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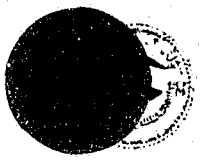

International Summaries

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From Sweden

Predicting Social Maladjustment

Criminality among boys between 11 and 15 years of age can indicate poor social adjustment later in life.

By Jerzy Sarnecki

Introduction

How does a boy's delinquency relate to his social adjustment as an adult? To what extent can someone's adult social adjustment be predicted using data gathered when that person is only 11 to 15 years old? Definitive answers to these questions might help deter future social problems. This report, *Predicting Social Maladjustment*, is the result of the Swedish National Council for Crime Prevention's quest to answer these questions.

Overall, the analysis shows the virtual impossibility of foreseeing an *individual's* future social adjustment. Thus, it does not confirm the deterministic view of deviance held in criminology in the 1960's. However, the study shows that it is possible to use the prediction variables to identify a *group* with excessive risk of poor future social adjustment. Most of the group's members on reaching adulthood will commit crimes, abuse drugs, and suffer illness, unemployment, and sometimes premature death. Compared to the study's control groups of boys with no recorded crime, the risk of very poor social adjustment was nearly three times greater for boys with records of single crimes and five times greater for those with multiple crimes. The same report shows how to identify a small group with extremely good prognoses for future adjustment, in spite of a criminal background in their younger years.

Predicting Social Maladjustment is a followup of a 1956 "clientele study" of juvenile criminals in Stockholm. The clientele study examined two groups of boys all of whom had criminal records and compared them with two control groups of boys without criminal records. The current study also examines the adjustment to adulthood of two other groups of slightly older boys (one general population group and one group with severe behavioral disorders) who had been the subject of a previous report by Jonsson and Kalvesten.[1] Extensive records from many official sources formed the bases for descriptions of the adult adjustment of individuals who had varying degrees of known teenage criminality and who had records established between the ages of 11 and 15 years.

The 1956 clientele study provides a rich source of data for examining the two issues raised here. It is possibly the most thorough examination conducted by experts in different fields of research on deviant behavior. Moreover, it includes prognoses regarding the boys' future development and adjustment.

Predicting Social Maladjustment provides sophisticated statistical analyses that explore the possibility of predicting outcomes using many different variables alone and in combination, and with and without weighting the clientele material to represent the general population.

Study population and data sources

Most of the analyses focused on 287 boys from the clientele study and included 192 boys with known criminal records and 95 control group boys matched for age, social group, and family type. The subjects were all born between 1939 and 1953. These boys were 11 to 15 years old at the time of the clientele study and 32 to 40 years old at the time of data collection for this followup study.

The analyses also included 222 Stockholm boys representing the general population and 100 boys who had been treated at Barnbyn Ska, an institution for children with severe behavioral disorders.

The researchers measured about 2,000 variables for each boy in the clientele study. The data sources and types of data included:

- Data from official criminal and social records.
- The Terman-Merril intelligence test, supplemented by nonverbal test methods.

This is a summary of *Predicting Social Maladjustment*. National Council for Crime Prevention, Brottsforebyggande radet, Atlasmuren 1, 1-113 21 Stockholm, Sweden. May 1985. 157 pages. (NCJ 101679.) The original report contains 31 data tables, 16 appendixes presenting methodological details and additional results, and 28 references. Summary published October 1986.

- Two projective tests, the Rorschach test and the Adolescent Apperception Test (AAT).
- A sociological interview, evaluated independently by an interviewer and by a sociologist.
- The revised edition of the "criminality form" used extensively on Stockholm youth.
- An interests test concerning leisure activities.
- A medical-psychiatric examination.
- Written and oral comments from the boy's teacher.
- A home visit and interviews with parents.
- School grades from the boy's entire school career.

For the followup data collection in 1983 and 1984, information came from a variety of government agency records. These data included:

- Occupation.
- Income, taxable wealth, and property holdings.
- Employment and unemployment.
- Deaths and causes of death.
- Illness in the last 3 years.
- Education.
- Marital and household status.
- Type and crowding of dwelling.
- Children.
- Prosecuted crimes and sanctions.
- Drug abuse as indicated by venipuncture marks.
- Alcohol abuse and alcohol-related crimes.

Extensive statistical analyses included correlation studies and analysis of variance. The analysis focused on the boys' status and adjustment as adults and on the prognostic ability of nine prediction variables when unweighted and weighted in various ways.

The boys as adult men

Three groups were compared: the boys with one recorded crime each (131), those with two or more recorded crimes (61), and those with no recorded crimes (95). The analysis included standardization for age, because the boys with a higher crime rate were younger on the average than those with a lower crime rate.

As adult men, the three groups differed significantly on every factor except the proportion living outside greater Stockholm and the proportion living in overcrowded conditions. Significantly, the mortality rate was 11.5 times greater among boys with two or more crimes than among boys in the control group. The nine suicides had all committed a recorded crime before age 15.

The three groups also differed significantly in drug use and criminality. Intravenous drug use was recorded among 19 percent of the high-crime group, 9 percent of the low-crime group, and 1 percent of the control group. Of the high-crime teenagers, 26 percent were sentenced to prison between ages 25 and 29, compared to 14 percent of those with low crime and 4 percent of those with no recorded crime. From ages 30 to 34, 21 percent of the high-crime group was sentenced to prison, compared to 4 percent of the control group. The high-crime teenagers who later committed crimes also committed more than 4 times as many recorded crimes per person as did the offenders from the control group.

The general state of health was worse among the individuals with early recorded crime than among those in the control group—they averaged more than twice the number of recorded sick days. On the other hand, the proportion of individuals without any reported sickness was roughly the same in all three groups—about 40 percent. The men with early criminal records were also more likely to be living alone and to be divorced or separated. In addition, they had a lower level of education, more than double the rate of unemployment, and considerably lower socioeconomic status than the control group. Differences also occurred in their home-ownership rate.

Correlation of social adjustment as youths and as adults

Social adjustment reflected the individual's success in adapting to the current norms prevailing in Stockholm society. Evaluation of social adjustment rested on three criteria: (1) the individual's ability to provide for himself; (2) the extent to which he was law abiding; and (3) his abuse of drugs or alcohol. Consideration also was given to such factors as self-inflicted death (by suicide or abuse), self-inflicted illness (by abuse), education, occupation, housing situation, and family situation.

The majority of the subjects managed well or very well to provide for themselves as adults and less than one-fourth managed poorly or very poorly. A clear correlation was found between the crime recorded at 11 to 15 years of age and the individual's social adjustment about 25 years later. Criminality before age 15 explained up to 12 percent of the variance in adult social adjustment.

The model used to determine each individual's social adjustment used eight independent variables:

- History of imprisonment.
- Suicide or death because of substance abuse.
- Supervision by "social insurance" authorities after age 25.
- Alcohol abuse after age 25.
- Ownership of a detached house.
- Education.
- "Pension points" per year.
- Occupation.

The dependent variable—adult social adjustment—was estimated using multiple regression. The model succeeded in explaining 82 percent of the variance in the dependent variable.

Data also were available to compare the subjects' social adjustment at four different ages: 11 to 15 years, 16 to 19 years, 20 to 24 years, and adulthood. The adjustment measures for each time period rested on the available data, which differed somewhat from one period to the next. Relatively high correlations were found between the social adjustment measures at different time periods. The strongest correlations were between measures of social adjustment in adjacent time periods. However, 13 men showed a marked improvement from bad to good social adjustment; 2 showed a marked opposite trend; and 20 others showed changes but no clear trends.

The prediction variables and their predictive ability

The original clientele study made many prognoses of the boys' future development, and the present analysis used nine of those prognostic variables. The two psychiatric variables were: (1) the psychiatric prognosis if the subject received no further treatment; and (2) the psychiatric prognosis if the subject was optimally treated. The three psychological variables were (1) the total asociality risk according to the Rorschach test; (2) the total asociality risk according to the AAT; and (3) the total psychological diagnosis based on these two tests combined with an intelligence test. The four sociopsychological variables included two measures related to the type of upbringing the youth received: (1) an overall sociopsychological prognosis reflecting the subject's current social adjustment; and (2) the subjects' own prognoses regarding their criminality.

None of the reports from the original clientele study made prognoses based on school variables. However, the present study did use some of these variables and found comparatively strong correlations between school variables and social adjustment in adulthood. The three school variables showing the strongest correlations were: (1) school adjustment; (2) teachers' evaluations of truancy; and (3) teachers' evaluations of the pupils' sense of orderliness. Also important were the teachers' evaluations of the pupils' attention, concentration, adjustment in school, and the average grades in school subjects.

The prognoses the boys made about their future criminality were not useful predictors. However, the other eight prediction variables all partially pointed to future social adjustment. The value of these predictions tended to decline as time elapsed between the prediction and later evaluation, however.

The groups of individuals with the worst prognoses also had the worst adult adjustments in almost all the factors examined. Together, the nine prediction variables explained 25 percent of the adult social adjustment. However, the social adjustment at age 11 to 15 explained 28.5 percent of the variance in adult social adjustment. In other words, early adjustment was a better predictor of future adjustment than were all the prognoses together.

Large clusters of variables from the original clientele study reports also were used to determine the maximal predictive ability of variables from different parts of the study. The greatest proportion of variance in adult social adjustment (29 percent) could be explained by school variables, as mentioned previously, and sociopsychological variables explained up to 26 percent. The variables related to upbringing explained 19 percent of the variance and psychiatric data could explain up to 24 percent of the variance in adult social adjustment. The psychological variables appeared to have the least potential for predicting future social adjustment, but the psychologists seemed to have been quite successful in using the available data to make predictions.

Results when the data were weighted

Since the majority of boys in the clientele study had criminal records, the proportions of variance explained by the data may have been greater than if the sample had represented only the general population. To adjust for this, a system of weights was assigned to the data, using comparisons with data from the 222 "normal" Stockholm boys studied by Jonsson and Kalvesten.[2]

Using the variables that were available for the boys in the clientele study as well as for the 222 general population Stockholm boys and the 100 Ska boys, the authors produced a new equation. This new model explained 70 percent of the variance in adult social adjustment.

The weightings revealed that the adult social adjustment of both the Ska boys and the boys with two recorded crimes was much worse than the adjustment of the 222 Stockholm boys and the weighted clientele group. Between 70 and 80 percent of the "normal" boys had good or very good social adjustment as adults, compared to only 33 percent of the Ska boys and the boys with high levels of criminality. Only 6 to 7 percent of the "normal" boys had poor or very poor social adjustment, compared to 39 percent of the Ska boys and 43 percent of the high-crime boys.

The analysis also showed only moderate correlations between adult social adjustment and social group, family type, and area crime rate—the three matching variables used along with age in the clientele study. The differences that were observable applied to the extremes of social adjustment, whether good or bad, extremely good, or extremely bad social adjustment.

The three variables that gave the best predictions of adult social adjustment in the weighted material were the psychiatric prognosis assuming no treatment, the sociopsychological prognosis based on the subject's social adjustment as a teenager, and the psychological prognosis based on the results of the Adolescent Apperception Test. In the weighted material, the probability that someone with a bad prognosis would in fact become badly or very badly adjusted was 55 percent. In contrast, the probability that someone with a good prognosis would in fact become badly or very badly adjusted was 9 percent. The difference was 6-fold. For the sociopsychological prognosis, the respective percentages were 53 percent and 3 percent, an 18-fold difference. The AAT tended to give most individuals poor prognoses, but was comparatively accurate for those with good prognoses.

In sum, the predictions were quite accurate for the extremes of the population—those with extremely good prognoses and those with extremely poor prognoses. The psychiatric and sociopsychological indicators revealed groups with great risk of continued poor social adjustment. The prognoses were fairly accurate, although most of the individuals with poor social adjustment came from the group with a comparatively good prognosis. The psychological prognosis based on the AAT was more successful at identifying a small group of individuals with a good prognosis. At the same time, a substantial proportion of the individuals who were well adjusted as adults came from the group with a poor prognosis on the AAT.

Review of the findings and their relationship to current theories

The 25 years that elapsed between the evaluations of the subjects' adjustment brought changes not only to the individuals but also to society. However, the

views regarding what constitutes deviant behavior have not changed much. Relying solely on official records for the followup data means that the followup does not give as complete a picture of the subjects' lives as did the record reviews and personal interviews used in the original studies. (Another stage of this study is planned by the National Council for Crime Prevention and will comprise interviews with individuals from the original study.) Nevertheless, the records provide objective data. A further limitation of the study is its use of subjects from Stockholm only.

The authors of all the reports from the original clientele study agreed that poor social adjustment in the teens increased the risk of poor social adjustment later in life. The results from the followup study show clearly that this assumption is correct.

The study shows that, although having one or two recorded crimes at age 11 to 15 is now considered a minor matter, boys recorded for one nonpetty crime against property by age 15 ran 7.5 times as great a risk as others of dying before age 40, 12 times as great a risk of being recorded for intravenous drug abuse, and much higher risks for other problems as well. For boys with two or more cited crimes by age 15 the increased risk of death or drug use (compared with those without recorded crime) was even greater: 11.5 times greater for premature death and 24 times greater for intravenous drug abuse. Nevertheless, 30 percent of those with two or more recorded youthful crimes and 55 percent of those with one crime were judged to be well adjusted or very well adjusted as adults.

These comments apply only to the matched, unweighted material, however. Weighting produced a surprising reduction in the correlation between social adjustment in the teenage years and in adulthood. However, both before and after the weighting, about 85 percent of the predictions based on social adjustment were correct. After weighting, predictions based on social adjustment gave a larger proportion of correct prognoses than did those based on psychiatric and sociopsychological factors. Of those whose prognoses were wrong, most turned out better than would have been predicted from their teenage situation.

Different types of data differed in their predictive ability. The school variables provided the best basis for predictions. The classic sociological variables of social grouping, family type, and neighborhood crime level were relatively poor predictors. Among the variables used in the original clientele study, the psychiatric prognosis based on no expectation of future treatment was the most effective predictor. This result was probably due to this variable's heavy use of data related to social adjustment. The sociopsychological prognosis was also relatively effective. Like the psychiatric prognosis, it was used on a large quantity and variety of data. The sociopsychological variables as a whole were slightly better than the psychiatric variables in explaining the variance in adult social adjustment, whereas the psychiatric variables were slightly more useful for prognostic purposes. Although the upbringing variables appeared to have great significance, further examination showed that it was the youth's own adjustment to parental demands rather than the nature of the demands that was crucial. Once again, it seemed to be the individual's adjustment in youth that best predicted future adjustment.

Significant measures of social adjustment were the boy's peers and his relationship with them. The most significant individual variable was the boy's adjustment at school. In the matched group dominated by criminal boys, the measures that related to upbringing were relatively good predictors of adult social adjustment. On the other hand, unlike the psychiatric and sociopsychological variables, these factors were unusable in the general population. This difference resulted from the strong random effects in the weighted material, based on the fact that the only control boy judged to have a lax upbringing managed well as an adult.

The psychological variables were much less effective than the others in predicting future behavior, probably because of the small number of tests used and the focus on personality characteristics rather than on behavior. However, the followup data supported the psychologists' observation of a correlation between personality characteristics and deviant behavior. In addition, the projective tests were as useful in the criminal groups as in the general population.

The different research methods and scientific theories used in the different parts of the clientele study all point in the same direction. The predictions made by the different research groups correlated with social adjustment in adult age and also showed even stronger correlations with one another.

The findings reported here relate in different ways to the three main groups of current theories in criminology: strain theories, cultural deviance theories, and control theories. This study provided the least support for strain theory, which includes the view that social class is related to criminality. Nevertheless, factors like the parents' criminality, drug abuse, and other problems did increase the probability of serious problems in the children's adjustment as adults. Thus, the data provide some support to Jonsson's theory of social heritage.[3]

Subculture theory received somewhat more support from the study's findings. Although data were lacking about the subjects' cultural norms as adults, those who had more positive attitudes toward crime in their teens had both a worse record of crime as youths and worse social adjustment as adults.

The study findings also provided some support for control theory. This theory asserts that individuals with weak links with established society tend to be deviant. Some subjects clearly had weak associations with school, an important social institution for this age group. The correlation between poor school adjustment and poor adult social adjustment was the strongest in the study. In addition, the boys who had the worst links with their parents, peers, and leisure-time activities also had worse social adjustments as adults. Further research will produce more extensive analyses of the connections between the study findings and criminological theory.

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1. Jonsson, G. and Kalvesten, A.L. 222 *Stockholmspojkar*. Stockholm: Almqvist & Wiksell, 1964.
2. Ibid.
3. Ibid.