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Career decision-making difficulties of Turkish adolescents

Feride Bacanli[1]

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Abstract The purposes of this study are (1) to adapt the Career Decision-Making Difficulties Questionnaire (CDDQ) to Turkish high school students and (2) to examine gender differences, grade differences, and differences between "decided" and "undecided" students. The sample consisted of 2509 adolescent students. The results showed that the structure of the Turkish version of the CDDQ was similar to the structure of the original CDDQ. The adolescent girls reported greater difficulties general indecisiveness, and dysfunctional belief difficulties than adolescent boys. Adolescent boys reported greater motivation difficulties than adolescent girls. Undecided students reported having more difficulties than decided students.

Résumé. Difficultés de prise de décision de carrière des adolescents turcs. Les objectifs de cette étude sont les suivants: (1) adapter le Questionnaire concernant les difficultés pour prendre des décisions liées à la carrière fourni aux étudiants Turques de niveau secondaire et (2) examiner les différences entre les sexes, les classes et les étudiants « décidés » et « indécis ». Le questionnaire est constitué de 2'509 étudiants adolescents. Les résultats ont montré que la structure du CDDQ en version Turque était similaire à la structure de la version originale. Les filles présentèrent des difficultés générales portant sur le niveau d'indécision et sur les croyances dysfonctionnelles que les garçons. Les garçons présentèrent moins de difficultés de

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✉ Feride Bacanli
fbacanli@gazi.edu.tr

[1] Guidance and Psychological Counseling Department, Gazi Education Faculty, Gazi University, Besevler, Ankara 06500, Turkey

motivation que les filles. Les étudiants indécis présentèrent plus de difficultés que les étudiants décidés.

Zusammenfassung. Schwierigkeiten von karrierentscheidung der turkische jugendliche. Der Zweck dieser Studie ist (1) die Umfrage bezüglich der Karriereentscheidungsschwierigkeiten (CDDQ) auf Türkische Schüler in der Sekundarstufe anzupassen und (2) die Geschlechtsunterschiede, Klassenunterschiede und die Unterschiede zwischen Schülern, die sich „entschieden haben“und die sich „nicht entschieden haben“ zu untersuchen. Die Basis der Studie wurde von 2509 Jugendlichen gebildet. Die Ergebnisse haben nachgewiesen dass die Struktur der türkischen Version der CDDQ ähnlich mit der Struktur der Original-CDDQ ist. Die Schülerinnen gaben größere Schwierigkeiten im Zusammenhang mit generelle Unentschiedenheit und disfunktionelle Glaubensschwierigkeiten als männliche Schüler an. Die männlichen Schüler gaben größere Motivationsschwierigkeiten als die Schülerinnen an. Unentschieden Schüler gaben an mehr Schwierigkeiten zu haben als Schüler die sich entschieden haben.

Resumen. Dificultades en adolescentes turcos tomando decisiones acerca de sus carreras académicas. Los propósitos del presente estudio son: (1) adaptar el Cuestionario sobre las dificultades en planear la carrera, a los estudiantes Turcos de nivel secundario, (2) estudiar las diferencias de género y clase entre los estudiantes decisivos e indecisos. La CDDQ fue llevada a cabo por 2509 estudiantes adolescentes. Los resultados mostraron que la estructura de la versión turca del CDDQ fue similar a la del CDDQ original. Las mujeres reportaron mayores dificultades indecisión general, y las dificultades de creencias disfuncionales que los varones adolescentes. Los varones presentaron mas dificultades motivacionales que las mujeres. Los estudiantes indecisos padecieron más dificultades que los estudiantes decididos.

Keywords Career decision-making difficulties · Adolescents · Cross-cultural adaptation

Introduction

Difficulties in career decision-making are among the most prevalent vocational problems (Amir & Gati, 2006; Osipow, 1999). Such difficulties may result in avoiding the process altogether, halting it, or making a decision that is less than optimal (Gati, Krausz, & Osipow, 1996). Many adolescent students struggle with the decisions they have to make about high schools, high school elective courses, and careers (Creed & Yin, 2006; Gati & Saka, 2001a; Hijazi, Tatar, & Gati, 2004; Mau, 2004). Most Turkish academic high school students struggle with similar decision problems and career indecision (Bacanli, 2012a; Çakır, 2004; Doğan & Bacanli, 2012; Öztemel, 2013; Sürücü, 2005).

Gati et al. (1996) developed a general theoretical taxonomy of career decision-making difficulties people might encounter. Gati et al.'s (1996) taxonomy is a hierarchical model that includes three major difficulty categories, which are further divided into 10 specific subcategories of difficulty. The first major category, lack of

readiness, includes three subscales that may arise before the beginning of the career decision-making process: (a) lack of motivation to engage in the career decision-making process; (b) general indecisiveness concerning all types of decisions; and (c) dysfunctional beliefs, including irrational expectations concerning the career decision-making process (Nevo, 1987). The two other major difficulty categories, lack of information and inconsistent information, include subcategories of difficulties that may arise during the actual career decision-making process. lack of information includes four difficulty subscales: (a) lack of information about the *process*; (b) lack of information about the *self*; (c) lack of information about the *occupations* (e.g., alternatives); and (d) lack of information about the *ways of obtaining additional information*. Inconsistent Information includes three subscales of difficulty: (a) Unreliable Information, or difficulties related to unreliable or contradictory information; (b) internal conflicts, or conflicts within the individual such as contradictory preferences or difficulties concerning the need to compromise; and (c) external conflicts, or conflicts involving the influence of significant others (e.g., parents, peers, and teachers; Gati & Saka, 2001a).

Gati et al. (1996) originally developed the Career Decision-Making Difficulty Questionnaire (CDDQ) to examine the proposed taxonomy empirically in a sample of young adult Israelis and a sample of American university students. Numerous studies have supported the reliability and validity of the CDDQ (e.g., Fouad, Cotter & Kantamneni, 2009; Gati, Osipow, Krausz, & Saka, 2000; Gati & Saka, 2001a, b; Lancaster, Rudolph, Perkins, & Patten, 1999; Osipow & Gati, 1998; Reese & Miller, 2010).

Some studies examined the structure of career decision-making difficulties on samples of university students, adults, and adolescents (e.g., Bacanli, 2012a; Gati et al., 2000; Gati & Saka, 2001a; Kleiman et al., 2004; Morgan & Ness, 2003; Osipow & Gati, 1998). The results of these studies indicated that age and grade level are important variables that affect career decision-making difficulties. In a recently-conduceted meta-analysis, Martincin and Stead (2014) found that age has no effect on the difficulties of career decision-making. Other researchers examined the cross-cultural validity of the structure of difficulties in high school and university student samples from different cultures, such as American, Taiwanese, Chinese, Israeli, and Arab (e.g., Albion & Fogarty, 2002; Creed & Yin, 2006; Gati & Saka, 2001a; Hijazi et al., 2004; Mau, 2001, 2004; Tien, 2001, 2005). These authors indicated that culture and the education system are important factors that affect career decision-making difficulties.

High school education system in Turkey

There are two high school types in Turkey: vocational high schools and academic high schools. The main purpose of the vocational high schools is to teach basic theoretical knowledge and skills related to a vocation. The other purpose is to prepare students for university attendance. Vocational high schools offer art, music, technology, and other curricula. The main purpose of the academic high schools is to prepare students for university acceptance; academic high schools last 4 years

(grades 9 through 12). There are four career tracks available: Turkish-Mathematics, Mathematics-Sciences, Social Sciences, and Foreign Language (e.g., English, French, and German) in each high school. In addition, obligatory and elective courses are related to specific career tracks. Each career track provides a base for future career choices. Therefore, career track selection may affect future careers and future educational possibilities. For example, to study law at a university, students have to choose the Turkish-Mathematics track by the end of 9th grade.

At the end of 9th grade, all academic high school students have to decide on a career track. However, to make a decision about which track to pursue (e.g., Mathematics-Science), the student has to have 3-5 credit points for each of the obligatory courses (e.g., mathematics, physics, and chemistry) related to the selected career track. Beginning in 10th grade, students must choose the elective courses related to their career track. Elective courses are important in that they can affect future career and educational possibilities. Therefore, lack of information about the various alternatives (e.g., elective courses and careers) and the ways of obtaining additional information create significant difficulties for students in this process. Students in the 11th grade do not make new decisions regarding their career tracks or elective courses, but maintain their decisions by focusing on succeeding in their obligatory and elective courses. Thus, our sample does not include 11th-grade students. At the end of 12th grade, all students take a university entrance exam.

Most students make their final career decisions by considering their university exam results, their specific career track, their ability, interest and vocational values. These factors determine how they begin to study at a university. Most students experience many difficulties during the high school years. First, lack of motivation with regard to career decision-making is often a significant difficulty for students in the 9th grade. For example, at the end of the 9th grade, many students may not have sufficient credit points to choose a desired a career track. This may decrease students' motivations to engage in the decision-making process (Bacanli, Eşici, & Özünlü, 2013). Second, lack of information (about the self, occupations, etc.) also presents a significant difficulty in making a career track decision at the end of the 9th grade. All high school students should have necessary knowledge of their abilities, interests, values, available career tracks, and types of careers to choose a career track. However, the most students who do not have sufficient knowledge in these areas will have difficulty related to a lack of information (Sarikaya & Khorshid, 2009; Vurucu, 2010). In addition, most students face difficulties related to internal and external conflicts during the actual career decision-making process. For example, Turkish parents generally want their children to choose a highly prestigious career (Sarikaya & Khorshid, 2009). However, some students' University Entrance Exam Scores (UEES) are not high enough to pursue highly prestigious careers, which can cause external conflicts for students. The interests and abilities of some students may not be suitable for highly prestigious careers, which can cause students to encounter internal conflicts (Akkoç, 2012a, b; Bacanli et al., 2013; Çakır, 2004).

Most academic high school students in Turkey seek help from guidance and counseling services to cope with their career indecision (Akaydin, 2002; Çakır, 2004; Öztemel, 2012, 2013) and with their career difficulties (Bacanli, 2012a; Bacanli et al., 2013; Doğan & Bacanli, 2012). In Turkey, academic high school

students have asked psychological counselors to provide information related to careers, career tracks, and the realities of the world of work. They also have been asked to provide career counseling related to career indecision and difficulties (Bacanli, 2012a; Çakır, 2004; Doğan & Bacanli, 2012; Öztemel, 2013). Psychological counselors need to use an instrument to measure high school students' career decision-making difficulties. However, there is no such instrument in Turkey. Therefore, the purposes of this study are (1) to adapt the Career Decision-Making Difficulties Questionnaire (Gati & Saka, 2001a) to Turkish high school students and (2) to examine gender differences, grade differences, and differences between "decided" and "undecided" students.

Method

Participants

Initially, 2545 Turkish academic high school students participated in this study. However, 36 students were excluded from the sample because they did not answer many of the questions. Thus, the final sample consisted of 2509 students: 1332 (53.09 %) were adolescent girls and 1177 (46.91 %) were adolescent boys from nine academic high schools in Ankara, the capital of Turkey. Participants ranged from 14 to 18 years old ($M_{age} = 16.28$, $SD = .92$). Of these students, 40 % were in the ninth grade ($n = 995$; 524 adolescent girls and 471 adolescent boys), 31 % were in the tenth grade ($n = 777$, 630 adolescent girls and 347 adolescent boys), and 29 % were in the twelfth grade ($n = 737$, 378 adolescent girls and 359 adolescent boys). All participants were from Turkey, and their native language was Turkish.

Instrument

Career decision-making difficulties

The 34-item high school version of the Career Decision Making Difficulties Questionnarie (CDDQ; Gati & Saka, 2001a) was used for adaptation study in the present study to measure career decision-making difficulties. The 34-item CDDQ contains two items included as a validity check and is divided into ten difficulty categories embedded in three major categories: lack of readiness (lack of motivation, general indecisiveness, and difunctional beliefs), lack of information (the stages of career decision-making process, self, occupations, and ways of obtaining additional information), Inconsistent Information (unreliable information, internal conflicts, and external conflicts). Gati and Saka (2001a) reported internal reliabilities for the 34-item CDDQ that were consistent with the 44-item scale (Gati et al., 1996): .91 (total), .63 (lack of readiness), .88 (lack of information) and .87 (inconsistent information). The 34-item CDDQ has demonstrated evidence of construct validity (e.g., Albion & Fogarty, 2002; Gati & Saka, 2001a; Kleiman

et al., 2004). The 34-item CDDQ uses a 9-point Likert-type scale (1 = *does not describe me,* 9 = *describes me well*).

Translation

The translation of the 34-item CDDQ (Gati & Saka, 2001a) into Turkish followed these steps: (a) all 34 English items of the CDDQ were first translated into Turkish by two English-language experts, a researcher, and two counseling psychologists with expertise in career counseling and guidance and fluency in Turkish and English; (b) the translations made by each of the experts were compared with the best translation of each item chosen by the author; (c) one native Turkish speaker, who also spoke English but was unfamiliar with the English version of the CDDQ, then back-translated the questionnaire into English; and (d) the back-translated version was compared with the 34-item CDDQ in terms of correctness, clarity, wording of items, and cultural relevancy by the researcher and one of the counseling psychologists; and (e) the English back-translation was approved by the 34-item CDDQ developers. A few revisions were made to ensure accuracy, readability and understandability of translations. Participants respond to the Turkish version of the CDDQ on a 5-point Likert-type scale (1 = *does not describe me,* 5 = *describes me well*).

A preliminary study was conducted with a sample of 45 high school students to receive feedback about the clarity, understandability, and cultural appropriateness of the 34-item Turkish questionnaire. The students stated that the contents of the items, with the exception of item 10 ("I expect that through the career I choose, I will fulfill all my aspirations"), were easily understandable. Thus, the Turkish version of the CDDQ was revised to preserve the content of the original item 10 ("I hope through the career I choose I will fulfill all my expectations/dreams") of the CDDQ (Gati & Saka, 2001a); thus the Turkish version of the CDDQ was finalized.

Procedure

To collect data in Turkish schools, researchers must obtain official permission from the Directorate of National Education in the city. Because the Directorate of National Education gave official permission for nine schools in the city, the sample consists of students from those nine academic high schools. The school counselors in each school adminsterd the Turkish version of the CDDQ. They explained the questionnaires' purpose and importance to the participants. Participation was voluntary, and the participants could withdraw at any time. The total completion time ranged from 35 to 40 min.

The first page of the anonymous questionnaire included general information, such as gender, grade, and decision status about a future career (e.g., decided and undecided). The participants were asked, "Have you decided about the major you are going to pursue or about which career to choose?" The students who answered "yes" were considered to be decided, and those who answered "no" were considered to be undecided.

Data analysis

To examine the empirical structure of the three major categories and 10 scales of the Turkish version of the CDDQ, we conducted an ADDTREE analysis (cf. Sattath & Tversky, 1977). The ADDTREE represents the proximity matrix in the form of an additive or path length tree, in which the variables are divided into clusters and subclusters according to the proximity between clusters and subclusters. Therefore, the ADDTREE cluster analysis of the intercorrelations among the ten scales and the intercorrelations among the difficulties within the three major categories enabled us to directly compare the empirical structure within the hypothesized theoretical structures (Gati et al., 1996). In addition to ADDTREE analysis, a confirmatory factor analysis (CFA) was conducted. A four-way mixed-model multivariate analysis of variance ($2 \times 2 \times 3 \times 10$ MANOVA) was conducted to test differences between decided and undecided students, adolescent boys and girls, and 9th, 10th and 12th grade students, with gender, grade, and decision status as the between-subject factors, and the score on the ten scales of the CDDQ as the whitin-subject factor.

Results

Table 1 presents the means, standard deviations, internal consistency reliabilities, number of items, and intercorrelations (among the three major categories, ten subscales, and Total CDDQ—Turkish version). The correlations among the ten subscales of the Turkish version of the CDDQ scales ranged from small (e.g., .14 between lack of motivation and general indecisiveness) to large (e.g., .67 between unreliable information and internal conflicts). The correlations among the scales of major categories ranged from .14 to .15 for the lack of readiness scale, .53 to .64 for the lack of information scale, and .50 to .67 for the inconsistent information scale. Corrected item-total correlations for the 34 items ranged from .24 to .74. Specifically, corrected item-total correlations are highly acceptable for most items, but a few items have lower item-total correlation coefficients (e.g., items 5 and 6 of the lack of readiness scale had .24 and .27 corrected item-total correlation coefficients, respectively).

The Cronbach's alpha internal-consistency reliabilities were high for the total the Turkish version of the CDDQ, the lack of information scale (.90) and the inconsistent information scale (.84), but low for the lack of readiness scale, which showed an unacceptable α level (.45; Nunnally & Bernstein, 1994).

Structure of the Turkish version of the CDDQ

Cluster analysis

We performed a cluster analysis to uncover the structure of the 10 scales (ADDTREE; Sattath & Tversky, 1977). Figure 1 presents the clustering structure derived from an across-sample intercorrelation matrix (the linearly accounted-for

Table 1 Means, standard deviations, and internal consistency reliabilities, number of items, and intercorrelations among the three major categories, ten subscales, and total CDDQ Turkish Version ($N = 2509$)

CDDQ scales	No. of Items	*M*	*SD*	α	R	Rm	Ri	Rd	L	Lp	Ls	Lo	La	I	Iu	Ii	Ie
R	10	2.86	.51	.45	–												
Rm	3	1.91	.83	.53	.56**	–											
Ri	3	3.16	.92	.49	.75**	.14**	–										
Rd	4	3.51	.76	.49	.50**	−.15**	.15**	–									
L	12	2.38	.87	.90	.46**	.42**	.41**	−.04	–								
Lp	3	2.56	1.13	.85	.42**	.37**	.41**	−.05*	.84**	–							
Ls	4	2.10	.94	.80	.39**	.43**	.32**	−.07**	.84**	.63**	–						
Lo	3	2.54	1.05	.78	.36**	.31**	.34**	−.02	.86**	.62**	.61**	–					
La	2	2.30	1.03	.62	.36**	.31**	.32**	.01	.82**	.53**	.60**	.64**	–				
I	10	2.25	.83	.84	.41**	.42**	.33**	−.04	.73**	.58**	.62**	.61**	.63**	–			
Iu	3	2.29	.97	.66	.37**	.36**	.33**	−.03	.69**	.56**	.58**	.59**	.60**	.84**	–		
Ii	5	2.31	.87	.71	.37**	.41**	.29**	−.06**	.67**	.54**	.58**	.56**	.57**	.86**	.67**	–	
Ie	2	2.16	1.13	.74	.30**	.30**	.22**	.00	.50**	.39**	.44**	.41**	.44**	.84**	.50**	.55**	–
CDDQ total	32	2.50	.63	.90	.67**	.53**	.54**	.11**	.91**	.76**	.77**	.77**	.76**	.89**	.80**	.79**	.68**

R lack of readiness cluster, *Rm* lack of motivation, *Ri* indecisiveness, *Rd* dysfunctional beliefs, *L* lack of information cluster, *Lp* lack of knowledge about the process, *Ls* lack of information about the self, *Lo* lack of information about occupations scale, *La* lack of information about ways of obtaining additional information scale, *I* inconsistent information cluster, *Iu* unreliable information scale, *Ii* internal conflicts scale, *Ie* external conflicts scale

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

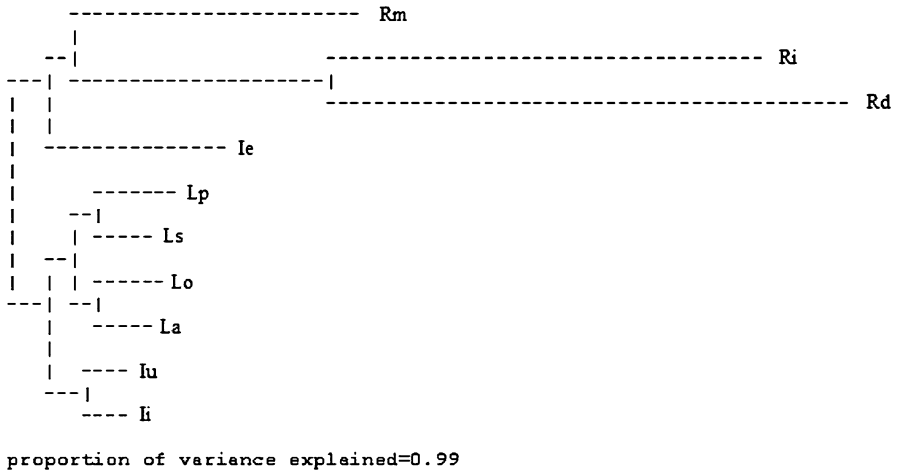

Figure 1 The structure of ten difficulty categories of the Turkish Version of the CDDQ ($N = 2509$). *Rm* lack of motivation, *Ri* indecisiveness, *Rd* dysfunctional beliefs, *Lp* lack of knowledge about the process, *Ls* lack of information about the self, *Lo* lack of information about occupations, *La* lack of information about ways of obtaining additional information, *Iu* unreliable information, *Ii* internal conflicts, *Ie* external conflicts

variance is .99, reflecting an adequate representation of the intercorrelations among the scales by the clustering structure). As shown in Figure 1, the ten scales are grouped into three major categories. The empirical structure of the ten difficulty scales in the Turkish high school sample is similar but not identical to that of the original theoretical model underlying the questionnaire (Gati et al., 1996). The main difference between our empirical structure derived from Turkish high school students' data and the theoretical model is related to the location of the external conflicts difficulty scale. The external conflict scale was located empirically in the lack of readiness scale instead of the inconsistent information scale. However, it is interesting to note that this deviation resembles the result obtained in the American sample reported by Gati et al. (1996). The other 9 scales were empirically clustered exactly as expected by the theoretical model (Gati et al., 1996; Gati & Saka, 2001a, b).

Confirmatory factor analysis

Based on the 2509 students in the sample, to test the fit of the proposed theoretical model (10-3-1 model), a CFA was conducted, using LISREL 8.7 software (Jöreskog & Sörbom, 1993), with the maximum likelihood estimation procedure. The model fit indices for the CFA were as follows: $\chi^2(33, N = 2509) = 508.36$, $p < .001$, $\chi^2/df = 15.40$; comparative fit index (CFI) = .98; Goodness-of-Fit Index (GFI) = .96; Adjusted Goodness-of-Fit Index (AGFI) = .093; Normed Fit Index (NFI) = .98; root mean square error of approximation (RMSEA) = .076, 90 % confidence interval (CI) = [0.070, 0.082]; and standardized root mean square residual

(SRMR) = .040. The CFI, GFI, AGFI, NFI, RMSEA and SRMR were in the acceptable range (Byrne, 1994; Hu & Bentler, 1999; Kline, 2011).

However, the χ^2/df ratio was found to be greater than the acceptable value. The Chi square statistic tends to be inflated when the sample size is large (Hu & Bentler, 1999). Because the sample size of this study is large ($N = 2509$), the χ^2/df ratio may be affected by the sample size. Therefore, the Chi square statistic was not considered in evaluating goodness of fit (Bentler & Bonett, 1980). Nonetheless, the CFA indicated that the Turkish version of the CDDQ consisted of 10 scales and 3 major categories (clusters) as expected according to the theoretical model (Gati et al., 1996) and the original CDDQ sample (Gati & Saka, 2001a).

Comparison of groups according to gender, decision status, and grade level

Table 2 presents the means, standard deviations, and results of a multivariate analysis of variance of the Turkish version of the CDDQ scales by gender, decision status, and grade. Multivariate analysis of variance (MANOVA) was used to test for significant mean score differences on ten scales of the Turkish version of the CDDQ by gender, decision status and grade ($2 \times 2 \times 3$). Bonferroni correction was used for the MANOVAs to avoid inflation of alpha error.

Using Pillai's trace, results of MANOVA analyses indicated a significant main effect for gender: Pillai's trace = .094. $F(10, 2354) = 24.35$, $p < .001$, $\eta^2 = .090$; decision status, Pillai's trace = .270. $F(10, 2354) = 87.25$ $p < .001$, $\eta^2 = .271$; and grade, Pillai's trace = .019. $F(20, 4710) = 2.215$, $p < .05$, $\eta^2 = .009$. The adolescent girl students had higher levels of difficulties than the adolescent boy students for the general indecisiveness: $F(1, 2361) = 88.20$, $p < .05$, $\eta^2 = .036$; dysfunctional beliefs, $F(1, 2361) = 52.54$, $p < .05$, $\eta^2 = .021$; information about the process, $F(1, 2361) = 9.86$, $p < .05$, $\eta^2 = .003$; and about the occupations scales, $F(1, 2361) = 11.29$, $p < .05$, $\eta^2 = .004$. Conversely, adolescent boy students had higher levels of difficulties than adolescent girl students related to the lack of motivation scale: $F(1, 2361) = 81.44$, $p < .05$, $\eta^2 = .033$. When we consider the effect sizes of the General Indecisiveness, Dysfunctional Beliefs, and lack of motivation subscales for gender differences, it can be stated that the effect sizes are small according to Cohen's (1988) benchmark guideline (i.e., small = eta-square >.01, medium = eta-square >.06, large = eta-square >.14). Besides, the effect sizes of the About the Process and About the Occupations subscales are small enough that they can be safely neglected (Ellis, 2010). No significant gender differences were found on the other five subscales (e.g., about the self, about ways of obtaining additional information, unreliable information, internal conflicts, and external conflicts) of the Turkish version of the CDDQ.

For decision status, undecided students had higher levels of difficulties than decided students related to the following scales: lack of motivation $F(1, 2361) = 363.57$, $p < .05$, $\eta^2 = .143$; general indecisiveness $F(1, 2361) = 59.84$, $p < .05$, $\eta^2 = .025$; about the process $F(1, 2361) = 541.81$, $p < .05$, $\eta^2 = .198$; about the self $F(1, 2361) = 421.33$, $p < .05$, $\eta^2 = .161$; about the occupations $F(1, 2361) = 354.03$, $p < .05$, $\eta^2 = .137$; About Ways of obtaining additional information $F(1, 2361) = 166.42$, $p < .05$, $\eta^2 = .073$; unreliable information $F(1,$

Table 2 Means, standard deviations, multivariate analysis of variance of the Turkish Version of the CDDQ scales in different gender, different decision status, and different grade

CDDQ scales\categories	Gender				Decision status				Grade					
	Female (n = 1264)		Male (n = 1109)		Decided (n = 1618)		Undecided (n = 755)		9th (n = 978)		10th (n = 711)		12th (n = 684)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
R	2.92	.475	2.80	.543	2.79	.500	3.03	.496	2.94	.515	2.83	.482	2.80	.522
Rm	1.78	.758	2.05	.892	1.69	.750	2.36	.825	2.03	.853	1.84	.788	1.80	.832
Ri	3.34	.867	2.97	.930	3.06	.908	3.39	.893	3.24	.906	3.16	.888	3.06	.950
Rd	3.63	.705	3.40	.786	3.60	.755	3.34	.715	3.54	.748	3.48	.731	3.53	.782
L	2.40	.893	2.34	.850	2.10	.777	2.95	.789	2.52	.855	2.30	.858	2.24	.888
Lp	2.62	1.160	2.49	1.090	2.21	1.002	3.30	1.021	2.70	1.107	2.49	1.114	2.42	1.155
Ls	2.08	.948	2.12	.934	1.84	.823	2.66	.932	2.24	.932	2.05	.930	1.94	.909
Lo	2.61	1.072	2.47	1.037	2.27	.977	3.13	.986	2.70	1.046	2.44	1.032	2.42	1.074
La	2.32	1.024	2.26	1.024	2.11	.982	2.70	.997	2.42	1.010	2.23	1.001	2.18	1.041
I	2.24	.838	2.26	.834	2.06	.797	2.66	.768	2.37	.831	2.19	.819	2.13	.838
Iu	2.31	.998	2.26	.940	2.06	.896	2.78	.950	2.38	.990	2.25	.945	2.20	.965
Ii	2.30	.882	2.33	.869	2.11	.838	2.75	.792	2.43	.862	2.26	.862	2.20	.890
Ie	2.10	1.141	2.20	1.106	2.01	1.069	2.45	1.184	2.31	1.155	2.07	1.075	2.00	1.107
CDDQ total	2.52	.625	2.47	.631	2.32	.582	2.88	.547	2.61	.611	2.44	.614	2.39	.643

2361) = 293.54, $p < .05$, $\eta^2 = .121$; internal conflicts $F(1, 2361) = 281.56$, $p < .05$, $\eta^2 = .120$; and external conflicts $F(1, 2361) = 66.53$, $p < .05$, $\eta^2 = .028$. The decided students had higher difficulties scores on dysfunctional beliefs than the undecided students, $F(1, 2361) = 56.73$, $p < .05$, $\eta^2 = .023$. The effect sizes ranged from .023 (small = $\eta^2 > .01$) to .198 (large = $\eta^2 > .14$) on the decision status subscale.

With regard to grades, significant univariate differences were found on the following scales: lack of motivation, $F(1, 2361) = 4.39$, $p < .05$, $\eta^2 = .004$; about the self $F(1, 2361) = 4.78$, $p < .05$, $\eta^2 = .004$; and external conflicts $F(1, 2361) = 7.47$, $p < .05$, $\eta^2 = .006$. For each of the three scales, the 9th grade students' mean scores were significantly higher than those of the 10th grade and 12th grade students. The effect sizes of these three scales can be neglected because their values were small than .01 (Ellis, 2010). No significant grade differences were found on the other seven scales of the Turkish version of the CDDQ.

MANOVA results indicated no statistically significant interaction for gender and grade, Pillai's trace = .012, $F(20, 4710) = 1.479$, *ns*, or for grade and decision status, Pillai's trace = .012, $F(20, 4710) = 1.376$, *ns*. On the contrary, the results indicated statistically significant interaction effects for gender and decision status, Pillai's trace = .012; $F(10, 2354) = 2.739$, $p < .05$, $\eta^2 = .012$. When the univariate results were examined for interaction effect of gender and decision status, there were significant differences on the following subscales: about the process, $F(1, 2361) = 9.485$, $p < .05$, $\eta^2 = .004$, about way of obtaining additional information, $F(1, 1261) = 7.676$, $p < .05$, $\eta^2 = .003$, and internal conflicts, $F(1, 1261) = 8561$, $p < .05$, $\eta^2 = .004$. The effect sizes of these three scales for interaction can be neglected because their values were small than .01 (Ellis, 2010). No significant interaction effects between gender and decision status differences were found on the other seven scales of the Turkish version of the CDDQ (i.e., lack of motivation, indecisiveness, dysfunctional beliefs, about the self, about the occupations, unreliable information, and external conflicts).

Discussion

We studied a Turkish adaptation of the 34-item high school version of the Career Decision Making Difficulties Questionnarie (CDDQ; Gati & Saka, 2001a) and validated the CDDQ in a large Turkish sample of high school students. In addition, we studied the impact of some demographic variables (e.g., gender, decision status, and grade) on the career decision-making difficulties of this sample.

The empirical structure of career-related decision-making difficulties of Turkish adolescents was found to be similar but not identical to those of the theoretical model underlying the questionnaire (Gati et al., 1996, Gati & Saka, 2001a). Specifically, in the Turkish adolescent sample, nine of the ten scales were located in the expected major categories. However, one scale, External Conflicts, was located in the Lack of Readiness major category instead of in the Inconsistent Information major category. These results resembled those found in Gati et al.'s (1996) American sample. This deviation suggests that external conflicts (whose sources are

"significant others," such as parents, teachers, and peers) experienced by Turkish adolescents are more related to lack of readiness than to obtaining inconsistent information. In other words, the results also suggest that for Turkish adolescents, external conflicts arise prior to beginning the process of career decision-making instead of during the actual process. This result is consistent with others demonstrating that Turkish parents and teachers intervene with Turkish students prior to the career decision-making process (Aytekin, 2005; Hamamci, Bacanli, & Doğan, 2013; Hamamci & Hamurlu, 2005; Özyürek & Atici, 2002). This result may relate to the characteristics of the Turkish culture.

Throughout history, Turkish culture has been collectivist. Despite exposure to Western culture since the second half of the twentieth century, some characteristics of collective cultures, such as social conformity and collective decision-making, are still predominant in Turkey (Göregenli, 1995, 1997; Kagitcibasi, 1997). Bacanli (2012b) found that Turkish students are more likely to use a dependent decision-making style than a rational style. In other words, Turkish students' career decision-making tends to reflect familial and societal expectations rather than the students' own desires. Thus, parent, family, teacher, and peer expectations are salient factors in the Turkish adolescents' career decision-making process. Indeed, Bacanli et al.'s study (2013) supported this view in a Turkish sample. Fan, Cheung, Leong, and Cheung (2014) examined the contribution of perceived family intrusiveness to career decision-making as related to a lack of readiness in different cultural settings (e.g., Hong Kong Chinese and US college students). Although the contributions of family intrusiveness to lack of readiness were demonstrated across the two cultural settings, the significant influences of family orientation were supported only in the Hong Kong sample. However, Berríos-Allison (2005) found that college students who were struggling with occupational issues might benefit from family interventions in their career decision-making process. These inconsistent results suggest that the influences of family intrusiveness and support on career decision-making difficulties need further exploration.

The internal reliabilities for the Lack of Information and the Inconsistent Information scales of the CCDQ-THS were adequate (>.70), and the corrected item-total correlations are very high and acceptable for most items. The weak corrected item-total correlations of the Lack of Readiness (<.24) scores are consistent with those from previous studies (e.g., Creed & Yin, 2006). A low reliability of the Lack of Readiness (.45) is reported in this study, but it was basically consistent with the corresponding results in different cultural settings reported by Gati and Saka (2001a; for Israeli high school students .58), Mau (2001; for Taiwanese students .55), Mau (2004; for White American and Hispanic American high school and university students .63, .48, respectively), Hijazi et al. (2004; for Palestinian Arab high school students .52), Creed and Yin (2006; for Chinese high school students .29), and Fan et al. (2014; for Hong Kong university students .51). As Sovet, Tak, and Sungcheol (2014) stated, these results express the need to carefully explore the validity of the Lack of Readiness major category in the 34-item CDDQ in different cultural settings.

In this study, the adolescent boys reported significantly higher Lack of Motivation scale scores than the adolescent girls, findings that are consistent with

those of Chinese university students (Tien, 2001, 2005) and Israeli and Palestinian Arab adolescents (Hijazi et al., 2004). The other studies with American (Kleiman et al., 2004) and Chinese (Tien, 2001, 2005) university student samples did not verify differences between men and women. In this study, adolescent girls reported greater difficulties than adolescent boys for general indecisiveness and dysfunctional beliefs. These results are consistent with some results showing that Turkish, Dutch, and Palestinian Arab adolescent girls are more indecisive (e.g., Bacanli, 2006; Hijazi et al., 2004; Rassin & Muris, 2005; Sari, 2007) and have more dysfunctional beliefs (e.g., Türküm, Balkaya, & Karaca, 2005) than adolescent boys. Morever, in this study, adolescent girls reported significantly higher scores on the About the Process and About the Occupations subscales than adolescent boys.

In addition, adolescent girls reported greater difficulties than adolescent boys in all three grades regarding lack of information about the occupations (i.e., alternatives) and lack of information about the process; although, it should be acknowledged that the effect sizes were relatively small. These results are consistent with those from previous studies (e.g., Gati & Saka, 2001a). Because adolescent girls spend more time making decisions than adolescent boys, they may face more difficulties in career decision-making than adolescent boys (Ginevra, Nota, Soresi, & Gati, 2012).

With regard to differences concerning perception of career difficulties, 9th grade students experience more intense external conflicts with significant others (e.g., parents, teachers, peers, and adults), lack of motivation, and lack of information about the self in the career decision-making process than 10th and 12th grade students; again, it should be acknowledged that the effect sizes were relatively small. This result was consistent with those of previous studies in Turkish culture (e.g., Aytekin, 2005; Bacanli et al., 2013; Doğan & Bacanli, 2012; Hamamci et al., 2013) and other cultures (Hijazi et al., 2004; Tien, 2001). At the end of the 9th grade, Turkish academic high school students have to decide on a career track related with future careers. They are experiencing a particularly critical period for their educational and vocational choice. In short, they have diffirent decisional tasks than Italian and Israeli high school students (e.g., Di Fabio, Palazzeschi, Levin, & Gati, 2015; Gati & Saka, 2001a; Sovet et al., 2014). In Turkey, 10th and 12th grade students select a career track, but 9th students are still facing career track decision. Finally, 9th students reported having more career decision-making difficulties than 10th and 12th grade students. Moreover, most parents want their children to choose a career track that is not compatible with their children's interest and abilities. Turkish parents' interventionist attitudes may be the cause of these external conflicts.

In turn, regarding decision status differences, the undecided Turkish high school students perceived more difficulties in career decision-making than the decided students in this study. This same result has been supported by most previous researchers in the area, which found that students who were undecided about their future careers had significantly higher CDDQ scores than decided students (e.g., Bacanli, 2012a; Bacanli et al., 2013; Gati et al., 2000; Gati & Saka, 2001a; Lancaster et al. 1999; Öztemel, 2012; Tien, 2005). In addition, our results supported

Gati et al.'s (1996) theoretical views that being undecided may result in avoiding the career decision-making process, halting it, or making less than optimal career decisions.

Gati and Saka (2001a) proposed that in countries with different high school education systems or with different decision tasks, the relative salience of the various difficulty categories might be different. In fact, Di Fabio et al. (2015) and Gati and Saka (2001a) reported that, in general, students in their last 2 years of high school and interns receiving on-the-job training have more difficulties than university students. Based on these findings, Di Fabio et al., and Gati and Saka stated that the notion of career decision-making difficulties is more likely to differ in different educational settings. Also, Mau (2001) noted that individuals' career indecision and career decision-making difficulties are affected by their cultures. Generally, the results of the present study support those of Gati and Saka (2001a), Di Fabio et al. (2015), and Mau (2001). Indeed, the high school education system and decision-making tasks in Turkey exert pressure on adolescent students to decide their future careers while choosing their career tracks. Further, the students are influenced before the career decision-making process by their parents and teachers (Aytekin, 2005; Özyürek & Atici, 2002; Yildiz, 2001). These differences in Turkish culture are reflected in the structure of the Turkish version of the CDDQ. Our findings indicate that further research is needed to examine the structure of the Turkish version of the CDDQ, especially with regard to the external conflicts scale.

Limitations and implications for theory, future research, and practices

Although this study provides support for the psychometric properties of the Turkish version of the CDDQ, it has several limitations. First, only the empirical structure of the Turkish version of the CDDQ for construct validity is examined in this study. Thus, additional studies on the construct validity of the Turkish version of the CDDQ are needed. Second, further studies can examine the test–retest reliability of the Turkish version of the CDDQ. Third, as previously mentioned, the Lack of Readiness scale has low internal consistency reliability. Additionally, the External Conflict subscale was located empirically in the Lack of Readiness scale instead of in the Inconsistent Information scale. All these limitations related to psychometric properties of the Turkish version of the CDDQ should be considered in both future studies and career counseling interventions.

Although additional studies need to be conducted on the Turkish version of the CDDQ, the results of this study contributed to the literature related to the measurement and theoretical structure of career decision-making difficulties proposed by Gati et al. (1996). This study is pioneering in that it is the first to examine career decision-making difficulties of Turkish high school students. It would be interesting to determine whether future studies involving different adolescent samples in Turkey would replicate Gati et al.'s (1996) findings. Such studies could contribute to and strengthen the reliability and validity of the Turkish version of the CDDQ. It would also be useful to examine the association between the Turkish version of the CDDQ, academic achievement, and academic self-

efficacy. An additional study could determine how the components of career-related decision-making difficulties relate to other career decision variables (e.g., career barriers and decision-making styles) and plan career counseling interventions to address these components. Further studies could also examine the severity of the major difficulties.

This study has several implications for career counseling practice. For example, the Turkish version of the CDDQ can be used by career counselors to assess the career decision-making difficulties of their clients. The Turkish version of the CDDQ can also be used to assess the outcomes of career group guidance and career counseling as well as interventions aimed at reducing career decision-making difficulties. These results can be shared with clients or groups to make them aware of their decision-making difficulties in order to plan future interventions.

References

Akaydin, F. S. (2002). Üniversite öğrencilerinin problem alanları, problemlilik düzeyleri, problem çözme becerileri ve yardım arama davranışları arasındaki ilişkinin incelenmesi [An examination the relationship between problem fields, levels, problem solving skills and seeking help behaviors of university students] (Unpublished master's thesis). Trabzon: Karadeniz Technical University.

Akkoç, F. (2012a). Lise Öğrencilerinin Mesleki Kararsızlıkları İle Kariyer İnançları Arasındaki İlişki [The relationship between the vocational indecision and career beliefs of high school students]. *Buca Education Faculty Journal, 32*, 49–70.

Akkoç, F. (2012b). Lise Öğrencilerinin Mesleki Kararsızlıklarının Bazı Sosyo-Demografik Faktörlere Göre İncelenmesi [A study on high school students' vocational indecision according to demographic factors] *Mehmet Akif Ersoy University Journal of Education Faculty*, *23*, 215–233.

Albion, M. J., & Fogarty, G. J. (2002). Factors influencing career decision making in adolescents and adults. *Journal of Career Assessment 10*, 91–126. doi:10.1177/1069072702010001006.

Amir, T., & Gati, I. (2006). Facets of career decision-making difficulties. *British Journal of Guidance and Counselling, 34*, 483–503. doi:10.1080/03069880600942608.

Aytekin, A. (2005). *Meslek seçimini etkileyen sosyo-ekonomik ve kültürel faktörler (Isparta örneği)* [Socio-economic and cultural factors that affect career choices: The case study of Isparta]. (Unpublished master's thesis). Isparta: Süleyman Demirel University.

Bacanli, F. (2006). Personality characteristics as predictors of personal indecisiveness. *Journal of Career Development, 32*, 320–332. doi:10.1177/0894845305282941.

Bacanli, F. (2012a). Kariyer karar verme güçlükleri ve meslek seçimine ilişkin akılcı olmayan inançların ilişkisi [Relationship between career decision-making difficulties and irrational belifs about career choice]. *Turkish Psychological Counseling and Guidance Journal, 4*(37), 86–95.

Bacanli, F. (2012b). An examination of the relationship among decision-making strategies and ego identity statuses. *Education and Science, 37*(163), 17–28.

Bacanli, F., Eşici, H., & Özünlü, B. M. (2013). Kariyer karar verme güçlüklerinin çeşitli değişkenlere göre incelenmesi [An examination of career decision-making difficulties according to several variables]. *Turkish Psychological Counseling and Guidance Journal, 5*(40), 198–211.

Bentler, P. M., & Bonett, D. C. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*(3), 588–606. doi:10.1037/0033-2909.88.3.588.

Berríos-Allison, A. C. (2005). Family influences on college students' occupational identity. *Journal of Career Assessment, 13*, 233–247. doi:10.1177/1069072704270320.

Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows*. Thousand Oaks, CA: Sage.

Çakır, M. A. (2004). Mesleki karar envanterinin geliştirilmesi [The development of the Career Decision Inventory]. *Ankara University Journal of Faculty of Educational Sciences, 37*(2), 1–14.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Creed, P. A., & Yin, W. O. (2006). Reliability and validity of a Chinese version of the Career Decision-Making Difficulties Questionnaire. *International Journal for Educational and Vocational Guidance, 6*, 47–63. doi:10.1007/s10775-006-0003-3.

Di Fabio, A., Palazzeschi, L., Levin, N., & Gati, I. (2015). The role of personality in the career decision-making difficulties of Italian young adults. *Journal of Career Assessment, 23*, 281–293. doi:10.1177/1069072714535031.

Doğan, H. & Bacanli, F. (2012). The effect of a career decision-making group guidance program on career decision-making difficulties [Special Issue]. *Energy Education Science and Technology Part B: Social and Educational Studies, 1*, 912–916.

Ellis, P. D. (2010). *The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results*. New York, NY: Cambridge University Press.

Fan, W., Cheung, F. M., Leong, F. T. L., & Cheung, S. F. (2014). Contributions of family factors to career readiness: A cross-culturel comparision. *The Career Development Quarterly, 62*, 194–209. doi:10.1002/j.2161-0045.2014.00079.x.

Fouad, N., Cotter, E. W., & Kantamneni, N. (2009). The effectiveness of a career decision-making course. *Journal of Career Assessment, 17*, 338–347. doi:10.1177/1069072708330678.

Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology, 43*, 510–526.

Gati, I., Osipow, S. H., Krausz, M., & Saka, N. (2000). Validity of the career decision-making difficulty questionnaire: Counselee versus career counselor perceptions. *Journal of Vocational Behavior, 56*, 99–113. doi:10.1006/jvbe.1999.1710.

Gati, I., & Saka, N. (2001a). High school students' career related decision-making difficulties. *Journal of Counseling and Development, 79*, 331–340. doi:10.1002/j.1556-6676.2001.tb01978.x.

Gati, I., & Saka, N. (2001b). Internet-based versus paper-and-pencil assessment: Measuring career decision-making difficulties. *Journal of Career Assessment, 9*, 397–416. doi:10.1177/106907270100900406.

Ginevra, M. C., Nota, L., Soresi, S., & Gati, I. (2012). Career decision-making profiles of Italian adolescents. *Journal of Career Assessment, 20*, 375–389. doi:10.1177/1069072712448739.

Göregenli, M. (1995). Kültürümüz açısından bireycilik-toplulukçuluk eğilimleri: Bir başlangıç çalışması [Individualism-collectivism trends in terms of our culture: An initial study]. *Turkish Journal of Psychology, 10*(35), 1–14.

Göregenli, M. (1997). Individualist-collectivist tendencies in a Turkish sample. *Journal of Cross Cultural Psychology, 28*, 787–794. doi:10.1177/0022022197286009.

Hamamci, Z., Bacanli, F., & Doğan, H. (2013). İlköğretim ortaöğretim ve üniversite öğrencilerinin mesleki ve eğitsel kararlarını etkileyen faktörlerin incelenmesi [The investigation of factors influencing on students' career and educational decisions]. *Electronic Journal of Social Sciences, 12*(44), 284–299.

Hamamci, Z., & Hamurlu, K. M. (2005). Anne babaların meslek gelişimine yardımcı olmaya yönelik tutumları ve bilgi düzeylerinin çocuklarının mesleki kararsızlıkları ile ilişkisi [Relationship between level of knowledge and attitudes of parents about helping their children for career development and career indecision of their children]. *İnönü University Journal of Educational Faculty, 6*, 55–59.

Hijazi, Y., Tatar, M., & Gati, I. (2004). Career decision-making difficulties among Israeli and Palestinian Arab high-school seniors. *Professional School Counseling, 8*(1), 64–72.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. doi:10.1080/10705519909540118.

Jöreskog, K., & Sörbom, D. (1993). LISREL 8: Structural equation modeling with the SIMPLIS command language. Lincolnwood, IL: Scientific Software International.

Kagitcibasi, C. (1997). Individualism and collectivism. In J. W. Berry, M. H. Segal, & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology* (pp. 1–49). Boston, MA: Allyn and Bacon.

Kleiman, T., Gati, I., Peterson, G., Sampson, J., Reardon, R., & Lenz, J. (2004). Dysfunctional thinking and difficulties in career decision making. *Journal of Career Assessment, 12*, 312–331. doi:10.1177/1069072704266673.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: The Guilford Press.

Lancaster, B. P., Rudolph, C. E., Perkins, T. S., & Patten, T. G. (1999). The reliability and validity of the Career Decision Difficulties Questionnaire. *Journal of Career Assessment, 7*, 393–413. doi:10.1177/106907279900700405.

Martincin, K. M., & Stead, G. B. (2014). Five-factor model and difficulties in career decision making: A meta analysis. *Journal of Career Assessment,*. doi:10.1177/1069072714523081.

Mau, W.-C. (2001). Assessing career decision-making difficulties: A cross-cultural study. *Journal of Career Assessment, 9*, 353–364. doi:10.1177/106907270100900403.

Mau, W.-C. J. (2004). Cultural dimensions of career decision-making difficulties. *The Career Development Quarterly, 53*, 67–78. doi:10.1002/j.2161-0045.2004.tb00656.x.

Morgan, T., & Ness, D. (2003). Career decision making difficulties of first year students. *The Canadian Journal of Career Development, 2*(1), 33–37.

Nevo, O. (1987). Irrational expectations in career counseling and their confronting arguments. *The Career Development Quarterly, 35*, 239–250. doi:10.1002/j.2161-0045.1987.tb00918.x.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.

Osipow, S. H. (1999). Assessing career indecision. *Journal of Vocational Behavior, 55*, 147–154. doi:10.1006/jvbe.1999.1704.

Osipow, S. H., & Gati, I. (1998). Construct and concurrent validity of the career decision-making difficulties questionnaire. *Journal of Career Assessment, 6*, 347–364. doi:10.1177/106907279800600305.

Öztemel, K. (2012). Kariyer kararsızlığı ile mesleki karar verme öz yetkinlik ve kontrol odağı arasındaki ilişkiler [Relationships between career indecision, career decision making self efficacy, and locus of control]. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, 32*(2), 459–477.

Öztemel, K. (2013). Testing the validity of the emotional and personality-related career decision-making difficulties questionnaire in Turkish culture. *Journal of Career Development, 40*, 390–407. doi:10.1177/0894845312468060.

Özyürek, R., & Atıcı, M. K. (2002). Üniversite öğrencilerinin meslek seçimi kararlarında kendilerine yardım eden kaynakların belirlenmesi [Determining sources which are effective in university students' career decision making]. *Turkish Psychological Counseling and Guidance Journal, 2*(17), 33–42.

Rassin, E., & Muris, P. (2005). Indecisiveness and the interpretation of ambiguous situations. *Personality and Individual Differences, 39*, 1285–1291. doi:10.1016/j.paid.2005.06.006.

Reese, R. J., & Miller, C. D. (2010). Using outcome to improve a career development course: Closing the scientist-practitioner gap. *Journal of Career Assessment, 18*, 207–219. doi:10.1177/1069072709354309.

Sari, E. (2007). The effects of impetuous, exploratory, and overall indecisiveness on self-esteem among Turkish university students. *Educational Sciences: Theory and Practice, 7*(2), 915–926.

Sarikaya, T., & Khorshid, L. (2009). Üniversite öğrencilerinin meslek seçimini etkileyen etmenlerin incelenmesi: Üniversite öğrencilerinin meslek seçimi [The investigation of factors that affect university students' profession choice: University students' profession choice]. *Türk Eğitim Bilimleri Dergisi, 7*(2), 393–423.

Sattath, S., & Tversky, A. (1977). Additive similarity trees. *Psychometrika, 42*, 319–345.

Sovet, L., Tak, J., & Sungcheol, J. (2014). Validation of the career decision-making difficulties questionnaire among Korean college students. *Journal of Career Assessment*. doi:10.1177/1069072714553556.

Sürücü, M. (2005). *An examination the relationships between career maturity and perceived social support of high school students* (Unpublishhed master's thesis). Ankara: Gazi University.

Tien, H.-L. S. (2001). Career decision-making difficulties perceived by college students in Taiwan. *Bulletin of Educational Psychology, 33*(1), 87–98.

Tien, H.-L. S. (2005). The validation of the career decision-making difficulties scale in a Chinese culture. *Journal of Career Assessment, 13*, 114–127. doi:10.1177/1069072704270327.

Türküm, A. S., Balkaya, A., & Karaca, E. (2005). Akılcı Olmayan İnançlar Ölçeği'nin lise öğrencilerine uyarlanması: Geçerlik ve güvenirlik çalışmaları [The adaptation of the Irrational Beliefs Scale to adolescents: Validity and reliability studies]. *Turkish Psychological Counseling and Guidance Journal, 3*(23), 77–87.

Vurucu, F. (2010). *Meslek lisesi öğrencilerinin meslek seçimi yeterliliği ve meslek seçimini etkileyen faktörler* [Occupational choice capability of students in vocational schools and factors affecting their occupational choice] (Unpublished master's thesis). Istanbul: Yeditepe University.

Yildiz, S. (2001). *Kişilik ve meslek seçimi arasındaki ilişki ve bir uygulama* [An examination relationships between personality and career choice: An application] (Unpublished master's thesis). Bursa: Uludağ University.