

Diagnostic Classification of 120 Delinquent Boys

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Delinquency has been defined as youthful behavior that violates the law.¹ Juvenile court statistics indicate that 2.9 percent of American youths age 10-17 appear in Juvenile Court each year (excluding traffic offenses). Considering there are about 36 million youngsters in this age range in the United States,² that means each year over a million youths are in serious trouble and appearing in court. The FBI reports an increase of 293.4 percent in arrests for juveniles between the ages of 7 and 17 years for violent crimes and an increase of 131.9 percent for property crimes.³ As Shamsie⁴ stated, this increase cannot be explained by a growth in population. Therefore, delinquency and crime are a real threat to society and are of increasing and serious concern to each individual, and of particular concern to mental health professionals and law enforcement authorities.

The above definition of delinquency is very broad and does not take into account the fact that delinquency is often considered a heterogeneous multicausal phenomenon. Therefore, efforts have been made to identify subgroups within this heterogeneous syndrome.⁵ Most of the literature has categorized delinquency on the basis of characterological or neurotic disturbances.⁶ Other reports indicate that delinquents have a high incidence of psychopathology other than sociopathy.⁷ Weiner¹ classified the delinquents into three types based on their psychological make-up:

Sociological delinquency: This type of delinquent usually has few psychological problems and is part of a delinquent subculture that commits antisocial acts in a group rather than individually. This type of delinquency sometimes is considered adaptive rather than maladaptive.

Characterological delinquency: These youngsters usually have an asocial personality orientation. The person has little concern for the other people who suffer from his act. He is a loner who doesn't trust anyone and is amoral, aggressive, and impulsive.

Neurotic delinquency: This individual is unable to communicate his needs and, therefore, expresses his needs through delinquent behavior. These needs are for recognition, admiration, and help. He forces the environment to pay attention to his needs through his delinquent acts.

The most recent classification proposed by DSM III⁸ categorizes conduct disorder into four types. The DSM III definition of conduct disorder is

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“a repetitive and persistent pattern of conduct in which either the basic rights of others or major age-appropriate societal norms or rules are violated”

The diagnostic criteria for the four types of conduct disorder are:

Socialized: Social attachment to others as evidenced by at least two of the following:

1. The person has one or more friendships that have lasted over 6 months.
2. The person extends himself for others even when no benefit is likely.
3. He feels guilty or regretful when such reactions are appropriate (not only when caught or in trouble).
4. The person avoids putting blame and informing on friends.
5. He cares about the well-being of friends or others.

Undersocialized: Inability to establish a normal amount of affection, empathy, or attachment with others as shown by no more than one of the following:

1. The person has one or more friendships that have lasted over six months.
2. The person extends himself for others even when no benefit is likely.
3. He feels guilty or regretful when such reactions are appropriate (not only when caught or in trouble).
4. The person avoids putting blame and informing on friends.
5. He cares about the well-being of friends or others.

Aggressive Type: There is a persistent pattern of aggressive behavior in which the basic rights of others are violated, as evidenced by either of the following:

1. Physical violence (abuse) to people or property, for example, rape, breaking, fire setting, mugging, assault, vandalisms.
2. Stealing outside of the home that involves direct interaction with the victim (for example, armed robbery, purse-snatching, extortion).

Nonaggressive Type: There is a persistent pattern of nonaggressive behavior in which the basic rights of others or major age-appropriate social rules are violated, as evidenced by any of the following:

1. Persistent violation of many important rules at home or at school.
2. Repetitive running away from home overnight.
3. Chronic and serious lying at home or away.
4. Stealing that does not involve direct interaction with the victim.

An individual is classified as either socialized or undersocialized and either aggressive or nonaggressive so that there are four classifications of conduct disorder: socialized aggressive (SA), socialized nonaggressive (SN), undersocialized aggressive (UA), and undersocialized nonaggressive (UN).

Since the DSM III classification system is relatively new, there are few published reports using these diagnostic criteria. For instance, Henn *et al.*⁹ in a retrospective study, applied DSM III criteria of socialized-under-

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socialized to selected records of 286 boys admitted to a training school and reported differences among these types of youths.

The present study is an effort to investigate the diagnostic classification, demographic characteristics, and intellectual abilities of 120 delinquent boys in a prospective manner.

Method

The subjects were 120 delinquent boys who were committed to the Missouri State Training School for Boys. They ranged in age from 13 to 18, with a mean age of 15.3. Forty-nine (41 percent) were black and 71 (59 percent) were white. The mean Socio-Economic Status (SES) based on the Hollingshead and Redlich¹⁰ Social Class Classification was 3.98. The SES of 17 (14 percent) of the boys could not be accurately measured for a variety of reasons, for example, the youth had been in several foster homes or group homes since childhood. Over two-thirds (73 percent) of the sample came from urban areas and the remainder (27 percent) came from rural areas. The mean full scale IQ for the entire group was 86.1.

These youngsters were committed to this training school because they had been adjudicated as delinquent by the Juvenile Court. Within 48 hours admission, a trained investigator conducted a semistructured interview that covered areas such as relationships with peers, parents, and others. Additional information was collected from previous records and from counselors in the training school. Based on this information the DSM III diagnostic classification was made by the first author.

The variables examined in this study included age, SES, race, home community, and intelligence scores obtained from either the child or adult form of the Wechsler Intelligence Scale. For each variable, the primary analyses consisted of a comparison of the socialized and undersocialized groups and a comparison of the aggressive and nonaggressive groups. Four additional subanalyses also were performed: (1) socialized aggressive (SA) versus undersocialized aggressive (UA); (2) socialized nonaggressive (SN) versus undersocialized nonaggressive (UN); (3) SA versus SN; and (4) UA versus UN. One-way analysis of variance (ANOVA) was performed on interval variables. The likelihood ration χ^2 was computed for categorical variables. All tests are two-tailed.

Results

Means and standard deviations for interval variables (that is, age, SES, intelligence measures) are in Table 1 for the primary classification groups (socialized-undersocialized, aggressive-nonaggressive) and in Table 2 for the subclassification groups (SA, SN, UA, UN). The percentages of cases classified into the home community and racial group categories are in Table 3 for the primary classification groups and in Table 4 for the subclassification groups.

TABLE 1. Results for Socialized-Undersocialized and Aggressive-Nonaggressive Comparisons

		Socialized	Undersocialized	Anova p	Aggressive	Nonaggressive	Anova p
Age	Mean	15.40	15.30	ns	15.30	15.40	ns
	STD	.95	.91		.90	1.00	
SES	Mean	4.00	4.00	ns	3.80	4.30	.02
	STD	.93	.95		.99	.71	
VIQ	Mean	87.90	75.30	.0001	83.10	88.50	ns
	STD	13.50	14.40		15.30	12.60	
PIQ	Mean	93.40	84.60	.0090	90.50	92.80	ns
	STD	14.60	17.20		16.50	13.50	
FSIQ	Mean	89.00	77.90	.0005	84.70	89.60	ns
	STD	14.40	15.10		16.40	11.80	

Distribution of Cases

For the total sample, 89 cases (74 percent) were classified as socialized, while 31 cases (26 percent) were classified as undersocialized. These frequencies are significantly different from a distribution of 50 percent of the youths receiving each diagnosis, $\chi^2(1) = 28.033$, $p < .001$. Significantly more youths were classified as aggressive ($n = 85$, 71 percent) than nonaggressive ($n = 25$, 29 percent), $\chi^2(1) = 20.83$, $p < .001$. The distribution of socialized-undersocialized by aggressive-nonaggressive did not deviate from this overall trend (that the majority are socialized and aggressive), $\chi^2(1) = 1.137$, $p > .2$. Seventy-one percent of the aggressive youths and 81 percent of the nonaggressive were in the socialized category. Sixty-seven percent of the socialized cases and 77 percent of the undersocialized cases were in the aggressive category.

Age

There were no significant age differences between any of the diagnostic groups (all $F_s < 1$). Mean age for each group was between 15.3 and 15.4 years.

Race

For the total sample, 59 percent of the cases were Caucasian, and 41 percent of the subjects were black.

Socialized-Undersocialized: For socialized youths, 67 percent were

TABLE 2. Results for Comparisons between the Four Diagnostic Subclassifications

		Diagnostic Classification				Anova Comparison			
		SA	SN	UA	UN	SA vs UA	SN vs UN	SA vs SN	UA vs UN
Age	Mean	15.40	15.40	15.30	15.40	ns	ns	ns	ns
	STD	.89	1.10	.95	.79				
SES	Mean	3.85	4.20	3.70	4.60	ns	ns	ns	ns
	STD	1.00	.75	.99	.53				
VIQ	Mean	86.50	90.60	75.10	76.20	.002	.02	ns	ns
	STD	14.30	11.40	14.90	13.40				
PIQ	Mean	93.60	93.00	83.10	91.60	.009	ns	ns	ns
	STD	15.00	13.80	17.90	13.10				
FSIA	Mean	87.90	91.10	76.80	82.70	.005	ns	ns	ns
	STD	15.60	11.60	15.90	11.30				

NOTE: SA = Socialized Aggressive
SN = Socialized Nonaggressive

UA = Undersocialized Aggressive
UN = Undersocialized Nonaggressive

In the subanalysis involving only the socialized youths, Caucasians account for 58 percent of the SA group and 86 percent of the SN group, $\chi^2(1) = 7.374$, $p < .007$. The majority of both blacks and Caucasians were classified as SA, but this trend was much more pronounced for blacks (86 percent SA, 14 percent SN) than for Caucasians (59 percent SA, 41 percent SN).

For the undersocialized youths, Caucasians account for 86 percent of the UN group, and blacks account for 79 percent of the UA group, $\chi^2(1) = 10.019$, $p < .02$. Blacks were almost always classified UA (95 percent), while Caucasians were more equally distributed between the UA (45 percent) and UN (55 percent) groups.

Home Community

For the total sample, 73 percent came from urban areas, and 27 percent came from rural areas. This distribution is in accordance with the State of Missouri's distribution for rural and urban, that is, 26.4 percent of Missourians live in a rural area, and the rest reside in the urban area.

Socialized-Undersocialized: Examination of the distribution of socialized and undersocialized youths shows that almost all the undersocialized youths (94 percent), came from urban communities; for the socialized youths, 66 percent were raised in urban environments and 34 percent in rural environments, $\chi^2(1) = 11.007$, $p < .0009$. The vast majority of rural youths were classified as socialized (94 percent), whereas 2/3 of the urban group was classified as socialized and 1/3, as undersocialized.

The home community analysis involving the SA and UA subgroups was also significant, $\chi^2(1) = 9.429$, $p < .005$. The pattern of results was identical to that reported above for the total sample of socialized and undersocialized cases.

The results of the home community analysis for SN and UN groups did not reach significance, $\chi^2(1) = 1.591$, $p > .2$. Sixty-two percent of the SN youths and 86 percent of the UN youths were from urban homes. For urban youths, 75 percent were SN and for rural youths, 92 percent were SN.

Aggressive-Nonaggressive: None of the comparisons of home community by aggressive-nonaggressive classification reached significance (all $\chi^2(1) < 1$, all $ps > .3$). The majority of both the aggressive (76 percent) and nonaggressive (67 percent) groups were from urban backgrounds. The majority of both the urban (72 percent) and rural (62.5 percent) cases were classified as aggressive.

For the socialized youths, about 2/3 of both the SA and SN cases were from urban homes, and 1/3 were from rural homes. Approximately 2/3 of the urban and rural youths were in the SA category, while 1/3 were in the SN category.

For the undersocialized youths, more than 85 percent of the cases were from urban backgrounds (96 percent UA, 86 percent UN). Rural youths were equally split between the UA and UN categories, while the urban youths were primarily undersocialized aggressive (79 percent UA, 21 percent UN).

Socioeconomic Status

In the Hollingshead and Redlich SES classification system, the ratings range from 1 to 5, with 1 being the highest SES level and 5, the lowest. None of the youths came from the highest category, and more than 60 percent of each diagnostic group came from the two lowest SES levels.

Socialized-Undersocialized: Socialized and undersocialized youths did not differ in SES classification, $F(1, 81) < 1$. The two groups also did not differ when the SES values were compared for youths classified SA and UA $F(1, 52) < 1$, or SN and UN, $F(1, 27) = 1.25, p > .2$.

Aggressive-Nonaggressive: Aggressive youths came from higher SES backgrounds than the nonaggressive youths, $F(1, 81) = 5.66, p < .02$. The same pattern of higher SES backgrounds for the aggressive youths was found when comparing the SES levels of the UA and UN youths, $F(1, 19) = 4.47, p < .05$, and the SA and SN youths, $F(1, 60) = 2.38, p > .1$.

Intelligence Measures

Socialized-Undersocialized: The socialized group obtained significantly higher scores than the undersocialized group on all of the intelligence test measures: $F(1, 112) = 18.21, p < .0001$, for Verbal IQ (VIQ); $F(1, 112) = 7.22, p < .009$, for Performance IQ (PIQ); $F(1, 115) = 12.72, p < .0005$, for Full-Scale IQ (FSIQ). The same consistent pattern of higher intellectual functioning in the socialized youths was also found when the SA group was compared with the UA group: $F(1, 79) = 10.53, p < .002$, for VIQ; $F(1, 79) = 7.37, p < .009$, for PIQ; $F(1, 80) = 8.66, p < .005$, for FSIQ. Within the nonaggressive groups, the VIQ of the SN youths was significantly above the VIQ of the UN youths, $F(1, 30) = 6.48, p < .02$. On PIQ, however, the two groups obtained comparable scores, $F(1, 30) < 1$. Although the FSIQ of SN youths was higher than that of the UN youths, the difference did not reach significance, $F(1, 31) = 2.68, p > .1$.

Aggressive-Nonaggressive: Examination of the intelligence scores for all groupings of the aggressive and nonaggressive youths shows a tendency for the nonaggressive groups to obtain higher scores than the aggressive groups. None of the differences, however, reached significance (all $ps > .07$).

Discussion

The present study presents descriptive and comparative data about 120 delinquent boys classified according to DSM III conduct disorder criteria.

We found that 3/4 of the total sample were socialized and 1/4, undersocialized. These figures differ from those reported by Henn *et al.*⁹ who found almost equal numbers of socialized ($N = 107$) and undersocialized ($N = 100$) in their sample. Several factors could account for this difference. Although both studies were conducted in Midwestern Training Schools, Henn *et al.* did a selective and retrospective chart review of cases admitted as early as 1963. Our data was collected in 1980, and all the youths were

incarcerated at the time of the interview and data collection.

Regardless of the reasons for the discrepancy, the fact that 74 percent of our sample were socialized indicates that the majority of delinquents have made some bonding in their past. This is of clinical significance when we realize that the socialized group has been shown to have a better prognosis than the undersocialized group. Henn *et al.* reported that the socialized were discharged from a training school at a younger age, and there was less time between admission to training school and discharge. The socialized had fewer returns to the training school and did better on parole than the undersocialized. The likelihood of a conviction on an adult charge and the chance of going to prison as an adult were both significantly higher for undersocialized than for the socialized.

We also found several significant differences between the socialized and undersocialized groups. The socialized tended to have better developed intellectual abilities, especially in verbal skills. The superiority of the socialized youths in the nonverbal area (that is, PIQ) was primarily due to the poor performance of the undersocialized aggressive subgroup, since the PIQ scores of the other three groups were about equal.

We found significant differences between socialized and undersocialized in terms of race and home community. Although the majority of both groups were from urban communities, a much higher proportion of the socialized (about 1/3) came from rural communities, and the rural youths were almost always classified as socialized. This may suggest that interpersonal bonds are more likely to develop in the small, close-knit rural community than in the more impersonal urban environment.

Comparison of the racial distributions of the socialized and undersocialized revealed three different patterns. Nonaggressives, both SN and UN, were predominantly Caucasian. The percentages of blacks and Caucasians in the SA subgroup was the same as that for the total sample of youths. The UA group, however, was predominantly black. Although it is possible that race influenced which diagnosis a youth received, we do not believe this was the case. The interview used information obtained from both the youth and the documented record. The fact that the poor, urban, black youth is at high risk in our society has been widely discussed. Our findings seem to be consistent with these views but cannot explain why this is the case.

There were few significant differences between the aggressive and nonaggressive youths in this sample. Compared to the nonaggressives, surprisingly, the aggressive group came from higher SES backgrounds and contained a larger percentage of blacks. Since 71 percent of the sample were categorized as aggressive, it seems that aggressive behavior was usually the precipitating factor for admission. In the Henn *et al.* study, the undersocialized aggressives were not distinguished from the undersocialized nonaggressives by number of adult arrests, convictions, or imprisonments, but were distinguished by the number of arrests for violent crimes. The aggressives were arrested for more violent crimes, including

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rape, assault, and murder. The nonaggressives were primarily property offenders. Although the prospect of future violent behavior cannot be predicted with any accuracy, factors such as type of offense and certain specific characteristics of the offender such as impulsiveness, inability to establish affection, or attachment with others play an important role in such an assessment.¹¹ In a study of 151 violent adolescents, all of whom were adjudicated as adults and committed to a maximum security unit for forensic evaluation, Daniel *et al.*¹² reported that a significantly greater proportion of those who committed crimes of violence such as murder, rape, and assault had engaged in aggressive and violent crimes earlier in life.

TABLE 5. Summary of Results for Socialized-Undersocialized and Aggressive-Nonaggressive Comparisons

Variable	Diagnostic Group		P*
	Socialized	Undersocialized	
Community	66% Urban	94% Urban	.0009
Race	67% Caucasian	65% Black	.0070
SES Mean	3.98	4.00	ns
VIQ Mean	87.9	75.3	.0001
PIQ Mean	93.3	84.6	.0090
FSIQ Mean	89.0	77.9	.0005
	Aggressive	Nonaggressive	
Community	76% Urban	67% Urban	ns
Race	53% Black	86% Caucasian	.001
SES Mean	3.8	4.3	.020
VIQ Mean	83.1	88.5	ns
PIQ Mean	90.1	92.8	ns
FSIQ Mean	84.7	89.6	ns

* p values for Community and Race are from χ^2 analyses.
p values for all other variables are from Anovas.

In summary, the data from this study showed (in Tables 5 and 6) that the undersocialized mostly come from urban communities, have less developed intellectual abilities, and are predominantly black when compared to socialized who are more likely to come from a rural community, have developed some bonding, have better developed IQ, and are predominantly Caucasian. The findings reported in this paper indicate that there are many differences between various types of conduct disorders. These results, however, are only the "tip of the iceberg" in our understanding of the many interacting factors that contribute to delinquency. From the prognostic and management points of view we emphasize the usefulness of the specific diagnostic categorization into socialized versus undersocialized and aggressive versus nonaggressive types of conduct disorder. Future research should be geared to more comprehensive investigations of a variety of variables including those relating to the child, his parents, and the environment.

TABLE 6. Summary of Results for Comparisons between the Four Diagnostic Subclassifications

Variable	Diagnostic Group		Statistical Comparison*	
	SA	UA	SA vs UA	SA vs SN
Community	67% Urban	96% Urban	p	p
Race	58% Caucasian	79% Black	.005	ns
SES Mean	3.85	3.70	.002	.007
VIQ Mean	86.50	75.10	ns	ns
PIQ Mean	93.60	83.10	.002	ns
FSIQ Mean	87.90	76.80	.009	ns
	SN	UN	.005	ns
Community	62% Urban	86% Urban	SN vs UN	UA vs UN
Race	86% Caucasian	86% Caucasian	ns	ns
SES Mean	4.20	4.60	ns	.002
VIQ Mean	90.60	76.20	.020	ns
PIQ Mean	93.00	91.60	ns	ns
FSIQ Mean	91.10	82.70	ns	ns

NOTE: SA = Socialized Aggressive
 SN = Socialized Nonaggressive
 UA = Undersocialized Aggressive
 UN = Undersocialized Nonaggressive

* p values for Community and Race are from χ^2 analyses
 p values for all other variables are from Anovas.

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