

Richard Schuster,¹ Ph.D. and P. D. Guggenheim,² M.D.

An Investigation of the Intellectual Capabilities of Juvenile Offenders

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ABSTRACT: One hundred two cases were drawn randomly from the Bronx Family Court Mental Health Clinic's active files. Clients were given a Wechsler Intelligence Scale for Children—Revised, Bender Gestalt, and Wide-Range Achievement Test Reading. Results indicated that approximately one third were functioning the mentally defective range, one third in the borderline mentally retarded range, and one third in the low average to average range. Almost half showed perceptual deficits correlated with minimal brain dysfunction. Results were highly significant, suggesting that delinquents apprehended and seen in our clinic are likely to be of borderline intelligence or below, showing evidence of minimal brain dysfunction. Hypotheses are discussed, as is the need for appropriate treatment facilities.

KEYWORDS: pathology and biology, jurisprudence, juvenile delinquency

Traditionally the relationship between intelligence and delinquency was considered insignificant. Early studies found no differences between the intelligence of delinquents and nondelinquents [1,2]. Even more recently the effect of intelligence on antisocial behavior was considerably downplayed. For example, many texts dealing with criminality and delinquency did not even mention IQ as a possible variable influencing antisocial deviant behavior [3,4]. At other times researchers noted that intelligence apparently was a factor in antisocial behavior; however, they often rationalized their observations, mitigating its importance as an etiological factor in delinquency. Statements indicating that IQ tests measure the degree to which the individual has internalized middle-class values rather than intelligence are typical [5]. In other cases authors suggest that although a higher percentage of delinquent children are retarded, it is not mental retardation per se but the inability of the child to make adequate school or social adjustments that usually results in delinquency [6].

After an extensive review of the literature, Hirschi and Hindelang [7] concluded that the refusal to relate intelligence to delinquency arose from several factors. They cite a shift from a medical to a sociological paradigm, the failure of early research to substantiate claims that low IQ was a "necessary and sufficient" condition for illegal behavior, early negative reviews of research on this question, reservations about the validity of IQ and delinquency measure-

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¹Chief psychologist, Family Court Mental Health Services, City of New York; clinical director, Mental Health Services, Bronx Family Court; and associate, Institute of Advanced Psychological Studies, Adelphi University, Garden City, NY.

²Medical director, Family Court Mental Health Services, City of New York, and clinical associate professor, Department of Psychiatry, New York University School of Medicine, New York, NY.

ments, and erroneous interpretation of research findings as factors fostering an unrealistic assessment of the situation. After reexamining pertinent data, they concluded that there is an effect between intelligence and delinquency, independent of class or race, that is mediated through a variety of educational variables. They add that the relationship between IQ and delinquency is at least as strong as the relationship between class or race to official delinquency.

Such conclusions are drawn from a variety of studies. For instance, in a study of 9200 white males in Tennessee, the authors concluded that IQ is more important than social class in predicting official delinquency among white boys. The rate of adjudication between the lowest IQ group was 2.1 times that of the highest IQ group, while the rate of adjudication of the lowest occupational group was 1.7 times that of the highest occupational group [8]. Other studies reveal "intellectual status" as a significant forerunner of delinquency independent of socioeconomic level [9]. When gang members are compared with other juveniles, gang members scored "lowest on six independent intelligence measures regardless of race" [10]. A study of 3600 California boys revealed that the effect of IQ on official delinquency statistics was stronger than that of the father's education [11]. An additional study of British boys indicated that low IQ was a significant precursor of delinquency. Most outstanding was the fact that boys with an IQ of 110 or above had a recidivism rate of only 1 in 50, while boys with an IQ of 90 or below had a recidivism rate of 1 in 5. The author concluded that intelligence appears to be a significant factor in multiple offenders [12].

When violent juvenile offenders were compared with less violent juvenile delinquents, the results showed the violent group had a lower Wechsler Intelligence Scale for Children (WISC) similarities score, again suggesting that intelligence is a factor in acting-out behavior [13]. Such research is corroborated in later studies. Recent research suggests that violent delinquents manifest more psychiatric and neurological liabilities than less violent delinquent children. Marked psychoeducational deficiencies are also evident [14, 15].

Gordon [16] examined IQ and delinquency from a variety of perspectives. He observes that IQ is relevant to delinquency, providing extensive rationales for his conclusions (that is, greater incidence of criminality among monozygotic than dizygotic twins). He denied a cultural bias in IQ, emphasizing that research showed conclusively that IQ has the identical meaning for both minority and majority individuals. In this respect, although early studies and research concluded that IQ was not a significant variable in delinquency, more recent data clearly indicate that IQ is a prominent factor in the etiology of delinquent behavior.

Clinical impressions in the Bronx Family Court Mental Health Services corroborated such conclusions. A disproportionate number of mentally deficient, neurologically impaired, and psychologically disturbed youngsters were seen at the clinic for dispositional purposes. It became increasingly evident that mentally retarded youths are frequently involved in delinquent activities, often of a violent nature. Indications of minimal brain dysfunction in these adolescents appeared more prominent. A study was undertaken to substantiate these clinical impressions and the findings of other researchers.

Materials and Methods

The new Bronx Family Court opened in May 1977. At that time a full-time mental health clinic located in the court also began its operation. As part of its regular assessment of juveniles, particularly for placement purposes, batteries of psychological tests were administered. Over the first 15-month period four psychologists were involved in evaluations of juveniles. For the purpose of this study 102 cases were drawn from the active files on a single day, constituting all active cases in the file at that time.

All clients were under 16 years of age. Sixty clients were involved in delinquency petitions. Forty-two clients were involved in designated felony findings. (A designated felon is a New York state legal term for adolescents aged 14 and 15 who are involved in one of eleven

specific crimes such as murder or rape which, if committed by an adult, would constitute a serious felony. The law mandates that such adolescents receive both psychiatric and psychological evaluations. They can receive harsher sentences at the judge's discretion than the lesser category of juvenile delinquent.) The age range for clients with a delinquency finding was 11 years through 15 years, 11 months of age; the age range of clients with a designated felony finding was 14 years through 15 years, 11 months of age. Ninety-six clients were male; six were female. All clients were tested between May 1977 and August 1978. The intelligence test used was the WISC-R. Reading was tested by using a word recognition task (Wide-Range Achievement Test or WRAT Reading). All clients were also given the Bender Gestalt, a task involving copying simple geometric designs.

The WISC-R is a general intelligence test widely used to determine IQ scores. The WISC-R norms are derived from representative groups of the U.S. population of children drawn from a stratified sampling plan based on a recent census and congruent with the breakdown of the U.S. population according to significant criteria [17].

The reading test consisted of a simple word recognition test that involved pronouncing progressively harder words correctly. For example, the test moves from beginning words such as "cat," "see," "red," "to," and "big" (commensurate with about a first-grade reading level) to such words as "finger," "tray," "felt," and "stalk" (commensurate with about a third-grade reading level). It continues through words such as "clarify," "recession," "threshold," "horizon," and "residence" (commensurate with about a sixth-grade reading level), to words such as "putative," "endeavor," and "heresy" (about a ninth-grade reading level), to much more difficult words such as "audacious," "mitosis," "seismograph," "spurious," and "idiosyncrasy" (on a twelfth-grade and above level).

The Bender-Gestalt test involves copying simple geometric designs. The way these designs are copied correlates highly with perceptual deficits indicative of minimal brain dysfunction (MBD) [18,19]. This is a nonverbal task and essentially culture-free. The designs are simple; evidence of MBD includes perseveration, lack of integration of the gestalt, rotation, and so forth. Children whose designs were like those of brain-injured children were classified as showing evidence of MBD in this sample.

Results

An analysis of the results showed a disproportionately large percentage of juveniles functioning below average intellectually. Approximately one third of the clients were mentally defective (IQ of 69 and below), one third were borderline mentally retarded (IQ of 70 to 79), and one third were low average to average (IQ of 80 to 109). No client was above the average level. In addition, 44 clients (43%) showed indications of MBD, and their range of functioning was from moderately mentally retarded to average levels (IQ of 41 to 105) (Table 1).

In all these cases the clinic recommended dispositional alternatives to the court. As previously mentioned, approximately two thirds (67) of the juveniles were borderline retarded or below. Of this group 18 were recommended for probation, 23 for placement in a nonsecure, nonrestrictive facility, and 26 for placement in a secure, restrictive environment. The clinic thus requested placement for 76% of the clients diagnosed as borderline retarded and 70% of those diagnosed as mentally defective, as shown in Table 2.

An informal assessment reveals that the proportion of intellectually limited youngsters seen by the court is not congruent with expectations from a normal distribution. The WISC-R manual states that only 2.2% of the population falls within the mentally retarded defective range, 6.7% within the borderline mentally retarded range, 16.1% within the low average range, and 50% within the average range. As already noted, this is markedly discrepant from the distribution of scores found among this population of juvenile offenders. A statistical analysis was done to examine this distribution of scores more objectively.

To evaluate the significance of these data a chi-square analysis was computed. This test

TABLE 2—*Clinic recommendations regarding placement for retarded juvenile offenders.*

	Probation	Nonrestrictive or Nonsecure Placement	Restrictive or Secure Placement
Designated felons			
Mentally defective	1	5	5
Borderline retarded	3	9	5
Total	4	14	10
Delinquents			
Mentally defective	9	7	6
Borderline retarded	5	2	10
Total	14	9	16

compares the expected frequencies with the observed frequencies in a given population. The expected frequency as listed in the WISC-R manual indicates a normal distribution for IQ scores. The observed frequencies in this sample show a marked skew towards the mentally retarded population.

Further analysis revealed that there is a relationship between evidence of MBD and intellectual limitation. This population shows signs of MBD disproportionate to the population as a whole (usually stated at 5% to 10% [20], compared to 43% for this sample); in addition, the likelihood of perceptual deficits increases significantly as IQ diminishes when these juveniles are compared to each other. Thus, evidence of MBD does not occur evenly between IQ groups, but is disproportionately found in the mentally defective group (see Tables 3 and 4).

Discussion

The results clearly indicate that more mentally retarded adolescents are being apprehended than would be expected from the population as a whole. In these youths retardation appears to be at least partially related to MBD rather than to functional handicaps, such as socioeconomic deprivation and lack of education. It should be added that this group of youngsters certainly manifests academic deficiencies. For example, 47.8% of these adolescents were reading on a third-grade level or below, and 59.5% of these adolescents were reading on a fourth-grade level or below (see Table 5). The average reading level for the designated felon was at the 5.2-grade level. These adolescents do not appear to be heavily interested in developing their general academic capabilities; in fact, school appears to be

TABLE 3—*Chi-square summary table.*^a

IQ Group	Observed Frequency from Test Protocols	Expected Frequencies from WISC-R Manual
Mentally defective	33	2.24
Borderline	34	6.83
Low average	24	16.42
Average	11	51.00
Bright average	0	16.42
Superior	0	6.83
Very superior	0	2.24
Total	102	101.98

^a $\chi^2 = 590.84$; $P < 0.001$; 6 degrees of freedom.

TABLE 4—*Minimal brain damage chi-square summary table.*^a

IQ Group	No Signs of MBD		Signs of MBD	
	Observed Frequency from Protocols	Expected Frequency	Observed Frequency from Protocols	Expected Frequency
Mentally defective	10	18.81	23	14.19
Borderline	23	19.38	11	14.62
Low average	15	13.68	9	10.32
Average	10	6.27	1	4.73
Total	58	58.14	44	43.85

^a $\chi^2 = 16.71$; $P = 0.001$; 3 degrees of freedom.

TABLE 5—*Distribution of word recognition scores for juvenile offenders.*

Grade	Designated Felon ($n = 40$)	Delinquent	Total ($n = 94^a$)
K-1	4	8	12
2	7	7	14
3	7	12	19
4	5	6	11
5	5	3	8
6	6	5	11
7 and above	6	13	19

^aEight youths were not given word recognition tests.

rather low on their general hierarchy of values. Since many of these children show evidence of MBD it seems likely that acquiring academic skills is particularly difficult for them. It also seems likely that school work is not perceived as a path for peer recognition and status. Consequently, it is not surprising that most of these youngsters have a history of both academic difficulties and behavior problems. The large majority have been left back or suspended. Many of them are chronic truants. Typically they spend much of their time on the streets associating with people from the street culture.

This group of youngsters impresses us as largely intellectually deficient. They do not appear actively involved in academic pursuits. Consequently, it is particularly easy for these youngsters to seek gratification from other outlets, especially those acceptable in the street culture. (Other theorists have previously noted that differential opportunity fosters delinquent behavior [21]. When adolescents fail to achieve a sense of accomplishment in school and feel that pathways to success are blocked by intellectual and academic deficits, other sources for gratification are naturally sought. If illegitimate means for status enhancement are easily available, such avenues are particularly seductive.) In many ways activities geared toward criminal acts, violence, exploitation, and "getting over" receive a great deal of approval in this environment. These youths also find that to a certain extent they can succeed in the street culture beyond the degree that they succeed in other areas, such as school. They therefore find themselves receiving a certain degree of status in the street subculture that was lacking in other areas and engage in delinquent and criminal activities more readily. They are also easily inculcated with a psychopathic orientation and find themselves quickly enmeshed in difficulties with the courts. Thus, most retarded acting out youngsters are currently before the court on a host of charges, ranging from minor offenses such as criminal trespassing to major ones like murder and rape.

It should be stressed that the great number of intellectually limited adolescents that are evaluated by the clinic may reflect that the more intelligent adolescent is not being apprehended and brought before court as readily as his less gifted peer. The large number of intellectually limited, minimally brain injured adolescents tested by the clinic may reflect the fact that such adolescents tend to make foolish mistakes or act impulsively [22], thus fostering apprehension by the police. More sophisticated and intelligent delinquent adolescents may avoid detection more often by using a planning ability that many of the limited adolescents lack. In this respect, the current study highlights the fact that more intellectually limited youths are being apprehended, brought before the courts, and referred to the clinic than would be expected from the population as a whole. It does not exclude the possibility that brighter and more sophisticated adolescents are engaging in delinquent activities but successfully eluding arrest.

Conclusions

The current study agrees with prior research that suggests that delinquents apprehended and then evaluated by the court clinic show a greater proportion of mental retardation and MBD than would be expected from the population as a whole. Although explanations for these findings are postulated, such explanations are speculative at this stage of the investigation. This study highlights a phenomenon; it does not attempt to provide an understanding (beyond preliminary speculation) regarding the etiological factors fostering such results. Further research is needed to elaborate and delineate the factors leading to the preponderance of the mentally retarded offender seen in the juvenile justice system today.

The study also suggests that the type of delinquent seen before the court requires a special type of placement facility. More than 70% of retarded adolescents received a recommendation for placement. Unfortunately, facilities geared to the special needs and characteristics of these juveniles are rare. Facilities and programs geared to the training of the mentally retarded, brain injured, educationally deficient, acting out delinquent are badly needed, particularly since it appears that the majority of youths evaluated for dispositional purposes fall into this category.

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Address requests for reprints or additional information to
Richard Schuster, Ph.D.
Mental Health Services
Bronx Family Court
900 Sheridan Ave.
Bronx, New York 10451