

Organicity as shown in Bender-gestalt test and the Wechsler Adult intelligence Scale

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To accumulate further empirical data on diagnostic value of the WAIS and the Bender-gestalt in detection of organicity and to investigate correspondence between these two tests, a sample of 50 male alcoholics were tested. The findings tend to support the hypothesis of relationship between VIQ-PIQ and Bloch design subtest and significant correlation between VIQ-PIQ and deviation score for Bender-gestalt reproductions. The highest correlation found to be between the differences of IQs and that of estimated extent of brain damage.

Bender-gestalt test and the Wechsler Adult Intelligence Scale have been widely used in detection of organic brain pathology. Validity data for both tests suggest that they are effective in detecting perceptual deficiencies.

Curnutt (1953); Story (1960); Hirchenfang, et. al. (1967); Snortum (1965); Mackie (1963); Ladd (1964); and Bortner (1968); have advocated the use of Bender-gestalt and the Block design subtest of the WAIS in detection of organicity in alcoholics, and in estimation of intellectual and perceptual deterioration and increased behavioral rigidity.

Wechsler (1958); Bortner (1960); Aylaian and Meltzer (1962), Tolor

tion and general loss of mental efficiency in severe cases like Korsakoff's,

Cortical damage, regardless of its forms, being peripheral or central neuritis, damage to the vascular system with secondary neuronal degeneration, damage to the cortex, cerebellum, particularly to Purkinje cells, the periventricular gray matter and the basal ganglia, damage to the mammillary bodies and hypothalamic nuclei or to the corpus callosum, or anterior commissure, if sufficiently extensive, results in a more or less typical organic test syndrome. On the WAIS, it is characterized by marked differences between verbal and performance IQ and by special deficit in certain of the verbal as well as performance subtests. The diagnostic value of the Block design is particularly emphasized here. Subjects with mental deterioration and senile have particular difficulty in managing the test. This is also true of most cases of brain disease. The difficulty here seems to be due to lack of synthesizing ability or loss of the "abstract approach" in Goldstein sense of the term.

This correlational study was carried out to accumulate further empirical data regarding the use of Bender-gestalt test and the WAIS in detection of organicity and to investigate correspondence between these two tests with a group of male alcoholics.

METHOD

Subjects:

A sample of 50 subjects were randomly selected from a population of 165 male alcoholics referred to a specialized social agency, a rehabilitation center for alcoholics in Oklahoma City, Oklahoma. The average age of the individuals comprising the sample was 43.8 years. The greater proportion of the subjects came from low socioeconomic status. Nearly 50 percent were divorced and two were separated. 17 had attended college, including four had completed four years. Eight had graduated from high school.

Procedure:

The Wechsler Adult Intelligence Scale and the Bender-gestalt were individually administered to the subjects by one of the authors. In scoring the Bender-gestalt reproductions, the Pascal-suttell scoring system was chosen among the other available scoring systems, (Hutt, 1953; Billingslea, 1948; and Hain, 1964), because of its objectivity and a wealth of information concerning its diagnostic value. This system provides the scorer with a enumerated and numerically weighted set of factorial criteria for judging each design. The sum of the numerical values of factors judged to be present in a protocol represents the "total raw score". Research has shown that the greater the deviations from the stimulus, the higher the score on the Bender-gestalt and by interpolation the greater the suspicion of organicity, (Addington, 1952; Swenson, and Pascal, 1953; Curnutt, 1953; Robinson, 1953; and Lonstein, 1954). Each Bender-gestalt record was scored on a separate score sheet and in order to establish a sound scorer reliability it was checked by another clinical practitioner at the center. A pearson productmoment correlation was computed between deviation scores on the Bender-gestalt and the WAIS Block design subtest, between deviation scores on the Bender-gestalt and difference between Verbal IQ and Performance IQ on the WAIS and between VIQ-PIQ and scores for the Block design subtest.

In addition a list of variables was prepared which were estimated as pertaining to each of the subjects. Using Flanagan-Kelley technique for computation of an estimated Pearsonian productmoment coefficient of correlation, each of these variables was correlated with a score denoting the extent of brain damage estimated as existing within the individual subject. In order to arrive at the estimate, the scaled scores from the WAIS Block design subtests were reversed and rank ordered, and the Bender-gestalt deviation raw scores also rank ordered, enabling us to combine the two scores in order to establish a correlation score for the amount of brain damage sustained by each subject.

As a matter of information, it might be mentioned that the upper level criteria for the various correlations were: age, 45 years; education, 12 years

of schooling; marriage, being either married or divorced; verbal and performance IQ, 90. The lower limit of the range for average normalcy, Block design and Bender-gestalt, the median of the rank-ordered scores; VIQ-PIQ, the median of the spread of scores; and PIQ-VIQ, the median of the spread of scores.

Results And Discussion

As shown in table 1., the correlation between the Block design subtest of the WAIS and deviation score on the Bender-gestalt test produced a value of -0.20 not statistically significant.

A correlation of 0.48, significant at 0.05 was found between VIQ-PIQ and Block design subtest of the WAIS, suggesting a better diagnostic value in this case.

TABLE 2

TABLE 3

TABLE 4

TABLE 5

As shown in tables 2,3,4, and 5, the highest correlation found to be between the difference of IQs and that of estimated extent of brain damage, supporting the hypothesis that organicity does manifest itself in lowered perceptual-motor activities.

It is worth mentioning that, comparing scores on Block design subtest with the scores obtained on the other subtests of the WAIS, when score on the Block design was smaller than that of Picture Completion and Picture Arrangement, the correlation between Bender-gestalt and the Block design was significant and higher than the correlation shown in table 1., supporting Glasser and Zimmerman (1967) and Schafer and Rapaport findings (1951).

The analysis of the present study indicates a need for further studies investigating the value of the Block design subtest of the Wechsler Adult Intelligence Scale as an indicator of organicity. The investigation may provide additional information with respects to other subtests of the WAIS

and their validity in inspection of organic brain syndromes. Replication of the research using a control group consisting of non-alcoholics is also recommended.

TABLE 1
CORRELATIONS

Correlations	Scores
Block Design and Bender-Gestalt	-.20
PIQ minus VIQ and Block Design	-.40
VIQ minus PIQ and Bender-Gestalt	.48

TABLE 2
PER CENT OF MOST BRAIN-DAMAGED CASES
CHARACTERIZED BY THE CRITICAL
SCORE (OR TRAIT) ON
EACH VARIABLE

Variable	%
Age	62
Education	69
Marital Status, Married	23
Marital Status, Divorced	46
Verbal IQ	84
Performance IQ	69
Block Design Performance (rank ordered)	15
Bender-Gestalt Score	15
VIQ minus PIQ	100
PIQ minus VIQ	23

TABLE 3
PER CENT OF LEAST BRAIN-DAMAGED CASES
CHARACTERIZED BY THE CRITICAL
SCORE (OR TRAIT) ON
EACH VARIABLE

Variable	%
Age	54
Education	38
Marital Status, Married	38
Marital Status, Divorced	46
Verbal IQ	92
Performance IQ	100
Block Design Performance (rank ordered)	77
Bender-Gestalt Score (rank ordered)	92
VIQ minus PIQ	23
PIQ minus VIQ	100

TABLE 4
LEAST AND MOST BRAIN-DAMAGED CASES
COMPARED ON PER CENT
CHARACTERIZED BY
CRITICAL TRAIT
SCORE

Variable	% Most	% Least
Age	62	54
Education	69	38
Marital Status, Married	23	38
Marital Status, Divorced	46	46
Verbal IQ	84	92
Performance IQ	69	100
Block Design Performance (rank ordered)	15	77
Bender-Gestalt Score (rank ordered)	15	92
VIQ minus PIQ	100	23
PIQ minus VIQ	23	100

DATE	NOMBRE DES INTOXIQUES	NOMBRE DES DECES	POURCENTAGE DES DECES
1966	81	7	8,64%
1967	120	10	8,33%
1968	102	6	5,88%
1969	126	11	
1970	173	12	6,94%
1971	119	4	3,36%
1972	132	6	4,55%
1973	160	12	7,50%
TOTAL:	977	70	7,16%

NOMBRES DES MALADES ET DES DECES PENDANT 8 ANS

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