

## EDUCATION AND PSYCHOLOGICAL TEST SCORES

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### ABSTRACT

Education, a long neglected variable affecting psychological test score, is in search of reemphasis. Some evidence for this has accumulated on the psychological tests constructed and standardized here at the department of Psychiatry, P.G.I., Chandigarh. Tentative norms prepared education wise on WAIS-Verbal section, PGI-Memory Scale, Proverb and Similarity Tests, Psychoticism Questionnaire, and PGI MQN 2, for adults, in the age range of 16-50, are reported. The results showed marked difference in the mean scores of different educational categories and thus stressed the need for reporting norms separately for different educational levels.

Any educational experience the individual undergoes, should be reflected in his performance on tests sampling the relevant aspects of behaviour (Anastasi, 1963). Many other research workers also feel that education is an important variable on any psychological test (Sorokin, 1947 ; D'Amato, 1970). In the clinical fields the role of education on psychological test scores has generally been underplayed and adequate weightage has rarely been given while interpreting scores of an individual. This poses a great problem to the test users. The result is obvious, the clinicians who use psychological tests, either become disgusted with the tests or they interpret the scores in their own way, by arbitrarily adding or deducting a few points (Wig *et al.*, 1974) from the earned scores. The national norms, generally provided in the work manuals of the tests, are thus not usable for the subjects belonging to varied strata of the society. Norms must be defined as estimate of some characteristics of a distribution of test scores for a specified population (Flanagan, 1966). If they are not based on groups of people, with whom it is sensible to compare the individual, the purpose of testing itself would be defeated.

Education appears to increase understanding, power to read between the lines, logical thinking, perception, general know-

ledge, flexibility to storage system and general social adaptability. If it is so, then scores on any psychological test, be it a measure of cognition, personality or any other must be influenced by his education. To test this contention, a number of studies conducted in the department of Psychiatry, P.G.I., Chandigarh are reviewed. It may be mentioned here, that in the reviewed studies, raw scores of various tests were not found to be significantly influenced by the age and sex of the subjects, to call for reporting separate analysis.

### MATERIAL AND METHOD

A number of psychological tests are developed/adapted in the Psychiatry department of P. G. I., Chandigarh for practical use, i.e. diagnosis/screening/evaluation, etc. These were standardised on seemingly normal adults, i.e. attendants of the patients who did not have any history of mental or neurological illness and were in the age range of 16 to 50 years. Subjects in each of the reported studies were different and were more or less representative of the group whose needs are catered to by this department. Scores on various psychological tests were calculated (at times recalculated from available data) education wise to increase their usability and comparability. The grouping of level of education, however,

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was not uniform from study to study because it depended upon the design adopted at that time and upon frequency and the characteristics of the samples included.

#### RESULTS AND DISCUSSION :

Table 1 presents the education wise means and S.D's of the raw scores and correlations between education and scores of memory, intelligence, proverb and similarity, psychoticism and neuroticism tests developed in the department of Psychiatry,

P. G. I., Chandigarh. It shows that educational levels achieved do effect the test scores, irrespective of functions measured by these tests.

Apart from the above well planned studies where tentative norms are provided educationwise, in some other studies also we found significant correlations between education and psychological test performances, for example, with Nahor Benson test of organic brain pathology (Pershad and Wig, 1978) and the Rorschach Ink

TABLE 1—*Education wise scores on various tests*

Test	Level of Education	n	M	SD	r	Source
PGI Memory .. ..	0-5	60	60.8	11.26	+.67	Pershad (1977) and Pershad & Wig, (1987).
	6-9	60	74.25	9.01		
	10-+	60	82.17	8.37		
WAIS Verbal .. ..	0-5	32	77.15	11.42	*	Pershad and Verma (1978).
	6-9	10	88.40	6.11		
	10-+	53	105.84	13.75		
Proverb .. ..	0-3	20	9.00	4.70	*	Suri (1976).
	4-8	18	16.40	3.69		
	9-10	30	21.10	4.17		
	11-+	16	21.31	3.63		
Similarity .. ..	0-3	20	11.50	5.37	*	Suri (1976)
	4-8	18	17.22	6.20		
	9-10	30	21.76	5.06		
	11-+	16	22.87	3.00		
Psychoticism Questionnaire ..	0-8	18	11.36	3.70	-.25	Arora (1977).
	9-12	39	9.32	3.46		
	13-+	43	8.20	4.18		
PGI HQ N-2 Neuroticism .. ..	0-7	35	15.28	12.89	-.30	Derived from Verma and Wig (1978).
	8-10	131	8.68	9.34		
	11-13	202	6.33	5.19		
	14-+	276	5.99	5.36		
Lie score .. ..	0-7	35	4.29	3.17	-.33	(1978).
	8-10	131	3.02	2.94		
	11-13	202	2.35	2.53		
	14-+	276	1.90	2.27		

\*Correlations were not calculated.

Blot Test (Dubey, 1978). The findings have been consistent not only in the normal but in the clinical groups like psychoneurosis, functional psychosis, and neurological cases of brain dysfunction also. One can argue that those who are illiterate might also be mentally subnormal, at least proportionately. This line of argument, though supported when I. Q. is measured and interpreted according to the national or pooled norms, can not be sustained here. The reason is clear, subjects in all the reported studies have been attendants of the patients. These attendants were probably wiser (intelligent and stable enough) than the other members available in the immediate vicinity of the patients and thus were requested to escort the patients to the hospital.

In India, perhaps Bhatia's Battery of Performance Tests of Intelligence (Bhatia, 1955) was the first test where separate norms were provided for the literates and illiterates. This might be one of the reasons for its wide spread acceptance and use all over India. Unfortunately, this trend has however, not been picked up by the other test constructors. This of course does not mean that they are not aware of the effect of education. They do mention the correlations between scores on psychologicals and the education of the subjects. Recently a few welcome reports have come to the notice of the authors where these efforts are once again revived. For example, on Rorschach ink blot test Somasundaram, *et al.* (1971) have reported norms separately for '0-4', '5-11' and '11 and above' years of schooling subjects. While analysing the data of a newly developed test of organic

brain dysfunction, Kapur (1978) has also aptly remarked, the examination of mean scores shows that higher the educational level, better is the performance. Even speed of performance was found improved with education. This finding has an important implication, particularly for the developing countries, where there may be a wide gulf in the educational levels reached among the population.

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