1962

Objective TAT Scores and Personality Characteristics: Hypothesis Formulation. Statistical Summary

Richard H. Dana
Portland State University

MASTER
P. 2 add Jump (C)

Objective TAT Scores and Personality Characteristics: Hypothesis Formulation. Statistical Summary[1]

1962

Richard H. Dana

University of Nevada

This paper contains the statistical results of a "buckshot" congruent validation study of one objective TAT scoring variable, Perceptual Organization (PO). PO was developed from personality theory (Dana, 1954) and from an explicit rationale for the construction of scoring systems for projective techniques (Dana, 1955b). PO is scored from a five card, short-form, TAT set which yields scores comparable to a 20 card set (Dana, 1956c). A series of concurrent validation studies (Dana, 1955a; Dana, 1956a; Dana, 1956b; Dana, 1957) culminated in a manual for application of the scoring system in which PO is one variable (Dana 1959a). PO is a reliable score (scorer reliability; test-retest) and valid for prediction of clinical diagnosis (concurrent validity). That PO may also be used for prediction of personality variables has been demonstrated (Dana, 1959b; Dana & Mueller, 1960). This exploratory congruent validity study is an attempt to answer the question, "For what personality variables may PO be used?"

Method

Description of PO. One of the three basic aspects of TAT behavior is the approach to the situation which is reflected by the extent to which standard directions are followed. PO indicates the S's ability to "tell a story." Seven components are scored on a specially prepared score sheet (For complete directions and score sheet, see Dana, 1959): (a) Card Description (CD);

---

[1]This study was supported by a grant from the James McKeen Cattell Fund.

(b) Present Behavior (PB); (c) Past Events (PE); (d) Future Events (FE); (e) Feeling (F); (f) Thought (T); (g) Outcome (O). Table 1 presents means and sigmas of the seven PO components for each of the five groups.

Research Population. The Ss were selected from the concurrent validity groups on the basis of available MMPI and Rorschach data. Five groups were used: (a) normal female (N=50); (b) neurotic male outpatients (N=20); (c) neurotic female outpatients (N=26); (d) psychotic male inpatients (N=15); (e) psychotic female inpatients (N=23). Criteria for each group and details of S characteristics appear elsewhere (Dana, 1959a).

136

Test Variables: MMPI. Twenty-six MMPI scales were used, including the three validity scales (L, F, K); the nine clinical scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma); three subscales, Pd 1 and 2, Familial Discord and Authority Conflict (Pd_{s1}), Pd 4, Alienation (Pd_{s2}), and Sc 2c, Defect of Inhibition and Control (Sc_2); and eleven special scales, Achievement (Ac), Anxiety (A), Dependence (De), Dominance (Do), Hostility (Ho), Social Introversion-Extroversion (Si), Responsibility (Re), Ego Strength (Es), Welsh A (Wa), Welsh R (Wr), Winne (Wi). Tables 2 and 3 present means and sigmas of the seven PO components for each of the five groups.

Test Variables: Rorschach. Fifteen Rorschach variables were used. The total N of responses (R), Sum C, and thirteen percentage scores: (a) W, (b) D, (c) Dd, (d) M+FM+m, (e) F, (f) FK+F+Fc, (g) FC+CF+C, (h) k+K+FK, (i) Fc+c+C^0, (j) P, (k) M, (l) A, (m) H. Table 4 presents means and sigmas of the seven PO components for each of the five groups.

Procedure. Pearson product-moment correlations were run between each of the seven PO components and the 26 MMPI variables and 15 Rorschach variables for the five groups. For the neurotic female group, data were not available on MMPI scales Ach, De, Ho, and these relationships were not calculated. A total of 1435 coefficients were obtained between TAT and criterion data. In addition, 35 product-moment correlations were obtained from PO components and Wechsler-Bellevue, Form I, IQ scores. Table 5 presents means and sigmas of IQ scores

for each of the five groups.

Results

Criterion Variables. Two coefficients were significant at <.001 level; 11 were significant at the <.01 level; 19 were significant at <.02 level; 49 were significant at <.05 level; and 85 were significant at <.10 level. These results only slightly exceed chance expectations with this N of obtained correlations. Table 6 presents a summary of the N of correlations at different levels of significance. Tables 7 through 13 present these TAT PO and criterion relationships.

Intelligence. Out of 35 correlations of PO components with Wechsler-Bellevue, Form I, intelligence quotient scores, three were significant. For Past Behavior correlations significant at the <.05 and <.01 level were obtained for neurotic female and psychotic male groups, respectively. For Outcome the correlation for the normal female group was significant at <.02 level. These results for Past Behavior support the single previously obtained significant correlation between PO and Wechsler-Bellevue, Form I, scores for neurotic females (Dana, 1959a), and suggest that the Past Behavior component may be responsible. The previously obtained correlation for psychotic males and Wechsler scores approached but did not attain significance. Disturbed Ss with high intelligence may tend to be more in contact and thus obtain higher PO scores. The significant Outcome--Wechsler correlation for normal female Ss may suggest that greater planning ability associated with higher intelligence tends to be reflected by more frequent inclusion of Outcomes.

Discussion of Results

The small N of significant relationships suggests that obtained relationships may be a function of chance. This would lead to the conclusion that separate PO components cannot be used for prediction of personality characteristics (congruent validity). However, only cross-validation of these

relationships would permit a definite conclusion.

There is also the possibility that these correlations are merely expressing the kind of psychopathology being measured by the valid total PO score. Thus, the interpretation of the PO score in terms of sources of strength may be aided; i.e., prognosis. It may further be observed that there is a tendency for significant correlations to occur in more than one group, and for different relationships to be significant as a function of sex of S. Finally, there is a tendency for significant relationships to occur on several different PO components for any one MMPI or Rorschach criterion variable.

Summary

Perceptual Organization (PO) was subjected to a "buckshot" congruent validation study. The seven PO components were compared with 26 MMPI variables, 15 Rorschach variables, and Wechsler-Bellevue, Form I, I.Q. scores, for five S groups; i.e., normal females, neurotic males, neurotic females, psychotic males, and psychotic females. Of 1435 Pearson product-moment correlations between PO and criterion data, 81 were at the $<.05$ level of confidence. Of 35 Pearson product-moment correlations between PO and Wechsler I.Q., three were significant at $<.05$ level. These results do not appreciably exceed chance expectations. Statistical data for PO and criterion variables are presented; significant correlations for each PO component are detailed. Pending cross-validation studies, no interpretation of these results is offered.

References

Dana, R. H. Personality Orientation: an organizational focus for current research. J. Psychol., 1954, 37, 139-150.

Dana, R. H. Clinical diagnosis and objective TAT scoring. J. abnorm. soc. Psychol., 1955, 50, 19-25. (a)

Dana, R. H. The objectification of projective techniques: rationale. Psychol. Rep., 1955, 1, 93-102. (b)

Dana, R. H. An application of objective TAT scoring. J. proj. Tech., 1956, 20, 159-163. (a)

Dana, R. H., Cross-validation of objective TAT scoring. J. consult. Psychol., 1956, 20, 33-37. (b).

Dana, R. H. Selection of abbreviated TAT sets. J. clin. Psychol., 1956, 12, 36-40. (c)

Dana, R.H. Norms for three aspects of TAT behavior. J. gen.Psychol., 1957, 57, 83-89.

Dana, R. H. Proposal for objective scoring of the TAT. Percept. mot. Skills., 1959, 9, 27-43. Monogr. Suppl. 1. (a)

Dana, R. H. The perceptual orgainization TAT score: number, order, and frequency of components. J. proj. Tech., 1959, 23, 307-310. (b)

Dana, R. H., and Mueller, D. J. Congruent validation of a TAT score: PERCEPTUAL ORGANIZATION [redacted] J proj. Tech.,

Table 1

Means and Standard Deviations on Seven PO Components from Five Groups, Normal Female (A), Neurotic Male (B), Neurotic Female (C), Psychotic Male (D), Psychotic Female (E)

TAT Component

Group	CD		PB		PE		FE		F		T		O	
		SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
A	3.0	1.4	4.2	1.2	3.5	1.3	3.2	1.7	4.6	.6	4.5	1.0	4.1	1.2
B	2.2	1.5	3.9	1.0	1.5	1.2	1.6	1.5	3.8	.8	2.5	1.0	3.0	1.2
C	2.2	1.5	4.4	.6	1.7	1.1	1.6	1.3	3.9	.9	2.2	1.1	3.0	1.2
D	1.2	1.2	3.5	1.1	.6	.8	.4	1.0	2.9	.8	1.5	1.1	1.5	1.2
E	1.0	1.0	3.8	1.2	.2	.4	.3	.6	2.2	1.5	1.1	1.1	.5	.8

Table 2

Means and Standard Deviations on MMPI Clinical Validity Scales and Subscales for Five Groups, Normal Female (A), Neurotic Male (B), Neurotic Female (C), Psychotic Male (D), Psychotic Female (E)

MMPI	Group A		B		C		D		E	
	M	SD	M	SD	M	SD	M	SD	M	SD
L	3.2	1.5	3.4	2.3	4.7	2.4	5.3	3.2	5.6	2.2
F	2.6	1.9	7.2	4.1	8.6	4.8	6.7	5.1	10.7	8.3
K	15.4	3.5	12.3	4.2	14.1	4.9	17.4	6.4	15.1	4.3
Hs	4.3	2.6	8.7	7.1	10.9	7.9	6.1	4.5	10.0	7.6
D	18.2	3.8	25.6	9.5	29.1	9.2	23.1	6.4	24.9	8.7
Hy	20.2	3.7	23.6	7.3	27.1	6.8	22.1	12.6	25.2	7.4
Pd	14.1	3.3	21.8	6.2	21.5	6.3	19.5	5.8	21.7	6.7
Mf	37.1	4.1	27.8	4.9	35.6	4.6	25.6	5.3	33.4	6.7
Pa	9.1	2.6	11.7	4.6	13.4	3.2	11.7	3.7	13.8	4.7
Pt	12.4	5.6	20.7	11.4	21.7	11.4	13.7	12.0	17.4	10.1
Sc	9.5	4.5	18.6	10.8	22.5	12.2	14.7	11.9	20.4	13.6
Ma	16.2	1.9	18.1	3.9	17.6	5.0	16.3	4.9	19.4	6.3
Pd_{S1}	5.5	2.1	9.7	3.1	.2	1.0	7.8	3.7	8.6	3.4
Pd_{S2}	4.9	2.2	6.6	3.2	11.5	5.6	6.2	2.9	8.1	3.5
Sc_S	1.8	1.3	2.2	2.0	2.9	1.9	1.9	1.9	3.1	2.5

Table 3

Means and Standard Deviations on MMPI Special Scales for Five Groups, Normal Female (A), Neurotic Male (B), Neurotic Female (C), Psychotic Male (D), Psychotic Female (E)

MMPI	Group A		B		C		D		E	
	M	SD	M	SD	M	SD	M	SD	M	SD
Ach	12.4	3.4	11.2	3.5			9.6	1.6	11.6	2.5
A	14.6	6.4	16.9	11.5	23.4	11.8	12.9	11.2	18.8	9.9
De	21.3	8.3	27.9	12.4			19.7	10.9	26.3	9.1
Do	17.1	3.9	12.6	3.9	13.0	4.1	15.5	3.2	13.9	3.4
Ho	13.8	6.5	20.1	8.9			15.6	9.5	20.7	8.2
SIE	25.9	9.7	27.4	9.5	30.5	10.1	27.6	11.1	27.5	8.1
Re	23.2	2.8	17.1	5.6	20.3	4.2	20.4	4.5	20.2	4.4
Es	45.8	5.9	36.4	8.9	36.6	7.4	40.9	5.5	33.4	6.2
Winne	4.3	2.2	8.9	7.4	12.8	7.5	6.5	5.5	10.7	8.3
Welsh R	15.8	3.7	15.5	4.6			18.8	4.6	16.7	4.2
Welsh A	12.2	6.5	19.0	20.7			11.9	11.0	15.9	8.5

Table 4

Means and Standard Deviations on Rorschach Variables for Five Groups, Normal Female (A), Neurotic Male (B), Neurotic Female (C), Psychotic Male (D), Psychotic Female (E)

Rorschach	Group A		B		C		D		E	
	M	SD	M	SD	M	SD	M	SD	M	SD
R	21.0	11.4	23.3	13.3	22.9	7.3	18.4	8.8	16.6	9.2
W%	50.6	24.2	39.5	23.6	34.8	24.9	42.9	26.0	43.3	23.7
D%	45.6	22.1	51.9	19.3	53.2	23.4	52.3	24.4	50.6	20.9
Dd%	3.8	8.2	8.6	12.7	10.8	12.8	5.4	9.7	6.0	9.0
M+FM+m%	39.8	5.4	23.1	15.3	24.0	13.1	21.9	15.1	19.1	16.2
F%	35.0	18.0	46.1	18.8	43.7	16.7	48.1	14.9	53.0	24.7
FK+F+Fc%	41.2	18.2	51.6	17.7	52.1	16.8	54.4	17.8	58.0	22.5
FC+CF+C%	13.2	9.2	18.8	11.3	18.4	11.5	18.5	12.4	17.5	11.2
k+K+FK%	2.8	4.6	5.2	8.5	4.2	4.7	2.5	4.5	1.7	4.1
Fc+c+C'%	9.5	10.3	6.1	5.1	8.7	6.4	9.1	11.3	8.4	7.8
P%	21.8	9.6	21.5	12.0	19.1	11.4	19.6	15.1	19.9	12.9
Sum C	2.8	2.3	4.4	3.4	3.4	2.2	3.0	2.6	3.4	3.8
H%	17.7	12.0	10.1	6.6	7.8	7.5	4.6	5.3	8.5	8.0
A%	46.0	12.6	42.7	13.2	47.4	10.0	45.2	18.4	48.2	21.3
Hf%	21.8	12.1	14.3	10.7	12.9	9.6	10.5	10.9	8.5	9.7

Table 5

Means and Standard Deviations of Wechsler-Bellevue, Form I, Scores for Five Groups, Normal Female (A), Neurotic Male (B), Neurotic Female (C), Psychotic Male (D), Psychotic Female (E)

Group									
A		B		C		D		E	
M	SD	M	SD	M	SD	M	SD	M	SD
110.6	11.0	107.2	12.4	105.0	14.5	98.6	15.8	96.9	9.9

Table 6

N of Correlations at Different Levels of Significance Between Each of 7 PO Components and MMPI and Rorschach Variables

		CD		PB		PE		FE		F		T		Θ	
N	P	M	F	M	F	M	F	M	F	M	F	M	F	M	F
85	<.10	10	7	8	12	3	4	5	7	4	6	8	4	3	4
49	<.05	3	5	2	4	2	1	1	3	5	9	1	7	1	5
19	<.02	1	2	2	1	2	2	2	1	1	2	0	1	0	2
11	<.01	2	3	0	1	2	0	0	1	0	0	1	0	0	1
2	<.001	0	0	0	0	0	1	0	0	0	0	0	0	0	1
166	TOTAL	16	17	12	18	9	8	8	12	10	17	10	12	4	13

Table 7

Selected Pearson Product-Moment Correlations Between

Card Description and MMPI and Rorschach Variables for Five Groups

		Female		Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10	FC+CF+C%	-K -Hy	-ES W% -D% -M%	-K Pt Ho	F -K Pa Ho -ES Pd_{S2} -M+FM+m%
<.05		-D -Pt -A Do Re		De Welsh A P%	
<.02		-Sc -SIE			-Re
<.01		-Hs ES -Winne		A%	Dd%

Table 8

Selected Pearson Product-Moment Correlations Between

Present Behavior and MMPI and Rorschach Variables for Five Groups

	Female			Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10	De Sc_s -Do A		-K Pt Sc Ho A Pd_{s1} Pd_{s2} M%	SIE M% H%	-Pd Do -SIE -Welsh A -R
<.05	Pt	Σ C	-L De	Ho -k+K+FK%	
<.02			Welsh A	Ach	$-Pd_{s2}$
<.01	-K				

Table 9

Selected Pearson Product-Moment Correlations

Between Past Events and MMPI and

Rorschach Variables for Five Groups

		Female		Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
< .10		-L -Pa Fc+c+C'%	-P%	L	-Re -M+FM+m%
< .05			-Mf	-FC+CF+C%	-M%
< .02	Pa		-Do		Pd_{s1} Pd_{s2}
< .01				Dd%	Pd
< .001	-Ma				

Table 10

Selected Pearson Product-Moment Correlations Between Future Events and MMPI and Rorschach Variables for Five Groups

	Female			Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10	-F A	-F% -FK+F+Fc% FC+CF+C%	-Hy M+FM+m%	-Sc Re R	-Hs -D
<.05		-L	F P%	Sc_S	
<.02	P%			Do	k+K+FK%
<.01		Fc+c+C'%			

Table 11

Selected Pearson Product-Moment Correlations Between

Feeling and MMPI and Rorschach Variables

for Five Groups

	Female			Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10	R -W% P%	-Dd%	-D -De	L M% -A%	-L
<.05	Pa	-Ma	L -Hs -Hy -Pt -Winne -Welsh A M%	-F% -Pa	R F% FK+F+Fc%
<.02	Ma		-A		-FC+CF+C%

Table 12

Selected Pearson Product-Moment Correlations Between

Thought and MMPI and Rorschach Variables

for Five Groups

		Female		Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10		-F Dd%	-A Do	Re Pd_{sl} Sc_s R -W% D%	k+K+FK% -P%
<.05		-Pa -W%	-D -Pt -Welsh A M+FM+m% k+K+FK%	Σ C	
<.02			H%		
<.01				FC+CF+C	

Table 13

Selected Pearson Product Moment Correlations Between

Outcome and MMPI and Rorschach Variables

for Five Groups

	Female			Male	
Level	Normal	Neurotic	Psychotic	Neurotic	Psychotic
<.10	Do -SIE Pd_{sl}	-Pd_{sl}		-D% -H%	-H%
<.05	-Sc -Ho F% -M%		Ach		D%
<.02	FK+F+Fc%		H%		
<.001	-M+FM+m%				