

# AGE DIFFERENCES IN PERSONALITY STRUCTURE

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There is a relative paucity of comprehensive studies of age differences in adult personality structure. Most studies represent analyses of test protocols collected over many years and are, therefore, suspect since they confound possible generational shifts in environmental cues with whatever stable maturational variance might be discovered above and beyond the usual generational confounds implicitly inherent in any cross-sectional study. Furthermore, only a few studies on adult personality differences are based on factored personality inventories (see Schaie & Marquette, 1969). One of the major difficulties in collecting personality test data for a representative sample of the adult population over a wide age range is the difficulty in designing a valid format for data acquisition. Many adults, unless they seek psychological services, may be quite reluctant to volunteer personality test information.

The purpose of the present study is to show that it is possible to infer information about Ss' scores on a broad sample of personality dimensions even where such data cannot be collected directly. Of primary interest is the information obtained by these methods on age differences over the greater part of the adult life span for some of the major personality dimensions identified by the factor

analytic work of Cattell and his associates (Cattell & Eber, 1964).

As part of their short-term longitudinal studies of age changes and differences in cognitive behavior, Schaie and Strother (1968) administered a 75-item rigidity-flexibility questionnaire (Schaie, 1960) which contained mostly irrelevant masking items. Data on this questionnaire were available for a sample of 462 males and 529 females covering the age range 21-75 yr. All Ss were obtained by means of stratified random sampling from approximately 18,000 members of a prepaid medical care plan. Since this was an unusually representative adult sample collected at one point in time, an attempt was made to retrieve the variance on other personality dimensions which might be contained in the questionnaire. The questionnaire was administered to a group of 271 college students who also took Form B of the 16PF (Cattell & Eber, 1964). These Ss ranged in age 19-22, a period of life during which maximum personality differentiation should be expected to prevail and which would therefore seem to be a good age level for cross-referencing personality items. The questionnaire items were regressed on all 16 factor scores and regression equations were computed for those 13 factors where

TABLE 1  
Mean Scores for 13 Source Traits

Source trait	Sex	Age										
		21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75
A	M	60.1	61.4	61.7	60.0	59.1	58.4	60.0	59.2	60.1	59.0	58.0
	F	62.7	62.0	61.9	61.1	60.8	60.9	60.8	61.3	61.9	61.5	60.8
C	M	58.4	59.4	60.9	60.0	59.8	60.6	59.5	59.4	60.6	60.1	60.2
	F	59.6	60.1	60.5	60.5	61.4	60.2	61.0	60.8	60.5	61.8	60.3
E	M	52.1	50.7	51.2	49.6	49.4	48.6	48.4	48.1	47.7	47.3	45.7
	F	48.3	46.3	46.7	47.5	45.7	46.5	47.7	46.0	46.9	46.6	44.5
F	M	55.4	55.1	56.3	56.0	53.8	54.2	55.9	54.8	55.7	53.9	53.0
	F	55.5	56.1	53.6	53.0	53.4	53.0	54.9	54.7	54.0	53.9	50.9
G	M	48.5	51.6	51.3	51.0	50.7	50.5	50.4	51.0	53.2	51.3	51.3
	F	53.2	52.6	53.9	52.3	53.8	53.8	53.9	53.2	53.9	54.0	52.6
H	M	51.9	51.4	52.5	50.7	50.5	49.5	50.1	50.4	50.9	49.7	48.8
	F	51.5	51.7	49.9	50.0	48.4	49.4	49.8	49.1	51.0	49.4	47.6
I	M	62.7	63.6	62.4	62.7	61.3	62.5	61.5	62.0	63.1	62.7	61.7
	F	64.0	63.4	64.5	64.3	64.4	64.5	63.7	64.2	63.4	63.4	62.9
L	M	37.5	36.0	34.9	36.2	34.8	34.1	35.6	36.4	36.3	36.2	35.9
	F	35.5	36.7	35.7	35.2	35.4	35.3	35.3	34.6	36.0	37.0	38.5
M	M	64.6	65.9	65.1	65.8	63.9	64.2	64.6	63.4	65.2	65.3	63.7
	F	65.3	65.3	65.3	66.3	66.5	65.1	65.7	65.2	66.1	65.0	64.0
O	M	42.5	43.4	43.0	42.8	42.1	43.2	44.2	43.7	44.9	45.1	47.2
	F	43.3	44.6	43.7	44.4	44.2	44.6	45.1	44.3	44.5	46.0	46.2
Q <sub>2</sub>	M	48.6	49.4	49.9	50.4	50.8	51.6	51.5	51.0	51.0	51.5	54.8
	F	49.5	50.2	49.4	49.9	48.8	49.5	50.7	50.2	49.4	50.7	51.7
Q <sub>3</sub>	M	44.9	45.2	46.0	44.6	46.0	45.4	45.4	45.6	47.5	47.3	48.4
	F	44.2	44.5	44.6	44.2	45.5	45.5	46.5	45.9	46.7	47.4	48.0
Q <sub>4</sub>	M	48.2	48.5	47.5	48.3	46.5	46.9	47.9	46.9	45.5	47.1	45.6
	F	48.1	47.7	47.8	48.4	47.6	47.0	47.1	47.4	46.3	46.3	46.6
No. of Ss	M	27	25	44	49	58	50	44	41	37	48	40
	F	41	37	50	51	58	54	55	58	40	44	40

multiple correlations between questionnaire items and factor scores exceeded a value of .50. Scores on the 13 factors were then computed for all Ss who took the 75-item questionnaire in the 1963 series of the study of cognitive behavior. All scores were converted to standard score form with a mean of 50 and a standard deviation of 10. Group means are presented in Table 1. A two-way analysis of variance was performed for each of the 13 factors, with the two variables of age and sex assumed to be fixed. The results of these analyses are summarized in Table 2.

Significant increases in mean scores over the age span included here were found for factors O, Q<sub>2</sub>, and Q<sub>3</sub>. Guilt proneness (O) showed a significant sex difference with females scoring higher than males. Consistent with these results, males scored significantly higher on self-sufficiency (Q<sub>2</sub>) than females. No sex difference was found for self-sentiment although the increase over age for both sexes is consistent with results obtained by Sealey and Cattell (1965) for Ss aged 16-70.

Factors E and Q<sub>4</sub> showed significant decreases in mean scores over age. Males scored significantly higher than females on dominance (E). However, inspection of the significant Age X Sex interaction for Factor E indicates that male and female scores converge with increasing age. No significant sex difference was found for ergic tension (Q<sub>4</sub>).

TABLE 2  
F Ratios from Analyses of Variance of 13 Source Traits

Source trait	Age <sup>a</sup>	Sex <sup>b</sup>	Age X Sex <sup>a</sup>
A. Cyclothymia vs. schizothymia	2.34*	27.89**	.73
C. Ego strength	1.29	6.31*	.77
E. Dominance	5.69**	52.27**	1.85*
F. Surgency	1.45	3.31	.49
G. Superego strength	1.42	49.51**	1.25
H. Parmia vs. threctia	3.01**	4.41*	.57
I. Premia vs. harria	.79	30.51**	1.07
L. Protension vs. relaxed security	2.19*	.17	1.81
M. Autia vs. praxernia	1.39	5.37*	.72
O. Guilt proneness	3.69**	4.99*	.57
Q <sub>2</sub> . Self-sufficiency vs. group dependency	4.09**	8.47**	1.20
Q <sub>3</sub> . Self-sentiment	6.52**	1.20	.51
Q <sub>4</sub> . Ergic tension	3.00**	.22	.60

<sup>a</sup>df = 10/969.

<sup>b</sup>df = 1/969.

\*p < .05.

\*\*p < .01.

Factors A, H, and L also showed significant age differences. Factor A (warm, sociable vs. aloof, stiff) showed a decline over the middle years (approximately 36-55) followed by an increase and then a further decline after age 65. Females scored significantly higher on this factor than males. Factor H (adventurous vs. shy, timid) showed age trends which were similar to Factor A. However, these results are in contrast to those obtained by Sealy and Cattell, who found an increase in parmia through age 55. Present results also indicate that males scored significantly higher on H than females. Factor L (suspecting, jealous vs. acceptable, adaptable) shows a fairly curvilinear U-shaped trend for both sexes ages 21-75.

No significant age differences were found for Factors C, G, I, and M, although females scored significantly higher than males on all of these factors. No significant age or sex differences were found for Factor F. Sealy and Cattell, however, found increases with age for ego strength (C), super-ego (G), and autia (M), and a decrease with age in surgency (F). No such trends were found in the present study.

Consistent with the results of Sealey and Cattell on the second-order factors, our data show a tendency for increasing introversion and decreasing anxiety with increasing age.

The results of this study indicate that many personality characteristics change over the adult years and that sex differences in personality characteristics do occur. Although the methodology of such a cross-sectional study confounds generational differences with maturational changes, the present data indicate that age must be considered as an important variable in the interpretation of personality structure.

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