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ABSTRACT

This paper examines the conceptual and empirical relationships differentially associated with antisocial behavior and undercontrol, two concepts that frequently are confused. The personality characteristics conceptually associated with antisocial behavior were specified by seven psychologists using the California Child Q-sort (CCQ) to describe independently a prototypically antisocial adolescent. Next, CCQ descriptions of each adolescent in a longitudinal study of ego and cognitive development of 3-, 4-, 5-, 7-, 11-, and 14-year-olds were correlated with the prototype. The congruence between an actual CCQ description and the prototype was the index of antisocial personality. Undercontrol was operationalized similarly. Indices of antisocial personality and of undercontrol then were related to indices of adolescent drug usage, self-concept, and parental child-rearing practices. Numerous external correlates distinguished between antisocial personality and undercontrol. Antisocial personality, but not undercontrol, predicted drug usage at age 14 in both sexes. The value systems of antisocial males reflect aspirations for wariness and uninvolvement. Parental child-rearing values foretold antisocial behavior and undercontrol more frequently in girls than in boys. (Author/RH)

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Distinguishing Between Antisocial Behavior and Undercontrol

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Abstract

The often diffuse and overlapping character of psychological constructs leads to their frequent conflation. Hence, delineation of the differences between related constructs can be useful. This chapter examines the conceptual and empirical relationships differentially associated with antisocial behavior and undercontrol, two concepts that frequently are confused. The personality characteristics conceptually associated with antisocial behavior were specified by seven psychologists each using the California Child Q-sort (CCQ) to describe independently a prototypically antisocial adolescent. Next, CCQ descriptions of each adolescent in our longitudinal study were correlated with the prototype. The congruence between an actual CCQ description and the prototype was our index of antisocial personality. Undercontrol was operationalized similarly. Our indices of antisocial personality and of undercontrol then were related to indices of adolescent drug usage, self-concept, and parental child-rearing practices. Numerous external correlates distinguished between antisocial personality and undercontrol. Antisocial personality, but not undercontrol, predicted drug usage at age 14 in both sexes. The value systems of antisocial males reflect aspirations for wariness and uninvolvement. Parental child-rearing values foretold antisocial

behavior and undercontrol more frequently in girls than in boys. Substantively, the results articulate the conceptual and empirical differences between the constructs of antisocial personality and undercontrol and deepen our developmental understanding of these two domains. The methodology employed should be equally useful in analyzing relations between other, conceptually related but often confounded individual difference constructs.

This chapter is a first attempt to respond to a longstanding concern we have had with the way the study of antisocial and prosocial behavior has proceeded over the years. We believe there has been a general failure to consider closely enough the relationship between what is called poor impulse control and what is called antisocial behavior. Theory and research on the antisocial personality (or for that matter, the prosocial personality) in our view has too casually equated or assimilated antisocial behavior to the notion of undercontrol of impulse. We believe there is an important linkage between the societally-defined category called antisocial behavior and the construct of under-control but this relationship is far from an equival ce. The main purpose of this chapter, therefore, is to articulate the differences between these two constructs and to evaluate the utility, empirically, of maintaining their distinctiveness. We will first establish the personality characteristics that psychologists consider to distinguish between undercontrol of impulse and antisocial behavior. We will then go on to present some empirical relationships differentially associated with the two constructs.

Theorists of many persuasions have found it necessary to in-

voke as an explanatory construct something akin to the construct of impulse control. Because many of these invocations have been ad hoc and casual rather than systematic theoretically and descriptively, the construct has required a conceptual and behavioral basis, which we have sought to offer (cf., e.g., J. Block, 1950, J. H. Block, 1951; J. H. Block & J. Block, 1980).

Our own formulation, termed "ego-control," derives from an attempt to integrate aspects of psychoanalytic theory (cf. Fenichel, 1945) with the theorizing of Lewin regarding the dynamics of motivational states (Lewin, 1935, 1936, 1938, 1951). Based on the Lewinian formulation of boundary permeability (the degree of mutual influence between subsystems), ego control refers to the modal degree of impulse control characterizing an individual's ego organization. When dimensionalized, the underlying continuum at the one end--overcontrol--implies excessive boundary impermeability resulting in containment of impulse, delay of gratification, inhibition of behavior, and insulation from environmental distractors. The opposite end of the continuum--undercontrol--implies excessive boundary permeability resulting in insufficient modulation of impulse, immediate and direct translation of needs into behavior, and vulnerability to distractors. Whereas each of these two modes of behavior can serve adaptive functions under a restricted set of circumstances, extreme placement at either end of the continuum can be expected to be dysfunctional in the long run.

The location of individuals on this dimension of ego control provides implicative and predictive informations about how individuals will behave in a wide variety of situations, about cognitive functioning and the articulation of experience, and about psychosocial adaptation. Behaviorally, the overcontroller appears to be constrained and inhibited, to show minimal expression of personal emotions, to be highly organized, to tend toward categorical thinking, to be able to continue working on uninteresting tasks for relatively long periods of time, to be intolerant of ambiguity, to be over-conforming, indecisive, and to have relatively narrow and unchanging interests. Behaviorally, the undercontroller appears to be unduly spontaneous, to readily manifest emotional reactions, to tend to disregard social customs, to tend towards the immediate gratification of personal desires, even when such gratifications are at odds with ultimate goals, and to have widely ranging associative processes that often produce unusual thoughts (that may or may not be of high "quality.")

Considerable clinical and research effort has been devoted to understanding the nature of individuals societally labeled as antisocial. Descriptions of the antisocial or the psychopathic individual generally converge in finding insufficient impulse control to be a central personality characteristic. For example, the most recent version of the highly influential psychiatric Diagnostic and Statistical Manual (DMS-III) includes impulsivity as one

of the major diagnostic criteria defining the DMS-III category, Antisocial Personality Disorder (American Psychiatric Association, 1980). DMS-III discourages the use of the term 'antisocial personality disorder' with individuals less than eighteen years of age. With regard to children, the term "impulse-ridden personality' has been recommended (Group for the Advancement of Psychiatry, 1966). (The remaining four were irresponsibility, superficiality of affect, inability to profit from past experience, and impairment of conscience.) McCord and McCord have suggested that antisocial behavior can be traced to an individual's search for immediate pleasure. "The psychopath is highly impulsive. He is a man for whom the moment is a segment of time detached from all others. His actions are unplanned and guided by whims" (McCord & McCord, 1964, p. 16). Rabin also has placed major emphasis on the inability of antisocial individuals to develop an adequate capacity for self-control. The psychopath "continues to be egocentric and impulsive, being solely concerned with the immediate fulfillment of his needs. Since he can suffer no delay or postponement and cannot tolerate frustration when thwarted by the environment, he remains rather childish in this respect" (Rabin, 1979, p. 327).

It is easy conceptually to recognize why these various societally-oriented descriptions of the antisocial personality find inadequate impulse control to be a central component. Societal definitions of antisocial behavior generally have referred to

obvious, flagrant, immediately disruptive behaviors such as face to face violence, criminal behaviors, and violations of social codes designed to facilitate the everyday functioning of the society. Given this (generally-held) definition of antisocial behavior, it follows that undercontrol may set the stage for a variety of antisocial behaviors. Yet, looked at conceptually rather than in the narrow terms set by operationalizing antisocial behavior in terms of reported violations or encounters with police or number of traffic violations or recorded drunkenness, it may well be that the current emphasis on the relationship between the two concepts, undercontrol and antisocial behavior, is excessive and preventing deeper recognitions. By viewing an antisocial predisposition largely in terms of insufficient impulse control, important psychological insights regarding different kinds of antisocial behavior may be lost. Conceiving of antisocial behavior in broader terms involving rejection or unawareness of the social contract, inability to empathize with unfortunate others, and an absence of inhibitions regarding the manipulation and exploitation of others, one can readily see how an individual--antisocial in this latter way-- could well have sufficient ability to modulate impulse. A configuration of personality qualities of this kind, conjoining control of impulse with an absence of empathy and internalization of social codes, is likely to set the stage for premeditated, consequential, (and sinister) antisocial behaviors ultimately, in contrast to the spontaneous, local, and generally

self-defeating behaviors characteristic of antisocial undercontrollers.

J.H. Block and J.Block (1980) and earlier Cleckley (1964) have noted that psychopaths can be planful and premeditated as well as shortsighted and impulsive. But, due to an absence of introspection during affective moments, psychopaths are unable to place themselves in the affective situation of others and are, therefore, less constrained in their behavior than more empathic individuals. When it is further recognized that ego-control is, functionally, unrelated to introspectiveness--there can be introspective or non-introspective undercontrollers, introspective or non-introspective overcontrollers--it follows that the two constructs of impulse control and antisociality should be kept separate and the separate implications of the two constructs established. Such efforts are likely to provide understanding of the differential developmental factors that foretell individuals later characterized as undercontrolled and as antisocial, respectively.

In addition to ample anecdotal evidence suggesting that the extremely assaultive person often appeared mild-mannered and well-controlled prior to the aggressive act, some empiricism has been brought to bear on this topic. Megargee (Megargee, 1966; Megargee & Mendelsohn, 1962; Megargee, Cook & Mendelsohn, 1967) reported that extremely violent criminals were more controlled than either nonassaultive criminals or normal individuals. The

overcontrolled type may be "more of a menace than the verbally aggressive, 'chip-on-the-shoulder' type who releases his aggression in small doses" (Megargee & Mendelsohn, 1962, p. 437). Correspondingly, Laufer, Johnson, and Hogan (1981) found that compared to drug offenders, murderers scored higher on a measure of ego control.

We recognize that the utility of distinguishing between impulse control and antisocial behavior is likely to depend on the age of the subject. The two constructs may be difficult to keep separate when very young subjects (i.e., preschool and elementary school children) are studied because at these early ages, there is relatively little internalization of experience and affect. With the advent of late childhood and early adolescence, however, undercontrol and antisociality can be expected to be more clearly distinguishable and thus more closely identified with different behavioral patterns, different views on self and the world, and different types of family environments. The increased separation of the two constructs in late childhood may at least partly be due to the emerging conception of other persons' ability to experience both pleasure and pain, an understanding related to the increased capacity for empathy (Hoffman, 1975).

The longitudinal study of ego and cognitive development initiated by Jeanne and Jack Block in 1968 provides a unique opportunity to test some of these hypotheses. In this project, chil-

dren were assessed on a wide range of experimenta. measures in the domains of personality and cognitive development at the ages of 3, 4, 7, 5, 11, and 14. The children, now adolescents, are currently being assessed at the age of 18. In addition, independent observer-based personality evaluations in the Q-sort format were obtained at each of these age levels excepting age 5. In addition, data on parental child-rearing practices and interactive patterns were collected both in preschool and in early adolescence.

The current study employs the Q-sort methodology to distinguish between the behavioral implications of the concepts of undercontrol and the antisocial character. Almost three decades ago, one of us (J. Block, 1957, 1961/1978) advanced a method whereby the defining behavioral attributes of psychological constructs could be compared in a quantitative and objective manner by the use of the Q-sort methodology. Qualified judges, it was suggested, could use the Q-sort to formulate a construct, or the personality implications associated with a construct. These Q-sort based definitions, if consensual, demonstrated that the construct was equivalently meaningful to the several judges. The several Q-sort definitions then warranted averaging across judges and could serve as a criterion or prototypical definition of the construct. Subsequently, by correlating the Q-sort descriptions of actual subjects with this consensus-based criterion definition,

scores ordering subjects on this construct (or a new variable) could be developed. A high correlation between a subject's Q-sort profile and the criterion definition would mean that the subject is close to, or congruent with the construct; a low correlation would mean the opposite. In the Block and Block longitudinal study (cf., e.g. J.H. Block & J. Block, 1980), this method has been employed to provide criterion-based definitions of ego control and ego resiliency, among other constructs. This methodological approach also has been used to establish the conceptual and empirical similarities between the related constructs of social competence and self-esteem in normal (Waters, Noyes, Vaughn & Ricks, 1985; Vaughn & Gallagher, 1983).

The Q-sort Methodology

Since some readers may be unfamiliar with the Q-sort method, a brief description may be helpful. The Q-sort is an "ipsative procedure" (J. Block, 1957; 1961/1978; Cattell, 1944, Stephenson, 1953). The term "ipsative measurement" can best be understood by contrasting it to the more common "normative measurement". In normative measurement, "there is a scale for every trait and a population of individuals is distributed about the mean of that population. In ipsative measurement, there is a scale for every individual and a population of an individual's trait scores is distributed about that individual's mean" (Guilford, 1952, p. 30). In other words, in ipsative measurement a score, or a Q-sort

item, reflects the salience of that score, or Q-item, relative to other scores, or Q-items, with reference to the particular subject under study. The Q-sort as an ipsative method has therefore been said to provide "person-centered" rather than "variable-centered" data (J. Block, 1961/1978). It is important to note that despite the ipsative nature of the Q-sort, individual Q-items can be employed in a normative manner (J. Block, 1957).

A set of Q-items can be viewed as constituting a general language for describing individual differences within a particular domain. Most often, the focus of Q-sets has been on personality characteristics (cf. e.g., the California Q-sort, J. Block, 1961/1978, and the California Child Q-sort, J. Block & J. H. Block, 1969/1980). But Q-sorts have also been developed to describe the domains of child-rearing orientations, self concepts, home environments, and teaching strategies, among others.

The Procedure of Q-sorting. In Q-sort methodology, the assessor is provided with a set of statements, printed on separate cards, which contains the entire vocabulary that the assessor is permitted to employ (J. Block, 1961/1978). The assessor is required to arrange the Q-sort items according to a predetermined distribution which specifies the number of cards allowed to be included in each pile. The items are arranged by the sorter according to their judged salience and representativeness with reference to the individual, or construct, being evaluated. Those items

deemed by the Q-judge to be most characteristic of the subject are assigned high scores, those items deemed least characteristic of the subject are assigned low scores. The "forced" distribution of items need not be "normal", or Gaussian, as it is sometimes assumed. Indeed, a distribution that approaches rectangularity is preferable because it permits the assessor to make finer and more frequent discriminations at the ends of the distribution.

The requirement that different assessors use identical Q-sort distributions confers several advantages: A large number of discriminations can be gained from each Q-sorter and since all participants employ the same scaling metric, comparisons among raters (and averaging of raters) can proceed straightforwardly. In addition, the forced distribution reduces response sets and problems associated with the social desirability of ratings. The reader is referred to J. Block (1956, 1961/1978) for a detailed description of the Q-sort rationale.

Method

Subjects

Subjects were participants in the longitudinal study of ego and cognitive development conducted by Jeanne and Jack Block at the University of California, Berkeley.

Subjects were initially recruited into the study at age 3,

while attending either a university-run nursery school or a parent cooperative school, and were assessed on wide-ranging batteries of personality and cognitive measures at ages 3, 4, 5, 7, 11 and 14. Subjects were equally distributed as to sex, live primarily in urban settings, and are heterogeneous with respect to social class and parent education. The exact number of subjects in any analysis varies somewhat. About two-thirds of the subjects are white, one-quarter are black, and one-twelfth are Asian. For a more detailed description of this study, see J. H. Block and J. Block (1980a).

Procedures

Measuring Personality: the California Child Q Set (CCQ).

Personality characteristics of the children were described by their nursery school teachers at age 3 and at age 4, by their public school teachers and project examiners at age 7 and at age 11, and by project examiners at age 14, using the standard vocabulary of the California Child Q-set (J. Block & J. H. Block, 1969, 1980). The CCQ is an age-appropriate modification of the California Q-set (J. Block, 1961/1978) and consists of 100 (or 63--see below) widely ranging statements about the personality, cognitive, and social characteristics of children.

At age 3, each child was described by three nursery school teachers who had worked with him or her a minimum of five months

before completing the descriptions; teachers also received training and met with the project director who explained the rationale, provided written instructions to the CCQ, and answered questions about item meanings. Each teacher then independently did a Q sort for a child who was not in the study (usually from a previous year) but who was known to all the teachers. The item descriptions were discussed, and usually a second child was described to check understandings. At age 4, each child was again described via the CCQ procedure, but by an entirely different set of three nursery school teachers equivalently trained.

When the children were age 7 and in public school, one teacher and two examiners provided the Q-sort characterizations of a child. When the children were 11 years old, each child was described by four or five examiners who had observed him or her while administering a variety o. experimental procedures tapping different aspects of cognitive and personality functioning. Similarly, when the children were 14 years old, each child was described by four examiners who had observed him or her during experimental sessions.

When the children were brought in for assessment at ages 7, 11, and 14, the examiners Q-sorted them using only 63 of the original 100 CCQ items. The 37 CCQ items excluded were those for which the examiners believed reliable judgments could not be formulated given the necessary constraints set by the laboratory en-

vironment. To insure commensurativeness of the Q-data, as in earlier assessments, a nine-step rectangular distribution was employed by the examiners in sorting the 63 CCQ items. In addition, during the age 14 assessment, examiners also described each subject using the 100 items of the original, adult form of the California Q-set (J. Block, 1961/1978).

Judges described each child by arranging the Q-set items into a forced nine-step, rectangular distribution according to the evaluated salience of each item with respect to a particular child. They worked independently of each other. At each age, the independent Q-sort formulations were averaged to form composite Q-sort descriptions. The CCQ descriptions were completed by a total of 11 different nursery school teachers when the children were at age 3; an entirely different set of 9 nursery school teachers completed the Q sorts when the children were at age 4; 67 different public school teachers and 2 examiners offered their personality evaluations when the children were at age 7; 5 different examiners offered Q-sort formulations when the children were 11 years old; and still another set of 4 examiners provided Q-sort descriptions when the children were 14 years old. (Note that no information from the clinical interview influenced the 14-year composite.) Thus, the assessments at each time period are strictly independent of each other and of all other measures. The estimated internal consistency reliabilities of the Q items, based on the

correlations among observers, averaged .65 at ages 3 and 4. At age 7, the average item reliability was .47; at 11, it was .70; and at 14, it was .72.

This reliability information not only provides important information about the relative quality of the personality data employed, but also places perspective on the possible magnitude of correlations that can be expected when these measures are related to criterion variables. It is insufficiently recognized that obtained correlations may be considerably attenuated as a function of the inevitable unreliability of the measures employed (J. Block, 1963, 1964; Epstein, 1979, 1980).

Operationalizing the Construct of Undercontrol. Indexing the construct of undercontrol was accomplished in two steps. First, the personality characteristics considered to be associated with the construct of undercontrol were specified, beforehand, by three clinical psychologists who used the CCQ to describe, independently, a prototypical undercontrolling child. These criterion-definers showed high levels of agreement in their conceptualization of undercontrol, the alpha reliability of the consensus prototype being .89. The second step toward creating an undercontrol score for each subject involved correlating the composited CCQ description of each subject in the study with the undercontrol prototype across all 100 CCQ items. For each subject, the correlation or congruence between his or her Q-descriptions by teachers

or examiners and the undercontrol prototype was taken as a score indexing the similarity between the personality of the subject and the construct of undercontrol. A high correlation means that the subject is similar or close to the prototypical definition (i.e., is undercontrolled); a low or negative correlation indicates that the subject is dissimilar or far from the prototypical definition (i.e., is overcontrolled).

Operationalizing the Construct of Antisocial Behavior. Indexing the construct of antisocial behavior was accomplished in a manner identical to the one described above for undercontrol. First, criterion definitions of the construct of antisocial behavior were obtained from seven psychology graduate students and Ph.D. level professionals, each of whom described independently a prototypical antisocial child. There was high agreement among these seven criterion-definers in their conceptualization of this construct, the alpha reliability of the prototype being .90. For each subject, the correlation or congruence between his or her Q-description was taken as a score indexing the similarity of his or her personality to the prototypical definition of an antisocial subject. A high correlation indicates that the subject is similar to the prototype (i.e., antisocial); a low or negative correlation indicates that the subject is dissimilar to the prototype (i.e., prosocial).

The same criterion-definers also described the personality

characteristics associated with a prosocial child. The prototypes of anti and prosocial behavior were highly negatively correlated ($r = -.92$). We decided, therefore, that the prototypical definition of the antisocial personality was sufficient alone to adequately represent the antisocial-prosocial continuum.

Creating "Pure" Indices of Undercontrol and Antisocial Behavior. The CCQ-based prototypical definitions of undercontrol and antisocial behavior were only moderately related, the correlation between the two prototypes being .33. With this level of correlation, the mean values associated with many CCQ items in the two prototypes were often close and did not clearly discriminate between undercontrol and antisocial behavior. To obtain indices differentiating sharply between these two constructs, we identified two subsets of CCQ items. The first subset contained only those CCQ items either highly characteristic (item placement = category 7, 8, and 9) or highly uncharacteristic (item placement = category 1, 2, and 3) of undercontrol and placed in the middle categories (neither highly characteristic nor highly uncharacteristic, item placement = category 4, 5, and 6) in the prototypical definition of antisocial behavior. Thirteen CCQ items met these criteria and served to represent the "pure" construct of undercontrol in this study. The second subset contained 14 other CCQ items either highly characteristic or highly uncharacteristic of antisocial behavior and placed in one of the three middle

categories in the prototypical definition of undercontrol. These 14 CCQ items served to represent the "pure" construct of antisocial behavior in this study. However, of the 27 CCQ items included in the two item subsets, only 16 could be employed at all age levels given the constraints of the laboratory setting in which the children were evaluated at ages 7, 11 and 14. In order to make our indices of undercontrol and antisocial behavior fully commensurate over time, the 11 CCQ items not employed at ages 7, 11 and 14 were excluded from further analyses. Ten of the 16 retained CCQ items characterized undercontrol; the remaining 6 were indicative of antisocial behavior.

Using this method to differentiate between undercontrol and antisocial behavior, the undercontrolled child is described by the following 10 CCQ items (used at all age levels): Rapid personal tempo, Emotionally expressive, Talkative, Vital, energetic and lively, Curious and exploring, Anxious in unpredictable environments (Reflected), Shy and reserved (Reflected), Keeps thoughts, feelings to self (Reflected), Inhibited and constricted (Reflected), and Reflective (Reflected). Three additional CCQ items also defining of undercontrol were not employable at ages 7, 11 and 14: Cries easily, Tends to brood, ruminate, worry (Reflected), and Likes to be alone (Reflected).

The qualities of antisocial behavior that differentiate between this construct and undercontrol are mostly descriptive of

disturbances in interpersonal relationships. The following 6 items used at all age levels described the antisocial child: Suspicious and distrustful, Stubborn, Sulky and whiny, Warm and responsive (Reflected), Arouses liking in adults (Reflected), and Helpful and cooperative (Reflected). Eight additional CCQ items which had been judged initially to discriminate between undercontrol and antisocial behavior were not employable at ages 7, 11 and 14: Attempts to transfer blame to others, Tries to take advantage of others, Is afraid of being deprived, Is jealous and envious, Emotional reactions are inappropriate, Behaves in a dominating manner, Shows recognition of others' feelings (Reflected), and Tends to give, lend, and share (Reflected).

Two composite measures--one indexing undercontrol and one indexing antisocial behavior--were created by summing the items included in each subset (reflecting those items where it was conceptually appropriate to do so), then taking their average.

As mentioned above, of the 14 items initially selected as discriminating antisocial behavior from undercontrol, only 6 were available at all five age levels. Most of the items defining antisocial behavior not included in the final composite refer to qualities of interpersonal relationships, qualities judges felt could not be evaluated reliably in a laboratory setting. However, since the ratings of these behaviors when available were highly correlated with the composite based on the 6 CCQ items available

at all age levels, and since we considered it to be of essential importance that the same composite of antisocial behavior be used in all analyses, we excluded these 8 CCQ items, restricting ourselves to the 6 CCQ items always available.

Measuring drug usage: Coding and scoring a clinical interview. Included in the assessment battery at age 14 was an extensive individual interview, conducted by a skilled clinician and typically lasting 55-75 minutes (range 40 minutes to over two hours). All interviews were videotaped. The interview included such topics as school work, family dynamics, peer relations, current activities, and future aspirations. Within the interview subjects also were asked about their use of the following substances: wine and/or beer, liquor, tobacco, marijuana, and other "harder" drugs. In addition to their verbal responses, subjects also were asked to indicate which substances they had used by checking off the appropriate items on a substance use checklist, the items of which are noted in Table 1.

Insert Table 1 about here

While self-report data on substance use are always subject to under-reporting, a number of investigators indicate that these data have a high concordance with more objective measures (e.g. Jessor & Jessor, 1977; Perry, Killen & Slinkard, 1980; Single,

Kandel & Johnson, 1975). Subjects in this study appeared to answer our questions about substance use with candor. The interviewer was skilled in gaining rapport, in eliciting information without inducing discomfort, and in recognizing when a subject wished to close off a topic. Thus, while information varies in specificity from subject to subject, the data which were recorded are likely to reflect honest answers to our queries, or to reflect somewhat the under-reporting phenomenon. To the extent the latter effect is operative, it seems likely the relationships subsequently to be reported are attenuated in strength, but not biased.

Data from the substance-use portion of the interview were independently coded or scored by two raters. Agreement on coding was high, and in the few cases of discrepancy, items were discussed to reach consensus. For each of the substances listed in Table 1 information was coded on 1) frequency of use; 2) context of use; and 3) school grade in which use was initiated. Of particular interest in this report is the information on use of marijuana and the "harder" drugs (i.e. hashish through heroin). A more complete report focusing on the pattern of usage of all substances by our adolescent subjects can be found in Keyes and J. Block (1984).

For marijuana, information on use and frequency of use was scored on a scale of 0 to 5 as follows: (0) Never used marijuana; (1) Used once or twice; (2) Used sometimes, occasionally; (3) Used

once a month; (4) Used once a week; and (5) Used more than once a week. Only one subject noted usage without providing an indication of frequency of use. This individual was classified in group 2--Used sometimes, occasionally. (Examination of other items from this subject's protocol indicated that this procedure was somewhat likely to under-represent, not over-represent, her usage of marijuana.) Scores on the marijuana use variable thus ranged from 0 to 5, with a mean of 1.33 and standard deviation of 1.68. As the relationship between the mean and standard deviation indicates, the score distribution was highly skewed.

For the "harder" drugs, information on frequency of use was less complete. As a result, a score was derived which was simply the sum of the number of these "harder" substances which had been tried at least once on a recreational, non-prescription basis. Scores thus ranged from 0 to 9, with a mean of .71 and a standard deviation of 1.49. As the relationship between the mean and the standard deviation indicates, the score distribution was highly skewed.

An illegal substance use summary score was then calculated, as the sum of the marijuana and drug use variables. This score ranged from 0 to 14, with a mean of 2.07 and a standard deviation of 2.87. The skewness of this score fairly reflects the skewness in usage of these substances within the sample studied.

Measuring the Self-concept: The Self-descriptive Q-sort. When the children were approximately 14-years old, they described their self-concepts using the Self-descriptive Q-set (SQ) (J.H. Block & J. Block, 1977). The SQ consists of 43 widely ranging adjectives relevant to a person's self-concept. Subjects described themselves by arranging the SQ-items in a forced-choice, seven steps, rectangular distribution according to the evaluated salience of each items with reference to their self-concept. The subjects completed the SQ twice. They described first their actual self-concept. Later, in a separate session, they used the SQ to describe their ideal self-concept (ego ideal). The correlation between subjects' actual self-concept and their ideal self-concept provides us with an estimate of self-esteem.

Measuring Child-rearing Practices: The Child-rearing Practices Q-sort. When the children were approximately 12 years old, mothers and fathers independently described their child-rearing values, using the Child-rearing Practices Report (CRPR) (J.H. Block, 1965). The CRPR was developed to provide a self-descriptive instrument that would tap both common and uncommon child-rearing dimensions. The CRPR consists of 91 items that are arranged by parents in a forced-choice, seven step, rectangular distribution according to the perceived salience of each item with reference to particular child-rearing orientations.

Results

Two types of analyses are reported. First, we examined the longitudinal consistency of the observer-based undercontrol and antisocial behavior scores from age 3 to age 14. Second, the "pure" undercontrol and antisocial scores, specified at age 14, were correlated with independently obtained information on the children and their parents. These independent data sources include (a) the illegal substance use index, (b) the adolescents' descriptions of th· self-concept and ideal self, and (c) the parent's descriptions of their child-rearing practices. Since the major purpose of this study is to identify parental and adolescent characteristics that discriminate between "pure" undercontrol and "pure" antisocial behavior, results are only reported if the correlation of undercontrol with a second variable is significantly different from the correlation of antisocial behavior with that same variable.

Reliabilities of the "Pure" Indices of Undercontrol and Antisocial Behavior

The 10 CCQ items defining undercontrol were intercorrelated separately at each of the five age levels. The average correlation among the items at each age was as follows: .54 at age 3, .42 at age 4, .53 at age 7, .75 at age 11, and .66 at age 14. The Spearman-Brown adjusted reliabilities at these five ages were .92,

.88, .92, .96, and .95, respectively.

The 6 CCQ items defining antisocial behavior were also intercorrelated at each of the five age levels. The average correlation among the 6 items at each age was as follows: .50 at age 3, .42 at age 4, .55 at age 7, .72 at age 11, and .68 at age 14. The Spearman-Brown adjusted reliabilities at these five ages were .86, .81, .86, .94, and .92, respectively.

The consistently somewhat higher reliabilities obtained for the undercontrol index are due to the greater number of items included in this measure compared to the measure of antisocial behavior; they are not caused by differences in the magnitude of the average correlations. If we equalize the two measures with respect to number of items, the size of the reliabilities becomes comparable.

The Relationship Between the "Pure" Undercontrol and Antisocial Behavior Indices from Age 3 to Age 14

Next, we calculated the intercorrelations between the relatively pure undercontrol and antisocial behavior scores at each of the five age levels. Among girls, the correlations were as follows: -.16 (ns) at age 3, .14 (ns) at age 4, -.37 ($p<.01$) at age 7, -.57 ($p<.001$) at age 11, and -.40 ($p<.01$) at age 14. Among boys, these correlations were .42 ($p<.01$), .23 (ns), -.35 ($p<.01$), -.50 ($p<.001$), and -.41 ($p<.01$), respectively. These correlations

indicate, as hypothesized, that the personality descriptions generated by these two indexes become more clearly distinguishable as the child approaches late childhood and adolescence.

Longitudinal Consistency of the Constructs of Undercontrol and Antisocial Behavior from Age 3 to Age 14

The measures of undercontrol and antisocial behavior, generated separately for each of the five age levels, were intercorrelated in order to examine the longitudinal consistency of the two constructs. Table 2 shows the correlations for the two measures over the 11-year time span, separately for girls and boys.

Insert Table 2 about here

With regard to undercontrol, the correlations for girls range from .74 to .31, with an average correlation of .52. For boys, these correlations range from .86 to .26, with an average of .54. With regard to antisocial behavior, the correlations are appreciably less consistent for both sexes. For girls, they range from .67 to -.12, with an average of .27; for boys, they range from .66 to .08, with an average of .33.

Sex Differences in Undercontrol and Antisocial Behavior

Table 3 shows the means and standard deviations for undercon-

trol and antisocial behavior from age 3 to age 14, separately for girls and boys.

Insert Table 3 about here

No sex differences were observed in the undercontrol scores. With regard to antisocial behavior, boys received higher scores at all age levels, the difference between the two sexes reading statistical significance at age 3 and age 11. Thus, there is a tendency for boys to manifest more "pure" antisocial characteristics than girls.

Indices of Undercontrol and Antisocial Behavior Related to Illegal Substance Use

The "pure" undercontrol and antisocial indices at age 14 were correlated with the illegal substance use score. The results show that undercontrol is unrelated to illegal substance use in both sexes. For girls, the correlation was -.05; for boys, it was -.01. Use of illegal drugs at age 14, however, was significantly related to antisocial behavior. The correlation between the drug use score and the index of antisocial behavior was .30 ($p<.05$; $N = 53$) for girls, and .39 ($p<.01$; $N = 50$) for boys. When the separate correlations of drug use with undercontrol and antisocial behavior were compared, using McNemar's formula (McNemar, 1969)

for comparing independent correlations, the difference in the magnitude between the two correlations was significant in both sexes (for girls, the t value was 1.80, $p<.10$; for boys, the t value was 2.04, $p<.05$).

Indices of Undercontrol and Antisocial Behavior Related to Self-descriptions

At age 14, the subjects were asked to provide descriptions of self-concepts, both actual self and ideal self, using the 43-item Self-description Q-sort (SQ). These self-report data were related to the observation-based "pure" indices of undercontrol and antisocial behavior, identified concurrently at age 14. Tables 4 and 5 display the results of these analyses, separately for girls and boys. For each Q-sort item, the correlations associated with undercontrol and antisocial behavior were compared, using McNemar's formula.

Insert Table 4 about here

Insert Table 5 about here

As seen in Table 4, the indices of undercontrol and antisocial behavior are associated with significantly different descrip-

tions of self in both sexes. Among girls, 12 (28%) of the 43 SQ items discriminated significantly between the two constructs. Female adolescents scoring high on the "pure" antisocial composite were, relative to same-aged undercontrolled girls, likely to describe themselves as more critical, more rebellious, and more reserved, more likely to be distractable, and more mischievous and masculine. They were also likely to describe themselves as less adventurous and less assertive, less responsible, less likely to be a show off, less feminine, and less competent. Among boys, a different pattern of 14 (33%) SQ items discriminated between undercontrol and antisocial behavior. Antisocial male adolescents were, relative to undercontrolled male adolescents, likely to describe themselves as more competitive and more self-controlled, more planful and more orderly, more reserved, and more self-confident. These boys were also likely to describe themselves as less energetic, less sociable, less restless, less likely to be a show off, less talkative, less fearful, less distractible, and less impulsive. It is of particular interest to note that the self-report item that discriminated most strongly between the two groups is Self-controlled, the antisocial scores being higher on this characteristic.

We turn now to the descriptions of ideal self displayed in Table 5. Among girls, 8 (19%) SQ items discriminated significantly between undercontrol and antisocial behavior; among boys, the

number was 11 (26%). Antisocial adolescent girls were, relative to same-aged undercontrolled girls, likely to describe their ideal self as more logical, more mischievous, and more obedient. They also described their ideal self as less energetic and less self-centered, less generous, less sympathetic, and less distractible. Antisocial male adolescents were, relative to same-aged undercontrolled boys, likely to describe themselves as more competitive, more critical and more fearful, and more likely to get upset easily. These male adolescents were also likely to describe themselves as less affectionate and less planful, less considerate, less generous, less helpful, less sympathetic, and less trusting.

Indices of Undercontrol and Antisocial Behavior Related to Parental Child-rearing Practices

When the children were 12 years old, mothers and fathers described their child-rearing practice using the 91-item Child-rearing Practice Q-sort (CRPR). These parental self-reported child-rearing orientations were related to the "pure" undercontrol and antisocial behavior scores, identified two years later. The results of these analyses, completed separately for girls and boys, are reported in Table 6 for fathers and in Table 7 for mothers. Again, we have only included Q-items which discriminated significantly ($p<.10$, or beyond) between undercontrol and antisocial behavior.

Insert Table 6 about here

Insert Table 7 about here

Inspection of Table 6 shows that more paternal child-rearing practices discriminated between undercontrol and antisocial behavior in the sample of girls than in the sample of boys. Among girls, 30 (33%) paternal CRPR items discriminated between undercontrol and antisocial behavior; among boys, the number was considerably lower, only 13 (14%). Girls described as antisocial have, relative to same-aged undercontrolled girls, fathers who were more likely to describe the father-daughter relationship as conflictual, more likely to teach the daughter to control her feelings at all times, more likely to feel angry with the daughter, more likely to make her aware of parental sacrifices, and more likely to expect her to appreciate such sacrifices. These fathers were also more likely to prevent rough games and to control the daughter by warning that bad consequences can occur. Relative to fathers of undercontrolled female adolescents, fathers of antisocial female adolescents were also less likely to be affectionate, they were less relaxed, less joking, less playful, and less protective of their daughter. At the same time, these fa-

thers were also less likely to expect a great deal from their daughter, less likely to let her decide many things by herself, and less likely to allow questioning of paternal decisions. In general, these results portray fathers of antisocial daughters as less affectionate, less caring, and yet less encouraging of independence than fathers of undercontrolled girls. We note that the especially significant item, Teaches child to keep control of feelings at all times, was significantly less associated with undercontrol than with antisocial behavior.

Among males, fewer paternal CRPR items discriminated between "pure" undercontrol and "pure" antisocial characteristics. Relative to fathers of undercontrollers, fathers of antisocial male adolescents were more likely to wish the son had not grown up so fast, more likely to see him risk failure, more likely to worry about sad things in his life, and more likely to keep him from fights. They were also more likely to give the son extra privileges, more likely to let him get angry with father, and more likely to let him know when the father is angry. On the other hand, these fathers were less likely to respect their antisocial son's opinions, le likely to forget promises, but also less likely to encourage the son to muse, daydream, and think. We sense, in these data, a growing worry among fathers of antisocial boys about the future of their sons and increased efforts to encourage prosocial behaviors.

Table 7 displays the maternal child-rearing practices, identified at age 12, that discriminated between undercontrol and antisocial behavior. Compared to paternal child-rearing practices, maternal child-rearing orientations differentiated less frequently between the two behavior patterns, especially in the sample of boys.

Among girls, 12 (13%) CRPR items were differentially related to undercontrol and antisocial behavior, among boys the number was only 8 (9%), or less than could be expected by chance. These 8 items are included in Table 8 but they will not be interpreted. Relative to mothers of undercontrolled girls, mothers of antisocial girls described themselves as more likely to encourage the daughter to be curious, more likely to worry about sad things in her life, more likely to think that scolding would improve the daughter, and more likely to report the mother-daughter relationship as conflictual. These mothers were also likely to describe themselves as less relaxed with their daughter, less likely to trust her to behave, less likely to give her duties and to include her preferences, less likely to let her know when the mother is angry, less likely to prefer the daughter to not risk failure. less likely to abandon own interests for her, and less likely to wish she had not grown up so fast. This group of items describe mothers' relationship with their antisocial daughters as relatively conflictual and lacking in trust. However, these maternal

descriptions do not convey the same lack of warmth, affection, and stress on independence evident in the descriptions of fathers' relationship with their antisocial daughters.

Discussion

This chapter had several purposes: (a) The development of age-appropriate, consensus-based criterion descriptions of "pure" undercontrol and "pure" anti-social characteristics; (b) the description of a method for evaluating the similarities and differences between these two constructs; and (c) the presentation of some empirical relationships differentially associated with undercontrol and antisocial tendencies in early adolescence. The high levels of agreement achieved by the two groups of criterion definers reiterate the usefulness of the Q-methodology in generating reliable, precise and meaningful definitions of complex psychological constructs. Consistent with other recent studies, (e.g., Cantor, Smith, French, & Mezzich, 1980; Clarkin, Widiger, Frances, Hunt, & Gilmore, 1983; Horowitz, Wright, Lowenstein, & Parad, 1981; Vaughn & Gallager, 1983, Waters et al. 1985), this chapter provides strong evidence for the utility of criterion-definitions, or conceptual prototypes, in defining individual difference constructs. This approach, we believe, provide a useful alternative to other methods by which individuals are ranked according to their relative standing on individual difference constructs (e.g., self-reports, personality inventories, experimental

procedures, etc.).

In the first part of this study, we specified the personality characteristics distinguishing between undercontrol and antisocial tendencies. Consistent with our hypothesis, numerous Q-items discriminated between the two constructs. There is no indication in these Q-descriptions provided by clinical and developmental psychologists that difficulty in maintaining an adequate level of impulse control is a centrally important characteristic of the antisocial individual. Antisocial individuals are defined above all by lack of empathy and by poor interpersonal relations. This description of the antisocial person is consistent with Gough's (1948) emphasis on incapacity to form interpersonal relationships, deficient role playing ability, and absence of social emotions (e.g., group identification) as the most important signs of an antisocial disposition.

The undercontrolled individual is, not unexpectedly, described in more positive terms than the antisocial individual. Absence of anxiety and lack of emotional constriction (e.g., expressiveness, vitality, curiosity, rapid social tempo, etc.) are the most salient characteristics which separate undercontrollers from antisocial individuals. The quality of interpersonal relationships is comparatively less important in defining undercontrol than in defining the antisocial type. The undercontroller is by definition neither more nor less likely to have good interpersonal

relations than the overcontroller. In sum, the modest overlap between the two constructs being compared indicates that further analyses--based on different combinations of undercontrol and antisocial behavior (e.g., undercontrolled-antisocial, undercontrolled-prosocial, overcontrolled-antisocial, and overcontrolled-prosocial)--should be undertaken to evaluate further the possibility that different patterns of antisocial behavior characterize overcontrolled and undercontrolled individuals.

The criterion definition approach has several advantages over previous methods used to identify antisocial individuals. In their review of research on children's prosocial dispositions, Radke-Yarrow, Zahn-Waxler, and Chapman (1983) noted that one of the most serious limitations on research in this area is how prosocial (and by implication, antisocial) behavior has been indexed. Rarely, these authors concluded, has prosocial behavior been evaluated in terms other than frequency of observed social transgressions. Hence, other, perhaps equally relevant factors, such as motivation and behavioral intensity, have been excluded from consideration. Although frequency counts of simple behaviors often yield higher interrater agreement than observer-based ratings of complex constructs, accumulating evidence indicates that observer-based evaluations of personality, when provided by knowledgeable, context-sensitive informants whose multiple observations are composited, provide reliable and valid estimates of

complex behaviors (J. Block, 1977, J.H. Block & J. Block, 1980a; Epstein, 1979, 1980; Moskowitz & Schwarz, 1982). In particular, broadband assessment procedures are often superior to microanalytic, context-blind strategies when generalizations across situations (Moskowitz & Schwarz, 1982; Waters & Sroufe, 1983), or predictability over time (Bakeman & Brown, 1980) are evaluated. The outcome of this study indicates that antisocial behavior should be evaluated in terms other than simple, fallible, equivocal counts of recorded antisocial episodes. Since the Q-sort methodology takes into account a wide variety of affects, cognitions, and behaviors in defining antisocial behavior, the resulting criterion definition is likely to provide a more valid and psychologically meaningful definition of antisocial proclivities.

The pattern of relationships differentially associated with the indices of undercontrol and antisocial behavior clearly attests to the empirical utility of keeping the two constructs conceptually distinct. Of the two indices -- undercontrol and antisocial behavior--only the antisocial index predicted illegal substance use, a finding providing strong evidence for the discriminant validity of the two constructs. The undercontrol index was unrelated to drug use, indicating that behavioral dispositions not specifically related to undercontrol (e.g., lack of empathy and interpersonal distrust) appear to have greater implications for whether adolescents ergage in antisocial activities,

such as drug use.

These results extend previous findings regarding the relationship between drug usage and personality characteristics (for recent reviews on this topic, see Braucht, Brakarsh, Follingstad, & Perry, 1973; Gorsuch & Butler, 1976). Enhanced understanding of these relationships has been achieved by recent longitudinal studies employing nonclinical samples. In a four-year longitudinal study of junior and senior high school students, Jessor and Jessor (1977) reported that marijuana use was associated with an inadequate personal control structure. In a longitudinal examination of the preschool and middle childhood precursors of adolescent drug usage, J. Block, Keyes, and J.H. Block (1985) reported that drug users, identified at age 14, were seen by their nursery and elementary school teachers over the preceding decade as more rebellious, less socially competent, less resourceful and less adult-oriented than nonusers. Whereas these studies have provided substantial evidence that personality factors precede and influence substance use, and not vice versa, they did not evaluate the relative importance of the constructs of undercontrol and antisocial behavior. In the study conducted by Block et al., however, the antisocial quality of the personality characteristics associated with illegal substance use emerged clearly. The results presented in this chapter show even more clearly the greater importance of antisocial dispositions compared to inadequate impulse

control as a predisposing factor to drug usage.

The characteristics of the self-concept differentially associated with the two indices are important for several reasons. First, they connect the observer-based indices of undercontrol and antisociality with entirely independent and fundamentally different kinds of data--the subjects' perceptions of their real and ideal selves. The content of the correlates associated with undercontrol and antisocial tendencies, respectively, provides important validation for the observer-based measures of these two constructs.

Second, sex-differentiated relationships are evident in these analyses. The hypothesis that antisocial individuals do not necessarily have difficulties in maintaining an adequate level of self-control receives strong support from the self descriptions provided by antisocial adolescent boys. These boys view themselves as significantly more self-controlled, more planful, and more orderly, and also as significantly less impulsive than undercontrolled adolescent boys--a finding that is likely to cast serious doubt on the widespread and oversimplified notion that antisocial behavior derives strongly from insufficient ability to modulate impulse. In the sample of girls, on the other hand, the dimension of self-control appears less relevant than sex-role identification in distinguishing between the self concept of undercontrolled and antisocial adolescents. Antisocial girls, these

results indicate, perceive themselves as less conventionally sex-typed (i.e., more masculine and less feminine) than undercontrolled girls. This emphasis on a more unconventional sex-role orientation in antisocial girls is consistent with other studies suggesting that less sex-typed adolescent females are more likely to engage in illegal behavior, such as drug usage (e.g., Block et al., 1985).

Third, the descriptions of ideal self provide important information about how undercontrolled and antisocial adolescents perceive their ego ideal. The interpersonal wariness and alienation so strongly characteristic of the antisocial criterion definition were reflected in these descriptions, especially in the sample of boys. Relative to undercontrolled boys, antisocial boys were less likely to describe their ideal selves as affectionate, considerate, generous, and sympathetic. The set of values reflected in this ego ideal indicates a strong identification with an antisocial role orientation, even at this relatively early age. In the ego ideals of girls, on the other hand, contradictory aspirations were evident. Although antisocial female adolescents described their ideal self as less generous and sympathetic than undercontrolled girls, they also aspired to become more obedient and planful. This finding suggests that antisocial girls experience some problems of impulse control not seen in same-aged antisocial boys. Moreover, since the identification of these girls

with an antisocial role orientation appears less complete than for boys, a high score on the antisocial index may be less predictive of future antisocial activities for adolescent girls than for adolescent boys.

In her study of the young sociopath, Robins (1966) reported results which underscored the importance of father's behavior in predicting antisocial behavior in the offspring, both male and female. Antisocial behavior in the father predicted both juvenile antisocial behavior and antisocial behavior in adults who had been minimally antisocial as children. Moreover, antisocial behavior in the father was the only childhood variable which predicted that the degree of antisocial behavior would not decrease with age. The current study differs from that of Robins' insofar as our subjects represent an unselected sample of young adolescents and, hence, are characterized by a much lower level of antisocial behavior. In addition, we did not evaluate the degree of antisocial behavior characterizing the father. Instead, we examined the relationship between paternal child-rearing orientations and antisocial behavior in the offspring. Despite this difference in subject selection and predictor variables, our results are consistent with Robins' conclusion in its emphasis on the father-child relationship. Another parallel in outcome also suggests itself. In summarizing her results, Robins concluded that girls' orientations appeared to be somewhat more dependent on problem

behaviors in the parent, especially in the father, than did boys. In the current study, the relationship between paternal child-rearing orientations and adolescent development was stronger for girls than boys. This congruence in results across studies--using different subject samples and different assessment procedures--suggests that future studies of antisocial behavior might do well to examine closely the father-daughter relationship, especially in studies of adolescent populations since the need for a father figure may become more important as the adolescent prepares for a more mature adult role (J. Block, 1971).

J. Block (1971) reported that psychologically maladjusted individuals often experienced neurotic and brittle parents of the opposite-sex. Although not directly concerned with parental personality antecedents of maladjustment in the offspring, our findings pertain to the relative importance of the same-sexed versus the opposite-sexed parent for the subsequent adjustment of the child. For girls, our results are consistent with Block's observation that the adjustment of the offspring is strongly related to the qualities of the opposite-sexed parent. For boys, indications for the greater importance of either parent did not emerge.

The numerous relationships which emerged between fathers' child-rearing orientations and adolescent undercontrol and antisocial proclivities in the females sample are consistent with a trend in developmental psychology stressing the role of paternal

influences on child development and with the finding that positively involved fathers are important for the social and personal adjustment of girls (J. Block, 1971; J. Block, von der Lippe, & J.H. Block, 1973; Gjerde, 1984; Lamb, Owen, & Chase-Lansdale, 1979). The evidence agrees quite well with Becker's (1964) conclusion that when both mothers and fathers have been included, paternal influences at least equal maternal influences. Psychologists have often assumed that because father-child contacts are less frequent and of shorter duration than mother-child contacts, paternal influences have less impact on the child. But as one of us (J. Block, 1971) has remarked, paternal influences may gain in their effect by virtue of their timing, by their nature, by their context, and by the emphasis they are accorded in anticipation by the mother and the child.

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Table 1

Substances Included on the Substance Use Checklist

Tobacco
Beer
Wine
Hard liquor (e.g., whiskey, gin)
Marijuana
Hashish
Hallucinogens (e.g., LSD, peyote, mescaline)
Inhalants (e.g., glue, gasoline, nitrous oxide, amyl nitrate
Barbiturates (e.g., Seconal, Quaaludes)
Tranquilizers (e.g., Valium, Librium)
Amphetamines (e.g., Dexedrin, Methedrine)
Cocaine
Codeine-type medicines
Heroin
Other

Table 2

Longitudinal Consistency of Undercontrol and Antisocial Behavior Indexes From Age 3 to Age 14

	Age				
	3	4	7	11	14
Undercontrol Index					
Age 3	-	.67****	.50***	.41**	.38*
Age 4	.86****	-	.50***	.31*	.31*
Age 7	.57***	.44**	-	.53****	.74****
Age 11	.40**	.43**	.60****	-	.65****
Age 14	.47**	.26	.55****	.61****	-
Antisocial Behavior Index					
Age 3	-	.67****	.37*	.06	.02
Age 4	.58****	-	.37**	-.12	.02
Age 7	.25	.26	-	.27	.35*
Age 11	.16	.08	.38**	-	.48***
Age 14	.11	.24	.44**	.66**	-

Note. The correlations for girls are above the diagonal; the correlations for boys are below the diagonal. Ns range from 39 to 52 for both sexes.

*p<.05, **p<.01, ***p<.001, ****p<.0001

Table 3

Descriptive Statistics for Undercontrol and Antisocial Behavior Indexes

Girls			Boys				
M	SD	n	M	SD	n	t	
							Undercontrol Index
57.35	15.00	61	58.70	15.93	55	ns	Age 3
55.98	12.96	64	57.95	15.26	64	ns	Age 4
51.87	5.25	50	52.89	5.85	52	ns	Age 7
50.51	18.97	52	54.54	16.80	54	ns	Age 11
49.91	18.44	54	50.06	17.41	52	ns	Age 14
							Antisocial Behavior Index
32.28	14.88	61	37.45	10.48	55	2.14**	Age 3
40.06	14.53	64	40.77	12.42	64	ns	Age 4
43.86	4.78	50	44.66	4.87	52	ns	Age 7
34.51	12.58	52	39.75	16.23	54	1.85*	Age 11
36.71	14.26	54	40.52	14.79	52	ns	Age 14

Note. *$p<.10$, **$p<.05$

Table 4

Undercontrol and Antisocial Behavior Indices Related to Descriptions of Actual Self at Age 14

SQ-item	Undercontrol	Antisocial Behavior	z
	Girls		
Adventurous	.21	-.21	2.15**
Assertive	.43***	.01	2.27**
Responsible	.17	-.21	1.94**
Show off	.32	-.13	2.34**
Feminine	.14	-.39***	2.79***
Competent	.30**	-.11	2.12**
Critical	-.27*	.22	2.42**
Rebellious	-.07	.25*	1.64*
Reserved, shy	-.57***	.15	2.51***
Distractable	-.09	.25*	1.74*
Mischievous	-.16	.37***	2.78***
Masculine	-.09	.23*	1.64*
	Boys		
Energetic	.31**	-.15	2.31**
Restless	.13	-.29**	2.10**
Sociable	.27*	-.11	1.90*
Show off	.34**	-.16	2.53***
Talkative	.38***	-.24*	3.16***

SQ-item	Undercontrol	Antisocial Behavior	z
	Boys (cont.)		
Fearful, worrying	.08	-.33**	2.07**
Distractable	.22	-.15	1.83*
Impulsive	.30**	-.23*	2.66***
Self confident	-.12	.34**	2.33**
Competitive	-.22	.19	2.03**
Self-controlled	-.33**	.51***	4.44***
Planful	-.29**	.14	2.15**
Orderly, neat	-.32**	.28**	3.03***
Reserved, shy	-.35***	.13	2.43**

Note. SQ = Self-descriptive Q-sort. For the sample of girls, Ns are 54. For the sample of boys, Ns are 51.

*p<.10, **p<.05, ***p<.01

Table 5

Undercontrol and Antisocial Behavior Indices Related to Descriptions of Ideal Self at Age 14

SQ-item	Undercontrol	Antisocial Behavior	z
	Girls		
Energetic	.24*	-.22	2.37**
Self-centered	.14	-.20	1.74*
Generous	.15	-.22	1.89*
Sympathetic	.04	-.38***	2.22**
Distractable	.15	-.29**	2.27**
Logical	-.08	.26*	1.75*
Mischievous	-.22	.38***	3.15***
Obedient	-.24*	.18	2.16**
	Boys		
Affectionate	.23	-.37***	3.02***
Planful	.27*	-.39***	3.34***
Considerate	.06	-.50***	2.95***
Generous	.06	-.35**	2.06**
Helpful	.03	-.37***	2.02**
Sympathetic	.13	-.32**	2.24**
Trusting	.06	-.28**	1.69*
Fearful	-.21	.15	1.77*

SQ-item	Undercontrol	Antisocial Behavior	z
	Boys (cont.)		
Gets upset easily	-.03	.40***	2.20**
Critical	-.33**	.43***	3.83***
Competitive	-.27*	.33**	3.00***

Note. SQ = Self-descriptive Q-sort. For the sample of girls, Ns are 54. For the sample of boys, Ns are 50.

*p<.10, **p<.05, ***p<.01

Table 6

Undercontrol and Antisocial Behavior Indices Related to Fathers' Child-rearing Practices at Age 12

CRPR item	Undercontrol	Antisocial Behavior	z
	Daughters		
Child should be comforted when scared	.60***	.02	1.96**
Respects child's opinions	.47**	-.07	1.69*
Insulates child from different ideas	.02	-.64***	2.27**
Shows affection by hugging, kissing child	.45**	-.10	1.71*
Lets child decide many things for self	.49**	-.16	2.03**
Enjoys home full of children	.29	-.50**	2.47**
Expects a great deal of child	.39*	-.25	1.95**
Is easy going, relaxed with child	.43*	-.49**	2.90***
Child reasoned with when misbehaves	.66***	-.08	2.55***
Trusts child to be well-behaved	.33	-.46**	2.48**
Jokes and plays with child	.52**	-.32	2.65***
Parent and child share warm ties	.38*	-.37*	2.33**
Supernaturality used to explain to child	.17	-.52**	2.18**
Encourages child to talk about troubles	.50**	-.31	2.54***
Child not allowed to question parental decisions	.07	.60***	-1.81*

CRPR item	Undercontrol	Antisocial Behavior	z
	Daughters (cont.)		
Stays home if child left alone with stranger	.23	-.50**	2.28**
Child should be aware of sacrifices	-.20	.51**	2.23**
Much conflict between parent and child	-.49**	.53**	3.28****
Thinks child must learn early not to cry	-.44**	.36	2.48**
Child expected to appreciate advantages	-.36	.23	1.78*
Teaches child to control feelings always	-.32	.42*	2.27**
Keeps child from fights	-.15	.45**	1.85*
Controls child by warning bad can occur	-.57***	.04	2.01**
Child not allowed to get angry with me	-.04	.61***	2.18**
Prevents rough games	-.46**	.37	2.58***
Sometimes forgets promises to child	-.35	.42*	2.37**
Often feels angry with child	-.47**	.49**	2.94***
Punishes child by violating her	-.07	.55***	2.01**
Watches closely what and when child eats	-.21	.43*	1.96**
Children of different sex shouldn't see each other naked	-.59***	.01	2.01**
	Sons		
Respects child's opinions	.60***	-.17	3.00***
Sometimes forgets promises to child	.16	-.34*	1.78*
Encourages child to muse about adult life	.26	-.29	1.96**

CRPR item	Undercontrol	Antisocial Behavior	z
	Sons (cont.)		
Child given time to think, day dream	.33*	-.25	2.07**
Too much 'TLC' can harm, weaken child	.27	-.28	1.96**
Child should not play alone without adult supervision	.29	-.18	1.67*
Wish child not have to grow up fast	-.53**	.25	2.93***
Prefers child not to prefer failure	-.21	.30	1.81*
Worries regarding sad, bad things in his life	-.33*	.42**	2.73***
Child not allowed to get angry with me	-.53**	.04	2.22**
Extra privileges given for good behavior	-.36*	.57***	3.55****
Keeps child from fights	-.24	.40**	2.32**
Lets child know when angry with him	-.37*	.21	2.08**

Note. CRPR = Child-rearing Practices Report. For the sample of girls, Ns are 20. For the sample of boys, Ns are 27.

*p<.10, **p<.05, ***p<.01, ****p<.001

Table 7

Undercontrol and Antisocial Behavior Indices Related to Mothers' Child-rearing Practices at Age 14

CRPR item	Undercontrol	Antisocial Behavior	z
	Daughters		
Prefers child not to risk failure	.11	-.37**	1.93*
Future plans include child's preferences	.24	-.29*	2.10**
Wishes child not to grow up fast	.19	-.34**	2.12**
Is easy going, relaxed with child	.21	-.28	1.94**
Some of own interests abandoned for child	.39**	-.06	1.83*
Trusts child to be well behaved with parents	.11	-.53***	2.71***
Many duties given to child	.30	-.18	1.86*
Lets child know when angry with child	.43***	-.05	1.98**
Encourages child to be curious	-.34**	.28	2.49**
Worries regarding sad, bad things in child's life	-.21	.26	1.86*
Scolding, criticism improves child	-.16	.34**	1.99**
Much conflict between child and parent	-.21	.27	1.90*
	Sons		
Helps child when being teased by friends	.39**	-.09	2.10**
Sibling jealousy, quarreling punished	.14	-.33**	2.02**
Child not blamed for others' trouble making	.08	-.56***	2.98***

CRPR item	Undercontrol	Antisocial Behavior	z
	Sons (cont.)		
Child reasoned with when misbehaves	-.52***	.39**	4.13****
Encourages child to do his best	-.33**	.29*	2.68***
Sometimes teases, makes fun of child	-.25	.21	1.83*
Supernaturality used to explain to child	-.35**	.11	2.03**
Makes child aware of shame/disapproval of misbehavior	-.36**	.05	1.79*

Note. CRPR = Child-rearing Practices Report. For the sample of girls, Ns are 34. For the sample of boys, Ns are 38.

*p<.10, **p<.05, ***p<.01, ****p<.001