

# Dimensions of Career Decidedness

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In two separate studies that factor analyzed nine measures of career decidedness taken by college freshmen, a single factor empirically defined choice status.

Many researchers and practitioners who seek to assess career decidedness use just one or two items to determine an individual's career choice status. This practice has a long history, starting with Williamson (1937) who initiated the study of personality differences between decided and undecided college students. To operationally define decidedness, Williamson categorized college freshmen who reported no vocational choice as undecided. He asked students who reported a vocational choice to indicate "the degree of certainty that this was the vocation they really wanted to prepare for" (p. 355) by checking either very certain, certain, or uncertain. Researchers following Williamson have typically defined career decidedness with a single

item (e.g., Hawkins, Bradley, & White, 1977; Holland & Holland, 1977; Holland & Nichols, 1964; Kimes & Troth, 1974; Robinson & Cooper, 1988). Practitioners who survey career decidedness among college students (e.g., Titley & Titley, 1980) and researchers who study the outcomes of career interventions also have used one-item measures of decidedness (e.g., Barak & Friedkes, 1981; Robbins & Patton, 1985). Test constructors who have devised measures of the antecedents of indecision have used one or two items to define decidedness and then offered inverse correlations to their new scales as construct validity evidence for the new scale. This strategy has been used in the development of the Career Decision Profile (Jones, 1989), the Career Decision Scale (Osipow, Carney, & Barak, 1976), the Career Factors Inventory (Chartrand, Robbins, Morrill, & Boggs, 1990), the Fear of Commitment Scale (Serling & Betz, 1990), the Indecision Scale (Holland & Nichols, 1964), and the Vocational Decision-Making Difficulties Scale (Holland, Gottfredson, & Nafziger, 1973).

Given the widespread use of single items to measure career decidedness, these items and their use merit examination. Unfortunately, in many instances we cannot examine the item because it is used only once and the exact wording of that item is not included in the research report. Reviewing the literature on

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career indecision enabled us to identify eight items that constitute what seems to be the complete set of decidedness items commonly used by researchers and practitioners. Comparing these items to each other revealed that the item writers implicitly conceptualize decidedness as including multiple dimensions such as certainty, satisfaction, and comfort. For example, the two career choice certainty items in the Career Decision Scale (Osipow, Carney, Winer, Yanico, & Koschier, 1976) examine whether one has decided about, remains comfortable with, and knows how to implement choices of a major and a career. Four items in the Career Decision Profile (Jones & Chenery, 1980) separately deal with decidedness about, and comfort with, a choice. A Career Choice Satisfaction Item (Holland, Gottfredson, & Nafziger, 1973) deals with decidedness and choice satisfaction. Thus, the items commonly used to assess career decidedness use words that imply multiple dimensions.

Having concluded that the wording used in decidedness items suggests multiple dimensions, we wondered how many empirical dimensions compose this construct. Do decidedness, certainty, comfort, and satisfaction represent multiple dimensions of choice status or are they different words for a unidimensional construct? Following Jones and Chenery's (1980) reasoning, we conceptually distinguished choice status from feelings about the status. Thus, we expected that a factor analysis of the commonly used career decidedness items would produce at least two dimensions. We hypothesized that decidedness and certainty items would load on a "choice status" factor and that satisfaction and comfort items would load on a "feelings about choice status" factor. When we did not find this to be true, we conducted a second study to replicate the results and to clarify their meaning. These two studies are reported separately and then followed by a general discussion.

## STUDY 1

### Method

**Measures.** In reviewing the literature on career indecision (Savickas, 1989, 1990), we identified eight items that seem to be commonly used to operationally define career decidedness. These items consisted of the Satisfaction with Career Choice Item, the Occupational Alternatives Question, two items from the Career Decision Scale, and four items from the Career Decision Profile. A description of each item follows.

**Career Decision Scale.** The Career Decision Scale (CDS; Osipow, Carney, Winer, Yanico, & Koschier, 1976) consists of a two-item Certainty Scale and a 16-item Indecision Scale. Although we were primarily interested in the two items in the Certainty Scale, we administered the Indecision Scale because its total score has been used to index decidedness (lower scores mean more decided). The Certainty Scale deals first with career choice certainty and second with major choice certainty. For both items, respondents rate how similar they are to a statement about having decided, feeling comfortable with that choice, and knowing how to implement it. The Indecision Scale items ask people to rate their similarity to 16 statements about reasons for career indecision. The Indecision Scale correlates negatively to the Certainty Scale (generally about  $-.6$  plus or minus  $.1$ ). The Indecision Scale has been used frequently in research, and extensive evidence supports its reliability and validity (Osipow, 1987; Savickas, 1990; Slaney, 1988). In contrast, the only empirical data that we could find about the validity of the CDS Certainty Scale is that it correlates inversely to the Indecision Scale. For the participants in the current study, the two-item Certainty Scale had a coefficient alpha of .90 and the 16-item Indecision Scale had a coefficient alpha of .89.

**Satisfaction with Career Choice Item.**

An item to assess satisfaction with career choice was constructed by Holland, Gottfredson, and Nafziger (1973) to use as a criterion in research on reasons for indecision. The item asks "How satisfied are you with your present choice of an occupation?" Participants respond on the following scale: (a) well satisfied with choice, (b) satisfied, but have a few doubts, (c) not sure, (d) dissatisfied, but intend to remain, (e) very dissatisfied and intend to change, or (f) undecided about my future career. In examining this item, we concluded that responses 1 through 5 deal with level of choice satisfaction whereas response 6 reflects a separate dimension rather than a level of satisfaction. Our previous experience with the item suggested that the response scale works better when it deals only with levels of satisfaction. Thus, in the current study we used only response options 1 through 5. Empirical evidence supports the validity of this item as a measure of decidedness (Holland & Holland, 1977; Robinson & Cooper, 1988; Savickas, Silling, & Schwartz, 1984; Slaney, 1980; Slaney, Palko-Nonemaker, & Alexander, 1981).

*Occupational Alternatives Question.* The Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1976) consists of two parts: (a) "List all the occupations you are considering right now," and (b) "Which occupation is your first choice? (If undecided, write undecided)." Slaney (1980) devised the following scoring system: a first choice without alternatives (1 point), a first choice with alternatives (2 points), just alternatives (3 points), and neither choice nor alternative listed (4 points). Correlations with other measures of career indecision offer evidence of concurrent validity (Robinson & Cooper, 1988; Slaney, 1988; Slaney & MacKinnon Slaney, 1986).

*Career Decision Profile.* Jones and Chenery (1980) presented a three-dimensional model of vocational decision status using the dimensions of

(a) decidedness, (b) comfort with the decision status, and (c) reasons for decision status. Jones (1989) characterized a person's decisional status as some position within the cube formed by the three dimensions. Originally, the Vocational Decision Scale (Jones & Chenery, 1980) operationally defined the model. Currently, researchers use the Career Decision Profile (CDP; Jones, 1989) to operationalize the model. In the current study, we used the CDP Decidedness Scale and Comfort Scale. The two items in the Decidedness Scale refer to "having an occupational field in mind" and having "decided on the occupation I want to enter." The two items in the Comfort Scale refer to feeling "comfortable with where I am in making a vocational decision" and being "worried about my career choice." The response scale for each of these four items is an 8-point scale defined only by anchors of strongly disagree and strongly agree. In publishing the first validity study of the CDP, Jones (1989) reported a test-retest reliability of .66 ( $N = 85$ ) and a coefficient alpha of .85 ( $N = 221$ ) for the Decidedness Scale and had a test-retest coefficient of .76 ( $N = 85$ ) and a coefficient alpha of .82 ( $N = 221$ ) for the Comfort Scale. For the participants in the current study, the Decidedness Scale had a coefficient alpha of .83 and the Comfort Scale had a coefficient alpha of .75.

## Participants

The participants consisted of 182 college students (109 women, 72 men, and one participant who did not indicate sex). All of the participants were freshmen, except for one sophomore, at a state-supported university located in the Midwest. Their mean age was 18.19 ( $SD = .52$ ). They were recruited from ten sections of an orientation course required of all students, except returning adult students.

Two criteria were used to select the ten sections of the course from the 158 sec-

tions that were offered during the fall semester. The first criterion concerned recruiting participants with diverse academic and career interests. The sections of the course were grouped according to intended academic major. We coded each of these academic majors using the RIASEC typology (Rosen, Holmberg, & Holland, 1987). No section represented a Realistic major. Thus, we selected two sections each from majors classified as Investigative, Artistic, Social, Enterprising, and Conventional. The second criterion involved selecting sections taught on a day and at an hour when one of the investigators could collect the data.

### **Procedures for Data Collection and Analyses**

Students were told that volunteering to participate in the study would not influence their grade, they could choose to leave or stay and work on other materials, and their anonymity was protected if they chose to participate in the study. About 85% of students in each course section volunteered to participate in the study. No more than three students from any section chose not to participate in the study. Students responded to the measures during a scheduled class period that occurred shortly after the portion of the course that dealt with career issues and choosing a major. The participants were asked to be thoughtful and honest in responding to the items. After collecting the data, an investigator debriefed the participants and oriented them to the career services provided by the University's Counseling and Human Development Center, Career Planning and Placement Center, and Academic Advising Office. Students with specific career concerns stayed after class and received personal referrals. The director of the orientation course program received descriptive statistics and an interpretation of their meaning for each course section that participated

in the study. Students who requested results of the study received them.

The items in the three 2-item scales were each analyzed as separate variables to examine how the items performed. We described the data by calculating mean scores and standard deviations for the eight items and the CDS Indecision Scale. We further examined the data by inspecting and factor analyzing the correlation matrix for the nine variables. Use of alpha factor analysis enabled us to investigate the nature of the career decidedness domain and the generalizability of the common factors extracted. A coefficient of generalizability was computed for each factor to indicate how well it was represented by the variables analyzed and if reliable generalizations could be made from the nonrandom sample of variables in the study to the universe of variables in the domain (Greene, 1978).

### **RESULTS**

The means and standard deviations for each measure appear in Table 1. To determine the dimensions of the space defining the data from the nine choice status measures, we submitted the matrix of correlation coefficients in Table 1 to alpha factor analysis. The nine measures were the two items from the CDS Certainty Scale, the CDS Indecision Scale total score, the four items from the CDP Decidedness and Comfort Scales, the Satisfaction item, and the OAQ. Using the criterion of eigenroots greater than one, the only factor extracted had an eigenroot of 5.03 that explained 50.9% of the total variance. The factor loadings for each variable appear in Table 1. The factor's generalizability coefficient (.81) indicated that the observed factor was a reliable representative of a "true" factor, presumably in the career decidedness domain.

The residual or the difference between the observed correlation and the

TABLE 1

Study 1 Means, Standard Deviations, and Matrices of Correlation Coefficients and Residuals (N = 182)

Measure	Mean	SD	Factor Loadings	CDSCC	CDSMC	CDSIS	CDPFD	CDPOD	CDPC	CDPW	OAQ	SAT
CDS Career Certainty	2.72	.92	.80		.18	.02	-.05	-.05	-.03	-.05	.03	.00
CDS Major Certainty	2.76	.93	.79	.82		-.02	-.07	-.03	-.01	-.01	-.06	.02
CDS Indecision Scale	29.04	9.11	-.68	-.53	-.56		.07	.07	.04	-.07	-.02	-.05
CDP Field Decided	6.42	1.90	.64	.44	.42	-.37		.24	.07	-.03	-.02	-.05
CDP Occupation Decided	5.61	2.23	.76	.57	.57	-.46	.72		-.02	-.07	.03	-.08
CDP Comfortable	5.42	2.19	.82	.62	.64	-.52	.59	.60		.13	-.06	-.05
CDP Worried	4.58	2.41	.58	.41	.45	-.47	.34	.37	.60		-.02	-.02
OAQ	3.10	.61	.49	.42	.33	-.35	.29	.41	.33	.26		.08
Satisfaction With Choice	4.00	.90	.79	.63	.64	-.59	.46	.53	.60	.44	.46	

Note. Observed correlation coefficients below diagonal; residuals between observed and reproduced correlations above diagonal.  
 CDS = Career Decision Scale; CDP = Career Decision Profile; OAQ = Occupational Alternatives Question.



reproduced correlation (i.e., the product of the factor loadings for two variables) represents that part of the correlation unaccounted for by the single factor. The residuals reported in Table 1 give no indication of a second substantive factor representing comfort, satisfaction, or any other theoretical dimension. In fact, the three largest residuals seem to represent method variance because each of the three pairs of variables comes from items that compose 2-item scales. The largest residual (.24) came from the CDP Decidedness Scale items that deal with having an occupational field in mind and being decided on an occupation. The second largest residual (.18) came from the CDS Certainty Scale items that deal with career and major decidedness. The third largest residual (.13) came from the CDP Comfort Scale items that deal with feeling at ease with current decisional status and not being worried about career choice. No other residual exceeded .07. The three largest residuals could be interpreted as evidence of some small amount of variance specific to the item pairs. The three residuals could also be interpreted as an indication of a small amount of method variance. Other than simply representing method variance, the pairs of items in the three 2-item scales could have elicited similar responses because the participants did not notice the distinction in item meanings. The CDP Decidedness Scale represents an attempt to clarify the distinction by giving examples. We wondered, however, if participants grasped the distinction between the examples of fields (e.g., medicine and management) and the examples of occupations (e.g., electrical engineer and nurse). A rival interpretation proposes that the participants did make a distinction but responded in the same way to the paired items because the paired items covary for these participants. For example, on the CDP

Decidedness Scale participants might simultaneously consider a field and an occupation in that field, or having already selected an occupation, they also had a field in mind.

We did separate factor analyses for the two sexes to ensure that there were not large differences in the factor structures for women and men. The results indicated that the factor structures for the sexes were highly similar.

We interpreted the single factor and pattern of residuals to mean that the data from the measures of career decidedness were unidimensional. This result was unexpected. We had expected more than one empirical dimension to emerge from the data analyses because the items used several theoretical dimensions such as decidedness, certainty, comfort, and satisfaction. Because of the unanticipated results, we decided to replicate the study.

## STUDY 2

### Introduction

If the results of Study 1 replicated, then one dimension would be sufficient to explain the construct of career choice decidedness. Assuming that the results would replicate, we also wanted to know whether one of the nine measures in the data set was sufficient to predict a criterion measure of career planning. To address this question, we investigated how each of the measures correlated to an external criterion. In a cross-sectional study, behavioral criteria of decidedness, such as occupation eventually entered, are not possible. We already had information concerning the most frequently studied criterion (number of reasons for being undecided) because we had administered the CDS Indecision Scale as part of Study 1. The Satisfaction item had the highest correlation (–.59) with the CDS Indecision Scale, followed by the CDS major certainty item (–.56).

the CDS career certainty item (-.53), and the first item in the CDP Comfort Scale (-.52).

Looking for a criterion other than degree of indecision, we selected realism of choice as indicated by congruence between occupation chosen and self-conception. To assess congruence we used an instrument, the Occupational Plans Questionnaire, devised to measure the degree to which respondents perceive themselves as having been able to connect the roles and skills cultivated earlier with an occupational role (Hershenson, 1967).

## METHODS

### Measures

The Occupational Plans Questionnaire (OPQ) was added to the assessment battery used in Study 1, that is, the Career Decision Scale, Satisfaction with Career Choice Item, Occupational Plans Question, and the Decidedness and Comfort Scales from the Career Decision Profile. The alpha coefficients of internal consistency for the participants in Study 2 were .86 for the CDS Certainty Scale, .90 for the CDS Indecision Scale, .75 for the CDP Decidedness Scale, and .85 for the CDP Comfort Scale.

*Occupational Plans Questionnaire.* The OPQ assesses occupational fit with multiple-choice questions that address commitment to stated occupational choice (5 items), knowledge about and experience relevant to that occupation (5 items), consistency of the occupation with self-perceived abilities, values, and interests (5 items), anticipated potential in this occupation (2 items), alternative choices (3 items), and the significance of the occupational role in the respondent's life (2 items). Hershenson (1967) reported an internal consistency coefficient of .83. The participants in the current study produced a coefficient alpha of .68.

### Participants

The participants for Study 2 were recruited, in the same manner as in Study 1, from the required orientation course. Because only 17 sections were offered during the Spring semester, we sought to use all 17 sections. Three sections did not participate in the study because two sections met at a time when no investigator was available to collect data and one section's instructor chose not to participate in the study. About 85% of students in each section volunteered to participate in the study. In all, 168 students (82 women; 86 men) participated in Study 2. This group consisted of 162 freshmen and six sophomores. Their mean age was 19.09 ( $SD = 1.25$ ).

### Procedures Data Collection and Analyses

The data collection procedures were the same as reported for Study 1. The data on the nine variables used in Study 1 were described and analyzed in the same manner for Study 2 (mean scores, standard deviations, correlation coefficients, and alpha factor analysis). This allowed us to directly compare and interpret the results obtained in the two studies. In addition, we calculated a mean score and standard deviation for the OPQ, included the OPQ in the correlation matrix, and regressed the OPQ on the nine variables using multiple regression analysis.

## RESULTS

The means and standard deviations for each measure appear in Table 2 along with the observed correlation and residual matrices. These results are very similar to those obtained in Study 1. Alpha factor analysis of the correlation matrix extracted one factor using the criterion of eigenroots greater than one. This factor had an eigenroot of 5.12 that accounted for 52.7% of the total variance. The factor loadings for each variable appear in Table 2. The

**TABLE 2**  
**Study 2 Means, Standard Deviations, and Matrices of Correlation Coefficients and Residuals (N=168)**

Measure	Mean	SD	Factor Loadings	CDSCC	CDSMC	CDSIS	CDPFD	CDPOD	CDPC	CDPW	OAQ	SAT
CDS Career Certainty	2.73	.91	.81		.14	.06	-.04	-.02	-.01	.00	.02	-.03
CDS Major Certainty	2.83	.91	.78	.78		.08	-.10	-.07	-.04	-.03	.09	-.02
CDS Indecision Scale	30.10	9.58	-.86	-.62	-.59		-.02	.11	.04	.01	-.09	-.02
CDP Field Decided	6.28	1.91	.54	.39	.33	-.49		.18	.04	-.02	-.03	.01
CDP Occupation Decided	5.70	2.31	.80	.61	.55	-.58	.61		-.04	.00	-.01	-.01
CDP Comfortable	5.33	2.04	.82	.64	.59	-.65	.48	.61		.14	-.01	-.03
CDP Worried	4.69	2.28	.77	.60	.56	-.64	.40	.60	.75		-.08	.13
OAQ	3.06	.58	.30	.23	.29	-.33	.13	.23	.22	.16		-.03
Satisfaction With Choice	4.05	.76	.69	.52	.53	-.61	.41	.56	.55	.65	.18	
OPQ	68.04	12.62		.43	.46	-.45	.42	.45	.41	.43	.19	.50

*Note.* Observed correlation coefficients below diagonal; residuals between observed and reproduced correlations above diagonal.  
CDS = Career Decision Scale; CDP = Career Decision Profile; OAQ = Occupational Alternatives Question; OPQ = Occupational Plans Questionnaire.



factor's generalizability coefficient was .81, the same as in Study 1. The residuals showed a pattern highly similar to that of Study 1. The pairs of measures with the largest residuals were the same as in Study 1, and in the same order from highest to lowest. The two items in the CDP Decidedness Scale had the largest residual (.18), followed by the two items in the CDS Certainty Scale (.143) and the two items in the CDP Comfort Scale (.137). These residuals compare to .24, .18, and .13 in Study 1. As in Study 1, separate factor analyses of the data for men and for women also produced highly similar factor structures. We concluded that results obtained in Study 2 very closely replicated the results obtained in Study 1. Taken together, the two studies strongly indicated that a single substantive dimension explains the variance in the construct of career choice status, at least among college freshmen, and that the residuals are small enough to ignore.

In addition to replicating Study 1, Study 2 was designed to determine whether one of the nine measures in the data set was sufficient to predict a criterion measure of career planning. When the nine decidedness measures were correlated to the OPQ, the largest zero-order coefficient ( $r = .50$ ) was obtained by the Satisfaction item. This suggests the Satisfaction item as the leading candidate if one wants to select a single item, from the nine items included in the factor, to represent the dimension of decidedness. According to *t* statistics, however, the correlations of the nine measures with the OPQ did not significantly differ from each other, except for the OAQ. The OAQ's correlation to the OPQ ( $r = .19$ ) was significantly lower than that of each of the other eight measures correlation to the OPQ.

To determine whether the remaining eight items measured any other dimensions in the OPQ beyond that mea-

sured by the Satisfaction item, we looked for any variable(s) that increased the multiple *R*. Multiple regression indicated that two additional measures were significantly related to the OPQ. With the Satisfaction item in the model, the CDP field decidedness item significantly increased the *R* to .55 ( $p < .001$ ). The CDS major certainty item further increased the *R*, beyond the Satisfaction and CDP items, to .59 ( $p = .003$ ). The multiple correlation for the full nine-variable regression was .59; thus the remaining six variables did not further increase the *R*. With all nine variables in the model, the CDP item had a significant standardized beta coefficient of .26, and the CDS major certainty item had a nonsignificant standardized beta coefficient of .23. The remaining six items showed the following nonsignificant standardized beta coefficients: OAQ = .05; CDS Indecision Scale = -.05; CDP worried about choice item = .04; CDP occupational decidedness item = .02; CDP comfortable with choice item = -.02; and CDS career choice certainty item = .01.

## DISCUSSION

Career choice status seems to be a unidimensional construct. Although the variety of words used in items to assess choice (i.e., decided, satisfied, certain, and comfortable) connote multiple dimensions in the construct of choice status, these words empirically denote a unidimensional factor. This conclusion suggests that researchers and practitioners may be making conceptual distinctions about dimensions of a construct of career choice status while their research participants or counseling clients do not make such subtle distinctions. This conclusion should be interpreted with caution because the data were obtained from college freshmen in a required orientation course.

Whether the conclusion drawn from these data extends beyond college fresh-

men to other populations is unknown. Given that vocational development proceeds in the direction of increasing differentiation, older groups may recognize and use multiple dimensions to describe their choice status. Repeating this study using a longitudinal design, or at least cross-sections of older students, may show that age differences or developmental trends characterize the construct of career decidedness.

Our interpretation of the results of the current study suggests that researchers and practitioners who wish to make distinctions in career choice status with college students probably are best advised to ask questions about different choices rather than different dimensions of a particular choice. Two scales already do so. The CDS Certainty Scale asks about career and major choices; the CDP Decidedness Scale asks about occupational field and occupational choice. In our opinion, the next generation of choice status scales should measure all three areas of choice satisfaction—major, career field, and occupation.

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