

CORRELATIONS BETWEEN AGE AND CALIFORNIA PSYCHOLOGICAL INVENTORY SCALE SCORES¹

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Summary.—This study examined the correlations between age and scores on scales of the California Psychological Inventory for 1,137 accountants. An analysis of within-scale score differences showed statistically significant correlations between age and Dominance, Capacity for Status, Sense of Well-being, Responsibility, Self-control, Good Impression, Achievement via Conformance, and Flexibility. Differences in direction of only three of the 28 correlation pairs found by the matching of scores on these scales and those reported by Gough in 1975 suggest that the latter intercorrelations are not sample- or situation-specific. Finally, age had only a negligible influence on the intercorrelations, allowing the inference that age has a direct rather than a moderating influence on these scores.

Use of the California Psychological Inventory in personality assessment is well documented (Megargee, 1972). Containing 480 items, the inventory is intended primarily for use with nonpsychiatrically disturbed subjects. Its 18 scales address personality characteristics important for social living and interaction. The inventory has been shown repeatedly to possess both adequate validity and reliability. Test-retest reliabilities for individual scales range up to .87 for testing intervals of 1 year (Gough, 1975, p. 19). Various validity studies have shown scores to be correlated in the expected direction with those on the Strong Vocational Interest Blank, Minnesota Multiphasic Personality Inventory, Cattell 16 PF, and Edwards Personal Preference Schedule (Gough, 1975, pp. 34-35). Despite this extensive documentation, only limited and dated information detailing the correlations between age and the scales of the inventory is available (Dyer, Monson, & Van Drimmelen, 1971; Schaie, 1959; Grupp, Ramseyer, & Richardson, 1968). The purpose of the present study was to assess the association between age and scores on the 18 scales.

Data were collected from 1,138 accountants who agreed to participate in a national survey of accounting professionals. Men and women numbered 549 (48%) and 589 (52%), respectively. Participants were grouped by age into five categories. For the men, 17% were aged 20 to 29 yr., 42% were aged 30 to 39 yr., 23% were aged 40 to 49 yr., 13% were aged 50 to 59 yr., and 5% were 59 yr. or older. For the women: 31% were aged 20 to 29 yr., 38% were aged 30 to 39 yr., 17% were aged 40 to 49 yr., 11% were aged 50 to 59 yr., and 3% were 59 yr. or older. Two sets of complementary analyses were conducted. In the first set, the association of age and scores was

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investigated within each of the 18 scales. Since multiple tests were being performed, the Bonferroni technique was used to decrease the probability of family-wise Type I errors. The Bonferroni technique adjusts the significance level for a group of null hypotheses so that significance may be stated in terms of a critical value for each individual null hypothesis (i.e., comparison). The result is a more conservative test. Since 18 tests of significance were performed, the α level for each test was $.05/18$ or $.0027$. In the second set of analyses, the influence of age on the intercorrelations of those scales displaying a significant correlation with age was evaluated.

For the purpose of exploring the age-performance association within each scale, product-moment correlations were computed between age and scale scores. Age was significantly correlated with scores on eight scales, i.e.,

TABLE 1
INTERCORRELATIONS AND PARTIAL CORRELATIONS WITH AGE HELD CONSTANT OF
EIGHT CALIFORNIA PSYCHOLOGICAL INVENTORY SCALES

Pairs of Scales		<i>r</i>	<i>r</i> *	Partial <i>r</i>
Dominance	Capacity for Status	.55	.55	.54
	Sense of Well-being	.29	.27	.28
	Responsibility	.30	.36	.28
	Self-control	-.09	.03	-.11
	Good Impression	.25	.26	.23
	Achievement via Conformance	.40	.43	.39
	Flexibility	.02	-.11	.04
Capacity for Status	Sense of Well-being	.36	.39	.35
	Responsibility	.23	.35	.21
	Self-control	.03	.15	.02
	Good Impression	.36	.34	.35
	Achievement via Conformance	.41	.43	.40
	Flexibility	.30	.19	.32
Sense of Well-being	Responsibility	.35	.46	.33
	Self-control	.48	.62	.47
	Good Impression	.52	.57	.51
	Achievement via Conformance	.57	.62	.56
	Flexibility	.14	.02	.17
Responsibility	Self-control	.45	.48	.44
	Good Impression	.41	.44	.38
	Achievement via Conformance	.47	.58	.46
	Flexibility	-.01	-.06	.02
Self-control	Good Impression	.67	.75	.66
	Achievement via Conformance	.49	.61	.48
	Flexibility	-.05	-.07	-.03
Good Impression	Achievement via Conformance	.55	.36	.54
	Flexibility	.01	-.09	.03
Achievement via Conformance	Flexibility	-.01	-.14	.01

*Correlations are a weighted average of those reported by Gough (1975, p. 29) for 4,098 men and 5,083 women.

Dominance ($r = .16$), Capacity for Status ($r = .13$), Sense of Well-being ($r = .17$), Responsibility ($r = .20$), Self-control ($r = .14$), and Flexibility ($r = .12$), all p s $< .001$. This is more significant r s than expected by chance alone, but their magnitude accounts for little common variance.

The influence of age on the intercorrelations of these scales was then determined by computing the simple correlations for each of the 28 pairs of eight variables significantly related to age; see Table 1. Differences in direction of only three out of the 28 pairs of correlations suggest that the scale intercorrelations are, by and large, not specific to samples or situations.

Continuing the analysis, partial correlations were then calculated for the same 28 pairs of scales before holding the influence of age constant. As Table 1 indicates, only slight differences exist between the 28 zero-order intercorrelations previously calculated and the corresponding first-order partials. This fact suggests that age has only a negligible influence on the intercorrelations of these scales and also has a direct rather than a moderating influence on scores on the California Psychological Inventory.

These findings indicate the inventory is relatively unaffected by the ages of respondents. While this conclusion is not startling, it is meaningful in the framework of person-situation interaction. Within this perspective, explanations of behavior and attitudes are based on the idea that personal attributes interact with situational characteristics. It is important that measures of psychological person-attributes be uninfluenced by measures of demographic person-attributes so that person-based determinants within a person-situation interaction can be unambiguously identified. Personality is a commonly assessed psychological person-attribute. In studies including personality variables as moderators of the influence of a situational characteristic, it would be difficult to rule out the effects of other unmeasured personal attributes (in the present case age) if personality covaried with these attributes. This study suggests that at least in the case of personality variables measured by the California Psychological Inventory, one could confidently say that any personality-situation interactions found were associated with psychological person factors rather than age.

REFERENCES

- DYER, E. D., MONSON, M. A., & VAN DRIMMELLEN, J. B. (1971) Are administrative level, age and educational preparation reflected in California Psychological Inventory scores? *Psychological Reports*, 29, 1111-1120.
- GOUGH, H. G. (1975) *California Psychological Inventory, manual* (2nd ed.) Palo Alto, CA: Consulting Psychologists Press.
- GRUPP, S., RAMSEYER, G., & RICHARDSON, J. (1968) The effect of age on four scales of the California Psychological Inventory. *Journal of General Psychology*, 78, 183-187.
- MEGARGEE, E. I. (1972) *The California Psychological Inventory, handbook*. San Francisco, CA: Jossey-Bass.
- SCHAE, K. W. (1959) The effect of age on a scale of social responsibility. *Journal of Social Psychology*, 50, 221-224.

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