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Comparison of risk factors and criminogenic need among incarcerated young offender, probationary young offender and non offender samples

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A Comparison of Risk Factors and Criminogenic Need among Incarcerated Young Offender, Probationary Young Offender and Non-Offender Samples

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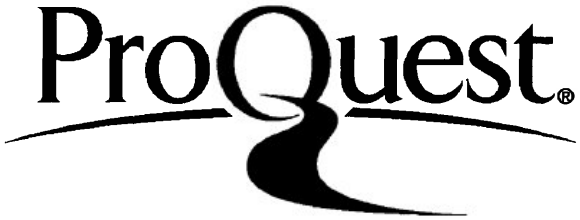

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Abstract

This research examined some of the risk/need factors that discriminate offending from non-offending youth employing three groups of adolescents at different points on the crime continuum. Non-offenders (n=30), probationary young offenders (n=28) and incarcerated young offenders (n=28), aged 16 to 18 years were subjects for whom a number of psychometric measures and other data were collected. A self-report measure of delinquent and criminal activity (SRP) was developed and used to validate group assignment along the crime continuum. Risk/need measures were predominantly psychometric and included measures of personality, drug abuse, alcohol abuse, family dysfunction, intelligence, academic achievement and the SRP. Drug abuse, family dysfunction and last complete grade were the measures which discriminated among all three groups. Increased criminality was associated with increased drug abuse problems, increased family dysfunction and a lower self-reported grade achievement level. Of lesser relevance in identifying group experiences were alcohol abuse, IQ, depression and psychiatric symptomology. The results and limitations of the study are discussed.

Comparison of Risk Factors and Criminogenic Need among Incarcerated Young Offender, Probationary Young Offender and Non-Offender Samples

This research attempted to confirm some of the findings related to risk factors that discriminate offending youth from non-offending youth. Although the research design was not unique, it did incorporate some methodological elements that are less frequently found in the criminal research literature. First, in examining differences between offenders and non-offenders, this study employed three groups of young people at different points on the crime continuum. Second, a self-report measure of crime was devised to encourage more self-disclosure by young persons and to validate group differences among offending and non-offending youth. Third, established psychometric instruments were predominantly used as the dependent variables. The literature pertinent to the focus of this study and the above issues is summarized next.

Young Offenders and a Rehabilitation Model

While there is general agreement that Canada's juvenile justice system should control and reduce youth crime, over the years debate has continued as to how this mission can best be accomplished. Mindful of this objective and sensitive to the perceived shortcomings of the previous *Juvenile Delinquents Act* (JDA,

Bala, 1988), Canadian judicial policymakers formulated the *Young Offenders Act* (YOA, 1984). The YOA represented a major philosophical shift from the JDA in that it accorded specific rights and responsibilities to the young offender while redefining the court's powers within a *just deserts/deterrence* focused policy (Bala, 1988; Leschied & Gendreau, 1986). This direction was a clear departure from the protective ideology of the doctrine of *parens patriae* or paternalism which was integral to the JDA: "Children were to be saved, not punished for their misdeeds" (Burrows, Hudson, & Hornick, 1988, p.4). However, in the ten years since its proclamation, significant criticisms have been directed against the ideological conflicts of the YOA and the limitations it places on the juvenile justice system to carry out its mandate. In general, these criticisms have revolved around a less than enthusiastic response toward the rehabilitation of young offenders on the part of YOA policymakers and, more importantly, the impact of these efforts on the reduction of youth crime (Andrews et al., 1990; Leschied & Gendreau, 1986).

Some of the proponents of the YOA policy shift were influenced, in part, by the belief that a reduction in crime would result through the deterrence associated with punishment meted out in a certain, timely and fair manner. Unfortunately, studies of the utility of criminal sanctions in both Canada and the United States have revealed less than impressive empirical support for this

contention.

Throughout most of Canada (excluding Ontario and the Northwest Territories), when administrative offenses are excluded, youth court cases have remained relatively stable, increasing by 5% between 1986-87 and 1992-93 (Juristat, 1994a). However, under the YOA there has been a significant rise in the use of custody sanctions (Juristat 1994b; Leschied & Gendreau, 1986), a marked decline in the use of treatment dispositions (Leschied & Hyatt, 1985; Leschied & Jaffe, 1985), and much fewer requests for psychological/psychiatric assessments (Leschied & Jaffe, 1987). A review of the literature suggests that the impact of criminal sanctions on recidivism has been negligible. Leschied, Austin and Jaffe (1988) examined recidivism rates among adolescents charged under the JDA versus the YOA and found a significantly higher rate of recidivism under the YOA. Furthermore, the overall trend has been toward an increase in the number of cases involving youth violence (Juristat, 1994a; Institute for the study of antisocial behaviour in youth, 1993) and an overall increase in adolescent criminal activity has been found in many studies despite the relatively stable rate of youth court cases (Andrews et al., 1990; Green, 1989; Leschied, Austin, & Jaffe, 1988; Leschied & Jaffe, 1987).

In concert with the emphasis on due process and criminal sanctions, there

has been a devaluation of rehabilitation. Criminologists and sociologists employed what Andrews and Wormith (1988) referred to as "knowledge destruction techniques" in their often cynical illustrations of the ineffectiveness of treatment (Lab & Whitehead, 1990; Walker, 1989). Frequently denying or discounting the importance of risk/need factors at the individual level, some experts denounced the need for individual rehabilitation, calling instead for a multitude of social reforms (Wilson & Herrnstein, 1985). Others, such as Leyton (1979), extended Martinson's (1974) notion that "nothing works", claiming that "therapeutic gimmicks.... [have done little more than] ...provide the innovator with a measure of recognition" (Leyton, 1979 pp. 203-204) whilst nurturing further criminality.

Andrews and others (Andrews, 1989; Andrews & Bonta, 1994; Andrews & Wormith, 1988) have offered sound criticism of the antirehabilitationist position for obfuscating the pertinent issues with antipsychology and often anti-empirical themes. After reviewing the literature on correctional treatment services, Andrews, Bonta and Hoge (1990) found at least 40% of studies and up to 80% of the better controlled studies, reported significant treatment effects in both adult and juvenile populations. More importantly, Andrews et al. noted that when clinically relevant and psychologically informed treatment principles were employed in meta-analyses, appropriate correctional interventions reduced

recidivism by 50% when compared to criminal sanctions and inappropriate correctional services (Andrews et al., 1990; Gendreau & Andrews, 1990; Hill, Andrews, & Hoge, 1991). Simply stated, appropriate rehabilitation works better than criminal sanctions in reducing recidivism.

Recent trends in research have led to a resurgence of what Andrews et al. refer to as the "psychology of criminal conduct" and have re-affirmed the usefulness of classifying young offenders in order to enhance the effectiveness of service and reduce recidivism. Within a social learning perspective, Andrews and his colleagues have cultivated a system of classification and treatment delivery which rests upon the principles of risk, need and responsivity (Andrews, 1982, 1983, 1988; Andrews & Bonta, 1994; Andrews et al., 1990; Andrews & Wormith, 1988; Andrews, Bonta, & Hoge, 1990; Hoge & Andrews, 1986). The *risk principle* aids in determining the level of services required by the individual so that those who will profit most from intensive rehabilitative programming are identified. Risk factors include both static and dynamic predictors of criminality. Static predictors such as criminal, environmental, and genetic history, as well as gender and age, are immutable. However, dynamic risk predictors, a subset of risk factors which co-vary with recidivism, are mutable and thus the focus of rehabilitative efforts. Such factors would include social and employment skills, antisocial beliefs

and attitudes, substance abuse and family functioning. The *need principle* addresses those dynamic factors which empirically or rationally, are demonstrated to interact with circumstance so as to increase the risk of re-offending. Hence, dynamic predictors furnish outcome variables for rehabilitative efforts. Finally, the *responsivity principle* in Andrews' model assists in matching young offenders to the appropriate mode and style of treatment intervention so as to enhance the outcome.

One of the main points of contention between those favouring rehabilitative interventions and those opposing this theme appears to be the notion of criminal differences between offenders and non-offenders and how these impact on criminal behaviour (Andrews & Wormith, 1988). Rehabilitationists contend that individual differences exist. Furthermore, these differences interact with situational variables to increase or decrease the probability of criminal behaviour and are critical in the prediction and treatment of criminality. Those in opposition to the psychology of criminal behaviour invariably argue that criminogenic differences either do not exist, reflect a particular bias or are simply differences that *don't* make a difference (Matza, 1964, Vold & Bernard, 1986, Wilson & Herrnstein, 1985).

Research on Risk/Need Factors that Discriminate Offenders from Non-offenders

Both the risk and the need principle of the Andrews' rehabilitation model

stem from a large body of cross sectional and longitudinal research dedicated to discovering the covariates of criminality. Overall, the findings appear impressive as numerous covariates have been identified as differentiating offenders from non-offenders and predicting future delinquency. These include:

1. Mental health variables such as EEG abnormalities, general left hemisphere dysfunction, frontal lobe dysfunction, attention deficit and hyperactivity (Buikhuisen, 1982; Milstein, 1988; Nachshon, 1988; Venables, 1988).

2. Cognitive facilities such as intellectual abilities, learning disabilities, social cognitive biases and deficits and moral reasoning (Dodge & Frame, 1982; Eacker, Allen, & Grey, 1983; Elmer, Heather, & Winton, 1977; Glueck & Glueck, 1968; Jurkovic & Prentice, 1977; Kandel et al., 1988; Lindgren, Harper, Richman, & Stehbens, 1986; Moffitt, 1988; Moffitt & Silva, 1988; Thornton & Reid, 1982; Walsh, 1987).

3. Characterological differences such as impulsivity, psychopathy, attitude towards authority, risk taking, antisocial characteristics, and empathy (Andrews & Wormith, 1988; Eaker, Allen, & Gray, 1983; Goma, Perez, & Torrubia, 1988; Hare, Williamson, & Harpur, 1988; Heilbrun, 1979, 1982; Kendall, Moses, & Finch, 1980; Lingren, Harper, Richman, & Stehbens,

1986; Simourd & Andrews, 1994; Wilson & Herrnstein, 1985).

4. Family dysfunction such as parental attachment and absence, parent-adolescent communication, parent mental health and parental criminality (Cantrell & Prince, 1985; Johnson, 1987; Moran & Barclay, 1988; Noller & Bagi, 1985; Simourd & Andrews, 1994).

5) Alcohol and substance use/abuse (Ellinwood, 1971; Greenburg, 1981; Moffitt, 1988; Wilson & Herrnstein, 1985).

Many of the above findings are the result of studies utilizing a comparative or contrasted groups methodology applied to offender and non-offender samples. Group classification is usually dichotomous and based on involvement or non-involvement with legal authorities. Lab and Whitehead (1990) and Rappaport, Lamiell and Seidman (1980) have criticized the selection of delinquent samples solely on the basis of "official" report statistics. It has been argued that such problems as the differential detection of criminal activity, the failure of some victims to report crimes, inconsistencies in collecting official data and difficulties in accessing official data for research have impacted negatively on research findings.

A second concern with dichotomizing the delinquency construct is that it may be too simplistic, overlooking the gradient of criminal behaviour. Certainly

self-reported delinquent activity, as well as official statistics, point to a continuum of criminality. Gold (1970), in his discussion of a unitary continuum of criminality, reflected on the advantages afforded by approaching delinquency as a matter of degree. The continuum approach results in a broadening of theoretical perspectives and, at the research level, permits the use of more sophisticated statistical analyses. Utilizing the continuum approach, Torstensson (1990) reported relative differences in attachment to school and commitment to education when examining four categories of female delinquency based on the degree of delinquent behaviour (non-delinquent; delinquent but not criminal; police recorded criminal behaviour or frequent, serious drug abuse; criminal record and records of hard drug use). Andrews' (1990) risk/need model further illustrates the continuum notion in associating the direction, intensity and delivery of services to the degree of risk and criminogenic need. Obviously, in determining whether any established, significant differences between offender samples are important factors with respect to risk and criminogenic need a non-offender control group is a prerequisite.

Self-Report Measures of Delinquency

Self-report measures are employed in offender research as a means of measuring "hidden delinquency" and their utility in validating the classification of subjects into offender and non-offender groups has been advocated by Moffit and

Silva (1988). As already mentioned, comparative studies have frequently been criticised for defining delinquency in terms of "sociocultural antecedent conditions" and their reliance on official measures (Blakely, Kushler, Parisian, & Davidson, 1980). In gathering self-report measures, researchers are able to report on criminal activity without concern for the potential inefficiencies and inequities in arrest reports and official crime statistics. Though there are no definitive studies on the reliability and validity of self-report measures, Moffitt (1988) demonstrated satisfactory criterion and concurrent validity as well as adequate test-retest and internal reliabilities for the Self-Report Delinquency (SRED) protocol. Additionally, Blakely et al. (1980) demonstrated a significant but minimal correlation of self-report measures with official records. The modest correspondence is not completely unexpected given the low base rate of official contact in the general population (Tolan & Lorion, 1988).

In general, self-report measures are relatively easy to administer and offer a method for studying the correlates of criminal behaviour prior to official recognition and without reliance on the delinquent/non-delinquent dichotomy (Gold, 1970; Nye & Short, 1957; Tolan & Lorion, 1988). The most basic self-report measure explores categorical information related to committing defined behaviour during a particular time interval. Gold (1970), employed this type of

rudimentary procedure by having subjects check off the crimes they had committed from a list of crimes. This instrument generated a single score equal to the total number of items endorsed. More recent self-report measures also take into account frequency and seriousness of unlawful acts. For example, Moffitt (1988) and Moffitt and Silva (1988) assessed delinquency with the Self-Report Early Delinquency (SRED) protocol which explored categorical, frequency and seriousness dimensions of criminal behaviour. A relatively complicated procedure, the SRED protocol requires the subject to sort 58 index cards, each printed with a delinquent act. In the Moffitt (1988) study, the cards were sorted into three frequency categories: never, once or twice, or three or more times. Similarly, in Moffitt and Silva (1988), subjects sorted the cards according to whether or not they had committed the act. In both instances the scales were weighted with item seriousness ratings and the SRED score was obtained by summing the seriousness weight for each item endorsed by the subject.

The relevancies and advantages of self-report measures are well established across a variety of disciplines and this type of measure is frequently utilized within the various branches of psychology. Yet, in the study of criminal behaviour the utility of self-report measures remains controversial. It is argued that trivial offenses can be over-represented without the appropriate consideration of the

seriousness of any specific criminal act. On the other hand, self-report measures are also criticised because of their consideration of the dimensions noted above and the elaborate weighting schemes applied to determine an individual's score.

The use of multiple dimensions of crime (categorical, frequency, and seriousness) and various weighting schemes appear to have little effect in strengthening self-report instruments. Blakely, et al., (1980) compared ten frequency and seriousness weighting schemes applied to their self-report measure and failed to strengthen the instrument or add to its applicability. Further, Tolan and Lorion (1988) concluded that categorical, frequency, and seriousness dimensions serve equally well as predictors of delinquency proneness. The results of these studies suggest that the total number of acts reported (i.e., categorical information) is the most efficient method of scoring.

Self-reporting criminal activity also introduces the potential for individual bias such as under-reporting and over-reporting criminal involvement (Wilson and Herrnstein, 1985). Quite a few years ago, Gold (1970) attempted to dismiss this latter concern. Gold found that 70% of subjects in a pretest of his self-report questionnaire responded without under-reporting. Although it was not possible to verify over-reporting, Gold's examination of the "wildest" disclosures through the media and police records indicated that the incidents had at least occurred. In the

current climate of concern about juvenile crime, it seems more likely that young persons would under-report if required to specifically identify crimes they had committed. Self-report measures might be improved if respondents can acknowledge criminal activity but not to a self-incriminating degree.

Overall, it appears that a self-report instrument should be easy to administer and score, include a balance of delinquent and criminal activities, and provide for some generality in self-reports. Such an instrument might prove beneficial in validating differences between offending and non-offending youth and may also provide useful information as a measure of risk in the prediction recidivism.

Scales for Measuring Risk

High recidivism rates are known to be associated with multiple risk factors as identified by standardized risk assessment instruments such as the Level of Supervision Inventory and the more recent Risk-Need Assessment (Andrews & Bonta, 1994). These instruments rely primarily on information obtained from interviews and historical reviews of official records to differentiate high risk from low risk offenders. Some of the factors explored in risk assessments include previous criminal history, family dysfunction, alcohol and substance abuse, academic/employment history and procriminal attitudes. The predictive power of

these assessments is impressive although not perfect, as research demonstrates (Andrews, 1990; Andrews, Bonta, & Hoge, 1990). Some high risk offenders never re-offend and some low risk offenders do. Andrews (1990) suggested that predictive imperfections result from both a failure to focus on dynamic/need factors and the limitations in our knowledge of what constitutes a risk factor. Notably, risk assessments make little use of systematic psychological testing. Ideally, the use of clinical psychometric instruments would contribute to finer distinctions within the covariates of delinquency and further enhance treatment efficacy.

As previously noted, factors such as personality, intelligence, family dysfunction and drug and alcohol abuse have been associated with criminal behaviour. A number of psychological assessment instruments which measure these variables have had some history of relevance to young offenders. For example, the Basic Personality Inventory (Jackson, 1989) has been used in the assessment of young offenders. Jaffe, Leschied, Sas, Austin and Smiley (1985) were impressed by "the ability of the BPI subscales to meaningfully differentiate important psychological variables related to delinquent behaviour" (p. 14). Subscales such as alienation, persecutory ideation, impulse expression and social introversion have been reported as covariates of delinquent behaviour (Leschied,

Austin, & Jaffe, 1988; Jaffe, Leschied, Sas, Austin, & Smiley, 1985).

A large body of criminal research highlights differences between offenders and non-offenders when intellectual abilities are compared. Studies employing the Wechsler series of intellectual assessments (e.g., WAIS-R and WISC-R) have found that offenders frequently have below average verbal/sequential processing skills and on average exhibit a greater than nine point difference between measures of verbal comprehension and perceptual organization when compared to non-criminal peers (Eaker, Allen, & Gray, 1983; Glueck & Glueck, 1968; Moffitt & Silva, 1988).

Family dysfunction, as well as, alcohol and substance abuse have long been implicated as a risk factor in criminal behaviour and a focus of rehabilitative efforts (Wilson & Herrnstein, 1985). The Research and Statistics Branch of the Correctional Service of Canada has established a link between substance use by adolescents and subsequent adult criminal activity (Research and Statistics Branch, Correctional Service of Canada, 1991). Further benefits might be realized through the use of standardized measures which more fully explore the parameters of alcohol and drug abuse. The Michigan Alcohol Screening Test and the Drug Abuse Screening Test are two of a number of such instruments. Both are relatively easy to administer and score, and focus on a number of factors relevant

to abuse. Similarly, family dysfunction as a variable might also benefit from a standardized assessment procedure.

Summary

An important approach to dealing with Canadian young offenders rests on the identification of risk and need factors, as well as related rehabilitative interventions. Comparisons between offending and non-offending youth yield useful information but can be supplemented by sampling youth at different points on the crime continuum. Self-report measures of delinquency and standardized psychometric instruments may yield useful information in the risk assessment process. The current study employed such measures in comparing non-offending youth with a sample of youth on probation and a sample of incarcerated youth. It was hypothesized that risk factors could be identified that would discriminate these three samples.

Method

Subjects

Non-young offenders (NYO).

This sample was comprised of 30 adolescent Caucasian males with a mean age of 17.5 years (SD = 0.86; range 16.0 to 19.1 years). Exactly one half of these subjects were attending a public secondary school while the remainder were

recruited from students attending two public technical/vocational schools. Non-offenders were questioned regarding possible convictions and although none were reported their responses were not confirmed through official records.

Probationary young offenders (PYO).

The PYO sample included 28 adolescent Caucasian males with a mean age of 17.6 years (SD = 0.65; range 16.3 to 18.8 years). None of the PYOs reported having received a custody disposition and this was confirmed through their probation officer. Juristat (1994b) reports that 40.4% of young offender convictions received probation as the primary disposition while 31% received a period of custody as the primary disposition.

Incarcerated young offenders (IYO).

This sample was comprised of 28 Caucasian male young offenders serving secure custody dispositions at the Thunder Bay Youth Centre. The mean age of this group was 17.5 years (SD = .57; range = 16.4 to 18.6 years). Their dispositions were for convictions on a variety of crimes against person and property. These crimes included break and enter, theft, assault and murder.

Measures

Self-Report Protocol (SRP).

The 21 item SRP (Appendix A) was developed by the author for the

purposes of this study and asked subjects about their previous delinquent and criminal activities. Many of the items included in the SRP were derived from the 58 items of the Self-Reported Early Delinquency (SRED) protocol developed by Moffitt and Silva (Moffitt, 1988; Moffitt & Silva, 1988). The majority of items were edited to enhance comprehension, particularly those items involving cultural variations. Some items were also edited to reflect Canadian YOA criteria and some items such as "broke traffic laws..." and "used force to obtain sexual acts..." were added. The 21 items of the SRP appeared to be representative of the variety of crimes committed within Canadian society (Juristat, 1989). The SRP was divided into four sections based on content: (a) crimes against person (i = 5), (b) crimes against property (i = 6), (c) involvement with illegal substances (i = 3) and (d) moral and status offenses (i = 7). The arrangement of items within each section was derived from an analysis of seriousness ratings obtained from correctional officers (n = 11), probation officers (n = 9) and graduate students in psychology (n = 9).

The subjects of this study were asked to scrutinize the items in each section and record the number of items committed since 12 years of age. Subjects were then asked to estimate the frequency of the behaviour on a four point scale (rarely = 1 to very frequently = 4). If the subject did not record any items in a given

section, the frequency score was zero. Note that a high degree of confidentiality is maintained as the examiner is unable to identify the specific items selected unless the subject reports committing all crimes in a given section.

Wechsler Adult Intelligence Scale - Revised (WAIS-R).

The WAIS-R (Wechsler, 1981) is a widely used and accepted measure of intelligence, suitable for ages 16.0 years and older. The instrument yields three summary IQs: verbal, performance and full scale. The psychometric properties of the WAIS-R have been well established (Kaufman, 1990).

Basic Personality Inventory (BPI).

The BPI (Jackson, 1989) is a brief self-report measure of psychopathology consisting of eleven 20-item clinical scales (Hypochondriasis, Depression, Denial, Interpersonal Problems, Alienation, Persecutory Ideas, Anxiety, Thinking Disorder, Impulse Expression, Social Introversion, Self Depreciation) and one 20-item critical scale (Deviation). KR-20 reliability coefficients range from .57 for Anxiety to .80 for Depression. Construct validity, as well as concurrent, convergent and discriminant validity, have been established with delinquent populations (Austin, Leschied, Jaffe, & Sas, 1986; Smiley, 1975).

Michigan Alcoholism Screening Test (MAST).

The MAST (Selzer, 1971; Selzer, Vinokur, & Van Rooijen, 1975))

measures the extent of problems related to the use and abuse of alcohol. This 24 item yes/no scale was offered a minor scoring adaptation by Skinner (1979, 1982a). Skinner's unit scoring system has demonstrated sound psychometric properties (Skinner, 1979, 1982a; Skinner & Sheu, 1982). Responses in the scored direction are totalled for a MAST score which reflects the degree of problems related to alcohol abuse (none to severe) over the previous 12 month period. Consequently, this approach was used in the current study. Some of the MAST items were modified to apply to adolescents (e.g. " Have you ever lost a job because of drinking?" became "Have you ever lost a job (or been kicked out of school) because of drinking?")

Drug Abuse Screening Test (DAST).

The DAST (Skinner, 1982b) is a 20 item self-report measure of problems involving drug abuse. Initial investigations of the DAST reveal respectable psychometric properties (Skinner, undated; Skinner & Goldberg, 1986). Respondents answer yes/no to each item about their non-medical use of prescription drugs, inhalation of solvents or their use of "street drugs" over the previous 12 month period. Responses in the scored direction are totalled for a DAST score which reflects the degree of problems related to drug abuse (none to severe). As with the MAST, there was modification to the wording of some items

in order to apply to adolescents. For example, "school" was included in the item "Have you been in trouble at work (or at school) because of drug use?"

Family Dysfunction Index (FDI).

This checklist (Appendix B) is composed of 14 items that identify different elements of family dysfunction. The items focus on marital disharmony, relationships, discipline and structure, violence and economic problems. The FDI was a locally used checklist and consequently its psychometric development was limited. Interjudge reliability on a sample of 37 subjects was calculated as $r = .69$ (Thompson, 1994). Item #8 "abusive childhood background", was not used in the assessment of PYOs and NYOs because of legal reporting responsibilities and a reluctance to tackle these issues in a research interview. This item was also removed from the FDI scores of incarcerated young offenders prior to analysis.

Last Complete Grade (LCG).

Academic achievement was measured as the last successfully completed grade as determined as accurately as possible from self-reports.

Procedure

Upon meeting the appropriate ethical criteria, the present study was approved by the Lakehead University Ethics Advisory Committee to the Senate Research Committee (Appendix C). The proper agencies were addressed and

permission was granted to approach the youth in their care and where necessary, use their premises for data collection (Appendix D).

Written consent was obtained from each NYO and PYO subject and for subjects under 18 years of age, parental consent was also acquired. Anonymity and confidentiality were assured through the use of coded subject numbers and the secure storage of data.

Seventeen IYOs (Caucasian males) were randomly drawn from a data pool of previous secure custody residents at the Thunder Bay Youth Centre who had received a standard assessment routine during their incarceration. The SRP was not available for these subjects. Another 12 current IYOs consented to complete the SRP which was not an aspect of the standard assessment routine.

With the exception of the Incarcerated Young Offenders (IYO), all subjects were given honorariums ($10.00/hr) for their participation in the study. Payments ranged from $15.00 to $30.00. The incarcerated subjects were tested as part of a standard psychological assessment routine at the secure custody facility and in accordance with Ministry policy were not eligible to receive a stipend. All NYO and PYO subjects were briefed in writing as to the nature and procedures of the study (Appendix E). The 12 IYOs were briefed in writing as to the purpose of the SRP (Appendix E). Confidentiality and anonymity were stressed at the beginning

of each session and the subject was informed of his right to withdraw from the study at any time. Subjects provided signed informed consent (Appendix F).

The SRP was administered to all subjects by the author. Approximately seven of the current IYO subjects were tested by the author as part of a practicum placement at the Thunder Bay Youth Centre. The remaining IYO data and data for two PYO subjects were administered by other members of the Psychology Department of the Thunder Bay Youth Centre. All NYOs and remaining PYOs were assessed by the author according to standard procedures. All items in the BPI, DAST, MAST and FDI were read to the subjects so as to reduce any confounding effect due to reading ability.

Results

Treatment of Data

All data were examined for missing information and checked for scoring, arithmetic and data entry errors. Steven's (1986) has noted that in order to increase the power of a multivariate analysis one should, wherever possible, reduce the number of dependent variables in the query. This is particularly important when there is only a moderate number of subjects within each group. To this end, WAIS-R subscales were excluded from the analysis and instead the verbal/performance IQ discrepancy (V-P IQ) and the Full Scale IQ (FSIQ) were

used. Research has revealed these factors to be among the most robust and consistent aspects of intelligence as it relates to criminality (Glueck & Glueck, 1968; Kandel et al., 1988; Moffitt & Silva, 1988; Wilson & Herrnstein, 1985).

Further reduction of the dependent variables could have been realized through a factor analysis of the 12 BPI scales employing a principal components extraction. However, given the ratio of variables to subjects within the current study, any analysis of this nature would be tenuous at best. Thus, factor score coefficients provided in the Austin et al. (1986) factor analysis of the BPI were used in calculating BPI factor scale scores for the present analysis. Austin et al. (1986) confirmed three factors in their analysis of BPI scales for 1,232 young offenders. The first factor, "Psychiatric Symptomology" (BPI-I), received substantial loadings from *Thinking Disorder, Hypochondriasis, Anxiety, and Persecutory Ideation*. The second factor, "Depression" (BPI-II), consisted primarily of *Self-Depreciation, Depression and Social Isolation*. The third factor, "Social Symptomology" (BPI-III), was comprised of mainly *Alienation, Interpersonal Problems and Impulse Expression*.

Self-Report Protocol

The design of the SRP permitted an analysis of categorical information, frequency, and seriousness. As previously mentioned, Davidson et al. (1987) and

Tolan and Lorion (1988) have demonstrated that the method for scoring self-reports on criminality is not as critical as was once thought. Thompson (1993) found that the four components of the SRP (crimes against person, crimes against property, substance abuse, and minor/statutory/traffic offenses) were all highly correlated with the SRP total score. Additionally, test-retest reliability was better for the total SRP score than three of the four categories. Thus for each subject, the total SRP score (SRP) equalled the total number of types of crimes committed across all four crime categories (Table 1). The SRP data complied sufficiently with one-way analysis of variance (ANOVA) assumptions (McClave & Dietrich, 1985, p.430) to justify the procedure. ANOVA results demonstrated a significant difference in group means ($F(2,67) = 9.93$, $p < .001$). As indicated in Table 1, multiple comparisons using the Least Significant Difference ($\alpha = .10$) confirmed expected group differences, although not at the accepted level of confidence. Incarcerated young offenders admitted to committing more offenses than the probationary young offenders who admitted to committing more offenses than the non-offenders. The SRP was not included as a dependent variable in the subsequent multivariate analysis of variance (MANOVA) because 17 of the IYO sample had not completed the SRP. The casewise removal of missing data

Table 1

Group Means by Offenses for the Self-report Protocol.

	Type of Offense				
GROUP	Person	Property	Drug	Status	SRP(total)
NYO (n = 30)					
M	0.87	2.10	0.67	0.43	6.07
SD	0.97	1.88	0.84	1.50	4.07
PYO (n = 28)					
M	1.32	3.25[a]	1.61[a]	3.39[a]	9.57[a]
SD	1.19	1.48	1.07	1.71	4.33
IYO (n = 12)					
M	1.67	3.33[a]	2.25[b]	4.83[b]	12.08[b]
SD	1.16	1.83	1.14	1.56	4.68
ANOVA					
F(2,67)	2.65	4.00*	13.02**	9.88**	9.93**

[a] Denotes those means significantly different from the NYO sample (α = .10)

[b] Denotes those means significantly different from the NYO and PYO sample (α = .10).

*p < .05 **p < .001

would have excluded too much information.

Multivariate Group Differences

Means and standard deviations for the major dependent variables of this study appear in Table 2. Descriptive statistics for the WAIS-R and BPI subscales can be found in Appendix G. The mean age for all subjects was 17.54 years. No significant age difference was found in a between-groups, one-way analysis of variance ($F(2,84) = 0.1721$, $p < .8422$). Thus, this variable was excluded from subsequent analyses.

Data from the other dependent variables complied sufficiently with MANOVA assumptions (Stevens, 1986; Tabachnick & Fidell, 1989) to justify the procedure. Specifically, there were more subjects than dependent variables per cell of the design. All variables over each group fell within the parameters of the normal distribution with the exception of the DAST for the NYO sample (Kt = 8.14, Sk = 2.81; mode = 0; mean = 1.03). This would appear to be a floor effect of the test which is designed to detect substance abuse and would not effect the power of the multivariate F (Stevens, 1986; Tabachnick & Fidell, 1989). Although univariate outliers were noted they remained in the analysis for three reasons. First, we decided to avoid extensive loss of information when missing variables are removed from the analysis casewise. Second, all of the outliers were within the

ranges of test scores. Third, all of the outliers were found in the PYO and NYO samples which might be expected to be more heterogeneous than the IYO sample. The search for multivariate outliers employing the regression procedure of the SPSS was unrevealing. An evaluation of the inter-relationship of the variables indicated that multicollinearity was not an issue as correlations ranged from a minimum of 0.02 (BPI-Factor I with BPI-Factor III) to a maximum of 0.54 (DAST with MAST). The tolerance level was 0.001, not as extreme as the level of 0.0001 which Tabachnick and Fidell (1989) consider reflective of multicollinearity problems. The homogeneity of variance-covariance matrices was assumed based on very similar cell sample sizes (Tabachnick & Fidell, 1989). In addition, Pillai's F statistic was used as the criterion for the multivariate tests as this statistic is robust to violations of MANOVA assumptions while having good power.

The MANOVA examined group differences on nine dependent variables (LCG, FDI, DAST, MAST, V-P IQ, FSIQ, BPI-I, BPI-II, BPI-III) and a significant multivariate group effect was found ($F(18,152) = 4.24$, $p < .001$). Significant multivariate effects were explored further through univariate ANOVAs (Stevens, 1986; Tabachnick & Fidel, 1989). Significant differences between groups were observed on five of the 8 variables: family dysfunction, drug related

Table 2

Group Means and Standard Deviations (in Parentheses)

for all Dependent Measures

	GROUP						
COVARIATE	NYO (n = 30)		PYO (n = 28)		IYO (n = 28)		UNIVARIATE F(2,84)
AGE	17.50	(0.86)	17.60	(0.65)	17.54	(0.57)	0.17
FDI	3.00	(2.92)	5.75[a]	(3.82)	8.14[b]	(3.06)	17.76**
DAST	1.03	(2.11)	4.43[a]	(4.53)	7.57[b]	(5.82)	14.84**
MAST	2.70	(2.79)	4.14	(4.50)	7.11[b]	(4.44)	8.78**
LCG	10.67	(1.06)	10.07[a]	(0.81)	8.86[b]	(0.85)	30.75**
V-P IQ	-5.33	(8.16)	-8.68	(9.16)	-6.61	(11.46)	0.85
FSIQ	100.33	(13.25)	100.71	(13.08)	98.43	(11.81)	0.36
BPI-I	4.12	(2.76)	3.49	(2.58)	3.60	(2.67)	0.51
BPI-II	0.77	(2.32)	0.72	(2.35)	2.30[b]	(1.92)	4.30*
BPI-III	7.84	(3.04)	8.41	(2.33)	9.25	(3.16)	1.57

Note. FDI = Family Dysfunction Index; DAST = Drug Abuse Screening Test; MAST = Michigan Alcohol Screening Test; LCG = last grade completed; V-P IQ = WAIS - R verbal IQ minus performance IQ; BPI-I = Basic Personality Inventory factor psychiatric symptomology; BPI-II = BPI factor depression; BPI-III = BPI factor social symptomology.

[a]Denotes those means significantly different from the NYO sample ($\alpha = .05$).

[b]Denotes those means significantly different from the NYO and PYO samples ($\alpha = .05$).

$^{*}p < .05$ $^{**}p < .001$

problems, alcohol related problems, academic achievement, and BPI-II (depression). A post hoc means analysis employing the Student-Newman-Keuls procedure ($\alpha = .05$) was used to assess which groups differed significantly from one another. Incarcerated young offenders experienced lower academic achievements (LCG) and higher degrees of family dysfunction (FDI), depression (BPI-II), problems with drugs (DAST), and problems with alcohol (MAST) than either the PYOs or the NYOs. Probationary young offenders exhibited poorer academic achievement (LCG) along with more family dysfunction (FDI) and more drug related problems than the non-offender sample.

Discriminant Analysis

Stevens (1986) has suggested the use of a Discriminant Analysis to further explore which factors might contribute to the differences between groups and to assist in classifying subjects on the basis of the reported measures. Stevens (1986) and Tabachnick and Fidell (1989) have recommended that all variables, including nonsignificant variables, be utilized when the goal of the research is to explore the significant results of a MANOVA. The SRP was included in the discriminant analysis in order to explore its utility as a predictor variable. All available SRP scores were used in determining the linear discriminant function. During the classification procedure missing SRP scores for 17 IYOs were recoded with the

mean SRP score of the remaining IYOs. Thus, 10 variables were utilized in the present discriminant analysis.

Results of the Discriminant analysis reveal that 98.16% of the variance between groups was accounted for by a single significant linear discriminant function (LDF), χ^2 (6, n = 69) = 41.29 p < .0001, with an eigenvalue of 0.85, a canonical correlation of .68 and a Wilke's Lambda of .53. Significant pooled within-groups correlations between the discriminating variables and the LDF included drug abuse (r = .51), family dysfunction (r = .49), self-reported delinquency (r = .49), V-PIQ as measured by the WAIS-R (r = -.32), alcohol abuse (r = .25) and BPI Psychiatric Symptomology (r = -.16). That is, the degree of criminality could be classified on the basis of lower levels of psychiatric symptomology, lower verbal IQ relative to performance IQ and more higher levels of drug related problems, self-reported delinquency, family dysfunction and alcohol related problems. As shown in Table 3, the LDF correctly classified 66.28% of the cases into their respective groups and accurately predicted group membership for 83.3% of non-offenders, 57.1% of probationary young offenders and 57.1% of incarcerated young offenders on the basis of test scores.

In summary, the MANOVA on nine dependent variables revealed significant multivariate differences between the three groups with significant

Table 3

Classification of Subjects using Discriminant Analysis.

	Predicted Group Membership From Linear Discriminant Function		
Actual Group	NYO	PYO	IY0
NYO (n = 30)			
Count	25	4	1
percent	83.3%	13.3%	3.3%
PYO (n = 28)			
Count	6	16	6
percent	21.4%	57.1%	21.4%
IYO (n = 28)			
Count	2	10	16
percent	7.1%	35.7%	57.1%

Note. Percentage of "grouped" cases correctly classified is 66.28%.

univariate differences for family dysfunction, drug and alcohol related problems, last completed grade and depression. A Discriminant analysis, which included the MANOVA variables and self-reported delinquency, revealed that a single LDF correctly classified 69% of the subjects in this study in terms of their criminal categorization. Variables related to classification included elevated levels of family dysfunction, self-reported delinquency, drug and alcohol related problems, combined with lower verbal IQ scores relative to performance IQ scores and lesser levels of psychiatric symptomology. Interestingly, 24 of the 41 variables measured in this study (including BPI and WAIS-R subscales but not including age) suggested a trend whereby greater impairment was associated with a more severe criminal categorization.

Discussion

The present study investigated criminogenic differences between samples of Non-offenders, Probationary Young Offenders and Incarcerated Young Offenders with a view to exploring risk/need covariates of youth crime. First, this study focused on profiling differences between youth along a continuum of criminal behaviour. Scores on the self-report measure of criminal activity validated the degree of criminality exhibited within the three groups of subjects in this study, albeit at the .10 confidence level. Although the IYO sample size was relatively

small, the trend was unmistakeable and it is likely that the findings would have been enhanced with an equal sample size. Higher levels of self-reported criminal involvement were associated with the experience of more severe criminal sanctions. Though it was not possible to include the SRP measure in the MANOVA, it did have predictive utility in the Discriminant analysis. One limitation of this Discriminant Analysis was that over half of the IYO SRP scores were estimated using the mean for the IYO subject data on hand. Furthermore, under non-research conditions, (i.e., section 13 assessments and pre-disposition reports, there is the potential for limited utility of the SRP when a youth has a vested interest in minimizing or denying their criminal behaviour. Nevertheless, the SRP results encourage further research and hold promise as a risk factor.

Designed for the present study, the SRP was a convenient, uncomplicated and inexpensive measure of self-reported delinquent and criminal activity within the context of the Canadian YOA. Its association with criminality suggests that it could be used as a criterion variable in Young Offender research. However, it might also have a role as a risk/need measure. Risk assessments, such as the Young Offender Levels of Supervision Inventory (YO-LSI) and the more recent Risk/Need Assessment (Hoge, Andrews, & Leschied, 1994) consider only official contacts (i.e., prior charges, convictions and dispositions) as a measure of criminal

behaviour. A self-report measure of delinquent and criminal activity which considers behaviour that likely escaped official scrutiny might assist in early risk identification and intervention. Furthermore, official criminal history is an inherently static measure of risk. The SRP might be adapted to function as a more dynamic criminal history variable. The protocol could be administered periodically to assess the impact of rehabilitation efforts with respect to self-reported criminal behaviour. The degree of confidentiality provided in the SRP may assist in reducing individual bias and should enhance the validity of the instrument. However, at present, the psychometric properties of the SRP must be further established with larger samples and recidivism studies in order to further explore its value as risk predictor.

The second outcome of this research was that several variables were shown to discriminate samples of incarcerated offenders, probationary offenders and non-offenders. As revealed in the MANOVA, family dysfunction, drug abuse and academic achievement were the variables demonstrating the strongest discriminatory power. These three measures discriminated all groups from each other. Elevated scores on the FDI, DAST and decreased scores on the LCG were strong predictors of criminality. Each of these variables is included in the YO-LSI and the current Risk/need Assessment but perhaps a quick psychometric

assessment of family dysfunction and drug abuse would increase accuracy and afford greater sensitivity to risk assessment. Both the YO-LSI and the Risk/Need Assessment integrate problems related to drug and alcohol abuse into the single factor "substance abuse" derived from 8 and 5 items, respectively. However, a factor analysis of the DAST (Skinner & Goldberg, 1986) identified five factors related to drug abuse including dependence, social problems, medical problems, polydrug abuse and treatment. As with alcoholism research, identifying a core drug dependence syndrome from the diverse problems relating to drug abuse has provided "an important catalyst for basic and applied research" (Skinner & Goldberg, 1986, p.479). Given the importance of these factors and the relative ease with which they can be measured, it may be beneficial to employ the DAST to improve the accuracy of risk assessment and assist as an outcome measure in rehabilitation.

Similarly, the importance of family dysfunction as both a predictor and treatment variable appeals to the benefits of psychometric measures. As previously mentioned, violence in the home, discipline and structure, parental neglect and absence are some of the factors impacting on the more global measure of family dysfunction. The approach taken in this study was not highly sophisticated and further psychometric development or consideration of other convenient measures

might be explored.

A grade achievement continuum, like the previous two variables, might also have some value although achievement relative to age may pose a bit of a problem (e.g., an 18 year old in grade 10 versus a 16 year old in grade 10). Though the difference in academic progress between the PYO and NYO samples was statistically significant, it was relatively slight compared to the IYO sample who were one grade below the PYO and almost 2 grades below the NYO sample. Last completed grade was a self-report statistic and this may have introduced some error into the data. However, if anything, PYOs and IYOs might have been tempted to inflate their self-reports. Consideration might be given to the Wide Range Achievement Test - III (WRAT-III) which is inexpensive and easy to administer, score and interpret.

Of less discriminatory power were the variables alcohol abuse and depression as a BPI factor. As with the DAST, Skinner (1979) found five factors which related to the assessment and rehabilitation of alcohol abuse when examining the MAST. These included recognition of alcohol problem by self and others; legal, work and social problems; help-seeking; marital-family difficulties; and liver pathology. As with drug abuse and family dysfunction, a quick psychometric assessment of alcohol abuse might improve the accuracy of risk

assessment and provide a focus for rehabilitative efforts.

Although personality characteristics are often considered important determinants of risk, the BPI factors did not demonstrate a particularly strong association with adolescent criminality in this study. BPI-II (Depression) differentiated the IYO sample from both the NYO and PYO sample but did not provide any relevant information to the significant LDF during the Discriminant Analysis. As previously noted, the factor BPI-II received substantial loadings from Self-Depreciation, Depression and Social Isolation scales of the BPI. From this study it was not possible to further define the relationship between the BPI depression factor and criminal involvement. The finding may involve the adolescent's adjustment to their present situation and environment (reactive depression). However, the finding may also relate to a prior depressive condition which may lead to escalating criminal activity through marked irritability, increased aggression, alcohol and substance abuse and vandalism. The BPI-I (Psychiatric Symptomology) contributed relatively little to the correct classification of the subjects. A examination of the means on scales that make up this factor suggested that criminality may be associated with mistrust and lower levels of anxiety and hypochonriasis. Although this makes intuitive sense, it is speculative at this point. In the current study, the BPI provided very little information given the time and

effort required to complete the inventory. One possible explanation for this is that the personality factors explored in this study were too general. Perhaps more salient and specific personality characteristics such as criminal sentiments/attitudes, lack of empathy, psychopathy and the need for stimulation/risk taking may be of greater value in risk assessment.

The final variable of consequence was the difference between verbal and performance IQ as measured by the WAIS-R. Although this variable did not differentiate between groups, it did contribute to the classification procedure. Subjects with a low verbal IQ relative to their performance IQ were more likely to be classified as having experienced more severe criminal sanctions. Recent research suggests that intelligence is a protective factor in criminality rather than a contributor (Kandel et al., 1988). That is, when other risk factors are operating on the individual, sound cognitive abilities may help to reduce the risk of criminality by providing greater cognitive control over impulsivity, a greater ability to self-reinforce, and better empathic skills.

The BPI and the WAIS-R measures had limited utility as a risk predictor based on group membership. Both measures also take considerable time and skill to administer. It seems unlikely that these measures will become standard risk/need measures. Certainly, to be considered a criminogenic factor there would

need to be evidence that change scores are related to recidivism. Of course, both the WAIS-R and the BPI may assist in developing treatment strategies for individual's who are experiencing difficulties in areas specific to these measures, e.g., learning disabilities and personality disorders.

In summary, the present study discriminated between non-offenders, probationary young offenders, and incarcerated young offenders on a number of variables. Family dysfunction, drug abuse, and academic achievement bore the strongest association with criminality, while weaker associations were found for alcohol abuse, depression, psychiatric symptomology and the verbal minus performance IQ differential of the WAIS-R. The self-report measure of delinquent and criminal activity (SRP) developed for this study holds some promise for enhancing risk assessment, although considerably more research is needed. The accuracy of both risk assessment and treatment evaluation depends largely upon the construction of measures which will capture the complexity of youth criminal behaviour. From this study it appears that brief, convenient psychometric measures such as the DAST, MAST, FDI and SRP may provide the "biggest bang for the buck". These measures seem to facilitate risk assessment and provide additional information to direct and evaluate rehabilitation with minimal time and effort. On the basis of this study, the more time consuming and psychometrics,

such as the WAIS-R and BPI, seem to contribute little to risk prediction although they are clearly required measures for evaluating needs in some circumstances.

Finally, two limitations to this study should be noted. First, the study would have benefitted from the collateral information to assist in establishing the validity of the FDI, LCG and grooup membership. Although self-reports and verbal reports from probation officers provided some assurance of group membership, criminal histories were not verified through official records. Second, it is acknowledged that the study focussed on white, Anglo-Canadian males and the results are not necessarily pertinent to other ethnic groups.

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Appendix A

Self-Report Protocol

Please, read carefully the following list of 5 activities.

Count in your head how many from the list you have done since you were 12 years old.

Place the total number in box A.

Do not indicate which specific activities you have done.

Then answer question B.

Have you:

1) Used force to obtain sexual acts (threats or physical abuse).

2) Used a weapon (such as a gun, knife or bat) in order to get money from someone.

3) Used force or threats to get money from someone.

4) Hit another person in a serious effort to injure him.

5) Used any kind of weapon in a fight (like a knife, chain, broken bottle or rock).

A. place the total number in the box. ——[ ]
NOTE: If you answer none, skip "B"

B. In general, how often do you engage in the kind of activities indicated above? Please circle the appropriate response.

rarely	sometime	often	v-often
1	2	3	4

Repeat the above steps with each group of activities below.

Have you:

1) Purposely set fire to property or building.

2) Purposely damaged public property (such as road signs, pay telephones, video machines or vending machines).

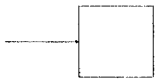
3) Stole something from an open shop or store for over $50.00 (shoplifting).

4) Stole something from an open shop or store for under $50.00 (shoplifting).

5) Broke into a vehicle, house or other building to steal or vandalize the property and its contents.

6) Purposely damaged another person's property (vehicle, house, apartment or personal articles).

A. place the total number in the box.
NOTE: If you answer none, skip "B"



B. In general, how often do you engage in the kind of activities indicated above? Please circle the appropriate response.

rarely	sometime	often	v-often
1	2	3	4

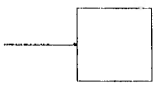
Have you:

1) sold illegal drugs.

2) Used illegal drugs (such as cocaine, speed or heroin).

3) Smoked cannabis (pot, hash, oil, etc.)

A. place the total number in the box.
NOTE: If you answer none, skip "B"



B. In general, how often do you engage in the kind of activities indicated above? Please circle the appropriate response.

rarely	sometime	often	v-often
1	2	3	4

Have you:

1) Been cruel to animals (so as to injure the animal).

2) Drove while under the influence of alcohol.

3) Carried some kind of weapon in case it is needed for a fight (knife, chain, bat or gun).

4) Raised a false alarm (such as dialling 911 or setting off a fire alarm).

5) Taken a vehicle (car, truck or motorcycle) for a drive without the owners permission, with no plan of keeping it for good.

6) Broke traffic laws (such as excessive speeding, running stop sign s or traffic lights).

7) Drank alcohol while under 19 years of age.

A. place the total number in the box.
NOTE: If you answer none, skip "B"

B. In general, how often do you engage in the kind of activities indicated above? Please circle the appropriate response.

rarely	sometime	often	v-often
1	2	3	4

Appendix B

Family Dysfunction Index (FDI)

1.	Parents separated within last 3 years	(2)	_____
	Longer than 3 years	(1)	_____
2.	No significant mother figure	(2)	_____
3.	No significant father figure	(1)	_____
4.	Lived with alcoholic parent, step-parent, guardian Score (1) or (2) for severity		_____
5.	Poor relationship with mother/step mother	(1)	_____
6.	Poor relationship with father/step father	(1)	_____
7.	Asked to leave/or left family home - gone for 1 month (1)		_____
	- gone for 1 month (2)		_____
8.	Abusive childhood background - physical, sexual, psychological, neglect Score (1) or (2) for severity		_____
9.	Parental discipline and family structure - permissive, laissezfaire, disorganized, chaotic Score (1) or (2) for severity		_____
10.	Witnessed spousal violence	(1)	_____
11.	CAS involvement/foster home placements Score (1) or (2) for severity		_____
12.	Parents, siblings criminal record (1)		_____
13.	Economic family problems (debt, welfare, unemployment) Score (1) or (2) for severity		_____
14.	No family support upon release Score (1) or (2) for severity		_____

*This is an experimental form and should be interpreted with caution. Contact Dr. A. P. Thompson, Thunder Bay (807) 475-8401, for more information and/or permission to use.

Lakehead University
Thunder Bay, Ontario, Canada Postal Code P7B 5E1
Department of Psychology
Telephone 343-8441 Area Code 807

CONSENT TO PARTICIPATE

I _____ consent to participate in the study which compares youth in conflict with the law to youth without a criminal record.

I understand that I will be required to complete a personality inventory and a self report delinquency questionnaire during one or two sessions lasting approximately I - 11/2 hrs. in total.

I understand that this information will be recorded anonymously, treated confidentially and that I may withdraw my participation in this research project at any time.

I am aware that a summary of the project's findings will be available from Dr. A. P. Thompson (principle investigator) of the Lakehead University Psychology department (345-8646) upon completion of the study.

_____
Signature

_____
Date

I _____ would also be willing to participate in any future research or follow-up.

_____
Signature

_____
Date

Phone number: _____

Address: _____

_____

Lakehead University
Thunder Bay, Ontario, Canada Postal Code P7B 5E1
Department of Psychology
Telephone 343-8441 Area Code 807

CONSENT TO PARTICIPATE

I _____ consent to participate in the study which compares youth in conflict with the law to youth without a criminal record.

I understand that I will be required to complete some questionnaires and psychological tests during one or two sessions lasting approximately 2 1/2 - 3 hrs.

I understand that this information will be recorded anonymously, treated confidentially and that I may withdraw my participation in this research project at any time.

I am aware that a summary of the project's findings will be available from Dr. A. P. Thompson (principle investigator) of the Lakehead University Psychology department (345-8646) upon completion of the study.

_____
Signature

_____
Date

I _____ would also be willing to participate in any future research or follow-up.

_____
Signature

_____
Date

Phone number: _____

Address: _____

_____

Lakehead University
Thunder Bay, Ontario, Canada Postal Code P7B 5E1
Department of Psychology
Telephone 343-8441 Area Code 807

AN EVALUATION OF THE DIFFERENCES BETWEEN NON-OFFENDERS,

PROBATIONARY YOUNG OFFENDERS AND INCARCERATED YOUNG OFFENDERS.

DEAR PARTICIPANT:

I would like to thank you for agreeing to participate in this research project. The purpose of this research is to examine the differences between non-offenders, young offenders on probation and young offenders who have been imprisoned. I will be looking at such factors as background, intelligence, personality, family, drug use and alcohol use. It is hoped that this study will lead to a better understanding of the reasons why young males become involved in crime.

Your participation in this study will involve approximately I hour of your time, during which you will be asked to complete a personality inventory, a family characteristics index and a self report delinquency questionnaire. All of your test results will be treated as confidential and coded in order to protect your anonymity. The questionnaires you answer will be kept in a secure place with limited access at Lakehead University. If you have any concerns about your test results please feel free to contact Dr. A. P. Thompson (343-8646) or myself. Furthermore, if you are interested in the results of this study you may request a summary of the findings from Dr. A. P. Thompson.

Once again thank you for your participation. If you have any further questions do not hesitate to contact me.

Sincerely,

Terry A. Stevenson
343-8476

TAS/ml

Appendix G

Group Means and Standard Deviations (in Parentheses)

for the WAIS-R subscales

	GROUP		
SUBSCALE	NYO (n = 30)	PYO (n = 28)	IYO (n = 28)
FSIQ	100.33 (13.25)	100.71 (13.08)	98.10 (11.73)
VIQ	97.97 (12.35)	97.04 (12.12)	95.21 (11.14)
PIQ	103.30 (13.63)	105.71 (13.17)	102.45 (13.75)
INFO	7.30 (2.56)	6.82 (2.20)	5.97 (1.97)
DS	9.60 (2.80)	9.07 (2.16)	9.24 (1.85)
VOC	7.97 (2.11)	7.71 (1.96)	7.31 (2.07)
ARI	7.67 (1.86)	8.14 (2.26)	7.93 (1.69)
COMP	8.90 (2.02)	8.32 (1.83)	8.41 (2.49)
SIM	8.80 (2.67)	8.82 (2.57)	8.62 (2.34)
PC	9.80 (1.99)	10.04 (2.67)	9.83 (2.52)
PA	9.13 (2.47)	9.68 (1.95)	9.97 (2.96)

BD	11.23	(3.00)	11.43	(2.50)	10.76	(2.52)
OA	10.40	(2.24)	11.18	(3.04)	9.59	(2.31)
DSYM	9.37	(2.50)	8.79	(2.04)	8.93	(1.94)

Note. FSIQ = Full scale IQ; VIQ = Verbal IQ; PIQ = Performance IQ; INFO = Information; DS = Digit Span; VOC = Vocabulary; ARI = Arithmetic; COMP = Comprehension; SIM = Similarities; PC = Picture Completion; P.A. = Picture Arrangement; BD = Block Design; OA = Object Assembly; DSYM = Digit Symbol.

Group Means and Standard Deviations (in Parentheses)

for BPI scales

SUBSCALE	GROUP					
	NYO (n = 30)		PYO (n = 28)		IYO (n = 28)	
HYP	4.80	(3.40)	4.14	(3.36)	3.48	(3.25)
DEP	3.60	(3.62)	4.14	(3.97)	5.79	(3.44)
DEN	6.67	(2.68)	5.64	(3.14)	6.14	(2.92)
IPS	10.70	(4.15)	10.32	(3.20)	10.83	(4.90)
ALN	7.10	(3.49)	7.71	(3.07)	9.10	(3.47)
PID	7.00	(3.09)	6.96	(3.01)	8.07	(4.08)
AXY	7.07	(3.30)	5.93	(2.98)	5.76	(3.56)
THD	3.47	(2.80)	2.57	(1.79)	3.35	(2.94)
IME	9.40	(3.57)	10.04	(3.20)	10.35	(3.67)
SOI	5.70	(4.24)	4.46	(2.13)	5.66	(2.67)
SDP	2.07	(1.89)	1.89	(1.87)	3.45	(2.54)
DEV	3.93	(3.01)	4.43	(3.11)	6.04	(3.21)

Note. HYP = Hypochondriasis; DEP = Depression; DEN = Denial; IPS = Interpersonal Problems; ALN = Alienation; PID = Persecutory Ideas; AXY = Anxiety; THD = Thought Disturbances; IME = Impulse Expression; SOI = Social Introversion; SDP = Self Depreciation; DEV = Deviation.