Exploratory and Confirmatory Factor Analysis of the Career Decision-Making Difficulties Questionnaire

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Objective: The present study aimed at validating the structure of Career Decision-making Difficulties Questionnaire (CDDQ).
Methods: Five hundred and eleven undergraduate students took part in this research; from these participants, 63 males and 200 females took part in the first study, and 63 males and 185 females completed the survey for the second study.
Results: The results of exploratory factor analysis (EFA) indicated strong support for the three-factor structure, consisting of lack of information about the self, inconsistent information, lack of information and lack of readiness factors. A confirmatory factor analysis was run with the second sample using structural equation modeling. As expected, the three-factor solution provided a better fit to the data than the alternative models.
Conclusion: CDDQ was recommended to be used for college students in this study due to the fact that this instrument measures all three aspects of the model. Future research is needed to learn whether this model would fit other different samples.

Key words: *Career choice, Decision-making, Questionnaires, factor analysis*

During youth's development, they make a number of important decisions affecting major arena of their life. Career decision making is one of these crucial decisions. Making a decision about career seems to be a difficult and confusing task for some senior college students. Different interpersonal, social and environmental factors can affect it (1). Undecided students might face the risk of poor adjustment, personal distress, academic failure, and attrition (2). Such confusion intensified by problems of poor vocational identity, career barriers and inadequate decision-making skills results in a state of indecision (3). Gati, Krausz, and Osipow (1) presented a hierarchical model of classifying career difficulties of people in making a decision. In this model, broad categories of career difficulties are segregated into categories and subcategories according to finer distinctions.

There are two general categories at the top of the taxonomy proposed by Gati et al. (1), "Prior to beginning the decision process" and "During the process." Prior to the beginning of the process includes the factors of lack of readiness due to lack of motivation, indecisiveness, and dysfunctional myths. The category "during the process", on the other hand, is in turn separated into two categories: lack of information and inconsistent information. Lack of information has four subcategories: (a) lack of

knowledge about the steps of the process; (b) lack of information about the self; (c) lack of information about the different alternatives (e.g., occupations, high school classes, college majors); and (d) lack of information about the possible sources of additional information. The major category "inconsistent information" includes three types of problems in using information: (a) unreliable information, or difficulties related to unreliable or contradictory information (e.g., above average high school grades, but a low SAT score); (b) internal conflicts like contradictory preferences or difficulties about the need to compromise; and (c) external conflicts (cited in 4).

The purpose of the present study concerns the applicability of this model in an Iranian culture. To evaluate the sources of indecision and the difficulties associated with career- decision making, Gati et al. (1) developed the Career Decision-Making Difficulty Questionnaire (CDDQ).

The validity and reliability of the CDDQ was then tested in several studies. Osipow and Gati (5), for example, examined the construct validity of the career decision-making difficulties questionnaire and concluded that undecided students had significantly higher scores on the CDDQ. Similarly, in another piece of research, Lancaster, Rudolph, Perkins, and Patten (cited in 6) found that decided students presented themselves as having fewer difficulties in decision making than undecided students. Moreover, Hsiu-Lan

(6) in their recent study found significant differences between decided and undecided students on their perceptions of career difficulties. Therefore, they all supported the three-group classification system for career decision-making difficulties to a great extent.

With regard to gender differences, Gati and Saka (7) specified that high school boys reported greater difficulties than girls in external conflicts and dysfunctional beliefs. The structure of the 10 difficulty categories of the revised CDDQ was found similar to the one proposed by Gati et al. (1).

Gati, Osipow, Krausz, and Saka (8) further examined the validity of the taxonomy using counselee versus counselor perspectives. Within a general sample of 259 young adults, the 95 counselees expressed fewer difficulties related to lack of motivation. The counselors and counselees had more agreement on difficulties related to readiness for decision making and inconsistent information than on difficulties about lack of information. The decision-making difficulty category of the CDDQ had a similar structure to the one proposed by Gati et al. (1). In another study, using structural equation modeling, Albion and Fogarty (9) examined the structure of the CDDQ. In their study, the multidimensional structure of the CDDQ was obtained for both adults and high school students.

Considering the applicability of the CDDQ in predicting the individual's indecision status, Gaffner and Hazler (10) explored the relationships between career indecisiveness and personality types and difficulties in career decision making. Their sample included 111 undergraduate students of a small Midwestern university. The results presented lack of career readiness on the CDDQ to be a better single predictor of indecisiveness than any other combination of variables. This finding verified the validity of the readiness scale of the CDDQ.

In spite of the multidimensional nature of the CDDQ and its theoretical base, there are criticisms on a number of grounds such as the poor psychometric properties of the lack of readiness subscales (lack of motivation, general indecisiveness, and dysfunctional beliefs) (cited in 11). Gati and Saka (7) also introduced a shortened and modified version of the CDDQ by decreasing the 44-item original version to 34 items (32 CDDQ items, and two items included as a validity check). These items were all taken from the original CDDQ, and adapted to be appropriate for high school students.

Cultural factors are important contextual determinants in making career related decisions (12). People in Western cultures generally focus on personal rights, well-being of the self and immediate family, and personal autonomy and accomplishments and are known as more individually oriented. In contrast, in Iran, the Iranian- Islamic culture greatly emphasizes group conformity and mutual obligations, where community goals and ethics are placed above the personal goals and competencies (13). Therefore, decision-making styles of Western and Iranian cultures are greatly different. In the West, reasoning and attributions of causality are mainly person orientated. In the East, on the other hand, social conformity and collective decision-makings are preferred. Thus, parental and family expectations are more prominent in the career decision-making process in Iran (13-14).

These cultural differences question the suitability of using non-modified Western devised psychological tools for Iranian adolescents. Although many studies have examined the suitability of the CDDQ with Western college samples (1, 8, 6 and 5), and two studies examined the CDDQ on Chinese and Taiwanese samples (14 &15) to date, no study has tested its suitability for use in Iran .

Consequently, the current study contributes to the literature by testing the applicability of the 34-item CDDQ (7) for adolescents in Iran. The goals of the study were as follows: (a) to test the psychometric properties of an Iranian version of the CDDQ (in terms of factor structure and reliability); and (b) to examine its validity by testing its relationship with another career constructs, namely, career decision-making self-efficacy in terms of differences in gender and grade. It is particularly suitable to test the relationship between the CDDQ and self-efficacy.

These constructs are important career-related variables found to be associated with career difficulties in previous studies. Career decision-making self-efficacy has been found to be negatively related with career decision-difficulties (9&14).

Thus, the primary purpose of the present study was to examine the construct and concurrent validity of the CDDQ in Iran. The secondary aim was to test the career-related difficulties perceived by college students in terms of their gender differences.

Materials and Method
Participants
The CDDQ was administered to 511 undergraduate students (126 males and 385 females) who majored in different disciplines of humanities. Of the 511 undergraduate students, 263 (63 males and 200 females) participated in the first study, while 248 students (63 males and 185 females) completed the survey for the second study. The research committee of the faculty approved the research protocol.

Instruments
The instruments used in this study were as follows:
Career Decision-making Difficulties Questionnaire – Revised (CDDQ-R). Students completed the 34-item CDDQ (Farsi version translated from its Chinese version), comprising 32 CDDQ-R items, and two validity items not used in the scoring. Students were asked to indicate their level of agreement to each statement (sample item: ''I find it difficult to make a decision about my career because I do not know which factors to take into consideration'') on a 9-point scale, with endpoints of 'does not describe me' and 'does

describe me', with higher scores indicating more career decision-making difficulties.

The original CDDQ (1) contained 44 items and was designed to assess career decision-making difficulties across three subscales of lack of readiness, lack of information and inconsistent information related to the decision-making process. A total difficulties score could also be obtained by summing scores across all domains. Gati et al. (1) tested initial convergent, divergent and concurrent validity and found them to be satisfactory and assessed multidimensionality using cluster analysis.

These authors reported sound internal reliability scores for lack of information (.95) and inconsistent information (.89) subscales, and for the total scale (.94), but found low reliability for lack of readiness subscale (.63). Albion and Fogarty (9) and Lancaster et al. (18) also reported low reliability for lack of readiness subscale. Mau (14) translated this 44 item version to Chinese and tested it on a sample of Taiwanese students, and found a poor fit of the data to the original Gati et al. (1) model when using structural equation modeling.

Gati and Saka (7) reduced the 44 statements in the original CDDQ to 34, and adapted them for use with high school students. These changes were based on the results of item analyses, where highly correlating statements were combined or reduced to one, and irrelevant statements were deleted. Gati and Saka reported internal reliabilities for the shortened version, which were consistent with the original scale, as follows: .91 (Total); .62 (Lack of Readiness); .88 (Lack of Information); and .87 (Inconsistent Information). There have been no independent validation studies of the CDDQ-R; no studies have tested its factor structure using factor analysis or latent variable analysis; and no Iranian version was identified.

Career Decision-making Self-efficacy Scale– Short Form (CDMSE-SF). Students completed a 25-item Chinese translated version of the CDMSE-SF to assess confidence regarding ability to make career related decisions (sample item: ''how confident are you about determining what your ideal job would be?''). Participants responded on a 5-point scale, with end-points of 'no confidence at all' and 'complete confidence', with higher scores indicating greater confidence. In developing the original CDMSE scale, Taylor and Betz included 10 behaviors to indicate each of the five career-choice competencies postulated by Crites, of accurate self appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving (cited in 17).The CDMSE-SF contains five behaviors per competency. Betz et al. reported an internal reliability of .94 for the CDMSESF, which is consistent with reliability coefficients reported in other studies (e.g., 15). Two studies (14-18) used the CDMSE-SF with Chinese samples. The scale was found to be unidimensional

when used with students from that country (18) and had internal consistencies ranging from .92 to .94. The internal reliability coefficient for the present sample was .87. The internal consistency of the total score was .94. The validity of this measure was indicated by its moderate correlation with career decision inventories, such as the *Career Decision Scale* (CDS) (19). The correlation between the CDMSESF and the CDS indecision sub-scale was -.63 for females and -.48 for males. The correlation between the CDMSESF and the CDS certainty sub-scale was .68 for females and .31 for males.

Procedure
The survey forms which contained the three translated scales of Career Decision making Difficulties Questionnaire, Career Decision-making Self-efficacy, Occupational Barriers and the demographic questions were administered to all volunteering students in the first grade in the high-school. The classroom teachers, who were provided with instructions regarding the administration protocol, administered the survey forms. A written group careers audit was provided to the school following the data collection.

Data analysis
In order to determine the best factor structure to represent the CDDQ, both an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were performed. The sample of 511 cases were randomly split into two separate groups of 263 each, one for the exploratory factor analysis and the other for the confirmatory factor analysis. PASW was used to analyze descriptive statistics, EFA and the reliability of the CDDQ. AMOS was used to perform the CFAs of the CDDQ analyzing the fit of models and its respective parameter estimates.

Results
Exploratory Factor Analysis
To investigate whether the Iranian CDDQ has unidimensional structure, an exploratory factor analysis was carried out on the 34 items. The significance of Bartlett's test of sphericity (χ^2=3535.03, p<001) and the size of the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO=.93) revealed that the items of the CDDQ had more adequate common variance for factor analysis (20).

Items that did not load on any factor or did not have a significant relationship with the total scale of the ESCQ were eliminated (9 items). Therefore, factor analysis was conducted with principal component and Oblimin rotation due to the expectance of the three factors. In respect to the number of factors, the Scree plot (Figure1), the criterion of Eigen value higher than 1, and the MAP method all suggested 6 factors.

Table 1. Inter-factor correlations for the CDDQ –Lack of Information, CDDQ – Inconsistent Information, and Career Decision-making Self-efficacy Scale. (N=260)

	CDDQ (F1)	CDDQ (F2)	CDDQ (F3)	CDMSE
CDDQ (F1)	-			
CDDQ (F2)	.61**	-		
CDDQ (F3)	-.08	.13	-	
CDMSE	-.14*	-.12	-.04	-

* P < 0.05 ** P < 0.001.

Table 2. Exploratory factor analysis of the CDDQ using direct Oblimin rotation

Items (in some cases abbreviated)	Factor		
I find it difficult to make a decision about the career because:	**1**	**2**	**3**
26. I have contradictory data about my potentials and or personality features(for example, I believe I am patient with other people but others say I am impatient)	.83		
16. I still do not know which occupations are interesting to me.	.80		
29. I do not like any of the occupation to which I can be admitted.	.78		
33. People who are important to me do not agree with the career options I am considering and/or the career characteristics I desire	.76		
25. I constantly change my career preference (for example, I want to be self-employed and sometimes I want to be an employee)	.76		
18. I do not have enough information about my competencies (for example, numerical ability, verbal skills) and/or about my personality traits (for example, persistence, initiative, patience).	.74		
17. I am not sure about my career preferences yet (for example, what kind of a relationship I want with people, which working environment I prefer?)	.73		
34. There are contradictions between the recommendations made by different people who are important to me about the career that suits me or about what career characteristics should guide my decisions.	.71		
32. my skills and abilities do not match those required by the occupation I am interested in.	.71		
19. I do not know what my abilities and/or personality traits will be like in the future.	.67		
23. I do not know how to obtain additional information about myself (for example, about my abilities or my personality traits)	.63		
28. I'm equally attracted by a number of careers and it is difficult for me to choose among them.	.58		
30. the occupation I am interested in involves a certain characteristic that bother me (for example, I am interested in medicine, but I do not want to study for so many years)	.56		
27-I have contradictory data about the existence or the characteristics of a particular occupation.	.49		
21. I do not have enough information about the characteristics of the occupations and/or training programs that interest me		.79	
13. - I do not know how to obtain accurate and updated information about the existing occupations or about their characteristics		.75	
22. I don't know what careers will look like in the future.		.75	
20. I do not have enough information about the variety occupations that exist.		.73	
14. I do not know what factors to take into consideration.		.58	
15. I don't know how to combine the information I have about myself with the information I have about different careers.		.56	
13. I do not know what steps I have to take		.54	
9. I believe there is only one career that suits me.			.68
10. I expect that through the career I select I will satisfy all my wishes.			.63
8. I expect that entering the career I select will also solve my personal problems.			.56
11. I believe that a career selection is a one-time choice and a life-long commitment			.56
Eigen value	9.89	2.53	1.49
Variance explained before rotation (%)	39.51	10.11	5.96

Factor loadings < 0.40 not shown.

Table 3. Goodness-of-fit statistics and their Comparisons for three alternative measurement models for the 9-item CDDQ

Models and Comparisons	χ^2	df	CMIN /df	CFI	TLI	IFI	RMSEA	AIC
1) original Model on factor	1714.698*	464	3.69	.66	.64	.66	.11	1906.698
2) original 32 items model	2700.315*	461	5.86	.73	.71	.73	.10	2898.32
3) original 27 items model	1208.582*	310	3.90	.88	.86	.88	.08	1398.582
4) 3-factor 23 items model obtained from the EFA	808.047*	206	3.92	.89	.88	.89	.08	946.05
5) Proposed model	545.703*	196	2.78	.94	.93	.94	.06	703.703

* P < 0.001.

Table 4. Gender differences in subscales of CDDQ

variables	gender	N	Mean	SD	t	df	p
Lack of Inconsistent	male	126	46.01	16.77	-2.61	509	.009
	female	385	50.49	16.66			
Lack of Information	male	126	22.88	9.49	-1.50	509	13
	female	385	24.48	10.64			
Lack of readiness	male	126	16.41	4.82	-.44	509	.66
	female	385	16.63	5.07			

The rotated factor structure was factorially complex, with multiple cross-loadings and several factors with only one or two items that loaded greater than .40,with the size of loading required to be significant at p<.05 for a sample size of 200 (21). When this was done, the rotated factor structure was still factorially complex with 12 items not loading on any factors and the smallest factor having only three significant item loadings. Following recommendations by Hair et al. (21), two factors were also rotated. These two factors accounted for 46.91% of the variance. Our findings were comparable to those of Creed and Yin (17). They found a 3-factor solution accounting for 55.58% of variance with 14 items loading on Factor 1 (lack of information about the self and inconsistent information) (eigenvalue=9.89, variance explained 39.51%); seven items loading on Factor 2 (lack of information) (eigenvalue =2.53, variance explained 10.11%); and four items for Factor 3(lack of readiness) (eigenvalue =1.49, variance explained=5.21%).

Concurrent Validity

Pearson correlation coefficients were computed to examine the convergent validity of the CDDQ with other well-known self-report measures of Career Decision-Making Self-Efficacy Scale (CDMSE) (Table 1); and significant correlations only were found between CDMSE and CDDQ (p<.05).

Reliability

The internal consistency of the 22-item inventory, using total Cronbach alpha reliability (α) was found to be .93. The internal reliability coefficient for Factor 1 was .91 and it was .86, .40 respectively for Factor 2 and Factor 3. Overall, the CDDQ scales had relatively high levels of reliability.

Confirmatory Factor Analysis

Confirmatory factor analysis was used to determine whether the factor structure obtained using exploratory factor analysis could be confirmed on the second half of the sample. Structural equation modeling methods were used to estimate the factor model. Data were analyzed using PASW Statistic18 and AMOS 16 (22 &23). PASW was used to analyze descriptive statistics and the reliability of the CDDQ. AMOS was used to perform the CFAs of the CDDQ, analyzing the fit of models and its respective parameter estimates.
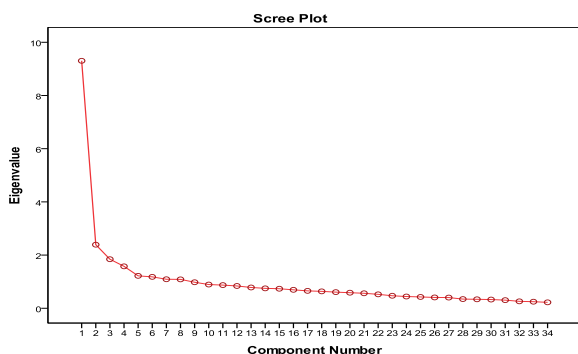

Figure 1. Scree plot of the CDDQ

All tested models used maximum likelihood estimation. Goodness of fit (GOF) was evaluated using seven indices: Chi-square, Chi-square/df ratio, Comparative Fit Index (CFI), Root-Mean-Square Error of Approximation (RMSEA), and the Tucker-Lewis index (TLI). TLI, CFI values usually range from 0 to 1 and values of 0.90 or greater are considered to be evidence of good model fit. RMSEA values of less than 0.06 indicate good model fit. All of the GOF measures mentioned above were used in this study. In addition, the TLI was also calculated with a one-factor model as a plausible, nested alternative. When models are fully nested, meaning that they are subsets of each other, the Chi-square difference test can be used. The difference between the Chi-square of the two models is evaluated as a Chi-square statistic using degrees of freedom that are the difference between the degrees of freedom in the two models (cited in 23).To evaluate the goodness-of-fit of five alternative measurement models for the CDDQ, CFA was first run for a one-factor solution in which all 32 items loaded on to a single general strengths factor (Model 1), then CFA was subsequently run for the three-factor models. In the second model, the original 32 items of the CDDQ were allowed to load on the three original hypothesized factors. Items 1–7 and 9–11 were allowed to load on the readiness latent factor; items 13–24 were allowed to load on the lack of information latent factor; and items 25–34 were allowed to load on the inconsistent information latent factor. After deleting the six items with low factor loadings (2 and7-11), we ran model 3 with the three factors. In tertiary model, based on modification indices, a path of covariance was then added between error terms for items 13-15, 13-14, 16-17, 20-21, 22-24, 25-26, 28-31, 30-31, and 33-34 resulting in an improved but still poor fitting model. In addition, the examination of the factor loadings revealed that items 1, 3, 4, 6 and 11 loaded weakly on readiness factors. Therefore, we removed them.

In the 3-factor 23 items model, each cluster of CDDQ items that was identified in the exploratory factor analysis was allowed to load freely on a latent factor. The 3-factor model was modified and the weight loss item was excluded (23, 27 and33). Regarding modifications index in the proposed model, items 25-26- 29,16-17 and 17-19 were allowed to load freely on a single latent factor of lack of information about the self and inconsistent information; and items 13,14 –15, 20, 21- and 22 were allowed to load freely on a single latent factor of lack of information. Further, items 9–11 were allowed to load freely on readiness latent factor. The correlations between the three factors in the models were freely estimated.

The results of the CFAs for each model are demonstrated in table 3. In all the analyses, the chi-square goodness–of-fit statistic is large and significant beyond the 0.001 level, rather than being small and associated with a high probability, which would indicate a close fit between the models and data. However, this statistic is sensitive to sample size and

does not provide a realistic test of the fit of models (24). Overall, the models 1-4 had the poorest fit to the data failing to meet acceptable criteria for the AIC, TLI, CFI and RMSEA.

The results of the initial estimation of the one factor model did not provide a satisfactory result with a chi-square value of 1714.698 (df =464), which was significant at the P < .001 level. Other fit indices revealed a moderate fit (RMSEA =.11; TLI=.64; CFI=.66; IFI = .66). The three-factor model (model 2) fits the data no better than the one-factor model ($\chi2$ = 2700.315; p= .001; RMSEA = .10; TLI=.71; CFI=.88; IFI = .73).

According to the suggestions of modification indices, covariance were set on the error variances of items in the internality model based on the reason that items were loaded on two unique factors of lack of information and inconsistent information respectively. These modifications improved the fit ($\chi2$ = 1208.582; p= .001; RMSEA = .08; TLI=.86; CFI=.88; IFI = .88).

The three-factor solution derived from the EFA, with 23 items was conducted, and fitted the data perfectly. It had the best values for Chi-square/df ratio, CFI, IFI, RMSEA, and TLI (comparing to a null model) compared to the other models. The proposed model had a significantly lower Chi-square value than the other factor models. The final three-factor model showed additional improvement in goodness-of-fit CMIN /df = 2.78, RMSEA = .06; TLI=.93; CFI=.94; IFI = .94).

We also directly compared the final and other factor models with the ΔAIC (Akaike Information Criterion) statistics. These statistics directly compare the fit of the models after adjusting for differences in the degrees of freedom. The ΔAIC was greater than 25 (conventionally ΔAIC > 15 is considered very substantial). These results again strongly support the superiority of the final-factor model over the other models; therefore, this model was considered optimal.

Gender Differences

Gender differences were tested by means of independent sample t-tests (Table 3). Therefore, results of independent samples t-tests showed significant gender differences for lack of inconsistent information, t (509)¬= -2.478, p> .05, but not for lack of readiness and information scores (p¬> .05), suggesting that compared with males, females reported significantly higher lack of inconsistent information.

Discussion

One of the main purposes of this study was to examine the properties and structure of the Iranian version of the CDDQ. This two-phase factor analytic study of the CDDQ on a group of students mirrors a priori factor structure as outlined by (1); thus providing a support for the structure of the scale. In other words, the results confirm that the empirical structure of the CDDQ scales was similar to the theoretical model. In contrast to the theoretical model proposed by Gati et al. (1), the subscale of "lack of information about the self" was

isolated from the major category of lack of information in the current data, and was added to the subscale of inconsistent information.

As a further test of the structure of the scale scores, confirmatory factor analysis was conducted. Results of the CFA for the multidimensional model indicate that the three-factor model fits the data quite well. The results are, therefore, in accordance with the findings of previous research (e.g., Gati et al. (1) and can provide empirical support for the multidimensional model. The three factors to emerge were lack of information about the self and inconsistent information, lack of information and lack of readiness (including 4 out of the 11 original items from this subscale).

When the original readiness items were tested separately, some item-total correlations were weak (<.22) and the internal reliability was unacceptable, at .25. Osipow and Gati (5) and Gati et al. (1) indicated that certain subscales within the CDDQ are less refined than the others. It is apparent that the lack of readiness subscale needs to be more developed in this cross-cultural setting. This may require the development and testing of culturally appropriate items in relation to readiness. However, future studies also need to examine the applicability of the readiness construct in collective cultures, such as Iran. This recommendation is vital as the CDDQ has been proposed to differentiate two separate phases of career decision-making: one prior to the decision-making process, and the second during the decision-making process (1- 7).

In contrast to the reliability of .57 observed by Kelly and Lee (11), our results indicated that the internal reliabilities for these two subscales (lack of information about the self and inconsistent information, lack of Information) were adequate, being >.93.

The other results of the present study indicated that females reported more career decision-making difficulties (lack of inconsistent information) than males. This finding is somewhat inconsistent with a society in which young females have higher societal and parent expectations and are expected to be more career-orientated.

The Iranian version of the CDDQ can be used for counseling and research purposes. More specifically, it can be used to obtain a global assessment of difficulty, or a more specific evaluation of the three major categories of difficulty.

It seems that motivation is as important as information in making a career decision. However, the low correlations among motivation and other scales indicated that it may not be appropriate to include motivation as one category of the career difficulties.

With regard to decision status and difficulties perceived by college students, the study indicated that over 20% of the freshmen were in the status of identity diffusion. They have not decided future directions, and they are not worried about their future. Buckham (24) investigated career planning of 24 art undergraduate students. The results indicated that many of the students lacked expectation about their future.

Unwillingness to be on the job market also leads to negative culture among undergraduates.

Strengths and limitations

To the best of our knowledge, this is the first study to examine the psychometric properties of the CDDQ in an Iranian context. One of the applications of our findings is the development of career counseling programming tailored more effectively to the career decision-making needs of the senior students. Specifically, we should continue to develop specific activities and interventions that increase students' career decision-making self-efficacy, which is predicted to decrease their career decision-making difficulties. We should also develop career services targeting each of the career decision-making difficulties as suggested by Gati, Krausz, and Osipow (1). For example, we have incorporated some of these ideas into a Career Exploration Workshop in our counseling service. The Career Exploration Workshop actively involves student participation in discussions and activities about career myths and beliefs, career planning models, identity development, occupation identification and research, and conflict resolution. Throughout this process, counselors provide assistance to students by normalizing the challenges of career planning, and by providing supportive feedback. Attendance and participation in the Career Exploration Workshop has proved to significantly increase students' levels of career decision-making self efficacy (25).

The CDDQ has the potential to serve as a diagnostic instrument in career counseling for psychologists, and counseling practitioners. The construct validity and reliability of the Iranian version of the CDDQ are good and could be applied in further research and counseling practices.

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