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THE RELATIONSHIP OF SELF-REPORTED DELINQUENCY TO SCALES OF THE CPI AND MMPI

MICHAEL J. HINDELANG*

Reviews of studies of personality attributes of delinquents and criminals have shown that the Minnesota Multiphasic Personality Inventory (MMPI) and the California Psychological Inventory (CPI) have quite consistently differentiated offenders from non-offenders.¹ Of the studies reviewed by Scheussler and Cressey and Waldo and Dinitz, those using the MMPI have been successful 30 out of 33 times, while those using the CPI have been successful 8 out of 8 times in discriminating offenders from non-offenders.

Hathaway, Monachesi, and their associates have exhaustively studied the relationship of the MMPI to police and court records of delinquents.² In a 1960 study, Hathaway, Monachesi and Young, examined the MMPI profiles of more than 11,000 adolescents who had been tested as ninth grade pupils in the 1953-1954 academic year.³ As had been found in previous studies, high scores on certain combinations of the Psychopathic Deviate, the Schizophrenia, and the Hypomania Scales, tends to be associated with high rates of delinquency. Hence, these scales of the MMPI have been referred to by Hathaway, *et al.*, as *Excitatory Scales*. The boys who scored high on the *Excitatory Scales* had delinquency rates 20 percent greater than the average rate in the male sample; among the girls, those who scored high on the *Excitatory Scales* had delinquency rates 50 percent higher than the average rate in the female sample. These findings are typical of those using the MMPI.⁴

Gough has done extensive research in the area of delinquency in connection with his development

and validation of the CPI. In 1960, he reported the results of studies using 41 samples of subjects who completed his Socialization Scale, which is a subscale of the CPI.⁵ Groups of both male and female respondents were classified on the basis of whether their behavior in the past had been designated as asocial or not. For example, the asocial group included high school disciplinary problems, reformatory inmates, county jail inmates, prison inmates, etc.; the non-asocial group included nominated high school "best citizens," medical school applicants, etc. It was found that among the males the mean difference between the former (less socialized, N = 1295) and the latter (more socialized, N = 9001), as measured by the Socialization Scale, was significant at the .001 level; the point-biserial correlation coefficient was .73 ($p < .001$). Similarly, among the females the mean difference between the less socialized (N = 784) and the more socialized (N = 9776) groups was significant at the .001 level; the point-biserial correlation coefficient was .78 ($p < .001$).

In 1965, Gough reported results of cross-cultural comparisons of delinquents and non-delinquents with respect to their scores on the Socialization Scale which was administered in eight languages, in ten countries, to 21,772 non-delinquent and 5052 delinquent males and females.⁶ For both sexes, in all comparisons, delinquents and non-delinquents differed at the .001 level. Furthermore, none of the non-delinquent sample means overlapped with the delinquent sample means.

In spite of the abundance of studies using the MMPI and the CPI in connection with delinquency and criminality, virtually all of these studies have used "official" offenders—i.e., those having police and/or court records.⁷ Although studies

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¹ Scheussler & Cressey, *Personality Characteristics of Criminals*, 55 AM. J. SOCIOLOGY 297-304 (1950). Waldo & Dinitz, *Personality Attributes of the Criminal: An Analysis of Research Studies, 1960-1965*, 4 J. RESEARCH IN CRIME & DELINQUENCY 185-202 (1967).

² S. HATHAWAY & E. MONACHESI, ANALYZING AND PREDICTING JUVENILE DELINQUENCY WITH THE MMPI (1953). S. HATHAWAY & E. MONACHESI, ADOLESCENT PERSONALITY AND BEHAVIOR (1963). Hathaway, Monachesi, & Young, *Delinquency Rates and Personality*, 51 J. CRIM. L.C. & P.S. 433-40 (1960).

³ *Id.*

⁴ See Scheussler & Cressey, *supra* note 1; Waldo & Dinitz, *supra* note 1, for a more inclusive bibliography.

⁵ Gough, *The Theory and Measurement of Socialization*, 24 J. CONSULTING PSYCHOLOGY 23-30 (1960).

⁶ Gough, *Cross Cultural Validation of a Measure of Asocial Behavior*, 17 PSYCHOLOGICAL REPORTS 397 (1965).

⁷ See F. Scarpitti, A FOLLOW-UP STUDY OF THE "GOOD" BOY IN A HIGH DELINQUENCY AREA, 1959 (unpublished thesis at Ohio State University), for an exception. Although Scarpitti, Murray, Dinitz & Reckless, *The "Good" Boy in a High Delinquency Area:*

of social characteristics of offenders have widely used self-report delinquency techniques to supplement or complement official records,⁸ research into personality characteristics of offenders has more rarely used self report delinquency instruments.⁹ Since it has been estimated that more than ninety percent of delinquent activities do not result in official action¹⁰, it seems probable that "official" delinquents are a rather select sample of those engaging in delinquent activities. It is, therefore, important to determine whether previous findings using subscales of the MMPI and the CPI are replicated when youths who engage in delinquencies but who have generally not come to the attention of the authorities are used as subjects. In addition, it may in fact be the case that contact with the authorities somehow *results* in the formation of the personality attributes that these scales tap. Finally, in past research "delinquency" has been viewed as unidimensional and undifferentiated, since researchers have generally not examined the relationship of the MMPI and the CPI sub-scales to types of delinquent activities.

It is the aim of the present research to examine the relationship of some of the MMPI and CPI sub-scales to self-reported delinquency. Specifically, the Psychopathic Deviate (PD) Scale from the MMPI and the Socialization (SO), Self Control (SC), and Responsibility (RE) Scales¹¹ from

Four Years Later, 25 AM. SOCIOLOGICAL REV. 555-8 (1960), and Dinitz, Scarpitti & Reckless, *Delinquency Vulnerability: A Cross-Group and Longitudinal Analysis*, 27 AM. SOCIOLOGICAL REV. 515-17 (1962), report having administered CPI and self-report delinquency scales, they do not report the relationship between the two.

⁸ Vaz, *Juvenile Delinquency in the Middle-Class Youth Culture*, in MIDDLE CLASS JUVENILE DELINQUENCY 131-47 (E. Vaz ed. 1967); Clark & Tift, *Polygraph and Interview Validation of Self-Reported Delinquent Behavior*, 31 AM. SOCIOLOGICAL REV. 516-23 (1966); Goode, *Multiple Drug Use Among Marijuana Smokers*, 17 SOCIAL PROBLEMS (1969); Hirschi & Stark, *Hellfire and Delinquency*, 17 SOCIAL PROBLEMS 202-13 (1969); Jensen, *Crime Doesn't Pay: Correlates of a Shared Misunderstanding*, 17 SOCIAL PROBLEMS 189-201 (1969).

⁹ M. Hindelang, PERSONALITY ATTRIBUTES OF SELF-REPORTED DELINQUENTS, 1969 (unpublished Ph.D. dissertation in University of California at Berkeley Library); Siegman, *Personality Variables Associated with Admitted Criminal Behavior*, 26 J. CONSULTING PSYCHOLOGY 199 (1962).

¹⁰ Erickson & Empey, *Class Position, Peers and Delinquency*, 49 SOCIOLOGY & SOCIAL RESEARCH 260-82 (1965).

¹¹ The PD, SO and RE scales were selected for use since past research had indicated that they were strongly related to officially recorded delinquency.

the CPI were administered to high school respondents as part of a larger battery of tests which also included a self-report index of delinquent behavior. Two samples of male subjects from Catholic high schools in generally middle-class areas of Oakland and Berkeley, California were chosen for study.¹²

In both schools, the author was introduced to the students as a researcher from the University of California who was interested in finding out about the attitudes and activities of high school students. The subjects of the research consisted of all those present and willing to cooperate on the day of testing—approximately ninety percent of those enrolled at the time of the study. The subjects were asked to respond to questions anonymously and they were assured that their responses would be considered confidential.

For all subjects, the mean age was 15.3 years with a standard deviation of 2.3 years; the ethnic breakdown was seventy-five percent Caucasian, seventeen percent Negro, six percent Mexican-American, and two percent Oriental.

Using Turner's (1964) occupational prestige scale, it was found that the respondents' fathers' occupations had the following distribution: two percent unskilled laborers and service workers, seven percent semi-skilled laborers, twelve percent skilled laborers and foremen, twenty-five percent

See Hathaway, Monachesi and Young, *supra* note 2; Gough, *supra* note 5.

The SC scale was selected because of its theoretical relevance. High scores on the PD scale show an absence of deep emotional response, an inability to profit from experience, a lack of responsibility, immaturity, and a disregard of social mores.

The SO scale assesses the degree of social maturity, integrity and rectitude which the individual has attained. A low score indicates that an individual is stubborn, undependable, deceitful in dealing with others and ostentatious in behavior. The RE scale identifies persons of conscientious, responsible and dependable disposition and temperament. A low score indicates an individual is immature, moody, dogmatic and under-controlled. The SC scale measures the degree and adequacy of self-regulation and self-control and freedom from impulsivity and self-centeredness. A low score indicates that an individual is impulsive, shrewd, uninhibited, aggressive and pleasure-seeking. H. GOUGH, CALIFORNIA PSYCHOLOGICAL INVENTORY MANUAL (1957). Since time considerations prohibited administering all *personality* instruments to all respondents, the PD scale was administered to 245 students at one school and the SO, RE, and SC scales were administered to 337 students at the second school.

¹² At the time the data were collected, May, 1968, it was not possible to gain access to San Francisco Bay Area public schools. Although using Catholic school respondents represents a severe sampling restriction, it is somewhat comforting to note Hirschi and Selvin's 1969 finding that religious belief and church attendance generally are not related to delinquent involvement.

TABLE 1
CORRELATION COEFFICIENTS SHOWING THE RELATIONSHIP OF THE DEMOGRAPHIC AND PERSONALITY
VARIABLES TO SELF REPORTED DELINQUENT BEHAVIORS

| | Father's Occupational Prestige | Father's Educa- tion | Ethnicity | Age | PD | SO | RE | SC | R |
|---|--------------------------------------|----------------------------|-----------|------|------|------|------|------|-----|
| Psychopathic Deviate (PD) | .04 | .06 | -.08 | -.12 | 1.00 | X | X | X | X |
| Socialization (SO) | .07 | .15 | -.10 | -.03 | X | 1.00 | .56 | .25 | X |
| Responsibility (RE) | .05 | .14 | -.08 | -.01 | X | .56 | 1.00 | .33 | X |
| Self Control (PD) | .05 | .01 | .08 | .05 | X | .25 | .33 | 1.00 | X |
| Theft less than \$10 | .01 | -.04 | -.04 | -.10 | -.32 | -.32 | -.38 | -.23 | .51 |
| Theft greater than \$10 | -.02 | .04 | .05 | .05 | -.37 | -.26 | -.27 | -.18 | .47 |
| Property destruction causing less than \$10 damage | .00 | -.03 | .05 | .07 | -.25 | -.24 | -.28 | -.22 | .40 |
| Property destruction causing greater than \$10 damage | -.09 | -.07 | -.01 | .07 | -.35 | -.25 | -.32 | -.14 | .47 |
| Drinking alcohol | -.07 | -.09 | -.11 | .19 | -.34 | -.42 | -.39 | -.28 | .57 |
| Getting drunk | .03 | -.04 | -.05 | .09 | -.27 | -.40 | -.38 | -.19 | .24 |
| Engaging in fist-fights with an indi- vidual | -.06 | -.05 | .10 | .00 | -.22 | -.19 | -.22 | -.28 | .39 |
| Engaging in gang fist-fights | .08 | -.06 | .12 | .02 | -.18 | -.26 | -.23 | -.14 | .32 |
| Carrying a concealed weapon | .03 | -.07 | .02 | .05 | -.19 | -.30 | -.31 | -.24 | .40 |
| Engaging in fights with an indi- vidual with a weapon | .01 | -.02 | .11 | .06 | -.18 | -.20 | -.25 | -.13 | .32 |
| Engaging in gang fights with weapons | -.01 | -.04 | .07 | .07 | -.24 | -.26 | -.31 | -.10 | .39 |
| Engaging in illegal gambling | -.04 | -.04 | .07 | .09 | -.05 | -.17 | -.16 | -.09 | .20 |
| Using marijuana | .05 | .03 | .02 | .07 | -.30 | -.43 | -.36 | -.23 | .52 |
| Sniffing glue | .03 | .02 | .06 | -.30 | -.21 | -.16 | -.16 | -.16 | .30 |
| Using LSD, Methedrine, or Mesca- line | .03 | -.05 | -.01 | .00 | -.29 | -.20 | -.23 | -.01 | .36 |
| Using Heroin | .01 | .16 | .08 | -.04 | -.13 | -.12 | -.13 | -.08 | .20 |
| Shaking down others for money | -.02 | .17 | .24 | .00 | -.24 | -.09 | -.17 | -.12 | .32 |
| Visiting a prostitute | -.01 | .02 | .17 | -.01 | -.14 | -.14 | -.14 | -.18 | .24 |
| Forcing sexual attention on a girl against her will | -.09 | .01 | .16 | -.01 | -.22 | -.14 | -.18 | -.14 | .30 |
| Engaging in promiscuous sexual activity | -.09 | .06 | .03 | .02 | -.12 | -.28 | -.14 | -.17 | .32 |
| Drag racing on street in excess of speed limit by 20 MPH | -.03 | .03 | -.06 | .18 | -.23 | -.23 | -.25 | -.17 | .36 |
| Driving while strongly under influ- ence of alcohol or drugs | -.02 | .01 | -.05 | .26 | -.28 | -.26 | -.18 | -.11 | .36 |
| Being involved in hit and run acci- dents | -.06 | -.01 | .02 | -.03 | .05 | -.16 | -.14 | -.08 | .20 |
| Cheating on exams | -.10 | -.04 | -.03 | .08 | -.21 | -.22 | -.31 | -.21 | .39 |
| Using false ID to pose as older person | .02 | -.03 | -.05 | .15 | -.23 | -.34 | -.26 | -.20 | .41 |
| Cutting school | -.04 | -.06 | -.05 | .14 | -.19 | -.32 | -.30 | -.25 | .41 |
| Total | -.03 | -.05 | .01 | .10 | -.41 | -.51 | -.50 | -.33 | .69 |
| F | -.02 | -.02 | .03 | .04 | -.24 | -.27 | -.27 | -.18 | .38 |

Correlation coefficients involving Pd scores are based on $N_1 = 245$, those involving So, Re, and Sc scores are based on $N_2 = 337$, those involving demographic variables are based on $N_1 + N_2 = 582$. For N_1 , when $r \geq .163$, $p < .01$. For N_2 , when $r \geq .139$, $p < .01$. For $N_1 + N_2$, when $r \geq .107$, $p < .01$.

clerical workers and salesclerks, fourteen percent small business owners and managers and retail salesmen, seven percent semi-professionals, fourteen percent business agents and managers, fourteen percent professionals, and five percent large business owners and officials.

Table 1 displays, in part, the twenty-six delinquent activities that made up the self-reported delinquency questionnaire. The respondents were asked to indicate the number of times in the last year that they had engaged in each activity. For each activity, if the number of times that the activity had been engaged in was between zero and eight inclusive, the respondent was given a score equal to that number; if the respondent indicated that he had engaged in the activity nine or more times, he was given a score of nine. As an index of overall delinquent involvement, a simple sum was taken across all twenty-six delinquent activities and has been designated Total Delinquent Involvement.

Table 1 presents the correlation coefficients which show the relationship of the personality and background characteristics to the delinquent activities.¹³ These correlation coefficients should be interpreted in light of the knowledge that the distributions of the delinquent activities are generally J-shaped rather than normal. That is, most of the respondents engaged in a given act zero times, some of the respondents engaged in the act once, fewer yet engaged in an act twice, and so on; this J-shape has been found to characterize delinquent involvement in past research.¹⁴ The fact that these dependent variables are not distributed normally has the consequence that the range of the correlation coefficient is severely restricted.¹⁵

¹³ For the purpose of analysis, ethnicity was dichotomized into Caucasian and non-Caucasian groups. Caucasian groups were assigned a score of zero and non-Caucasian groups a score of 1. Table 1, therefore, gives the point-biserial 0 correlation coefficients rather than the Pearson correlation coefficients to show the relationships between ethnicity and the other variables. The scoring on the PD scale was also reversed so that a low score would be in the psychopathic direction as in the SO, SC and RE scales where low scores mean a lack of socialization, self control and responsibility, respectively.

¹⁴ M. GOLD, *DELINQUENCY IN AN AMERICAN CITY* (1970); Hindelang, *supra* note 9.

¹⁵ Using a formula provided by Carroll, the maximum possible positive Pearson product-moment correlation coefficient for joint distributions of personality variables and delinquent activities similar to these (see Hindelang, 1969) was found to be .50. Because of this severe restriction in the range of the correlation coefficient, the sampling distributions (which are based on the ideal full range—from $-.100$ to $+1.00$ —of possible

From Table 1, it can be seen that the occupational prestige score of the respondent's father—as measured by the Turner (1964) Scale—is unrelated to his delinquent involvement. Also the number of years of father's education is quite uniformly unrelated to the delinquent activities; the two exceptions are the slight relationships between father's education and heroin use and between father's education and shaking down others for money. Ethnicity likewise is unrelated to the bulk of delinquent activities; compared to Caucasian, non-Caucasians are more likely to shake down others for money, visit a prostitute, and force their sexual attentions on a girl against her will. Age, too, is unrelated to most delinquent activities. However, as age increases so does involvement in drinking, drag racing, driving under the influence, using false identification and cutting school; glue sniffing is inversely related to age.

An examination of the relationship of the personality attributes to the delinquent activities, indicates that these variables are substantially more strongly related to the delinquent activities than are the demographic variables. The socialization and self-control scales are the most strongly related to the dependent variables; their mean correlation coefficient across the twenty-six delinquent activities is $-.27$. On the other hand, the mean correlation coefficients across the twenty-six delinquent activities are less than $.04$ for age, ethnicity, father's education, and father's occupational prestige score. The personality variables, relative to the demographic variables, appear to be substantially more strongly related to the dependent variables.

The correlations of the CPI subscales with each other indicate that they are not independent; although correlations of the Psychopathic Deviate scale with the CPI subscales cannot be determined from the present study since they were not administered to the same sample, one can use as an estimate of this relationship correlations published by Gough,¹⁶ where he found that the correlations of the Psychopathic Deviate Scale with the Socialization, Responsibility and Self-control scales were $.23$, $.04$, and $-.10$ respectively. Using these correlations in conjunction with the remaining correla-

correlation coefficients) from which the significance levels in standard tables have been calculated, are inappropriate. Since no simple solution to this problem exists, however, the standard table values will be used, but it should be borne in mind that our significance tests may be quite conservative.

¹⁶ See generally Gough, *supra* note 11.

TABLE 2

CORRELATION COEFFICIENTS SHOWING THE RELATIONSHIP OF THE DEMOGRAPHIC AND PERSONALITY VARIABLES TO THE OBLIQUE CLUSTER DOMAINS OF DELINQUENT ACTIVITIES*

| | Father's Education | Ethnicity | Age | PD | SO | RE | SC | R |
|--|--------------------|-----------|-----|------|------|------|------|-----|
| Cluster 1: Fighting (.79) | -.08 | .13 | .09 | -.32 | -.32 | -.39 | -.22 | .54 |
| Cluster 2: Soft Drug Use (.82) | -.01 | -.08 | .22 | -.43 | -.53 | -.46 | -.28 | .69 |
| Cluster 3: Malicious Destruction (.74) | -.04 | .04 | .09 | -.41 | -.32 | -.39 | -.24 | .58 |
| Cluster 4: Theft (.71) | .05 | .04 | .03 | -.46 | -.41 | -.46 | -.29 | .66 |
| Cluster 5: Drug Use (.67) | -.01 | .03 | .00 | -.39 | -.45 | -.45 | -.24 | .59 |
| F | -.02 | .03 | .09 | -.40 | -.41 | -.43 | -.24 | .61 |

* Reliabilities of the cluster scores appear in parentheses.

tions from the present study, the estimated multiple correlations of the MMPI and CPI subscales with the delinquent activities appear in Table 1 in the column labeled R. As can be seen from Table 1, the multiple correlation coefficients are of generally moderate strength. The multiple correlation coefficient is strongest for the relationship between the personality scales and total delinquent involvement ($R = .69, p < .01$).

By using a cluster analysis technique¹⁷ it is possible to examine the relationship of the independent variables to types of delinquent behavior. Tryon and Bailey's BC TRY package of computer programs allows the researcher to "define" clusters of delinquent activities.¹⁸ In the present study, the following clusters were composed of the activities indicated. Cluster 1: Fighting (individual fist fighting, group fist fighting, individual weapon fighting, gang weapon fighting, and carrying a concealed weapon); Cluster 2: Soft Drug Use (drinking, getting drunk, using marijuana, and driving under the influence); Cluster 3: Malicious Destruction (doing property damage of less than \$10.00, and doing property damage of more than \$10.00); Cluster 4: Theft (thefts less than \$10.00, and thefts greater than \$10.00); Cluster 5: Drug Use (sniffing glue, using LSD, methedrine or mescaline, and using heroin). Table 2 presents the correlations of the background and personality variables with the five clusters of delinquent activities. Once again it can be seen that the demo-

graphic variables account for much less of the variance than do the personality variables. With the exception of the relationship between age and soft drug use, the demographic variables are virtually unrelated to the clusters of delinquent activities. The Responsibility scale is most closely related to the clusters ($\bar{r} = .43$) followed by the Socialization scale ($\bar{r} = .41$), the Psychopathic Deviate scale ($\bar{r} = .40$), and the self-control scale ($\bar{r} = .24$). The multiple correlation coefficients appear in the column labeled R. The multiple correlations of the delinquent behaviors with the personality variables are somewhat invariant across clusters with soft drug use being the most predictable cluster and fighting the least predictable cluster.

Finally, because the relationships between the personality variables and the clusters of delinquent activities may still be partially masked by the non-normal distributions of the latter, non-parametric H tests were used. For each of the four scales, the respondents were divided into high, medium, and low scoring groups;¹⁹ this trichotomizing allows one to test for non-linear relationships. The results presented in Table 3 clearly show monotonic patterns of moderate strength which are rather consistent across clusters; across all clusters the Responsibility scale shows the greatest differentiation, and the Self-Control scale shows the least differentiation.

¹⁷ R. TYRON & D. BAILEY, CLUSTER ANALYSIS (1970).

¹⁸ The restrictions in the range of the correlation coefficients is somewhat reduced for the clusters since the distributions of the cluster scores are less markedly J-shaped than are the distributions for the individual delinquency items.

¹⁹ In all cases, those falling more than .6 of a standard deviation above the mean were assigned to the high group; those falling more than .6 of a standard deviation below the mean were assigned to the low group, those remaining were assigned to the middle group. A similar procedure was used with father's education and age but these variables failed to show any significant relationships to the clusters.

TABLE 3
H-TESTS RESULTS SHOWING THE RELATIONSHIP OF LOW, MEDIUM, AND HIGH SCORERS ON THE
PERSONALITY VARIABLES TO THE CLUSTERS OF DELINQUENT ACTIVITIES*

| | Low | Medium | High | p | W** |
|----------------------------------|--------|--------|--------|--------|-----|
| Cluster 1: Fighting | | | | | |
| Pd | 197.82 | 183.21 | 155.16 | .00036 | .25 |
| So | 184.34 | 158.10 | 128.68 | .00002 | .27 |
| Re | 195.50 | 150.67 | 128.50 | .00001 | .30 |
| Sc | 184.96 | 157.79 | 135.88 | .00025 | .24 |
| Cluster 2: Soft Drug Use | | | | | |
| Pd | 211.11 | 176.43 | 145.59 | .00001 | .35 |
| So | 210.84 | 150.48 | 115.29 | .00001 | .43 |
| Re | 203.34 | 157.30 | 110.48 | .00001 | .38 |
| Sc | 194.50 | 159.26 | 125.65 | .00001 | .32 |
| Cluster 3: Malicious Destruction | | | | | |
| Pd | 207.08 | 178.77 | 153.57 | .00001 | .32 |
| So | 187.68 | 150.82 | 134.09 | .00004 | .25 |
| Re | 199.39 | 150.98 | 125.66 | .00001 | .32 |
| Sc | 194.89 | 151.60 | 137.09 | .00001 | .29 |
| Cluster 4: Theft | | | | | |
| Pd | 201.42 | 182.82 | 149.51 | .00004 | .30 |
| So | 195.17 | 155.02 | 120.23 | .00001 | .34 |
| Re | 216.69 | 147.41 | 112.10 | .00001 | .44 |
| Sc | 194.79 | 154.38 | 135.72 | .00001 | .28 |
| Cluster 5: Drug Use | | | | | |
| Pd | 201.18 | 177.91 | 154.76 | .00009 | .28 |
| So | 214.49 | 158.73 | 133.69 | .00001 | .37 |
| Re | 216.05 | 162.80 | 124.48 | .00001 | .38 |
| Sc | 182.45 | 151.09 | 122.69 | .00001 | .29 |

* Scores on the dependent variables are given in mean ranks.

** This statistic is the square root of the ratio of the explained to the unexplained variance; it varies between zero and 1.00.

These data support the conclusion that the Psychopathic Deviate, Socialization, Responsibility and Self-Control Scales are related to self-reported delinquent involvement. As an individual scores in a more psychopathic, a less socialized, a less responsible, or a less controlled direction, he is more likely to be involved in delinquent activities. It is interesting to note that even widely varying clusters of the delinquent activities are similarly related to the four scales. Father's education, race, and age have been found by other researchers to be moderately related to officially detected offenses and less related to self-reported offenses.²⁰ Herein, these demographic variables are virtually unrelated to reported delinquency. Although there was a good sampling of father's educational and occupational

levels, an adequate (five year) range of ages, and a substantial proportion (twenty-two percent) of non-Caucasians, a more inclusive sampling of respondents and of delinquent activities may be required for the relationships to manifest themselves, if, in fact, they exist.

SUMMARY

Because the demographic variables are unrelated to the dependent variables, it can be said that the relationships between the four personality subscales and the clusters of delinquent involvement have been shown not to be spurious as a function of the demographic variables. In addition, since sex has been held constant, the relationships cannot be spurious as a function of sex. Therefore, when the effects of father's education and occupation, and the race, sex, and age of the respondent have been controlled, the relationships between

²⁰ See generally GOLD, *supra* note 14; Shout & Nye, *Reported Problems as a Criterion of Deviant Behavior*, 5 SOCIAL PROBLEMS 207 (1957).

the personality variables and the delinquent activities maintain. This is dissonant with Volkman's finding that none of the MMPI subscales differentiated²¹ twenty-seven delinquents from twenty-seven non-delinquents who were matched on race, age, father's occupation and intelligence; these findings also cast doubt upon

²¹ Volkman, *A Matched Personality Comparison of Delinquent and Non-delinquent Juveniles*, 6 *SOCIAL PROBLEMS* 238 (1958). Although the Hypochondriasis scale did differentiate between the two groups, the non-delinquents scored in the more disturbed direction. It should be pointed out that Volkman's findings were generally in the direction hypothesized by Hathaway and Monachesi, and that his lack of significant results was largely due to his small sample size.

his suggestion that previously obtained relations between MMPI subscales and delinquency may have been spurious due to a failure to control age, race, and social class. The findings of the present study indicate that those engaging in a wide range of delinquent activities, relative to those not engaging in these delinquent activities are more stubborn, undependable, and deceitful in dealing with others (SO); the former are immature, moody, and undercontrolled (RE), more impulsive, shrewd, uninhibited, aggressive, and pleasure-seeking (SC), and show an absence of deep emotional response, an inability to profit from experience, and a disregard of social mores (PD).