career decision-making difficulties ( $p < .001$ ).

The multiple linear regression analysis conducted to the data to determine the predictive power of the total scores obtained from the PCBS and CDSES-SF and the decision status to the total scores obtained from the LR subscale are depicted in Table 3.

**Table 3. Multiple regression analysis results on the prediction of LR subscale scores**

Variables	B	SE	$\beta$	t	P
Constant	43.569	3.878		11.234	.000
PCBS	.078	.025	.152	3.160	.002*
CDSES-SF	-.036	.035	-.050	-1.028	.305
Decision Status***	4.268	.952	.215	4.480	.000**

$R = .30$ ,  $R^2 = .09$ ,  $F(3,422) = 13.462$ , \* $p < .01$ , \*\* $p < .001$   
 \*\* Not making decision

As it is depicted in Table 3, total scores from PCBS and CDSES-SF and decision status significantly predict the scores from the LR subscale (Multiple  $R = .30$ ;  $R^2 = .09$ ;  $F(3-422) = 13,462$ ,  $p < .001$ ). This finding showed that PCBS and CDSES-SF scores and decision status explain 9% of the total variance regarding LR subscale scores. According to the ' $\beta$ ' coefficients of the predictive variables, it was understood that decision status ( $\beta = .215$ ) was the strongest predictor of lack of readiness among the

three predictor variables. In addition, it was understood that perceived career barriers ( $\beta = .152$ ) significantly predicted lack of readiness ( $\beta < .01$ ). On the other hand, career decision-making self-efficacy ( $\beta = -.050$ ) was not seen as a significant predictor ( $p > .05$ ) of scores related to lack of readiness.

The results of multiple linear regression analysis conducted to the data to determine the predictive power of the total scores obtained from the PCBS and CDESES-SF and the decision status to the total scores obtained from the LI subscale are depicted in Table 4.

**Table 4. Multiple regression analysis results related to the prediction of LI subscale scores**

Variables	B	SE	$\beta$	t	P
Constant	48.736	5.995		8.130	.000
PCBS	.264	.038	.269	6.922	.000*
CDESES-SF	-.388	.054	-.284	-7.150	.000*
Decision Status**	14.356	1.472	.377	9.751	.000*

$R = .64, R^2 = .40, F(3,422) = 95.232, *p < .001$

\*\* Not making decision

As it is presented in Table 4, the total scores obtained from PCBS and CDESES-SF and decision status together significantly predicted the scores obtained from the LI subscale (Multiple  $R = .64$ ;  $R^2 = .40$ ;  $F(3-422) = 95.232, p < .001$ ). This finding showed that PCBS and CDESES-SF scores and decision status explained 40% of the total variance regarding LI subscale scores. According to the ' $\beta$ ' coefficients of the predictive variables, it was understood that decision status ( $\beta = .377$ ) was the strongest predictor of the lack of information among the three predictor variables. In addition, perceived career barriers ( $\beta = .269$ ) and career decision-making self-efficacy ( $\beta = .284$ ) each were found to significantly predicted lack of information ( $p < .001$ ).

The multiple linear regression analysis conducted to the data to determine the predictive power of the total scores obtained from the PCBS and CDESES-SF and the decision status to the total scores obtained from the II subscale are depicted in Table 5.

**Table 5. Multiple regression analysis results related to the prediction of II subscale scores**

Variables	B	SE	$\beta$	t	P
Constant	28.203	4.736		5.955	.000
PCBS	.308	.030	.379	10.207	.000*
CDESES-SF	-.258	.043	-.229	-6.027	.000*
Decision Status**	11.953	1.163	.380	10.276	.000*

$R = .67, R^2 = .45, F(3,422) = 117.136, *p < .001$

\*\* Not making decision

As it depicted in Table 5, it was understood that the total scores from PCBS and CDESES-SF and decision status together significantly predicted the scores obtained from the II subscale (Multiple  $R = .67$ ;  $R^2 = .45$ ;  $F(3-422) = 117.136, p < .001$ ). This finding showed that PCBS and CDESES-SF scores and decision status explained 45% of the total variance regarding II subscale scores. According to the ' $\beta$ ' coefficients of the predictive variables, decision status ( $\beta = .380$ ) and perceived career barriers ( $\beta = .38$ ) were the strongest predictors of inconsistent information. In addition, it was understood that decision-making self-efficacy ( $\beta = -.229$ ) solely predicted inconsistent information significantly ( $p < .001$ ).

## DISCUSSION, CONCLUSION & SUGGESTIONS

This study was conducted to examine the relationships between university students' career decision-making difficulties and career barriers, career decision-making self-competencies, and decision status. As



a result of the multiple linear regression analysis conducted to the data, the perceived career barriers and career decision-making self-efficacy total scores of the university students participating in the study together with decision status (making / not making decisions) explained 45% of the total variance related to the scores obtained from all career decision-making difficulties. Among these three variables, decision status (not making a decision) was the strongest predictor of career decision-making difficulties.

Once the relevant literature is scrutinized, it can be said that the findings of the current research supported the previous studies' findings. More specifically, Tien (2001), Tien (2005), Bacanlı (2012), and Yang and Shi (2018) found that individuals who have not yet made a career decision perceive more difficulty in making career decisions than individuals who have made their decision. Vaiopoulou, Papavassiliou-Alexiou and Stamovlasis (2019) also reported that individuals who reported fewer career decision-making difficulties were more confident in their decision. Brown and Rector (2008) showed that career barriers are an important source of career decision-making difficulties with their meta-analysis study. While Jaensch, Hirschi, and Freund (2015) and Ukil (2016) with their research, confirmed that individuals who perceive more career barriers experience more career indecision. Morgan and Ness (2003) found a negative relationship between career decision-making difficulties and career decision-making self-efficacy. Amir and Gati (2006) reported that individuals with high levels of career decision-making self-efficacy experience fewer career decision-making difficulties.

Similarly, Choi et al. (2012) and Xu and Tracey (2014) found a negative relationship between career decision-making difficulties and career decision-making self-efficacy. Previous studies on decision status, career barriers, and career decision-making self-efficacy and the current research have similar findings showed that these concepts have an important role in the emergence of career decision-making difficulties or in coping with career decision-making difficulties. Accordingly, it can be said that it is important to focus on the decision status perceived by individuals, career barriers they perceive, and career decision-making self-efficacy levels in theoretical and practical studies on career decision-making difficulties. Considering that the decision status is the strongest predictor of career decision-making difficulties, it may be suggested to determine the decision status and plan the studies aiming to examine the coping strategies of career decision-making difficulties accordingly.

Regarding subcategories, when the findings of the study were examined, it was seen that the career barriers perceived by university students and their career decision-making self-efficacy and decision status (making / not making decisions) together explained 9% of the total variance regarding the scores obtained from the lack of readiness sub-scale. The findings of the study showed that those who have not yet made a career decision get higher scores on the lack of readiness subscale. This finding is in line with some research in the relevant literature (Boo & Kim, 2020; Tien, 2001; Tien, 2005; Yang & Shi, 2018). On the other hand, some other studies show differences compared to the findings of the current research. To illustrate, Bacanlı et al. (2013) found that scores from the lack of readiness subscale did not significantly differ according to the decision status.

In addition to the findings on decision-making, the current research showed that the lack of readiness increases as perceived career barriers are thrown away. It was observed that the findings of the present study support some research in the literature. To illustrate, Farrow (2016) found that lack of readiness is associated with career barriers. Although there is no direct research showing that career barriers are predictors of lack of readiness, a meta-analysis study by Brown and Rector (2008) also showed sub-dimensions of lack of readiness (lack of motivation, general indecision, and dysfunctional beliefs) are

associated with career barriers. On the other hand, it was observed that the results between the lack of readiness subscale and career barriers were not reported in the studies as the lack of readiness subscale showed lower internal consistency coefficients than the original scale developed by Gati et al. (1996) in some scale adaptation studies in the literature (Creed, Peter, Wong & Hood, 2009; Creed & Yin, 2006). Thus, it could be said that the findings of the current study contribute to the existing literature.

Another finding obtained in the present study was that career decision-making self-efficacy did not significantly predict lack of readiness solely. Considering the structures of the Career Decision Difficulties Scale (Gati et al., 1996) and the Career Decision Self-Efficacy Scale (Betz et al., 1996), it can be said that this finding is expected as the lack of readiness category consists of three subcategories: lack of motivation, general indecision, and dysfunctional beliefs, and none of the subscales of the Career Decision Self-Efficacy Scale address these categories. Compared to the related literature, it was seen that Reese and Miller (2006) reached similar results to the current research. On the other hand, Coon (2008) found that career decision-making self-efficacy significantly predicted lack of readiness, and there was a negative relationship between career decision-making self-efficacy and lack of readiness. Besides, Walker and Tracey (2012), Bullock-Yowell, McConnell, and Schedin (2014), and Santos, Wang, and Levis (2018) also found a significant negative relationship between lack of readiness and career decision-making self-efficacy.

Compared to the related studies focusing on the predictor status of lack of readiness, it was seen that these findings were similar to some research results in the relevant literature. At the same time, they differed from some other research results. It can be said that this situation stems from the reliability level of the lack of readiness subscale is not high enough for different cultures (Bacanlı & Öztemel, 2017; Creed & Yin, 2006; Levin, Braunstein-Bercovitz, Lipshits-Braziler, Gati & Rossier, 2020; Mau, 2001; Vahedi, Farrokhi, Mahdavi & Moradi, 2012). Therefore, these findings suggest that there is a need for the development and testing of culturally appropriate items regarding lack of readiness.

In addition to the lack of readiness, as a result of the examinations made on the categories of lack of information and inconsistent information, it was seen that the career barriers perceived by university students and their career decision-making self-efficacy and decision status (making / not making a decision) explained 40% of the total variance regarding the scores obtained from the lack of information subscale and 45% of the total variance regarding the scores obtained from the inconsistent information subscale. Among these three variables, it was found that decision status (not making a decision) was the strongest predictor of lack of information and inconsistent information. In addition, it was understood that career decision-making self-efficacy and career barriers alone were significant predictors of both lack of information and inconsistent information.

Compared to the relevant literature, it was seen that the findings of the present study supported the previous studies. To illustrate, Tien (2001) and Tien (2005) found that individuals who made a decision about career choice got lower scores on the subscales of lack of information and inconsistent information. Similarly, Bacanlı et al. (2013), Boo and Kim (2020), and Bullock-Yowell, McConnell, and Schedin (2014) also revealed that decision-making about career choice creates a significant difference in the scores obtained from the lack of information and inconsistent information subscales. Creed and Yin (2006) found that CDDQ's lack of information and inconsistent information subscales were positively associated with career barriers and negatively correlated with career decision-making self-efficacy. In line with the previous finding, Creed et al. (2009) reported that individuals with high-level career decision-

making self-efficacy scored lower on the subscales of lack of information and inconsistent information, while individuals with a high level of career barrier perceived higher scores on this scale. Reese and Miller (2006) also confirmed that there was a negatively significant relationship between career decision-making self-efficacy and lack of information and inconsistent information. While Coon (2008) found that career decision self-efficacy significantly predicted lack of information and inconsistent information, and there was a negative relationship between career decision self-efficacy and inconsistent information. In addition, Di Fabio and Maree (2011) revealed that while self-efficacy for career decision-making increased, lack of information and inconsistent information decreased with their study. Xu and Tracey (2014) also showed that there is a significant relationship between career decision-making self-efficacy and lack of information and inconsistent information. The findings of previous studies and the current research findings show that decision status, career barriers, and career decision self-efficacy play an important role in understanding and responding to difficulties related to lack of information and inconsistent information. Therefore, it can be said that it is important to conduct studies to reduce perceived career barriers and increase career decision-making self-efficacy while intervening in career decision-making difficulties caused by lack of information and inconsistent information. In addition, considering that the status of making a decision about career choice or not is an important factor in understanding the lack of information and inconsistent information of individuals in the career decision-making process, it can be said that considering the decision status in future studies and conducting studies to gain decision-making skills in practical research is important in terms of coping with individuals' lack of information and inconsistent information.

When the findings are examined generally, it can be said that the research has various implications for the relevant literature in terms of theory and practice. First, considering that each of the variables of career barriers, career decision-making self-efficacy, and decision status are significant predictors of career decision-making difficulties, considering these variables in future studies and planning professional group guidance, individual and group career counseling, and psycho-education programs can be suggested. In addition, as decision status was the strongest predictor of both the total scores obtained from career decision-making difficulties and the scores obtained from the sub-dimensions of career decision-making difficulties, it may be recommended to conduct studies on teaching decision-making steps and decision-making skills while intervening in the career decision-making difficulties of students. Besides, variables such as self-esteem, perceived social support, career optimism, and external locus of control, and negative career thoughts, which may be positively related to career decision-making difficulties can be included in future studies in addition to the variables in this particular study.

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### **Author Contributions**

Both authors substantially contributed to this work in each step of the study.

### **Conflict of Interest**

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

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### **Ethical Statement**

The ethics committee of Gazi University was consulted for ethical approval of this study. With the document dated 14.05.2018 and numbered E.76235, it was decided that the study was ethically appropriate. The participants were informed of the goals of the study and they were told that their identities would be kept confidential.