DOCUMENT RESUME

ED 414 542 CG 028 203

AUTHOR Hartung, Paul J.
TITLE Achieving Career Maturity.
PUB DATE 1997-08-00
NOTE 15p.; Paper presented at the Annual Meeting of the American Psychological Association (105th, Chicago, IL, August 15-19, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; *Career Development; Careers; Correlation; Decision Making; High School Students; High Schools; *Personality Traits; *Sex Differences; Student Attitudes; *Vocational Maturity
IDENTIFIERS *Career Salience; Gender Issues

ABSTRACT

Gaining career decision-making and world-of-work knowledge, and increasing career planning and exploratory behavior represent key tasks of adolescent career development. To better understand this process, the extent to which personality type relates to career development in high school students is examined in this report. A cohort of 64 high school students (28 females, 36 males) completed measures of career maturity, vocational interests, and life-role salience during their freshman and sophomore years. Results of these measures indicated sex differences in scale scores on the career maturity measure, revealing higher levels of cognitive career maturity among the females than among the males sampled. However, career maturity scores did not increase commensurate with grade level over the one-year period of the study. The lack of significant increases here indicates a deficit in this progress in the cohort and suggests a need for preventive assistance. Some scale scores on the career maturity measure correlated significantly with scores on the interest and salience measures to support hypothesized relationships between career development and personality and role salience. The trend of increases remains consistent with Super's career maturity model. (RJM)

Achieving Career Maturity

Paul J. Hartung
Behavioral Sciences Department
Northeastern Ohio Universities College of Medicine
Rootstown, OH 44272-0095

Abstract

This research examined rates of change in and personality and role correlates of career development. A cohort of 64 high school students (28 females, 36 males) completed measures of career maturity, vocational interests, and life-role salience during their freshman and sophomore years. Results indicated sex differences in scale scores on the career maturity measure, specifically revealing higher levels of cognitive career maturity among the females than among the males sampled. Career maturity scores did not increase commensurate with grade level over the one-year period of the study. Some scale scores on the career maturity measure correlated significantly with scores on the interest and salience measures to support hypothesized relationships between career development and personality and role salience.

Paper presented at the 105th annual meeting of the American Psychological Association, Chicago, IL, August 15-19, 1997.

Achieving Career Maturity

Administering the Career Development Inventory (CDI; Super, Thompson, Lindeman, Jordaan, & Myers, 1979) helps counselors determine whether individuals need remedial, preventive, or developmental assistance (Thompson & Lindeman, 1981). Individuals need remedial help when they show extant deficits in areas measured by the CDI such as career planning, decision-making skills, and knowledge of the world of work. Developmental assistance involves helping individuals who show satisfactory career progress on the CDI to achieve their full potentials for growth via activities such as values clarification and interpersonal skills training. Individuals need preventive assistance, according to Thompson and Lindeman, "when a repeated administration of the CDI after a year or two shows that the student's scores have not increased with age and experience, as they should, but have stayed the same or begun to decline" (p. 7).

Counselors and researchers have typically used the CDI for remedial and developmental purposes. That is because they most often index degree of career choice readiness by administering the CDI at a single point in time only. The extant literature on the CDI (Savickas & Hartung, 1996; Thompson & Lindeman, 1984) contains no known studies that use a repeated measures design to examine whether and how CDI scores change over extended (i.e., more than two or three week) periods of time. The present study, derived from the first year of a three-year career development research project initiated in April 1995, therefore sought to use the CDI for preventive diagnosis. This involved taking a different approach by measuring career development at different points in time, thereby indexing longitudinal rate of educational and vocational choice readiness.

A review of the CDI literature identified longitudinal and predictive validity studies as an important research need (Savickas & Hartung, 1996). Responding to this need, one recently reported study (Lewis, Savickas, & Jones, 1996) found that career development, as measured by CDI scores, significantly predicts success in medical school. A longitudinal approach using a repeated measures design could further be used to identify whether and how students regress, maintain, or develop in their readiness to make educational and/or vocational choices. Counselors could benefit from such information in their efforts to provide appropriate career services to students. The present study also further tests Super's (1974) structural career maturity model by charting high school students' career progress over a one-year period and examining two specific variables that might relate to such progress.

Correlates of Career Development

Variables associated with the development of career maturity have been identified in the literature (Savickas & Hartung, 1996). Two of these variables

include personality type as defined in Holland's (1985a) RIASEC model and Super's (1990) role salience construct. The present study included separate measures of role salience and Holland type to further assess the relationship of these variables to career development in high school students.

In two parallel studies (Nevill & Super, 1988; Super & Nevill, 1984), scores on a measure of commitment to work and commitment to home and family roles correlated significantly and positively with career development variables measured by the CDI. Such findings support the need to assess role salience concurrent with and as a crucial step in interpreting CDI scores (Super, Savickas, & Super, 1996). Research also suggests that level of career maturity may relate to personality type (Healy & Mourton, 1984). For example, Healy and Mourton found that college students with high Investigative scores on the Self-Directed Search (SDS) also scored high on various career maturity criteria (e.g., career planning; and congruence between SDS summary code and CDI preferred occupational group). The present study attempted to build on this previous work by examining the extent to which personality type relates to career development in high school students.

Hypotheses

Three hypotheses were set up and tested as follows:

H1. Significant grade and sex effects will occur in students' CDI scores. Consistent with Super's (1974) theory and previous findings (Wallace-Broscious, Serafica, & Osipow, 1994), students should produce significantly higher mean CDI scores in later grades than they do in earlier grades. Also, based on prior findings (Super & Nevill, 1984; Thomason & Winer, 1994; Wallace-Broscious et al., 1994), females will score significantly higher on the CDI than will males.

H2. The second hypothesis follows from an earlier study of personality and career maturity (Healy & Mourton, 1984). Specifically, different vocational personality types as defined in Holland's (1985b) RIASEC model will exhibit different levels of career maturity consistent with their personality characteristics.

H3. Commitment to, participation in, and value expectations for work and for home and family roles, as measured by an inventory, relate positively to career development. Super and Nevill (1984) proposed that individuals "who think positively about these roles, whether girls or boys, may tend to look ahead more than others in both the family and work spheres" (p. 42). Therefore, higher Commitment, Participation, and Value Expectation scores should relate to higher scores on a measure of career maturity.

Method

Participants

From a class total of 103 ninth-grade students at a small, semi-rural high school in the midwestern United States, 87 students (84% of the total) participated in the

first data collection. Of the 87 students, 23 did not participate in the second data collection of the study one year later producing an attrition rate of 26%. Consequently, a cohort of 64 students (28 females, 36 males) participated in both data collections. These students comprised a convenience sample for purposes of this exploratory study and had mean ages of 14.8 years in grade nine and 15.7 years in grade ten. Ethnically, 98.4% of the sample was White.

Measures

Career Development Inventory. The 120-item CDI Form S measured career maturity. Part I, Career Orientation, contains four scales measuring Career Planning (CP), Career Exploration (CE), Career Decision Making (DM), and World-of-Work Information (WW). Part II measures Knowledge of Preferred Occupational Group (PO). Given the manual's and reviewers' (Pinkney & Bozik, 1994) cautions against using the PO scale with students in grade ten and younger, it was not used in the present study. The CDI yields individual scale scores plus three composite scale scores: Career Development Attitudes (CDA) combines CP and CE; Career Development Knowledge and Skills (CDK) combines DM and WW; and Career Orientation Total (COT) combines CDA and CDK.

Alpha coefficients range from .75 to .90 for the attitude (CP and CE) scales and from .53 to .87 for the cognitive (DM and WW) scales. The CDI has adequate test-retest reliability and concurrent and construct validity (Savickas & Hartung, 1996). Some evidence for the CDI's predictive validity exists (e.g., Lewis et al., 1996), but Savickas and Hartung called for more studies of the CDI's use as a predictive tool.

Vocational Preference Inventory. The 160-item, eleven-scale VPI (Holland, 1985b) operationally defined Holland's (1985a) RIASEC model of vocational personalities and work environments. Its first six scales measure Realistic, Investigative, Artistic, Social, Enterprising, and Conventional personality and occupational dimensions. Five other scales measure Self-Control, Masculinity-Femininity, Infrequency (preference for unpopular occupations), Status, and Acquiescence. Respondents indicate on a separate answer sheet their liking, disliking, or indifference for each occupation listed on a reusable test form. A template facilitates manual scoring of each VPI scale. Higher scores on any RIASEC scale indicate stronger resemblance to the corresponding type.

The RIASEC scales have mean internal consistency coefficients of .88 and the VPI has moderate to high test-retest reliability (Holland, 1985b). Cronbach's alpha coefficients in the present sample reached a median of .84 for the RIASEC scales. Holland provides evidence for the VPI's construct and criterion-related validity.

Salience Inventory. As a second concurrent measure, the 170-item SI operationally defined career salience. The SI measures the relative importance of five life roles: student, worker, citizen, homemaker (including spouse and parent), and leisurite.

Three composite scales -- Participation, Commitment, and Value Expectations -- assess each role thereby yielding 15 subscale scores plus the composite scores. The Participation scale uses 50 items to assess role behaviors performed presently or in the recent past. The Commitment scale contains 50 items measuring attitudes toward each role. The Value Expectations scale contains 70 affectively-based items measuring the anticipated degree to which each life role will allow values to be realized. Higher scores on any one scale indicate more salience for the corresponding role. From the SI, only data from the Working and Home and Family subscales were used in the present study.

Test-retest reliabilities range from .81 to .94 for college students and from .82 to .95 for adults (Nevill & Super, 1986). The sample in the present study produced a median Cronbach's alpha coefficient of .90 for the six SI scales used. Nevill and Super judged the SI to have acceptable content, construct, and concurrent validity.

Procedure

Two copies of an informed consent form were mailed to the parents or legal guardian of each prospective participant in each year of the study. They were asked to read and sign one copy of the form and return it to the high school, keeping the other copy for their records. Before completing the measures, students were informed about the study and gave their written assent. Participants responded to all measures and a brief demographic questionnaire in group settings at the end of their grade nine and grade ten years in April 1995 and April 1996, respectively. The principal investigator of the study coordinated and administered all measures, assisted by high school personnel. Due to scheduling issues, for the first data collection 50 students completed the measures in a medical school lecture hall and 37 students completed the measures in their high school library. For the second data collection, all participants responded to the measures in a medical school lecture hall. After testings at the medical school, students received a 15-minute impromptu talk based on their questions about the medical school. They also received a pizza lunch and a brief tour of the medical school campus. Aside from possible fatigue effects due to completing three measures, testing proceeded smoothly.

Data Analysis

Scale means and standard deviations on all measures were computed separately for grade level and sex. To test for grade and gender differences on the CDI, t-tests of independent means were conducted for each scale of the measure. Effect sizes were computed for any significant mean differences that were found in order to determine the magnitude of those differences. A zero-order correlation matrix was produced for all CDI scales with all scales of the criterion measures to test for statistically significant intercorrelations. Data from the two testings of the study

were combined for the correlational analyses by computing the mean scores on each measure from time one (grade nine) and time two (grade ten).

Results

Mean scores and standard deviations on all measures appear in Table 1. T-test results indicated three significant sex differences in CDI scale mean scores at the .05 level. Table 1 shows that females scored significantly higher on DM in grade nine (M = 97.9, SD = 17.2) and grade ten (M = 107.0, SD = 18.6) and significantly higher on CDK in grade nine (M = 96.3, SD = 16.4) and grade ten (M = 101.0, SD = 24.6) than did males on these respective scales in grade nine (M = 87.6, SD = 20.3 for DM; M = 86.2, SD = 20.7 for CDK) and grade ten (M = 89.2, SD = 20.2 for DM; M = 86.6, SD = 25.1 for CDK). Moreover, the effect sizes of these differences proved moderate to high (Cohen, 1988) for DM (grade nine Effect Size = .52; grade ten Effect Size = .84) and moderate for CDK (grade nine Effect Size = .52; grade ten Effect Size = .56). Table 1 also indicates that females in grade nine scored significantly higher on COT (M = 100.2, SD = 17.3) than did males (M = 89.1, SD = 18.8) and the magnitude of this difference proved moderate (Effect Size = .59). Although students' mean scores on every CDI scale increased over the one-year period of the study, none of these differences proved statistically significant, indicating no grade differences in CDI scores. In sum, these findings partially support H1 by indicating significant sex differences in CDI scale mean scores. Support for hypothesized grade differences did not emerge from the results.

Insert Table 1 About Here

Table 2 presents Pearson product-moment correlation coefficients between the CDI scales and the VPI - RIASEC scales and SI - Work and SI - Home and Family scales. Six of the seven CDI scales correlated significantly with various RIASEC scales. Interestingly, WW did not correlate significantly with any RIASEC scale. Also, the Realistic scale did not correlate significantly with any CDI scale. In contrast, however, significant correlations in the expected directions emerged between (a) Investigative and CP, CE, DM, CDA, CDK, and COT (r = .20 to .26, median = .24); (b) Social and CP, CE, DM, CDA, and COT (r = .18 to .24, median = .22); (c) Enterprising and CP, DM, CDA, and COT (r = .18 to .22, median = .20); (d) Artistic and CE (r= .20) and CDA (r = .21); and (e) Conventional and CP (r = .20). These findings support H2. However, the low magnitude of the coefficients suggests that these relationships may be of little practical significance.

Insert Table 2 About Here

Somewhat stronger relationships emerged between SI and CDI scales thereby lending support to H3. As seen in Table 2, SI Participation in Home and Family (PH), Commitment to Work (CW), and Commitment to Home and Family (CH) each correlated significantly at the .01 level with all CDI scales (r = .20 to .48, median = .31). SI Participation in Work (PW) correlated significantly at the .05 level or better with CP, CE, CDA, and COT (r = .20 to .30, median = .22). SI Value Expectations for Work (VEW) and Value Expectations for Home and Family (VEH) correlated significantly with CE, WW, CDA, CDK, and COT (r = .20 to .40, median = .28).

In all but two cases, when a VPI or SI scale correlated significantly with an individual CDI scale it also correlated significantly, as would be expected, with the CDI composite scale that contains the particular CDI individual scale. Both of these cases involved significant correlations between VPI scales and DM with no significant correlation between these scales and CDK which contains DM. In one case, VPI-E correlated significantly with DM (r = .18) but not with CDK. In the other case, VPI-S correlated significantly with DM (r = .21) but not with CDK. The particularly low magnitude of these coefficients coupled with the very low magnitude and statistically not significant coefficients for E and S with WW, which also comprises CDK, may account for the lack of significant relationships between these VPI scales and CDK.

Discussion

Gaining career decision-making and world-of-work knowledge, and increasing career planning and exploratory behavior represent key tasks of adolescent career development (Super, 1974). The lack of significant increases in CDI scale mean scores over a one-year period indicates a deficit in this progress in the cohort under study and suggests a need for preventive assistance (Thompson & Lindeman, 1981). However, this apparent deficit may simply reflect the fact that only 12 months elapsed between testings and support the need for monitoring and subsequent testing after more time has passed. Further, the trend of increases on every CDI scale from grade nine to grade ten, although not statistically significant, remains consistent with Super's (1974) career maturity model and is encouraging given that the students' scores increased over a span of only one year. As the cohort's age and experience level increases over time, greater and statistically significant increases in their CDI mean scores will be expected to emerge.

Female students produced higher mean scores than male students on each CDI scale and three of these differences reached statistical significance. In support of H1, these results proved consistent with and extend previous findings of sex differences in CDI scores (Super & Nevill, 1984; Thomason & Winer, 1994; Wallace-Broscious et al., 1994). The higher female mean scores on DM, CDK, and COT in the current sample suggest that high school girls have higher levels of cognitive career maturity

than do high school boys. Despite the fact that CP and CE in part comprise COT, no significant gender differences in attitudinal maturity resulted.

Consistent with previous findings (Healy & Mourton, 1984), specific career development dimensions as measured by the CDI related significantly to scores on various VPI - RIASEC scales (H2). A greater number of significant relations resulted in the present sample, however, compared to Healy and Mourton's sample. The strongest and most numerous relationships occurred between pairings of CDI scales with the Investigative and Social scales, followed by Enterprising, Artistic, and Conventional. Investigative types overall appear more career mature than do other Holland types based on individual scale comparisons and on their higher COT scores. This finding supports Healy and Mourton's suggestion that counselors "probe whether clients with low I (scores) are lagging in their career development" (p. 12). This finding also seems congruent with Investigative types' inquiring and exploratory nature (Holland, 1985b). As one exception to Investigative types appearing more career mature, Enterprising types appear slightly more planful which also seems consistent with Holland's description of this type as "ambitious, aggressive, and energetic" (p. 22). It may be that Enterprising types more actively organize and prepare for participating in extra-curricular activities, talking about career plans with adults, and obtaining part-time or summer jobs through which they can explore career and work options. Realistic failed to correlate significantly with any CDI scale and showed a trend of inverse relationships with CDI career maturity dimensions. This trend, although not statistically significant, may reflect Realistic types' greater concern with practical, everyday matters and their tendency toward being, according to Holland, "asocial, uninvolved, and uninsightful" (p. 19). Such characteristics may inhibit their career maturity (e.g., they may not have talked to others about careers nor learned necessary career decision-making principles). Future research could examine this hypothesis.

Home and family role salience and work role salience related lowly to moderately with career maturity dimensions measured by the CDI. Individuals with a greater commitment to work and to home and family roles, and who participate more in home and family roles appear to possess more career maturity. Moreover, the median coefficient of $r = .41$ between COT and each SI scale suggests that individuals higher on any role salience dimension (i.e., participation, commitment, or values expectations) are more career mature. These findings support Super and Nevill's (1984) hypothesis that thinking positively about work as well as about home and family relates directly to career mature attitudes and knowledge.

The present findings support the use of the CDI as a preventive diagnostic tool in career counseling. For example, because the cohort scored below national CDI percentile norms on CDK, they may need and benefit from additional career interventions. These could be aimed at learning and practicing basic career decision-

making principles and understanding the breadth of occupations available to explore as well as learning about the structure and function of the work world (Niles & Usher, 1993). Similarly, their lower than average scores on COT indicate a need to increase their overall levels of both attitudinal and cognitive career maturity. Determining if the present cohorts' scores increase as they progress through high school awaits further study. Such study should include examining cognitive correlates of their career development including grade-point averages and achievement test scores.

Certainly, the effects of a small and homogeneous sample compounded by a disappointingly high attrition rate constrain the practical and statistical significance of the correlational data. Particularly, the small sample size decreases the stability of the product-moment coefficients reported. The data should thus be interpreted cautiously. Further research with larger sample sizes should produce more conclusive and generalizable findings regarding personality and role correlates of career development. The present findings of this exploratory study do, however, offer some initial and needed data about rates of career development and encourage further inquiry in this area. Additionally, subsequent testings with the present cohort and future longitudinal studies using larger and more diverse samples may provide a better test of Super's (1974) career maturity model.

References

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. San Diego, CA: Academic Press.

Healy, C. C., & Mourton, D. L. (1984). The Self-Directed Search personality scales and career maturity. Measurement and Evaluation in Guidance, 17, 3-14.

Holland, J. L. (1985a). Making vocational choices: A theory of vocational personalities and work environments. Englewood Cliffs, NJ: Prentice-Hall.

Holland, J. L. (1985b). Vocational Preference Inventory. Odessa, FL: Psychological Assessment Resources, Inc.

Lewis, D. M., Savickas, M. L., & Jones, B. J. (1996). Career development predicts medical school success. Journal of Vocational Behavior, 49, 86-98.

Nevill, D. D., & Super, D. E. (1986). Salience Inventory: Theory, application, and research. Palo Alto, CA: Consulting Psychologists Press.

Nevill, D. D., & Super, D. E. (1988). Career maturity and commitment to work in university students. Journal of Vocational Behavior, 32, 139-151.

Niles, S. G., & Usher, C. H. (1993). Applying the Career-Development Assessment and Counseling Model to the case of Rosie. Career Development Quarterly, 42, 61-66.

Pinkney, J. W., & Bozik, C. M. (1994). Review of the Career Development Inventory. In J. Kapes, M. Mastie, & E. Whitfield (Eds.) A counselor's guide to career assessment instruments (3rd Ed.), pp. 264-267. Alexandria, VA: National Career Development Association.

Savickas, M. L., & Hartung, P. J. (1996). The Career Development Inventory in review: Psychometric and research findings. Journal of Career Assessment, 4, 171-188.

Super, D. E. (Ed.). (1974). Measuring vocational maturity for counseling and evaluation. Washington, D.C.: National Vocational Guidance Association.

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown, L. Brooks, and Associates (Eds.), Career Choice and Development (2nd Ed.; pp. 197-261). San Francisco: Jossey-Bass.

Super, D. E., & Nevill, D. D. (1984). Work role salience as a determinant of career maturity in high school students. Journal of Vocational Behavior, 25, 30-44.

Super, D. E., & Nevill, D. D. (1986). Salience Inventory. Palo Alto, CA: Consulting Psychologists Press.

Super D. E., Savickas, M. L., & Super, C. M. (1996). The life-span, life-space approach to careers. In D. Brown & L. Brooks (eds.) Career choice and development: Applying contemporary theories to practice (3rd ed.) pp. 121-178. San Francisco, CA: Jossey-Bass.

Super, D. E., Thompson, A. S., Lindeman, R. H., Jordaan, J. P., & Myers, R. A. (1979). Career Development Inventory: School form. Palo Alto, CA: Consulting Psychologists Press.

Thomason, , S. L., & Winer, J. L. (1994). Career maturity and familial independence among college freshmen. Journal of Career Development, 21, 23-35.

Thompson, A. S., & Lindeman, R. H. (1981). Career Development Inventory: User's manual. Palo Alto, CA: Consulting Psychologists Press.

Thompson, A. S., & Lindeman, R. H. (1984). Career Development Inventory: Technical manual. Palo Alto, CA: Consulting Psychologists Press. Wallace-Broscious, A., Serafica, F. C., & Osipow, S. H. (1994). Adolescent career development: Relationships to self-concept and identity status. Journal of Research on Adolescence, 4, 127-149.

Table 1
Means and Standard Deviations on All Measures by Grade Level and Sex

	Grade Nine				Grade Ten			
	Females		Males		Females		Males	
Measure	M	SD	M	SD	M	SD	M	SD
CDI								
CP	101.0	15.1	95.6	14.1	104.0	19.0	101.5	18.1
CE	107.5	17.6	100.7	19.9	111.9	15.6	106.1	19.6
DM	97.9[a]	17.2	87.6	20.3	107.0[a]	18.6	89.2	20.2
WW	95.0	19.6	86.8	20.9	97.5	23.7	87.1	24.9
CDA	105.1	16.4	97.7	16.5	109.3	17.9	104.5	19.6
CDK	96.3[a]	16.4	86.2	20.7	101.0[a]	24.6	86.6	25.1
COT	100.2[a]	17.3	89.1	18.8	104.4	25.5	92.2	26.3
VPI								
R	1.2	1.5	3.6	3.1	1.4	1.9	4.1	3.5
I	3.0	3.2	4.2	3.9	3.8	4.5	5.4	4.9
A	2.2	2.3	2.1	2.4	2.9	4.0	3.4	3.7
S	4.3	2.7	1.8	2.2	4.7	3.9	2.8	3.2
E	2.8	2.9	2.0	2.1	3.4	3.5	2.6	3.3
C	1.9	3.2	.7	1.0	2.0	2.9	1.5	2.6
SI								
PW	2.3	.6	2.4	.7	2.2	.6	2.4	.7
PH	2.4	.6	2.4	.8	2.6	.6	2.4	.7
CW	2.9	.7	3.0	.6	3.2	.6	3.0	.8
CH	3.1	.7	2.9	.8	3.4	.6	3.0	1.0
VEW	4.1	.8	4.0	.9	4.2	1.1	4.0	1.0
VEH	4.3	.8	4.0	1.1	4.3	1.1	4.0	1.1

Note: CDI = Career Development Inventory; CP = Career Planning, CE = Career Exploration, DM = Decision Making, WW = World-of-Work Information, CDA = Career Development Attitudes, CDK = Career Development Knowledge, COT = Career Orientation Total; VPI = Vocational Preference Inventory; R = Realistic, I = Investigative, A = Artistic, S = Social, E = Enterprising, C = Conventional; SI = Salience Inventory; PW = Participation in Work, PH = Participation in Home, CW = Commitment to Work, CH = Commitment to Home, VEW = Value Expectations for Work, VEH = Value Expectations for Home.
[a] = significant mean score difference by sex ($p < .05$).

Table 2
Intercorrelations Between Scales of the Measures

	CDI Scale						
	CP	CE	DM	WW	CDA	CDK	COT
VPI Scale							
R	.05	-.07	-.06-	.10	-.01	-.10	-.10
I	.20*	.23**	.23**	.20	.25**	.21*	.26**
A	.15	.20*	.10	.10	.21*	.10	.17
S	.18*	.23**	.21*	.13	.24**	.20	.22*
E	.22*	.15	.18*	.10	.22*	.13	.18*
C	.20*	.10	.14	.10	.20	.11	.15
SI Scale							
PW	.22*	.20*	.11	.10	.23**	.15	.30**
PH	.33**	.33**	.23**	.24**	.38**	.30**	.44**
CW	.24**	.20**	.30**	.31**	.25**	.35**	.42**
CH	.25**	.31**	.29**	.44**	.32**	.42**	.48**
VEW	.16	.20*	.20	.30**	.21*	.30**	.40**
VEH	.16	.27**	.17	.30**	.26**	.29**	.37**

Note: CDI = Career Development Inventory; CP = Career Planning, CE = Career Exploration, DM = Decision Making, WW = World-of-Work Information, CDA = Career Development Attitudes, CDK = Career Development Knowledge, COT = Career Orientation Total; VPI = Vocational Preference Inventory; R = Realistic, I = Investigative, A = Artistic, S = Social, E = Enterprising, C = Conventional; SI = Salience Inventory; PW = Participation in Work, PH = Participation in Home, CW = Commitment to Work, CH = Commitment to Home, VEW = Value Expectations for Work, VEH = Value Expectations for Home. Two-tailed analyses; *p < .05, **p < .01.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: (1) CAREER SALIENCE AND GENDER-ROLE ATTITUDES IN MEDICAL STUDENTS (2) ACHIEVING CAREER MATURITY

Author(s): Paul Hartung + Jim Rogers ; Paul Hartung

Corporate Source:

Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following two options and sign at the bottom of the page.

☑

Check here
For Level 1 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical) *and* paper copy.

The sample sticker shown below will be affixed to all **Level 1** documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 1

The sample sticker shown below will be affixed to all **Level 2** documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2

☐

Check here
For Level 2 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical), but *not* in paper copy.

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at **Level 1.**

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Sign here→ please

Signature: Paul Hartung

Printed Name/Position/Title:

Organ

PAUL J HARTUNG PHD
ASSISTANT PROFESSOR
BEHAVIORAL SCIENCES DEPARTMENT
NEOU COLLEGE OF MEDICINE
P O BOX 95 STATE ROUTE 44
ROOTSTOWN OH 44272-0095

Telephone: 330-325-2511

FAX: 330-325-2524

E-Mail Address: phartung@neoucom.edu

Date: 12/18/97