

THE RELIABILITY AND FACTORIAL VALIDITY OF THE CAREER DECISION PROFILE FOR A SAMPLE OF AFRIKAANS-SPEAKING STUDENTS

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OPSOMMING

Die doel van hierdie studie was om die bruikbaarheid van die Career Decision Profile (CDP; Jones, 1989) vir 'n steekproef van 133 Afrikaanssprekende studente te ondersoek. Al ses subskale het tellings met bevredigende betroubaarheidskoëffisiënte opgelewer. Die faktorstruktuur wat deur Jones vir die Career Decision Needs-dimensie van die CDP gepostuleer is, is aan die hand van 'n bevestigende faktorontleding ondersteun. Ten slotte blyk dit dat die CDP nuttig aangewend kan word vir die multi-dimensionele taksering van loopbaanbesluiteloosheid by Afrikaanssprekende studente.

ABSTRACT

The purpose of this study was to examine the utility of the Career Decision Profile (CDP; Jones, 1989) for a sample of 133 Afrikaans-speaking students. The scores obtained on all six subscales showed acceptable reliability. The factor structure proposed by Jones for the Career Decision Needs dimension of the CDP was confirmed by means of a confirmatory factor analysis. In conclusion it appears that the CDP may be profitably used for the multidimensional assessment of career indecision with Afrikaans-speaking students.

The purpose of this study was to examine the reliability and factorial validity of the Career Decision Profile (Jones, 1989) for an Afrikaans-speaking student sample. A review of the literature on the measurement of career indecision revealed that this field has received sustained attention from researchers through the 1970's, 1980's and the 1990's (e.g. Fuqua & Newman, 1989; Osipow, Carney, Winer, Yanico & Koschier, 1976; Savickas & Jarjoura, 1991). The possibility that career indecision may lead to high psychological and financial costs due to inappropriate career choices may be a reason for the continued interest in the field. This interest is also reflected by the research of South African psychologists (Pretorius, 1991; Stead & Watson, 1993).

Since the 1970's several researchers have developed instruments to measure career indecision, for example the Career Decision Scale (CDS; Osipow et al., 1976), My Vocational Situation Scale (MVS; Holland, Daiger & Power, 1980), Career Decision Profile (CDP; Jones, 1989) and Career Factors Inventory (CFI; Chartrand, Robbins, Morrill & Boggs, 1990). Osipow et al. intended the CDS to be an unidimensional measure of career indecision. However, several researchers subsequently factor analysed the CDS and concluded that more than one dimension of career indecision underlie the inter-correlations of the CDS items (see Schulenberg, Shimizu, Vondracek & Hostetler, 1988; Shimizu, Vondracek, Schulenberg & Hostetler, 1988; Vondracek, Hostetler, Schulenberg & Shimizu, 1990). Osipow cautioned against the use of factor scores for the interpretation of CDS profiles, since they are not based on theory. In support of Osipow (1987), Martin, Sabourin, Laplante and Coallier (1991) also concluded that while some evidence point toward a four-factor solution, an unidimensional model of the CDS appears to be more appropriate.

In contrast to the CDS, the CFI and CDP were specifically designed to be multidimensional. Since people experience career indecision for several different reasons, the authors of the CFI and CDP intended their instruments to be useful in differentiating between different types of undecided career counseling clients (Chartrand et al., 1990; Jones, 1989). Jones

(1989) and Chartrand et al. (1990) provided convincing evidence in favour of the factorial, converging and discriminating validities of the subscales of the CDP and CFI respectively.

Despite the diversity of theoretical approaches, research revealed substantial overlap of the various career indecision instruments (Fuqua & Newman, 1989; Stead & Watson, 1993; Tinsley, Bowman & York, 1989). In their joint factor analysis of the CDS, CDP and CFI, Stead and Watson extracted four factors, namely Indecision, Need for Self/Career Information, Career Choice Anxiety, and Indecisiveness. Fuqua and Newman factor analysed 13 career decision-making subscales and reported a three-factor solution. Two of these factors corresponded with the factors reported by Stead and Watson, namely Need for Self/Career Information and Indecision. The third factor was described by Fuqua and Newman (1989) as "representing the degree of affective comfort with the career state" (p. 490).

The CDP is based on a three-dimensional model of career indecision, namely Decidedness, Comfort and Career Decision Needs. The Decidedness and Comfort dimensions are measured by two items each. These two scales correspond to the Indecision and Affective Comfort factors reported by Fuqua and Newman (1989). The Career Decision Needs dimension of the CDP consists of four subscales that explore different reasons for career indecision. These subscales are (a) Self-clarity, (b) Knowledge about Occupations and Training, (c) Decisiveness, and (d) Career Choice Importance. Each of these four subscales consists of three items.

The first three Career Decision Needs subscales correspond with three of the subscales of the CFI, namely Need for Self-Knowledge, Need for Career Information and Generalized Indecisiveness. The CDP does not measure the Career Choice Anxiety factor represented in the CFI. In return, the CFI does not measure the Career Choice Importance factor represented in the CDP.

Since the CDP measures at least four of the factors regularly found in joint factor analyses of career subscales, namely Decidedness, Comfort, Need for Information and Indecisiveness, it appears to capture most important factors in career indecision.

The questions addressed in this study were (a) whether reliable scores could be obtained with the CDP subscales for Afrikaans-speaking students, and (b) whether the proposed factor structure of the CDP would be valid for the same students. Positive answers to these questions would imply that the CDP may be used profitably for career counseling with Afrikaans-speaking students.

METHOD

Subjects

The participants in this study were 133 Afrikaans-speaking students enrolled in an introductory class in industrial psychology (57 men and 76 women). The mean age was 19.47 with a standard deviation of 1.42. All the students participated voluntarily and completed the CDP in class time. Since the CDP is brief and can be quickly self-scored, the students received immediate feedback on their test scores. The CDP fitted in with the content they were dealing with in class, namely theories of career development.

Instrumentation

Only one measure, namely the Career Decision Profile was used in this study. This instrument was selected because it is based on an explicit multidimensional model of career indecision (Jones, 1989). Also, favourable information regarding its reliability and validity was reported in previous studies (Fuqua & Newman, 1989; Jones, 1989; Stead & Watson, 1993).

All sixteen items of the CDP are statements to which an individual responds on an eight-point scale, ranging from Strongly Disagree to Strongly Agree.

Translation of the CDP into Afrikaans

The CDP was translated into Afrikaans by the first author. Subsequently a professor in English and an Afrikaans-speaking lecturer in Industrial Psychology jointly back-translated the Afrikaans version into English. The back-translated version was presented to professor L.K. Jones, the author of the CDP, for inspection. Upon receiving a favourable response from him, it was concluded that the translation was adequate.

Statistical Analysis

It was decided to examine the internal structure of the CDP by means of confirmatory factor analysis (Fassinger, 1987; Watkins, 1989). This approach was considered appropriate since an explicit measurement model is available for the CDP. The sample in the present study cannot be regarded as large, but it is well above the minimum of 100 subjects as recommended by Loehlin (1987) for a relatively simple model (as was the case in this study). Since a confirmatory factor analysis requires at least three indicators for each hypothesized factor, it was decided to exclude the Decidedness and Comfort dimensions from the analysis. These two scales consist of only

two items each. The confirmatory factor analysis thus focussed only on items five to sixteen, which comprise the four Career Decision Needs subscales. The loadings of the items on their designated factors were estimated with the maximum likelihood method. All other loadings were fixed to zero. The variances of all the factors were set to one and the factors were allowed to freely correlate. The measurement model is depicted in Figure 1. The confirmatory factor analysis was done with the EQS program (Bentler, 1989).

RESULTS

The reliability coefficients of the CDP subscale-scores for the present sample are listed in Table 1, along with the intercorrelations of the six CDP subscales, their means and their standard deviation.

Figure 1 contains all the estimated standardized parameters for the confirmatory factor analysis model. Although the chi-square for the model was significant ($\chi^2=78.49$; $df=48$; $p<0.05$), inspection of several goodness of fit indices suggested that the four-factor model showed an acceptable fit with the data. The Root Mean Square Error of Approximation (RMSEA) was .07, the Bentler-Bonnet Nonnormed Fit Index (BBNNFI) was .925 and the Comparative Fit Index was .945. Browne and Cudeck (1993) suggest that RMSEA values lower than .08 show a reasonably good fit, while values of .90 or higher for the BBNNFI and the Comparative Fit Index are also generally regarded as showing reasonable fit (Comrey & Lee, 1992). Also the chi-square to degrees of freedom ratio of 1.64 was less than the critical value of 2.0 (Fassinger, 1987), which again suggests a reasonable fit between the four-factor model and the data. Further confirmation for the validity of the four-factor model was found in the fact that the t-values for all the factor loadings were statistically significant ($p<0.05$).

However, inspection of the residual matrix revealed relatively large residuals for item 16, suggesting that this item possibly could not be viewed as a satisfactory unidimensional indicator of the Importance factor. Inspection of the content of the three items of the Importance dimension also suggested that item 16 was not strictly measuring the same construct as the other two items. This finding was confirmed by the lower loading of item 16 on the Importance factor, when compared with the loadings of items 14 and 15.

DISCUSSION

Table 1 shows that the alpha coefficients obtained for the present sample compares favourably with the coefficients reported by Jones (1989) for an American sample. These coefficients suggest that reasonably reliable scores can be obtained for Afrikaans-speaking students with the CDP subscales.

TABLE 1
RELIABILITY, CORRELATIONS, MEANS AND STANDARD DEVIATIONS OF CDP SCALES

Scale		CDP Scale								M	SD
		α^a	α^b	1	2	3	4	5	6		
1.	D	.73	.85	—						12.75	2.76
2.	C	.80	.82	.59	—					11.11	3.20
3.	SC	.79	.77	.34	.41	—				14.90	5.77
4.	KO	.78	.68	.32	.45	.63	—			15.17	5.35
5.	Ds	.77	.79	.27	.49	.44	.30	—		17.55	4.50
6.	I	.67	.73	.28	.20	.15	.26	.28	—	20.85	3.85

Note. D=Decidedness; C=Comfort; SC=Self-Clarity; KO=Knowledge about Occupations and Training; Ds=Decisiveness; I=Importance.
^aCoefficients obtained for the present sample ^bCoefficients obtained by Jones (1989) for an American sample.

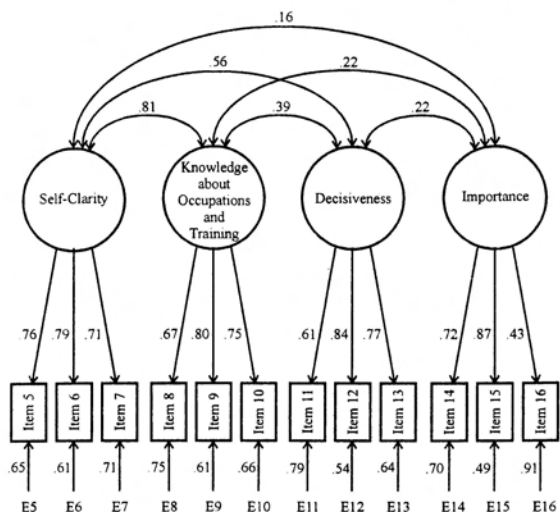


Figure 1. Measurement model and estimated parameters for the Career Decision Needs dimension of the CDP.

The goodness of fit indices reported above for the measurement model of the Career Decision Needs dimension, support the validity of the factor structure proposed by Jones (1989). Figure 1, however, shows a correlation of .81 between the Self-Clarity and Knowledge about Occupation and Training factors. This high correlation raises a question about the independence of the two constructs. In a previous South African exploratory factor analysis of career decision subscales, Stead and Watson (1993) found that the Self-Clarity and Knowledge about Occupations and Training subscales jointly loaded on a Need for Self/Career Information factor. This finding also calls the independence of the Self-Clarity and Knowledge about Occupations and Training constructs into question. Chartrand et al. (1990) addressed a similar question in the development of the CFI. They concluded that although there was a significant amount of overlap between the two factors, a model where the Need for Self-Knowledge and Need for Career Information factors were combined showed a poorer fit with their data than a model with separate but correlated factors.

Following the lead of Chartrand et al. (1990), the validity of a three-factor model for the present sample was also examined. The first factor was defined by the items of the Self-Clarity and Knowledge about Occupations and Training subscales, while the second and third factors corresponded with the third and fourth factors of the four-factor model. The RMSEA (.086), BBNFI (.885) and the Comparative Fit Index (.911) clearly suggested that the four-factor model showed a better fit with the data than the three-factor model. In addition the Expected Cross-Validation Index (ECVI) for the four-factor model (1.069), was lower than the ECVI for the three-factor model (1.155). This finding suggests that the four-factor model would more likely be successfully replicated than the three-factor model in another sample of similar size from the same population (Browne & Cudeck, 1993). Also, on a conceptual level the four-factor model appears to distinguish between meaningful aspects of career indecision. Accordingly it was decided to retain the four-factor model.

All the items appeared to be strong indicators of their respective factors, with the exception of item 16. Although the loading of item 16 on the Information factor was statistically significant, it may be necessary to revise this item.

In conclusion it appears that the CDP subscales can be used to obtain reliable and valid scores for Afrikaans-speaking students. This information should be useful in determining the state of decidedness and comfort of career counseling clients and also in determining reasons for undecidedness.

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AUTHOR NOTE

We thank Professors Larry Jones, Coen Bester, Tony Ulliyatt and Mrs. Laura Ulliyatt for their assistance and helpful comments.

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