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Abstract

The goal of this study was to examine the emotional and personality-related career decision-making difficulties of high school students in Turkish culture, using the model proposed by Saka and Gati. A sample of 523 high school students filled out the Turkish version of the Emotional and Personality-Related Aspects of Career Decision-Making Difficulties (EPCD) questionnaire. Cluster and confirmatory factor analyses supported the ternary classification system of the emotional and personality-related career decision-making difficulties model and questionnaire, thus providing evidence for the cross-cultural validity of the proposed model. Furthermore, the results demonstrated significant associations between making a decision and the emotional and personality career difficulties: students who were decided reported lower emotional and personality-related career difficulties than did undecided students. Generally, there were no differences in EPCD scores between boys and girls, and no effect of type of school and grade was observed.

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Keywords

career decision making, career decision-making difficulties, emotional and personality career decision-making difficulties, career problems, cross-cultural

Career indecision is defined as the difficulty that an individual faces while making a decision regarding his or her career (Chartrand, Rose, Elliot, Marmarosh, & Caldwell, 1993; Gati, Asulin-Peretz, & Fisher, 2012; Gati, Krausz, & Osipow, 1996; Leong & Chervinko, 1996; Osipow, Carney, & Barak, 1976; Saka & Gati, 2007). It refers to all the problems that the individual has to overcome before, during, and after decision making (Gati et al., 2011; Saka & Gati, 2007). Most young individuals encounter problems in career decision making. Some of these individuals have temporary or developmental career decision-making difficulties, and they are typically classified as undecided individuals (Gati et al., 2011; Osipow, 1999). Others, however, often suffer from chronic and pervasive difficulties resulting from emotional problems or personality-related aspects (Betz & Serling, 1993; Callahan & Greenhaus, 1992; Cohen, Chartrand, & Jowdy, 1995; Kelly & Pulver, 2003; Leong & Chervinko, 1996; Meldahl & Muchinsky, 1997; Osipow, 1999; Saka & Gati, 2007; Saka, Gati, & Kelly, 2008; Santos, 2001; Slaney, 1988). These people are often considered indecisive individuals (Gati et al., 2011; Osipow, 1999).

Recently, Saka and her colleagues (Saka et al., 2008; Saka & Gati, 2007) suggested a new theoretical model by focusing on the emotional and personality-related factors assumed to underlie chronic and pervasive career decision-making difficulties. Emotional and personality-related career decision-making difficulties involve more pervasive, severe, and chronic difficulties in making career decisions (Gati et al., 2012; Meldahl & Muchinsky, 1997; Osipow, 1999) and focus on deeper personality roots as well as cognitive origin. Also, emotional and personality-related career decision-making difficulties have been characterized by high levels of anxiety, negative thinking about the self and the choice process, and a diffused sense of personal identity (Chartrand et al., 1993; Cohen et al., 1995; Meldahl & Muchinsky, 1997; Saka et al., 2008).

The proposed model comprises three main clusters: pessimistic views, anxiety, and self-concept and identity. These are divided into 11 subcategories. The first cluster, pessimistic views, is composed of three categories: (a) pessimistic views about the process, (b) pessimistic views about the world of work, and (c) pessimistic views about one's control. Pessimistic views about the process indicates the low self-efficacy of career decision making, reflecting the individuals' perception that they are unable to manage an effective career decision-making process. The second category, pessimistic views about the world of work, refers to extremely negative perceptions about occupations (e.g., so few careers are really interesting). Finally, the third category, pessimistic views about one's control, refers to the person's sense of an external locus of control on the final choice process and/or the results of the choice.

The second cluster, anxiety, is composed of four categories: (a) anxiety about the process, (b) anxiety related to the uncertainty involved in choosing, (c) anxiety about the choice, and (d) anxiety about the outcomes. Anxiety about the process indicates the feeling of stress and anxiety that appears prior to the beginning of the decision-making process or with the extreme perfectionism about the process. Anxiety about making uncertain choices includes three aspects: (a) uncertainty about the future, (b) anxiety about being in an undecided state, and (c) anxiety about low tolerance resulting from disagreement. Following Betz and Serling (1993), anxiety about the choice is composed of four aspects: (a) perfectionism about making a choice (such as being obliged to find the perfect occupation), (b) the fear of losing the other potentially suitable occupations, (c) the fear of choosing the unsuitable (wrong) occupation, and (d) anxiety about the individual's responsibility for the act of choosing (particularly the wrong choice). Finally, the fourth category, anxiety about the outcomes, reflects a condition in some alternatives currently existing in a person's mind due to that person's fear of failure or due to the person's expectations and preferences about the chosen profession not being satisfactory.

The third cluster, self-concept and identity, refers to decision-making difficulties involving deeper and more pervasive personality aspects of the individual and refers to developmental personality aspects. The self-concept and identity cluster consists of four categories: (a) general anxiety, (b) self-esteem, (c) uncrystallized identity, and (d) conflictual attachment and separation. The first category, general anxiety, refers to the general trait of anxiety. The second category, self-esteem, plays a central role in the individual's actualizing his or her self-concept (Chartrand, Robbins, Morrill, & Boggs, 1990) and indicates the low self-esteem regarding general and practical profession. The third category, uncrystallized identity, indicates the difficulties in forming a stable sense of personal identity, which appears in the expression of reinforced beliefs, values, preferences, and life purposes. Last of all, the fourth category, conflictual attachment and separation, indicates difficulties with significant others (see Saka et al., 2008; Saka & Gati, 2007, for detailed description). In the cluster higher scores refer to decision-making difficulties involving deeper and more pervasive personality aspects of the individual.

To verify the classification system summarized above, Saka et al. (2008) developed the Emotional and Personality-Related Aspects of Career Decision-Making Difficulties (EPCD) questionnaire to assess the difficulties perceived by the individuals. First, the reliability and validity of the model and questionnaire were tested in an Israeli sample (254 male and 474 female young adults). Next, the cross-cultural validity was tested in an American student sample (128 males and 148 females). The Cronbach's α internal consistency reliabilities of the EPCD questionnaire ranged from .70–.91 for the Israeli sample and .66–.94 for the American sample for the 11 scales. Confirmatory factor analysis supported the hypothesized structure of three clusters that comprise 11 difficulty categories in the Israeli sample. In the American sample, a single deviation was observed: the uncrystallized identity-related difficulties

were located in the main cluster of anxiety instead of in the cluster of self-concept and identity (Saka et al., 2008, study 2). Furthermore, the reliability of the three difficulty categories in the pessimistic views cluster in the American sample was found to be lower than desirable (.77, .67, and .66 for pessimistic views about the process, the world of work, and one's control, respectively).

In this respect, the aim of the current study was to test the validity and applicability of the proposed model in Turkish culture, more specifically, to test the cross-cultural validity of the proposed theoretical model and questionnaire using a Turkish version of the EPCD. Cross-cultural validity is important in terms of supporting the internal validity of the EPCD, because cross-cultural validity reveals the adequacy of the model in cultures with different educational and occupational systems and their various different meanings (Saka et al., 2008). For example, American and Israeli cultures and educational systems are different from Turkish culture and educational system. Israeli students are usually faced with their first major career decision at an older age than American students because of 2 to 3 years of mandatory military service. American students often make their first major career decisions (e.g., choosing a college, which occasionally involves deciding on a major) toward the end of high school (Saka et al., 2008). Similarly, Turkish high school students generally make their career decision about what to study and where at the end of high school.

The Turkish education system differs also at the secondary school level. There are two high school types: technical/vocational and general. High school entry typically occurs when the students are 14–15 years old. Technical/vocational high schools prepare students for semi-skilled occupations. A few students in these institutions attempt to study in higher education, in order to transfer from semi-skilled occupations to professional occupations. On the other hand, general (academic) high schools prepare students for going on to higher education and acquiring an occupation. Both at the technical/vocational high school students and at the general high school students have to decide on their general career fields such as math-science field or social sciences field, at the end of ninth grade in high schools (15 or 16 years of age). These students generally make their career decision—what to study—at the end of 12th grade (18 or 19 years of age).

If these two tracks are considered more generally, Turkish students make their basic career decisions toward the end of their high school education, similarly to American students. On the other hand, Israeli students face this career decision making after completing their obligatory military service, which may take 2 or 3 years (Saka et al., 2008). Hence, individuals encounter the need to make their initial career decisions at different stages of their lives in different countries. These cultural differences may affect the decision-making process in various ways. For instance, Turkish students start to discuss their career choices at younger ages than their Israeli counterparts do; thus, the career choice difficulties of individuals may be associated with their self and identity or may depend on the other people who are considered significant (for instance, their parents).

In previous research, a few cultural differences emerged with respect to the difficulties in career decision making. For example, Gati, Krausz, and Osipow (1996) found that the lower readiness of the American samples is related to conflicts with significant others. Mau (2001) found that Taiwanese high school and university students were more indecisive than American students. Tien (2005) found a general support for the structural validity of the career decision-making difficulty model proposed by Gati et al. (1996) in the Taiwanese sample, but in her sample the category of lack of motivation was related to the major difficulty cluster of inconsistent information, while the unreliable information category was related to the major difficulty cluster of lack of information.

The Present Study

Saka et al. (2008) point out in their study that the cultural validity of the results are limited and the EPCD model and questionnaire need to be tested in other cultures. Based on this fact, the main goal of the current study was to adapt the EPCD scale to Turkish culture and to test its internal structure and the validity of the proposed model in a sample of high school students. These goals made it possible to extend the test of the EPCD model in two directions: first, to test its cross-cultural validity in a Turkish sample and second, to test its validity among high school students (in previous research university students were the participants). It appears that in Turkish culture, parents and/or other family members interfere more in an individual's decisions. Thus, the present study aimed to test the applicability of the suggested EPCD model in Turkish culture.

Hypotheses

Based on previous studies (Saka et al., 2008; Tien, 2005) that have generally demonstrated a similarity to the theoretical structure, it was hypothesized that the empirical structure in Turkish culture would be similar to the proposed theoretical structure. Also, based on previous studies (e.g., Lancaster, Rudolph, Perkins, & Patten, 1999; Saka & Gati, 2007; Tien, 2005), it was also hypothesized that undecided individuals would get higher scores in the 11 EPCD scales, the three difficulty clusters, and the total *EPCD* score than would the individuals who have already decided about an occupational field.

Method

Participants

A total of 232 female and 312 male high school students studying in five high schools in the city of Ankara, which is the Capital of Turkey and one of the major metropolitan cities, participated in the study. Twenty-one students (12 girls and 9 boys) did not complete the instrument; therefore, the data from 220 girls (42%) and

303 boys (58%) were included in the analyses. Most students (74%) were studying in general high schools, the rest (26%) in technical high schools; 60% were in 10th grade while 40% were in 11th grade. The participants ranged in age from 15 to 18 years, the mean being 16.40 (standard deviation [SD] = 0.68); 32 were 15 years old (6%), 273 were 16 years old (52%), 193 were 17 years old (37%), and 25 were 18 years old (5%).

Instrument

The development of the EPCD was elaborately described in the study by Saka et al. (2008). In the reliability and validity study of the original EPCD scale (Saka et al., 2008), Hebrew was used for the Israeli sample and English for the American sample. Both versions of the scale had 53 items, consisting of 50 actual items (e.g., “I have very little influence over the career I will finally have” for the pessimistic view cluster; “I am concerned that I might not choose the best career for me” for the anxiety cluster; and “I feel that I lack important vocational skills” for the self-concept and identity cluster), 2 validity items, and 1 “warm-up” item. The participants were asked to indicate their level of agreement for each statement on a 9-point Likert-type scale (1 = *not describing me*, 9 = *describing me very well*). Higher ratings represent a higher level of decision-making difficulty. Previous research (Saka & Gati, 2007; Saka et al., 2008) supported the structural and convergent validity of the scale. The Cronbach’s α internal consistency reliability was .94 and .95 for the total scores of the Hebrew and English versions, respectively. For the main clusters of pessimistic views, anxiety, and self-concept and identity, the Cronbach’s α internal consistency reliabilities were .79, .93, and .89 for the Hebrew, and .80, .96, and .89, for the English versions, respectively.

Adapting the EPCD for the Turkish culture involved a series of steps. First, the English version of the EPCD scale developed by Saka et al. (2008) was translated into Turkish by a person who knows the English language well and two other people who are experts in the field of psychological counseling. Next, these three separate translations were compared, and the Turkish form was generated. Following this, the Turkish form was translated back to English again by an expert in the English language; finally the English back translation was approved by the EPCD developers.

As in the original scale, the Turkish version of the EPCD scale (EPCD-TR) consists of 50 content items, 2 validity items, and 1 warm-up item, making 53 items in total. For each participant, 11 scales, 3 main clusters, and the total EPCD-TR scores were calculated.

Demographic and personal information. The personal information form included the demographic information (school type, gender, level of grade, age) and the statements of the individual about being decided or undecided about an occupation and the level of their certainty. Participants were asked “Have you decided about the major you are going to study or about which occupation to choose?”

with a Yes/No option. Participants who replied Yes were asked another question “If your answer is ‘yes,’ to what extent are you confident about your decision?” on a 9-point Likert-type scale (1 = *I am not confident at all* and 9 = *I am absolutely confident*). The mean level of certainty of the individuals who were decided about an occupation was 6.85 ($SD = 1.75$) and the median was 7.00. Based on these findings, individuals stating that they had decided about a profession were divided into two groups: those with a below-median rating were regarded as “not confident” about their decision, whereas those with 7.00 and an above-median rating were regarded as confident.

Procedure

With authorization from the school administration, a school psychological counselor and the researcher entered the classrooms and told students that the study was about the career decision-making process of high school students. Moreover, it was explained that personal feedback based on the analysis of the answers would be given to the students volunteering to participate in the study, and feedback would be given through e-mail, approximately 4 weeks later. Participants filled out the EPCD-TR in class during the guidance hours and with the assistance of counselors from the psychological counseling center. Before the application of the EPCD-TR, the participants filled out their personal information. The time required to complete the personal information and the EPCD-TR was approximately 35–40 min.

Results

Preliminary Analyses

Because no significant gender difference was found either in the total EPCD-TR or in any of the three main clusters, $t(521) = 0.44$ ($p = .658$, 0.94 , $p = .349$, 1.23 , $p = .219$, and 1.15 , $p = .252$, for the total score and for pessimistic views, anxiety, and self-concept and identity scores, respectively), the results are reported across gender. Although students of general high schools obtained higher scores than students of technical high schools in the pessimistic views scale, 5.17 vs. 4.73 ; $t(521) = 3.02$, $p < .01$, the effect size was small ($d = 0.26$). No significant difference was found in the other two main clusters or in total EPCD-TR, $t(521) = 0.80$, $p = .425$, -0.76 , $p = .447$, and 1.31 , $p = .192$, for anxiety, self-concept and identity, and total EPCD-TR, respectively. Hence, in the analyses I report the results across schools. Finally, no significant differences were found between the students of 10th and 11th grades either in total EPCD-TR or in the three subclusters, $t(521) = -1.08$, $p = .281$, -0.15 , $p = .878$, -1.06 , $p = .291$, and -1.51 , $p = .132$, for the total score and for pessimistic views, anxiety, and self-concept and identity scores, respectively; hence the results are reported across grades.

Table 1. The Number of Items, Mean, Standard Deviation, and Cronbach's α Coefficient of Emotional and Personality-Related Career Decision-Making Difficulties Scale–Turkish Version (EPCD-TR; $N = 523$).

| EPCD-TR scales | No. of items | M | SD | Cronbach's α |
|---------------------------------------|--------------|------|------|---------------------|
| Pessimistic views about | 12 | 5.04 | 1.48 | .77 |
| The process | 3 | 4.44 | 2.13 | .67 |
| The world of work | 5 | 5.60 | 1.98 | .77 |
| One's control | 4 | 5.08 | 1.90 | .67 |
| Anxiety about | 21 | 5.19 | 1.52 | .90 |
| The process | 4 | 5.49 | 1.89 | .75 |
| Uncertainty | 6 | 5.08 | 1.96 | .80 |
| The choice | 7 | 5.62 | 1.80 | .81 |
| The outcomes | 4 | 4.57 | 2.12 | .77 |
| Self-concept and identity | 17 | 4.62 | 1.52 | .84 |
| General anxiety | 3 | 5.15 | 2.10 | .70 |
| Self-esteem | 4 | 4.40 | 2.12 | .77 |
| Uncrystallized identity | 4 | 4.20 | 2.04 | .75 |
| Conflictual attachment and separation | 6 | 4.73 | 1.79 | .69 |
| Total EPCD-TR | 50 | 4.94 | 1.16 | .91 |

The Psychometric Properties of the EPCD-TR

To determine the psychometric properties of the EPCD-TR, the mean, *SD*, and the Cronbach's α reliability coefficient were examined. Table 1 shows the number of items, the mean, the *SD*, and the Cronbach's α internal consistency estimate of each scale. As can be seen in Table 1, the median reliability coefficients of the 11 scales was .75 (range .67–.81), reflecting moderate to high reliabilities, considering the small number of items per scale. The reliabilities of the three major clusters, namely, pessimistic views, anxiety, and self-concept and identity, were .77, .90, and .84, respectively; that of the total EPCD score was .91.

The Internal Structure of the 11 Scales of the EPCD-TR

Intercorrelations. Correlation coefficients were calculated in order to determine the relationships among three main clusters, 11 scales and EPCD-TR total. Correlations among three main clusters, 11 scales, and *EPCD-TR* total are given in Table 2. As can be seen in Table 2, the highest correlation (.84) is between anxiety cluster and anxiety about uncertainty scale, while the lowest correlation (.06) was seen between self-esteem and pessimistic views about the world of work scales. The correlation coefficients were found to be significant between the interval of .09–.12 at $p < .05$; and above .13 at $p < .01$. When assessed at the level of three main clusters and 11 scales, scales at each cluster were found to have a significant level of relationship with the cluster they are attached to. The correlation coefficients of

Table 2. Intercorrelations Among Three Main Clusters, 11 Scales, and Total EPCD-TR.

| EPCD-TR scales | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 1. Pv | — | | | | | | | | | | | | | | |
| 2. Pv-pr | .75** | — | | | | | | | | | | | | | |
| 3. Pv-ww | .75** | .34** | — | | | | | | | | | | | | |
| 4. Pv-cont | .70** | .26** | .32** | — | | | | | | | | | | | |
| 5. Ax | .27** | .23** | .16** | .21** | — | | | | | | | | | | |
| 6. Ax-pr | .19** | .15** | .11* | .17** | .76** | — | | | | | | | | | |
| 7. Ax-un | .25** | .20** | .15** | .19** | .84** | .55** | — | | | | | | | | |
| 8. Ax-ch | .24** | .22** | .14** | .17** | .84** | .57** | .68** | — | | | | | | | |
| 9. Ax-out | .17** | .15** | .08 | .13** | .70** | .29** | .40** | .42** | — | | | | | | |
| 10. SI | .20** | .18** | .11* | .15** | .60** | .36** | .52** | .47** | .51** | — | | | | | |
| 11. Gen-ax | .15** | .10* | .11* | .14** | .47** | .34** | .40** | .44** | .30** | .74** | — | | | | |
| 12. SE | .13** | .13** | .06 | .11* | .41** | .19** | .40** | .31** | .36** | .81** | .48** | — | | | |
| 13. Uncrys-id | .16** | .17** | .07 | .10* | .50** | .27** | .49** | .36** | .45** | .74** | .29** | .51** | — | | |
| 14. Conf-att | .16** | .15** | .09* | .12** | .41** | .30** | .27** | .31** | .41** | .71** | .42** | .38** | .40** | — | |
| 15. Total | .64** | .50** | .44** | .46** | .83** | .58** | .71** | .69** | .61** | .80** | .60** | .60** | .62** | .57** | — |

Note. Pv = pessimistic views; Pv-pr = pessimistic views about the process;

Pv-ww = pessimistic views about the world of work; Pv-cont = pessimistic views about one's control; Ax = anxiety; Ax-pr = anxiety about the process; Ax-un = anxiety about uncertainty; Ax-ch = anxiety about the choice; Ax-out = anxiety about the outcomes; SI = self-concept and identity; Gen-ax = general anxiety; SE = self-esteem; Uncrys-id = uncrysalized identity; Conf-att = conflictual attachment and separation; EPCD-TR = Emotional and Personality Career Decision-Making Difficulties Scale—Turkish Version.

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

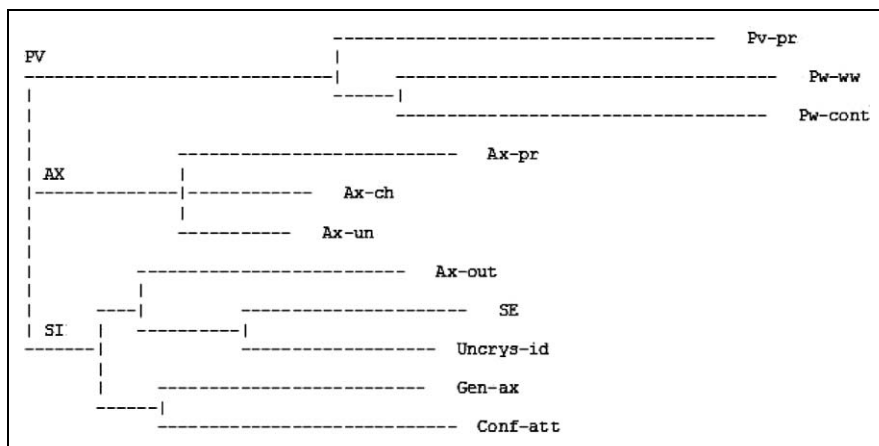


Figure 1. The structure of 11 difficulty categories of EPCD-TR (N = 523). EPCD-TR = Turkish version of the Emotional and Personality-Related Aspects of Career Decision-Making Difficulties; PV = pessimistic views; Ax = anxiety; SI = self-concept and identity; Pv-pr = pessimistic views about the process; Pv-ww = pessimistic views about the world of work; Pv-cont = pessimistic views about one’s control; Ax-pr = anxiety about the process; Ax-un = anxiety about uncertainty; Ax-ch = anxiety about the choice; Ax-out = anxiety about the outcomes; Gen-ax = general anxiety; SE = self-esteem; Uncrys-id = uncrytallized identity; Conf-att = conflictual attachment and separation.

pessimistic view cluster and three scales under this cluster vary between .71 and .76; the correlation coefficients of anxiety cluster and four scales under this cluster vary between .72 and .84; the correlation coefficients of self and identity cluster and four scales under this cluster vary between .72 and .81. It can be said that these findings demonstrate 11 scales existing in three clusters of EPCD-TR highly representing the clusters they exist in.

Cluster analysis. The additive similarity trees (ADDTREE; Sattath & Tversky, 1977) clustering algorithm was used as in previous studies (e.g., Gati et al., 1996; Saka et al., 2008). 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 them (as reflected in the degree of correlation between them; Gati et al., 1996; Osipow & Gati, 1998). Thus, the clustering analysis by ADDTREE of the intercorrelations among the 11 difficulty scales allowed us to directly compare the empirical structures with the hypothesized theoretical structures. Cluster analysis (ADDTREE) that provides a visual presentation of the relations among the 11 scales of the EPCD-TR was used. Figure 1 shows the cluster structure obtained through ADDTREE from the intercorrelations among scales. The linearly accounted-for variance by the distances in clustering structure was .92. The clustering structure is highly similar but not identical to the hypothesized structure and

Table 3. The Results of Confirmatory Factor Analysis of Emotional and Personality-Related Career Decision-Making Difficulties–Turkish Version Scale ($N = 523$).

| Model | χ^2 | df | χ^2/df | RMSEA | 90% CI ^a | NFI | GFI | CFI |
|--------|-----------|-------|-------------|-------|---------------------|-----|-----|-----|
| 11-3-1 | 99.29 | 38 | 2.61 | .056 | [.042, .069] | .96 | .98 | .98 |
| 50-1 | 6,880.76 | 1,163 | 5.92 | .097 | [.095, .099] | .81 | .66 | .85 |
| 50-3-1 | 44,254.61 | 1,160 | 3.68 | .071 | [.069, .074] | .86 | .75 | .90 |

Note. RMSEA = root mean square error of approximation; CI = confidence interval; NFI = normed fit index; GFI = goodness of fit index; CFI = comparative fit index. Models 11-3-1 = 11 scales loaded on 3 major factors and 1 general factor; 50-1 = 50 items loaded on a single factor; 50-3-1 = 50 items loaded on 3 major factors and 1 general factor. ^a90% CI for RMSEA.

that reported by Saka et al. (2008). There is one deviation in the Turkish sample from the original model: The “anxiety about the outcomes” scale emerged in the main cluster of self-concept and identity, instead of in the main cluster of anxiety.

Confirmatory factor analysis. For the purpose of testing the fit of the proposed theoretical model, confirmatory factor analysis was carried out by using the LISREL 8.7 software (Jöreskog & Sörbom, 1993). The 11-scale model (11-3-1) suggested by Saka et al. (2008), in which the general factor comprises three main factors, was tested against the single-factor model (50-1), in which all 50 items represent a single factor and against the three-factor model (50-3-1), in which the 50 items represent three main factors that can be combined to a single total score. As Saka et al. (2008) tested in the original study, these alternative models (50-1 and 50-3-1) were tested against the hypothesized 11-3-1 theoretical model, and the fit indices of the three models were examined. To assess the goodness of fit of the three models, the common fit indices (χ^2/df , root mean square error of approximation, normed fit index, goodness of fit index, and comparative fit index) were used. Table 3 shows the different fit indices for the hypothesized model and the alternative models. As can be seen in Table 3, the proposed model with 11 scales, 3 main clusters, and 1 general factor (11-3-1) fit with data well in all indices, and the fit indices of this model are better than those of the other two models (50-1 and 50-3-1). In particular, the χ^2/df ratio indicates that the 11-3-1 model has a better fit than the other two models (2.61, 3.68, and 5.92 for the models 11-3-1, 50-3-1, and 50-1, respectively). Furthermore, standardized coefficients of the three clusters ranged from .51 to .80 for the 11-3-1 model. On the contrary, standardized coefficients of the 50 items ranged .32–.69 for the 50-3-1 model and .03–.63 for the 50-1 model. These results reflect that 11-3-1 model best fitted the data (Kline, 2005).

Testing the Concurrent Validity of the EPCD-TR

Table 4 shows the validity criteria regarding the decision status obtained from the demographical information part. The left-hand side of Table 4 shows the means and

Table 4. Differences Between Decided and Undecided and Between High and Moderately Confident Individuals in the EPCD-TR.

| EPCD-TR Category | Already decided | | | | Confidence in decision | | | |
|------------------|------------------------|--------------------------|----------|----------|-------------------------------|---------------------------|----------|----------|
| | No (<i>n</i> = 73) | Yes (<i>n</i> = 450) | <i>t</i> | <i>d</i> | Moderate (<i>n</i> = 143) | High (<i>n</i> = 288) | <i>t</i> | <i>d</i> |
| PV | 5.28 (1.07) | 5.02 (1.51) | 1.42 | 0.12 | 5.27 (1.41) | 4.87 (1.55) | 2.63* | 0.25 |
| AX | 6.07 (1.14) | 5.11 (1.53) | 5.13* | 0.45 | 5.47 (1.45) | 4.93 (1.54) | 3.53* | 0.34 |
| SI | 5.43 (1.12) | 4.55 (1.54) | 4.67* | 0.41 | 4.88 (1.41) | 4.36 (1.55) | 3.35* | 0.32 |
| Total | 5.59 (0.80) | 4.89 (1.15) | 5.00* | 0.44 | 5.21 (1.10) | 4.72 (1.14) | 4.23* | 0.41 |

Note. SD is presented in within parenthesis; PV= pessimistic views; AX= anxiety; SI = self-concept and identity; EPCD-TR = Emotional and Personality Career Difficulties Scale–Turkish Version.

* $p < .01$.

the results of the *t* test analysis between the decided and the undecided groups, including an estimate of the effect size in terms of Cohen's *d* (Cohen, 1988). The results support the hypothesis: the difficulties of the individuals who have not yet decided on a profession were higher than the difficulties of those who have already decided which profession to pursue. Similar studies also indicated the differences between decided and undecided students (e.g., Albion and Fogarty, 2002; Bacanli, 2012; Lancaster et al., 1999; Tien, 2005). The difference between the groups was statistically significant for two main clusters (anxiety and self-concept and identity), $t(521) = 5.13, p < .001, 4.67, p < .001$, respectively, and for the total EPCD-TR, $t(521) = 5.00, p < .001$, with a difference of about one third of *SDs*. No significant difference was found between the decided and the undecided groups in the pessimistic view main cluster, $t(521) = 1.42, ns$.

The right-hand side of Table 4 shows the differences between career decision-making difficulties of individuals who are currently only moderately confident about deciding on a career and those who are highly confident about it. As hypothesized, the moderately confident group had significantly higher difficulties than the highly confident group in all three major clusters and hence also in the total EPCD-TR scores, $t(431) = 2.63, p < .01, 3.53, p < .001, 3.36, p < .01, and 4.23, p < .001$, with effect sizes of 0.25, 0.34, 0.32, and 0.41, for pessimistic views, anxiety, self-concept and identity, and total EPCD-TR, respectively. Similar studies also indicated the differences between moderately confident and highly confident students (e.g., Albion & Fogarty, 2002; Saka & Gati, 2007).

Discussion

The goal of the present study was to examine the validity of the EPCD theoretical model and questionnaire in the Turkish culture. For the purpose of testing the suggested taxonomy empirically, a Turkish version of the EPCD questionnaire was

developed based on the English version. Then the psychometric properties, the internal structure, and the concurrent validity of the EPCD-TR were tested.

With respect to the psychometric properties, the reliability of the EPCD-TR was almost as high as that reported by Saka et al. (2008): the medians of the total scores were .91, .94, and .95 for the Turkish, Hebrew, and English versions, respectively. The median internal consistency reliabilities of the 11 scales were .75, .85, and .85, for the Turkish, Hebrew, and English versions, respectively, reflecting a slightly lower reliability of the scales of the EPCD-TR. A possible explanation for the slightly lower reliability of the EPCD-TR is the younger age of the participants, who were adolescents, whereas the participants in the research by Saka and her colleagues were young adults.

According to the results of cluster analysis (ADDTREE) generally, the structure of the EPCD-TR was as expected, and the three main clusters emerged. However, there was one exception: the “anxiety about the outcomes” scale was included in the main cluster of self-concept and identity, instead of in the main cluster of anxiety. This deviation was unexpected and might be random; however, one explanation for this deviation may be that the anxiety experienced by an individual, who mostly faces negative events in his or her life, becomes a part of that individual’s identity in time (Feldman, 2003; Santos, 2001). This explanation is even more understandable when considering the younger age of the Turkish sample, most of whom were in their second year of high school. Older individuals can be more mature in their approach toward career decision making compared to younger ones. The probability that high school students, who are the sample group of the current study, are not mature enough in terms of career decision making may be the reason for deviation from the suggested model (Mau, 2004).

As regarding this deviation, it can be considered that Turkish students’ parents have acted more interventionist and directive to their children in career decision-making process. Furthermore, Saka and Gati (2007) stated that anxiety may arise when individuals feel they have to engage in the decision-making process while still unprepared, because they are being pressured by significant others (e.g., peers or teachers) or forced by circumstances or social norms. The deviation may be a result of these probabilities.

As reflected in the correlation between the anxiety main cluster and anxiety about outcomes scale, and self-concept and identity main cluster correlation coefficient was higher than pessimistic views main cluster and three scales (anxiety about the process, anxiety related to the uncertainty involved in choosing and anxiety about the choice) in anxiety main cluster. In addition, the fact that the “anxiety about the outcomes” scale is loaded on the main cluster of self-concept, and identity can be a result of the former’s relationship with the general anxiety that was included in this cluster (Gati et al., 2012; Germeijs, Verschueren, & Soenens, 2006; Saka et al., 2008; Saka & Gati, 2007).

Concurrent validity was tested in the present study by two comparisons. First, as expected, undecided students reported higher emotional and personality-related

difficulties overall and in two of the major clusters; the effect size was moderate. A similar difference between decided and undecided students also emerged in studies focusing on career decision-making difficulties in general (Albion & Fogarty, 2002; Kleiman et al., 2004; Lancaster et al., 1999; Saka & Gati, 2007; Tien, 2005). Although the same pattern emerged for the pessimistic views cluster, the difference was small and insignificant. Apparently, both decided and undecided individuals have a similar pessimistic approach regarding the employment process, the world of work, and their own control. This finding is in line with the findings of Gati, Asulin-Peretz, and Fisher (2012) who found, in a 3-year follow-up research, that the pessimistic views cluster was different from the other two clusters of the EPCD, in terms of its ability to predict making a career decision.

The second comparison involved the difference in the EPCD-TR scores between students who were decided and reported high confidence in their decision and those who reported only moderate confidence. The highly confident students reported significantly lower emotional and personality-related difficulties than those who were only moderately confident. This finding is in line with the findings of Albion and Fogarty (2002) and Saka and Gati (2007). This result supports the sensitivity of the EPCD-TR in distinguishing not only between being decided and not but also among different levels of confidence.

Limitations

The first limitation of the present study is that the participants were adolescents still studying in high school; therefore, to further validate the EPCD-TR, it should be tested with other, older groups. Second, because the focus of the study was to test the validity of the theoretical model and the EPCD questionnaire proposed by Saka and her colleagues (Saka et al., 2008; Saka & Gati, 2007), its association with other variables (e.g., parental attitudes, self-esteem, and career decision-making self-efficacy) that can provide additional support to the validity of the EPCD-TR remains for future studies. Third, the study aimed to identify individuals who have decided and those who have not decided by means of a single question. It would be beneficial for further studies to identify decided and undecided individuals in a more detailed manner.

Future Research

One focus of future research should be the relations between anxiety and career decision-making difficulties (Saka et al., 2008; Saunders, Peterson, Sampson, & Reardon, 2000; Stead, Watson, & Foxcroft, 1993). It was also claimed that there are relations between vocational maturity (Crites, 1973) and career difficulties. Moreover, it may be useful to study the relationships among career indecision and indecisiveness (Osipow et al., 1976; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996; Chartrand & Nutter, 1996), career decision-making self-efficacy (Taylor & Betz, 1983),

vocational decision-making styles (Walsh, 1987), and self-esteem (Rosenberg, 1965) in determining the career difficulties of the individual. Specifically, it is recommended that the relationships between these variables and career decision-making difficulties be studied in the Turkish culture in further research.

Because the anxiety about the outcomes scale was found to be included in the factor of self-concept and identity instead of in the anxiety factor, as expected (Saka et al., 2008), it is suggested that the items in the scale be reviewed and perhaps revised again. Future research should focus also on developing tools regarding coping with career decision-making difficulties and adopting intervention strategies. Finally, the EPCD-TR needs to be tested with various age samples and groups.

Counseling Implications

Identifying the individual's career decision-making difficulties can help the counselors clarify their identification. Determining the reasons underlying decision-making difficulties of the individual at three main clusters and 11 scales level can also reveal what kind of intervention the individual needs. Therefore, the counselor's considering these aspects in career counseling can help to provide individuals with an optimum level. Also, the EPCD-TR could assist counselors in the process of locating the emotional or personality-related sources of clients' difficulties by assessing pessimistic views, anxiety, and personal identity diffusion. Determining the sources of the clients' emotional difficulties can help tailor the counselor's efforts to address them.

In conclusion, the EPCD-TR has adequate psychometric properties and its internal consistency reliability is high enough. The structure of the 11 scales was similar to the theoretical structure, with the 3 major clusters emerging clearly; the reason for the misplacement of the anxiety about the outcomes scale needs to be clarified in further research. The comparisons between the decided and the undecided and between the highly and the moderately confident students support the concurrent validity of the EPCD-TR.

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