

Identity in Vocational Development

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J. L. Holland's (1985, *Making vocational choices: A theory of vocational personalities and work environments*, Englewood Cliffs, NJ: Prentice-Hall) formulation of the new construct vocational identity did not deal with its relation to other developmental constructs in vocational psychology. The present study investigated the association of vocational identity with vocational development by administering the Vocational Identity Scale, the Medical Career Development Inventory, and the Ego Identity Scale to 143 first- and second-year college students with the same career aspiration. The results indicated that vocational identity related to both degree of vocational development and progress in ego-identity achievement. In particular, vocational identity associated most with the task of crystallizing tentative preferences and progressively less with the other tasks in the vocational development continuum. Interpretation of sex differences in the results led to recommendations for research on stability of vocational identity and the identity formation process. © 1985 Academic Press, Inc.

Holland, Gottfredson, and Power (1980) proposed that researchers use Erikson's (1959) formulation of the identity construct to examine the relation between vocational behavior and personality. To facilitate such research they linguistically explicated and operationally defined a new construct—vocational identity. They described vocational identity as "the possession of a clear and stable picture of one's goals, interests, and talents" (Holland, Gottfredson, & Power, 1980, p. 1191). They also devised a self-report scale to measure vocational identity (Holland, Daiger, & Power, 1980). They use the Vocational Identity Scale (VIS) to measure adjustment in a diagnostic scheme for career counseling.

Although vocational identity can be construed as a developmental variable, the majority of validity evidence for the construct and its associated scale comes from its relation to adjustment (Henkels, Spokane, & Hoffman, 1981; Holland, Daiger, & Power, 1980; Olson, Johnston, & Kunc, 1985). Vocational identity has been related to only one developmental variable other than age (Holland, Gottfredson, & Power, 1980). Grotevant and Thorbecke (1982) reported that for a sample of 83 students

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an earlier 23-item version of the VIS related to occupational identity as assessed with Marcia's (1966) structured interview. Their report dealt with only the occupational component and not with the sexual, ideological, or interpersonal components of ego identity.

To further explicate vocational identity and to learn about its relation to developmental variables, the present study tested the hypothesis that vocational identity relates to progress in ego-identity formation and degree of vocational development. With regard to specific tasks in the vocational development continuum, it was hypothesized that vocational identity relates most to the task of crystallizing career preferences, that is, indicating what one likes to do (Crites, 1969, p. 129). This hypothesis assumes that vocational identity is an evolving internal structure of self-concepts and occupational concepts that enables individuals to form tentative preferences regarding career field and level.

METHODS

Measures

The Vocational Identity Scale was used to measure the degree to which individuals possess a clear and stable picture of their goals, interests, personality, and talents. The VIS evolved from research on the correlates of indecision (Holland & Holland, 1977) and was derived from two earlier scales, the Vocational Decision Making Difficulty Scale (Holland, Gottfredson, & Nafziger, 1973) and the Identity Scale (Greenberger, Josselson, Knerr, & Knerr, 1975). Holland, Gottfredson, and Power (1980) concluded that these two antecedent scales use different item content to measure opposite poles of the same dimension. Items from the two scales were selected empirically to form the VIS. In taking the VIS, clients respond "true" or "false" to 18 items. The total score is simply the number of "false" responses. Holland, Daiger, and Power (1980) suggest the counselors use the VIS to assess the degree to which a client needs vocational assistance. They found that high scorers were rated as well-organized, self-confident, competent to handle life well, and not "at loose ends" or tense. They also report internal consistency reliability coefficients (KR-20) for the VIS that ranged from .86 to .89 for samples of male and female high school students and college students/workers.

Progress toward ego-identity achievement was measured with the Ego Identity Scale (Tan, Kendis, Fine, & Porac, 1977). The Ego Identity Scale (EIS) seems to be the best available self-report measure of identity achievement because it avoids mixing identity foreclosed versus achieved individuals at the high end of the scale (Marcia, 1980). The EIS consists of 12 items that reflect Erikson's characterizations of ego-identity achievement. Each item pairs two statements in a forced-choice format to minimize the effects of social desirability. Two sample items are

(a) "Generally speaking, a person can keep much better control of himself and of situations if he maintains an emotional distance from others" versus (b) "A person need not fear loss of control, of himself and of situations, simply because he becomes intimately involved with another person"; (a) "No matter how well I do a job, I always end up thinking that I could have done better" versus (b) "Whenever I complete a job that I have seriously worked on, I usually do not have doubts as to its quality." Both of these items are keyed (b). Tan and his colleagues (1977) reported a split-half reliability coefficient of .68. A factor analysis extracted one factor that accounted for 40% of the variance. The scale correlates negatively with dogmatism and positively with internal locus of control, intimacy, personally derived values, and political, moral, and occupational commitment.

The Medical Career Development Inventory (MCDI) was used to measure vocational development. A total score indicates degree of vocational development or place reached on the continuum of vocational development tasks from career crystallization to position stabilization. Seven scale scores indicate the focus of vocational development, that is, the tasks a student has completed, is coping with, and anticipates. Three scales measure crystallizing, specifying, and implementing medicine as a career choice and three other scales measure crystallizing, specifying, and implementing a specialty choice. The seventh scale measures stabilizing in a position. Each scale consists of five items which deal with reflection and action that address a particular task. For example, a career crystallization scale item is "Finding a career that will allow for expression of my interests and abilities." A sample career specification scale item is "Reassuring myself that medicine will be a suitable career for me." Students respond to each item on a 5-point Likert scale that ranges from 5 (*I have already done this*) to 1 (*I have not yet thought much about it*). Scale scores above 20 indicate that a task has been completed, scores from 15 to 19 indicate that a task is being dealt with, scores from 10 to 14 indicate readiness to deal with a task, and scores from 5 to 10 indicate lack of readiness to deal with a task. Savickas (1984) reported that internal consistency coefficients (α) for the seven scales range from .73 to .91 and that the total inventory had an α of .93. The same article reports support for the content, construct, and criterion-related validity of the MCDI.

Subjects and Procedures

The sample consisted of 143 students who were enrolled in the first 2 years of a 6-year integrated program that leads to both the bachelor of science and doctor of medicine degrees. The 83 male and 60 female students ranged in age from 17 to 20 with an average age of 19 years. The career choice of medicine has been very stable for students enrolled

in this program. Typically, only about 7% of the students do not graduate from medical school and most of these students withdraw for academic reasons. The sample was selected because the students were in training for the same career. This controlled for the variance attributable to career aspirations which has been found to relate to the VIS (Holland, Gottfredson, & Power, 1980). Variance on medical specialty choice probably did not reduce this control. Most students in the college phase of a BS/MD program have not made specialty choices and even if they have, these choices are very unstable (Markert, 1983). When the students in the present sample were asked about their specialty preference, 21 expressed a first choice with no alternatives, 20 expressed a first choice with alternatives, 95 expressed several alternatives but no final choice, and 6 were completely undecided.

The students were recruited during the spring semester from six sections of a required course. The students were told that the present study was one in a program of research on career counseling with medical students and how the previous studies had benefited students in earlier classes. They also were told that they would learn about the results of the study in a course they would take next fall and that individual feedback was available to students who requested it. The students were then asked to take the measures the following week during a regularly scheduled class period. Those who did not want to volunteer were told to skip that class period and were assured that they would not be penalized. A doctoral candidate administered the measures in a uniform manner during the next week.

Data Analyses

Descriptive statistics were calculated for each measure. Pearson product-moment correlation coefficients were calculated among the variables to test the hypotheses. Sex differences could moderate the relationships between the variables, so the descriptive statistics and zero-order correlation coefficients were also calculated separately for males and females. To determine if males and females attained similar mean scores on the VIS by responding to different items, a 2×2 (Sex \times True/False Response) χ^2 analysis was conducted for each of the 18 VIS items.

RESULTS

Of the 200 students enrolled in the six sections of the course, 144 participated in the study and of those, 143 produced usable data. Table 1 reports the means, standard deviations, and correlations for the variables. The means and standard deviations for the MCDI were similar to those reported in other studies. The students were dealing with the tasks of crystallizing, specifying, and implementing a career choice; they were ready to begin dealing with the tasks of crystallizing and specifying a

TABLE 1
Means, Standard Deviations, and Intercorrelations of the Variables for 143 Students

Scale	Sample		Male (N = 83)		Female (N = 60)		VIS	EIS	MCDI	CC	CS	CI	OC	OS	OI	PS	Sex
	Mean	SD	Mean	SD	Mean	SD											
Vocational Identity Scale (VIS)	13.62	3.05	13.06	3.08	14.41	3.00	1.00										
Ego Identity Scale (EIS)	8.60	1.95	8.34	1.94	9.02	1.86	.44 ^c	1.00									
Medical Career Development Inventory (MCDI)	96.25	15.93	94.82	15.39	99.63	16.20	.40 ^c	.26 ^b	1.00								
MCDI Career Crystallization (CC)	18.46	3.39	18.10	3.71	18.89	3.01	.43 ^c	.18 ^a	.63 ^c	1.00							
MCDI Career Specification (CS)	18.90	3.18	18.38	3.18	19.74	2.84	.32 ^c	.30 ^c	.55 ^c	.37 ^c	1.00						
MCDI Career Implementation (CI)	17.25	3.77	17.04	3.92	17.90	3.50	.32 ^c	.25 ^b	.70 ^c	.42 ^c	.25 ^b	1.00					
MCDI Occupational Crystallization (OC)	12.18	3.64	11.71	3.29	13.13	3.88	.25 ^b	.15	.76 ^c	.40 ^c	.31 ^c	.49 ^c	1.00				
MCDI Occupational Specification (OS)	11.94	3.48	11.92	3.37	12.18	3.63	.21 ^a	.07	.73 ^c	.33 ^c	.29 ^c	.38 ^c	.52 ^c	1.00			
MCDI Occupational Implementation (OI)	8.63	2.97	8.71	2.82	8.80	3.21	.17 ^a	.15	.69 ^c	.16 ^a	.19 ^a	.38 ^c	.47 ^c	.51 ^c	1.00		
MCDI Position Stabilization (PS)	9.00	3.31	9.26	3.50	8.80	3.11	.14	.05	.62 ^c	.19 ^a	.20 ^a	.26 ^b	.33 ^c	.41 ^c	.60 ^c	1.00	
Sex							.22 ^b	.16 ^a	.15	.11	.22 ^b	.11	.19 ^a	.04	.02	-.07	1.00

^a $p < .05$.

^b $p < .01$.

^c $p < .001$.

specialty choice; and they were not yet ready to deal with the task of implementing a specialty choice.

The VIS related significantly to both the EIS ($r = .44, p < .001$) and the MCDI ($r = .40, p < .001$). The MCDI and EIS correlated .26 ($p < .01$). Of the seven vocational development tasks measured by the MCDI, the VIS had its strongest association with the first task—crystallizing a career choice ($r = .43, p < .001$). Furthermore, the correlations of the VIS with the tasks in the vocational development continuum progressively decreased from the first to the last task.

Four of the 10 measures had a low but significant relation to sex (see Table 1). Separate analyses by sex showed that females scored higher on 9 of the 10 measures. According to the binomial distribution, the likelihood of this occurring by chance is less than .01. Univariate t tests for sex difference were calculated on the 10 measures. The results indicated that females scored significantly higher than males on the VIS ($t = -2.47, p < .05$), the MCDI career specification scale ($t = -2.57, p < .01$), and the MCDI specialty crystallization scale ($t = -2.29, p < .05$). Comparison of the correlations among the 10 measures for males and females showed that the variables were more strongly associated for females in 41 of the 45 pairs. However, only 2 of the 45 pairs of coefficients showed significant sex differences. The correlation of the EIS with the MCDI career specification scale was .49 ($p < .001$) among males and $-.03$ (n.s.) among females ($z = 3.27, p < .01$). The correlation of the EIS with the MCDI career crystallization scale was .05 (n.s.) among males and .38 ($p < .05$) among females ($z = 2.03, p < .05$).

The χ^2 analyses for sex differences in means for each of the 18 VIS items showed that females were significantly more likely than males to respond false to three items: "I need reassurance that I have made the right choice of occupation" ($\chi^2 = 4.44, p < .05$), "I am concerned that my present interests may change over the years" ($\chi^2 = 6.66, p < .01$), and "I need to find out what kind of career I should follow" ($\chi^2 = 5.55, p < .05$).

DISCUSSION

Vocational identity related to the other developmental variables as hypothesized. It had a moderate association with both degree of vocational development and ego-identity achievement. Students who had a clearer picture of their vocational goals, abilities, and talents also were dealing with tasks further along the continuum of vocational development and had made more progress in ego-identity achievement. The pattern of correlations among the three variables also supports the idea that vocational identity is a composite construct. Vocational identity had a moderate association with both vocational development and ego identity, whereas

vocational development had a weak association with ego identity (Haase, Waechter, & Solomon, 1982). This pattern suggests that vocational identity is an aptly named construct because it includes both vocational and identity components which themselves are distinct.

Along the continuum of vocational development tasks, vocational identity related most to crystallizing career preferences and related progressively less to tasks further along the continuum. This finding fits with vocational development theory because vocational identity can be the substantive basis for crystallizing preferences about career field and level. The association between vocational identity and the other exploration stage tasks indicates that vocational identity relates to dealing with these tasks but not as much as it relates to crystallizing career preferences. For instance, vocational identity shared almost twice as much common variance with career crystallization (19%) as it shared with career specification (10%), the next task in the developmental continuum. This finding makes sense because committing oneself with some certainty to a choice requires much more than a vocational identity. In particular, it requires compromise with reality factors such as training and employment opportunities. For example, a student who cannot afford college may prefer a career in medicine but choose a career in mechanics.

In addition to showing how vocational identity relates to vocational development and ego identity, the present study raises some interesting questions about sex differences. Although the differences were small, females scored higher than males on 9 of the 10 measures. Three of these differences were statistically significant. This could be due to Type I error, yet as a set these sex differences form a coherent and readily interpretable pattern. Females showed more commitment to a career in medicine, greater readiness to explore specialty alternatives, and better defined vocational identities. In addition, the VIS item analyses indicated that the sex difference in vocational identity achievement was probably due to identity stability not identity clarity. Females were more self-assured about the temporal stability of both their interests and career choice. Maybe females need a more stable vocational identity to choose male-dominated professions and to cope with sex-role stereotypes as they implement these choices. This interpretation should be considered with regard to research reports about self-concept and career orientation in women (Fitzgerald & Betz, 1983) and studied using larger samples of males and females with diverse career orientations and choices.

The pattern of correlations among the variables raises a second question about sex differences in identity. In the present sample, decisiveness and commitment related to ego identity for males but not females whereas exploration of self and careers related to ego identity for females but not males. This conclusion may hold only for students who choose medicine or be due to Type I error. Nevertheless, it coincides with a finding

reported by Grotevant and Thorbecke (1982) and conforms with reports about sex differences in identity development process and content (Schieffelin & Marcia, 1985). Thus, this finding indicates a need to study how exploration and decisiveness contribute to identity formation for males and females.

In sum, this study found that vocational identity related to both vocational development and ego identity. The association of vocational identity with ego identity supports the proposal that the vocational identity construct be used to increase the linkage between vocational and personality psychology (Holland, Gottfredson, & Power, 1980). The association of vocational identity with vocational development may be even more heuristic. The construct of vocational identity comes from the trait-and-factor school of career counseling. Holland, Daiger, and Power (1980) present it as an adjustment variable in a diagnostic scheme for career counseling. Because it also is a developmental variable, vocational identity may be a unifying construct that researchers can use in trying to integrate the differential (Holland, 1985), decisional (Mitchell & Krumboltz, 1984), and developmental (Jepsen, 1984) perspectives on vocational choice.

REFERENCES

- Crites, J. O. (1969). *Vocational psychology*. New York: McGraw-Hill.
- Erikson, E. H. (1959). Identity and the life cycle. *Psychological Issues*, 1, 1-171.
- Fitzgerald, L. F., & Betz, N. E. (1983). Issues in the vocational psychology of women. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology: Vol. 1. Foundations* (pp. 83-159). Hillsdale, NJ: Erlbaum.
- Greenberger, E., Josselson, R., Knerr, C., & Knerr, B. (1975). The measurement and structure of psychosocial maturity. *Journal of Youth and Adolescence*, 4, 127-143.
- Grotevant, H. D., & Thorbecke, W. L. (1982). Sex differences in styles of occupational identity formation in late adolescence. *Developmental Psychology*, 18, 396-405.
- Haase, R. F., Waechter, D. M., & Solomon, G. S. (1982). How significant is a significant difference: Average effect size of research in counseling psychology. *Journal of Counseling Psychology*, 29, 58-65.
- Henkels, M. T., Spokane, A. R., & Hoffman, M. A. (1981). Vocational identity, personality, and preferred mode of interest inventory feedback. *Measurement and Evaluation in Guidance*, 14, 71-76.
- Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and work environments*. Englewood Cliffs, NJ: Prentice-Hall.
- Holland, J. L., Daiger, D. C., & Power, P. G. (1980). *My Vocational Situation*. Palo Alto, CA: Consulting Psychologists Press.
- Holland, J. L., Gottfredson, G. D., & Nafziger, D. H. (1973). *A diagnostic scheme for specifying vocational assistance* (Rep. No. 164). Baltimore: Johns Hopkins University, Center for Social Organization of Schools.
- Holland, J. L., Gottfredson, D. C., & Power, P. G. (1980). Some diagnostic scales for research in decision making and personality. *Journal of Personality and Social Psychology*, 39, 1191-1200.
- Holland, J. L., & Holland, J. E. (1977). Vocational indecision: More evidence and speculation. *Journal of Counseling Psychology*, 24, 404-414.
- Jepsen, D. A. (1984). The developmental perspective on vocational behavior: A review of

- theory and research. In S. D. Brown & R. B. Lent (Eds.), *Handbook of counseling psychology* (pp. 178–215). New York: Wiley.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551–558.
- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159–187). New York: Wiley.
- Markert, R. J. (1983). Change in specialty choice during medical school. *Journal of Family Practice*, 17, 295–300.
- Mitchell, L. K., & Krumboltz, J. D. (1984). Research on human decision making: Implications for career decision making and counseling. In S. D. Brown & R. B. Lent (Eds.), *Handbook of counseling psychology* (pp. 238–280). New York: Wiley.
- Olson, S. K., Johnston, J. A., & Kuncie, J. (1985). Validity of My Vocational Situation for homemakers and displaced homemakers. *Measurement and Evaluation in Counseling and Development*, 18, 17–25.
- Savickas, M. L. (1984). Construction and validation of a physician career development inventory. *Journal of Vocational Behavior*, 25, 106–123.
- Schiedel, D. G., & Marcia, J. E. (1985). Ego identity, intimacy, sex role orientation, and gender. *Developmental Psychology*, 21, 149–160.
- Tan, A. L., Kendis, R. J., Fine, J. T., & Porac, J. (1977). A short measure of Eriksonian ego identity. *Journal of Personality Assessment*, 41, 279–284.

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