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Clinical Method for Diagnosing the Seriousness of Juvenile Delinquency

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A CLINICAL METHOD FOR DIAGNOSING THE SERIOUSNESS OF JUVENILE DELINQUENCY

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I.

Scant consideration has been given to the fact that delinquent behavior varies widely in the extent of its manifestations from individual to individual. Slawson (4) has used two criteria, the number of arrests and the severity of the penalty for each offense, as a means of estimating the degree of delinquency. Clark (1) has devised a plan whereby juvenile offenses may be numerically graded as to their greater or lesser gravity. In the case of an individual offender, values are assigned to the different forms of delinquency committed, these are totalled and the sum is termed a *delinquency index*. One of the present writers (3) has proposed a quantitative method by which the degree of asocial behavior shown by juvenile delinquents may be differentially diagnosed. Essentially the method consists of the utilization of three operations which, equally weighted and compounded into a total, give a Delinquency Index (DI).[1] The last technique, however, does not seem to be entirely practical from a clinical standpoint. Hence, in this study a revision of the original procedure is presented, one more readily adaptable to the clinical analysis of delinquent conduct.

II.

The fundamental framework of the revised technique is similar to that employed in the original investigation. Three operations or criteria which quantitatively express variations in the extent of delinquent behavior form the basis of a method for finding the revised Delinquency Index.[2] Following is a brief description of these operations:

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[1] In the original study of this problem, the term "Delinquency Index" was used after Clark (1) and is retained in the present connection.

[2] As ascertained in the first investigation the interrelationship between the three operations was insignificant, warranting the practical assumption that they are relatively discrete functions of one phenomenon. It was held, therefore, that a

1. *Duration (D)*: length of time in months a given subject has been delinquent, obtained by subtracting the life age at which delinquency first occurred from the subject's current life age as indicated by institutional records. Thus, if the subject was 14 years 8 months of age and the first delinquent act occurred at the age of 11 years, *D* would equal 44.

2. *Frequency (F)*: total number of appearances of a given subject in Juvenile Court. Thus, if the records state that the subject has been brought into Juvenile Court on seven occasions, *F* would equal 7.

3. *Scale Values (SV)*: total of weighted values assigned to the different forms of delinquent behavior committed by a given subject. Thus, if the subject had committed burglary, incorrigibility, stealing, and truancy, *SV* would equal 96, the sum of 39, 20, 27, and 10, respective scale values for the foregoing offenses.

Details of the classification of different forms of delinquent conduct and the method of deriving weights for each type of offense have been reported elsewhere (2).

As an initial step in computing the revised Delinquency Index, frequency distributions of D-values, F-values, and SV-values were cast into percentile tables. Percentile tables for these three operations were calculated on the basis of data from the original study, namely, the cases of 368 delinquent boys of the white race from the Boys' Industrial School, Lancaster, Ohio. Table 1 shows percentiles for duration, frequency, and scale values.

TABLE 1

PERCENTILES FOR D, F, AND SV (N=368)

Percentile	Value for D	Value for F	Value for SV
100	135.0 or above	25.0 or above	165.0 or above
90	77.8	10.0	119.4
80	65.8	7.7	103.0
70	53.1	6.4	93.6
60	42.9	5.4	86.4
50	35.2	4.5	79.0
40	26.4	3.8	68.0
30	19.2	3.3	59.0
20	14.5	2.8	50.6
10	9.7	2.1	38.9
0	5.0 or less	1.0 or less	15.0 or less

composite value would be a more adequate measure of the degree of delinquency than the value of any one operation taken singly. Standard scores were employed for purposes of combining the three operational values. The sum of the standard scores, each value receiving equal weight in the total, constituted the Delinquency Index.

From the deciles in Table 1 percentile curves were plotted for the D, F, and SV values. By means of these ogives, the values for duration, frequency, and scale values on each of the 368 cases were transmuted into corresponding percentile ranks. The percentile ranks assigned to the operational values in each case were totalled, the sum constituting the revised Delinquency Index. As in the former investigation, each operation was given equal weighting in the total, an arbitrary procedure, but one which appears to be the only solution from an empirical standpoint.

To illustrate the revised method of obtaining the DI, two cases are cited:

Case 1. Subject is 15 years, 4 months old; first appeared in Juvenile Court when 13 years of age; two appearances in Court are recorded; offenses committed include burglary, stealing, and truancy.

Case 2. Subject's life age is 17 years, 1 month; first appeared in Juvenile Court when 10 years of age; ten appearances in Court recorded; and offenses committed are malicious mischief, stealing, larceny, and vagrancy.

Analyzing the operational factors in Case 1, D=28, F=2, and SV=76, the latter value being the sum of 39, 27, and 10, respective numerical weights for the forms of delinquency indicated. Reading from the appropriate percentile graphs, it is found by interpolation that the percentile rank for D is 42, for F is 9 and for SV is 47. Totalling these percentile ranks DI is found to be 98.

Following the same procedure in Case 2, D=85, F=10, and SV=91, which transmuted into respective percentile ranks are 91, 90, and 66, and totalled give a DI of 247.

It is evident from an inspection of Table 1, that when the Delinquency Index is defined as the sum of percentile ranks assigned to D, F, and SV values, each factor being equally weighted, it is possible for an array of DI's to vary from 0 to 300.

To determine the degree of equivalence between the revised and original methods of computing the Delinquency Index, a series of correlations were computed as follows: Pearson r's between the original DI and the revised DI on two groups each containing 100 cases; on one group containing 168 cases; and on the total group of 368 cases. Delinquent cases used were 368 boys on whom DI's were reported in the original study. Correlations with their respective PE's are displayed in Table 2.

TABLE 2

CORRELATIONS BETWEEN ORIGINAL AND
REVISED DELINQUENCY INDEX

Group	N	r	PE
I	100	.94	±.008
II	100	.96	±.005
III	168	.86	±.014
IV	368	.95	±.003

The foregoing array of correlations may be regarded as highly reliable since each is far in excess of its PE. Too, it may be concluded that the revised procedure for finding the Delinquency Index is an adequate substitute for the original method because of the manifestly high level of correspondence between the two methods. A not unimportant fact which may be added in favor of the revised procedure is that it follows more the conventional practices observed in clinical psychology in dealing with certain kinds of quantitative information, i. e., the employment of percentiles rather than standard scores.

III.

By way of demonstrating the practical significance of the revised Delinquency Index in clinical diagnosis, it has been applied to two entirely different groups than the original one on which it was developed. One of the new groups consisted of 150 negro boys, the other of 460 white boys, the subjects being from the same institution for juvenile delinquents to which reference has been made heretofore. The original 368 cases were resident in the institution in 1932, the two latter groups during 1935, so that approximately three years have elapsed between collection of the first and last body of data. It should be emphasized here that in no instance has the factor of selection, except for race, entered into the accumulation of data. The groups were random samples of the delinquent population of the institution, representative of varying degrees of asociality.

Table 3 shows a frequency distribution of DI's based on 368 delinquent boys of the white race resident in the institution during 1932; 460 delinquent boys constituting the 1935 white group; and 150 delinquent boys in the negro group contemporary with the 1935 white group.

TABLE 3

FREQUENCY DISTRIBUTION OF DELINQUENCY
INDEX BY REVISED METHOD

| | Number of Cases | | |
Class Interval	1932 White Group	1935 White Group	1935 Negro Group
0–19	15	11	1
20–39	19	25	3
40–59	19	39	5
60–79	33	28	9
80–99	29	45	19
100–119	29	46	14
120–139	27	39	9
140–159	34	54	26
160–179	34	43	20
180–199	36	42	15
200–219	27	34	9
220–239	27	33	10
240–259	24	13	5
260–279	12	7	5
280–299	3	1	0
Total	368	460	150
Mean	144.48	135.96	148.87
Median	148.13	138.42	152.14
SD	72.14	65.49	58.90
Q1	84.29	86.32	100.71
Q3	200.56	187.14	187.22
Q	58.14	50.41	42.36

Several conspicuous facts are revealed by Table 3. The tendency of the DI's in each distribution is to spread widely, i. e., covering practically all of the class intervals within the limits 0 to 300. All three distributions have a slight negative skewness, being in order —.152, —.114, and —.167. Variability is considerably more pronounced for the two white groups than for the negro group. The mean and median DI is slightly higher for negroes than for either of the groups of whites. The middle 50 per cent of DI's are more concentrated in the negro group than in either of the two white groups.

Two important questions are suggested by the foregoing conclusions. First, are there noteworthy differences between the racial groups in degree of delinquency? Second, is there any indication that the degree of delinquency is significantly related to the different periods of time of the samplings? A few computations will

suffice as answers. The differences in the mean Delinquency Index between the two white groups amounts to 8.52, the ratio $\dfrac{D}{PE\ Diff}$ being 2.61; the difference between the means of the 1932 white group and negro group is 4.39, resulting in a critical ratio of 1.07; and the difference between the mean of the 1935 white group and the mean for the negro group is 12.91, the critical ratio being 3.36. While some significance may be attached to differences between certain of the means, especially the 1935 white group and the negro group, none of the critical ratios denote complete reliability. In general it may be stated that negroes tend to be somewhat more delinquent on the average than a contemporary white group but even this difference may have been the result of sampling errors. Further, there is a moderate tendency noticeable for the average degree of delinquency to decrease among the 1935 white groups as compared with the 1932 white group. In no case, however, are such findings startling.

Comparisons of the groups in terms of the overlapping of distributions yield the following:

(a) 199 cases or 54 per cent of the 1932 white group exceed the median Delinquency Index of the 1935 white group;

(b) 90 cases or 61 per cent of the negro group exceed the median DI of the 1935 white group;

(c) and 80 cases or 53 per cent of the negro group exceed the median DI of the 1932 white group.

Again the 1932 white group is shown to have a slightly higher degree of delinquency on the average than the 1935 white group. The negro group is likewise demonstrated as having a higher degree of delinquency on the average than either white group. Such differences are in no sense outstanding, variations and differences in the seriousness of delinquent conduct within each group being of more concern from the standpoint of clinical differentiation than intergroup relationships.

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IV.

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Based on a revised method for computing the Delinquency Index two conclusions are yielded by this study:

1. Correlations between the original and revised methods indicate that the latter is an adequate substitute for the original

method for purposes of clinical differentiation of delinquent behavior.

2. An application of the revised technique to three groups of delinquent boys, two white groups and one negro, signifies that while there are small differences in degree of delinquency as between groups, a vastly more important consideration are variations and differences in the Delinquency Index within each group.

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