

Validity Study of the Career Preference Inventory (CPI) with Employed Adults

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Introduction

Individuals engaged in career exploration are encouraged to identify their vocational interests, often by completing an inventory that assesses their preferences for particular occupations. Rooted in a Person-Environment Fit paradigm, the typical purpose of this exploration is to help individuals match their career interests to those of the occupational environment (Holland, 1997). More recently, Haase and colleagues (2008, 2011) quantified the demand characteristic profiles of 42 occupations and 6 Holland RIASEC types. They demonstrated that occupational environments also vary in their characteristic informational demands on the same constructs as the individual capacities. For example, Social occupations place the greatest demands on individuals for processing interpersonal stimuli, while Investigative occupations are characterized by high demands for information processing and rapid change. As part of the above mentioned study a short self-report measure was developed by Haase and colleagues (2008, 2011) to assess the 6 Holland RIASEC types, named Career Preference Inventory (CPI). The purpose of this poster is to describe the development of the CPI and show evidence of its reliability and validity using a sample of adults employed in occupations classified in each of the 6 Holland RIASEC types.

Method

The CPI is a measure of interests in a series of different occupations, consisting of 42 occupations, 7 per each of the 6 Holland RIASEC types, requiring different levels of education (e.g., Electrician, Biologist, Architect, Elementary School Teacher, Insurance Agent). Participants are asked to check mark those occupations that they would consider choosing or have chosen. The score for each of the RIASEC categories is the sum of the checked items for each Holland type and can range from 0 to 7. We administered the CPI to 431 employed adults, who reported to be satisfied and had been working in a particular occupation over a year. The distribution of participants according to the occupation was: 161 Teachers, 70 Journalists, 75 Accountants, 67 Pharmacists, 63 Real Estate Agents, and 6 Electricians.

Results

Reliability

We obtained Kuder-Richardson 21 internal consistency reliability coefficients for the six RIASEC scales as follows: Realistic, .80; Investigative, .58; Artistic, .64; Social, .74; Enterprising, .66; and Conventional, .76. Thus each of the 7-item subscales of the CPI showed reasonable internally consistent reliability (and therefore some evidence of construct validity). The lowest mean item to scale correlation was shown on the Investigative Scale (computer programmer) with a value of .12. If excluded this item the alpha coefficient would increase to .60.

Validity

We assessed the validity of the CPI by a series of tests. We evaluated the hit rates between actual occupation and the CPI and tested the predictability of satisfaction, success and longevity as a function of RIASEC high point code as determined by the CPI. Each respondent was evaluated by the congruence index of Holland (1997) between the Holland type of their actual occupation and the Holland type assigned by the CPI and was classified as a hit (3= perfect match) or a miss (2, 1, or 0 = degree of mismatch) to a RIASEC Holland type. The hit-rates between measured RIASEC interest from the CPI and the actual occupation of the respondent was 64%. The typical hit rate reported by other published studies is typically in the 45% range. The relationship between current occupation and CPI measured occupational interest is statistically strong (Cramer's $V = .549$) and significantly different from zero ($\chi^2_{(25)} = 648.43, p < .001$)—that is, the two distributions of RIASEC categories are substantially related.

We also tested the differences between congruent and incongruent respondents on measures of success, satisfaction (self-report, MSQ), salary, longevity, total quality of life, positive affect, and negative affect. A multivariate analysis of variance of the means of these 8 variables was found to be statistically significant [Pillai's Trace = .040, $R^2_p = .040, F_{(8,397)} = 2.05, p = .040$]. Three of the DV's (satisfaction, total quality of life, and positive affect) uniquely and significantly discriminated between groups (p 's = .011, .026 and .009), and the time in profession (longevity) was marginally significant ($p = .102$). In addition to the tests of validity reported above we evaluated whether the RIASEC occupational groups in this research differed significantly from one another on their measured congruence index (range 0-3). A six-group, one-way ANOVA revealed significant differences [$F_{(5,425)} = 4.56, p < .001, \eta^2 = .05$]. The electricians, pharmacists, and journalists were the most congruent (averaging 2.66) while the teachers, real estate agents, and accountants are the least congruent (averaging 2.28).

Conclusions

We have found initial support for the reliability and validity of this 42 occupation measure of vocational interest. We find a significant degree of congruence between measured Holland type on the CPI and the actual occupation of the respondent who have been employed for at least one year in their chosen occupation. We observed significant relationships between congruence and several measures of success, satisfaction and longevity. We also observed that the RIASEC types among these respondents were differentially congruent, which raises interesting theoretical and practical questions since the sample consisted of employed adults. Implications for practice and for future research will also be discussed.

Actual Career by Career Preference Inventory RIASEC Cross-tabulation

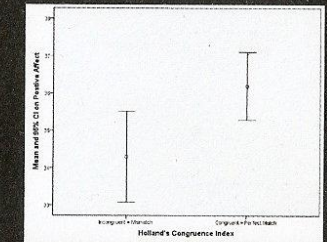
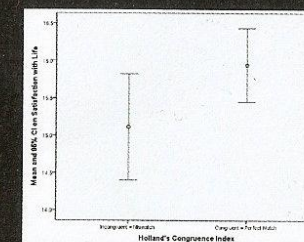
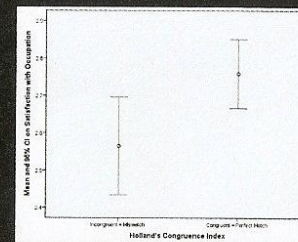
	Realistic	Investigative	Artistic	Social	Enterprising	Conventional	Total
Electrician	4	1	0	0	0	1	6
Pharmacist	3	45	13	4	1	1	67
Journalist	2	2	58	5	2	1	70
Teacher	4	16	34	89	5	3	151
Real Estate Agent	2	3	8	5	35	9	62
Accountant	2	4	11	9	5	44	75
Total	17	71	124	112	48	59	431

Hit Rate = $(4+45+58+89+35+44)/431 = 275/431 = 64\%$;
Cramer's $V = .549, p < .001$;
 $\chi^2_{(25)} = 648.43, p < .001$

Prediction of Satisfaction, Success, Longevity, Quality of Life, and Affect from Congruence

C-Index	Success	Satisfaction	Longevity	Quality of Life	Positive Affect	Negative Affect	MSQ-Intrinsic	MSQ-Extrinsic
Congruent	3.1 (.54)	2.8 (.85)	158 (120)	15 (4.4)	34 (7.6)	22 (7.1)	45 (8.3)	18 (5.1)
Incongruent	3.1 (.52)	2.6 (.77)	138 (114)	16 (4.0)	36 (7.6)	23 (7.3)	46 (8.6)	19 (5.3)
F-test	0.002	6.82	2.68	4.65	6.90	0.26	1.49	0.80
p-value	.962	.009	.102	.032	.009	.608	.222	.373

Note: Standard deviations are in parentheses; degrees of freedom for all tests are 1, 425; MSQ = Minnesota Satisfaction Questionnaire



Holland's Congruence Index based on the Hexagonal Model. Degree of agreement between actual occupation and measured RIASEC classification. Perfect match on the hexagon = 3, Different by one category = 2, Different by 2 categories = 1, Different by 3 categories = 0.