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**Assessing Procriminal Sentiments in Young Offenders:
A Comprehensive Examination of the
Psychometric Properties of a Battery of Attitudinal Scales**

Stephanie Robertson

**A thesis submitted to the Faculty of Graduate Studies and Research
in partial fulfilment of the requirements for the degree of
Master of Arts
Department of Psychology**

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Acceptance of the thesis:

**“Assessing Procriminal Sentiments in Young Offenders: A Comprehensive Examination
of the Psychometric Properties of Battery Attitudinal Scales”**

submitted by

Stephanie Robertson

in Partial fulfillment of the requirements for
the degree of Master of Arts

Chair

Thesis Supervisor

**Carleton University
February, 1999**

Abstract

The purpose of the present study was to verify, explore and expand upon the psychometric properties of the PiD and the CSS-M with a sample of 724 young offenders. For the young offender sample, the recidivism rate was 44.3% with recidivism defined as return to closed custody. Overall, the PiD and the CSS-M exhibited acceptable psychometric properties. Empirical evidence regarding the internal consistency of the PiD and CSS-M was sufficiently strong to deem them both highly reliable measures. A Principal Component Analysis (PCA) isolated a two-component solution for both the PiD and CSS-M. The hypothesis that the PiD and the CSS-M (and subscales: LCP, TLV and ICO) would be correlates of recidivism was upheld by the results of the present study. A hierarchical multiple regression analysis suggested that the PiD and ICO explained unique variability in recidivism over and above the YO-LSI. That is, specialized measures of procriminal attitudes added to the predictability of a young offender's behaviour beyond a more broad based risk/need assessment measure. The Relative Improvement Over Chance (RIOC) measure of predictive accuracy illustrated improvements in the prediction of recidivism well above chance with the use of the PiD and CSS-M both individually and combined. The results of the present study are discussed within the context of previous research conducted on the procriminal attitude measures.

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Assessing Procriminal Sentiments in Young Offenders: A Comprehensive Examination
of the Psychometric Properties of a Battery of Attitudinal Scales

Over five decades have passed since Tolman (1939) noted the paucity of information available on offender's attitudes towards the law enforcement and justice system. Even though the theoretical and empirical foundation has increased, there is still a lack of research investigating the usefulness of measuring antisocial attitudes in the prediction of recidivism (Bonta, 1990). Both theoretically and empirically, procriminal sentiments play a central role in understanding criminal behaviour. More specifically, the majority of criminological theories assign criminal sentiments a central causal role (Nettler, 1989; Andrews, 1985).

Given the theoretical/empirical findings and promising practical applications, *surprisingly* there remains a lack of research into the practical use of the procriminal sentiments-criminal behaviour relationship. Simourd (1997) points out that the slow integration of these findings into a practical setting can be attributed to the lack of adequate assessment tools. Further investigation into this forensically relevant variable is needed (Simourd, 1997; Andrews & Bonta, 1994; Guerra, Huesmann & Hanish, 1994; Hoge & Andrews, 1994).

Traditionally, the attitude construct has been viewed as "a relatively stable pattern of beliefs, feelings and behavioural tendencies toward some object" (Alcock, Carment & Sadava, 1994, p.663). In the present study, procriminal sentiments/criminal attitudes are defined as attitudes, values, beliefs and rationalizations supportive of criminal conduct.

To date, numerous young offender studies empirically demonstrate a significant relationship between procriminal sentiments and criminal behaviour. Through both self-report and official measures of delinquency, young offenders hold more negative attitudes towards the law, courts and police (Mak, 1991; Mak, 1990; Gomme, 1985; Guerra, 1985; Farrington & West, 1973; Conger & Miller, 1966; Clark & Wenniger, 1964). Moreover, antisocial attitudes contribute to criminal behaviour independent of family and peer variables (Hoge, Andrews & Leschied, 1994).

In addition, studies have found a relationship between procriminal sentiments and adolescent drug use. Negative attitudes towards law abidance have been found to be significantly correlated with drug use and criminal behaviour (McGee & Newcomb, 1992) and exert a significant influence on all types of substance abuse (Elliot, Huizinga & Mernard, 1989). Similarly, research has consistently found that youth who hold positive attitudes towards a substance are more likely to use it in comparison to those who hold negative attitudes toward the substance (Johnston, 1973).

Research has also examined institutional adjustment and behaviour of young offenders in relation to antisocial attitudes. For example, values towards delinquency contributed significantly to the institutional adjustment of young offenders (Gold & Osgood, 1992). If delinquent values remained high, institutional adjustment did not improve. While in secure custody, predatory young offenders had significantly higher scores on the Criminal Sentiments Scale (i.e., a measure of procriminal attitudes) in comparison to those who were nonpredatory (Shields & Simourd, 1991).

Prior to discussing the purpose of the present study, an overview of the theoretical models of the attitude construct, theoretical explanations of procriminal sentiments, risk assessment, correlates of criminal behaviour and assessment of procriminal sentiments is provided.

Theoretical Models of the Attitude Construct

With regards to the theoretical conception of the attitude-behaviour relationship, both the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1985) have been intensely researched and tested. One of the most widely used behaviour prediction theories, the theory of reasoned action (Fishbein and Ajzen, 1975) posits that the proximal cause of behaviour is the individual's intention to engage in the behaviour; behaviour is under the control of intentions (see Figure 1). Intention, a psychological construct, is defined as an individual's motivation to consciously plan to exert effort to carry out a behaviour (Fishbein & Ajzen, 1975). Accordingly, intentions are influenced by both (1) attitudes toward the behaviour and (2) subjective norms. Attitude toward the behaviour depends on both the beliefs concerning the perceived consequences of the behaviour and an evaluation of the favourable/unfavourable consequences. In comparison, subjective norms are a function of both normative beliefs (i.e., perceptions held by significant others) and the motivation to comply with the normative belief.

In general, the theory of reasoned action can be summarized with the following four points: (1) behaviour is influenced by the intention to engage in the behaviour, (2) intention is influenced by the attitude toward the behaviour and subjective norms,

Figure 1

Theory of Reasoned Action.

(3) attitude is determined by the behavioural beliefs and evaluations of outcomes and
 (4) subjective norms are determined by normative beliefs and the motivation to comply with significant others (Fishbein & Ajzen, 1973). Therefore, procriminal sentiments are influenced and determined by both the perceived consequences and an evaluation of the favourable/unfavourable consequences of the criminal act. More specifically, procriminal sentiments may be operationalized as the immediate precursor to behavioural intentions.

The theory of reasoned action has been used to predict diverse behaviours ranging from dental hygiene to voting behaviour (see Ajzen & Fishbein, 1980). For example, both attitudes and normative beliefs are relatively good predictors of reported moral behaviour (Enker, 1987; Vallerand, Deshaies, Cuerrier, Pelletier & Monteau, 1992).

However, criticism surrounding the theory of reasoned action has focused on the theory's generalizability. Given the exclusion of non-volitional behaviours, Eagly and Chaiken (1993) argue that the theory of reasoned action is a theory of the immediate proximal causes of volitional behaviour. Developed to account for behaviours which are not under the volitional control of the individual, the theory of planned behaviour (Ajzen, 1985; 1988) extends the theory of reasoned action. Specifically, behaviour is now viewed as a goal which organizes a sequence of behaviours to obtain the goal (see Figure 2). Ajzen (1985) postulates that the degree to which an individual's behavioural intention is carried out depends upon the degree of control which the individual has over the behaviour. Therefore, behaviour is now treated in terms of easily

executed behaviours verses behaviours which demand resources, opportunities and specialized skills.

Determined by control beliefs, perceived behavioural control is defined as the individual's perception of the difficulty in performing the task (Ajzen, 1985).

Control beliefs depend on the probabilities that the individual has the resources, opportunities and specialized skills to execute the behaviour or obtain the goal (Ajzen, 1985). Similar to Bandura's (1986) notion of self-efficacy, an individual engages in a behaviour to the extent that they feel confident in their ability to perform the behaviour.

Overall, the theory of planned behaviour has been used to predict a variety of behaviours ranging from smoking cessation (Goden, Valois, Lepage & Desharnais, 1992) to blood donation (Giles & Carimes, 1995). For example, Norman and Smith (1995) found individuals who possess a positive attitude toward exercise and a belief that exercise was under their control were more likely to participate in exercise classes 6 months later.

Theoretical Explorations of Procriminal Sentiments

Major theoretical explanations of criminality - subcultural, control, anomie and labelling - assign procriminal sentiments a central explanatory role. More specifically, Nettler (1978) noted that several theories of criminal behaviour (e.g., subcultural, control, anomie, labelling) stipulated a causal relationship between procriminal attitudes and criminal behaviour. In addition, differential association, social learning and the personal, interpersonal and community-reinforcement (PIC-R) perspective on deviant

behaviour both specify and stress the importance of procriminal sentiments.

Within subcultural explanations there exists the assumption that delinquents hold values divergent from those held by the general society/culture. Delinquency results from taking the norms from the larger society but reversing the social values (Cohen, 1955). Overall, subcultural theorists view criminal conduct as conformity to explicitly anticonventional procriminal norms.

Prevention of criminal behaviour, according to control theorists (Hirschi, 1960; Reckless, 1967), involves increasing ties to conventional values and pursuits. Specifically, Hirschi (1960) theorized that social ties were composed of four main elements: (1) attachment, (2) commitment, (3) involvement and (4) belief in the validity of the law. Lower rates of delinquency are observed when the law and agents of the law are positively evaluated thereby indicating strong ties to the conventional society (Jensen, 1973). Essentially, control theory assumes the existence of a common value system but there is variation in the effectiveness of socialization. For example, some individuals fail to internalise conventional beliefs. Although, Sykes and Matza (1957) claim that antisocial attitudes can override conventional ties through usage of the "techniques of neutralization" by both legitimizing the behaviour and discrediting the moral authority of controlling influences.

Emphasizing the blocked opportunity in conventional pursuits, anomie theory (Merton, 1969) asserts that not everyone has equal access to legitimate means/resources that allows individuals to achieve the goals set up by the larger society. Given this situation, an individual must come up with innovative ways to adapt and succeed within

society. In order to justify the deviant behaviour (i.e., an innovative way to achieve the goals set forth by the larger society), an individual adopts procriminal attitudes.

According to labelling theorists, while being processed by the criminal justice system an individual acquires the "label" of a criminal (Becker, 1963). Eventually, the individual accepts the "criminal label" and acts accordingly. This is based on the idea of the "self-fulfilling prophesy" (Hackler, 1970; Merton, 1957). The newly developed "identity" includes the internalization of antisocial attitudes, values and beliefs of a criminal. According to Hackler (1970), procriminal sentiments are the product rather than the cause of criminal behaviour.

Therefore, the attitude construct is not a new theoretical explanation of criminal behaviour, rather the construct has been previously identified and defined. The existence of the procriminal sentiments construct is a conceptual area of convergence among divergent criminological theories; "virtually all criminological theories assign criminal sentiments a central causal role" (Andrews, 1985). Although procriminal sentiments are implied within these theories, the attitude construct is not the main risk factor associated with the prediction of recidivistic behaviour. Generally, sociological perspectives tend to over-emphasize static variables (i.e., employment history, educational history, class of origin) that, at best, are moderately correlated with recidivism (Bonta, 1997).

In specific reference to procriminal sentiments, the fundamental points of Sutherland's (1947) differential association theory state that (1) criminal behaviour is learned, (2) is learned within intimate social groups and (3) the learning of criminal

behaviour includes the techniques of committing crime and the specific motives, drives, rationalizations and attitudes. Contributing to the personal definitions of immediate situations favouring criminal behaviour, criminal sentiments are acquired through association with criminal patterns. If the criminal act is defined as appropriate in the favouring immediate situation, the antisocial behaviour (i.e., criminal) will occur.

According to this theory, an individual engages in criminal behaviour because of an excess of definitions favourable to violations of the law over definitions unfavourable to violations of the law (Sutherland, 1947). Furthermore, the influence of definitions both favourable and unfavourable to law violations upon behaviour, provided by antisocial companions, are affected by frequency, duration, priority and intensity of the definition.

However, critics of differential association theory render the theory invalid given that (1) contact with criminals did not lead everyone to engage in delinquent behaviours and (2) the theory did not specify the learning process and lacks a precise conceptualization of the term "definitions" (Akers, 1996). In regards to the first criticism, Akers (1996) explains that the criticism resulted from a theoretical misinterpretation; criminal behaviour is learned through the relative exposure to criminal and noncriminal patterns not simply through exposure with criminals. Although the learning process was not fully elaborated upon and the term definitions ambiguously conceptualized, subsequent research (Sykes & Matza, 1957; Bandura, 1996) and reformulations (Burgess & Akers, 1966; Andrews & Bonta, 1994) expanded Sutherland's (1947) theoretical explanatory framework of criminal behaviour to address

the aforementioned problems.

Challenging the subcultural approach, Sykes & Matza (1957) suggest that the majority of delinquents hold conventional values. Supporting Sykes and Matza's (1957) assumption, empirical evidence suggests procriminal sentiments are indeed a two dimensional rather than an unidimensional construct (Andrews & Bonta, 1994; Hope, 1989). That is, the presence of procriminal sentiments does not imply the absence of prosocietal attitudes.

Operating under this premise, the ability to commit criminal acts occurs by employing rationalizations which define the criminal act as situationally appropriate, thereby neutralizing internal and external demands for conformity (i.e., freeing an individual from commitments to societal norms). The following five rationalizations, termed the techniques of neutralization, are employed more extensively and frequently by delinquents than non-delinquents: (1) denial of responsibility, (2) denial of victim, (3) appeal to high loyalties and (4) condemnation of condemners (Sykes & Matza, 1957). In summary, conventional values are held by delinquents but they are explained away (i.e., neutralized). Before and after the criminal act, the proposed set of "techniques of neutralization" provide justifications that protect an individual from self-blame and blame from others. Empirical evidence demonstrates that neutralizations are related to deviant behaviour among non-offender (Agnew & Peters, 1986; Ball, 1983) and offender (Agnew, 1994; Shields & Whitehall, 1994) populations.

Similar to, but not an exact theoretical mapping of, the techniques of neutralizations (Sykes & Matza, 1957), Bandura, Barbarnelli, Caprara and Pastorelli's (1996) theory of the

mechanisms of moral disengagement posits that regulatory self-sanctions, which keeps conduct in line with internal standards for behaviour, can be disengaged from by converting harmful acts to moral acts. If the detrimental consequences of an individual's behaviour are ignored, minimized, distorted or disbelieved, self-censure (i.e., adverse self-criticism and blame) will not be activated.

More specifically, conversion of harmful acts to moral acts is possible by linking the act with one of the following: worthy purposes; obscuring personal causal agency by diffusion and displacement of responsibility; misrepresenting or disregarding the injurious effects inflicted on others; and vilifying the recipients of maltreatment by blaming and dehumanizing them (Bandura et al., 1996). Through cognitive reconstructing, the contemptible can be made moral. Generally, these self-exonerating processes parallel Sykes and Matza's (1957) denial of responsibility, denial of injury and denial of victim, respectfully.

Through the process of socialization, moral standards are established from information imparted by direct tuition, evaluative social reactions to one's conduct and exposure to the self-evaluated standards modeled by others (Bandura et al., 1996). Serving as both guides and deterrents for action, individuals self-regulate their behaviour by the consequences (i.e., costs verses rewards) they apply to themselves. Bandura and colleagues (1996) suggest that self-regulation results from monitoring, judgemental and self-reactive subfunctions. Overall, moral conduct is motivated and regulated through the process of self-influence whereby behaviour must correspond with an individual's

internal standards unless they have justified to themselves the legitimacy of their endeavour (Bandura et al., 1996).

Originally formulated as an explanatory model of crime, delinquency, drug use and other forms of deviant behaviour, social learning theory (Burgess & Akers, 1966; Akers, 1977) integrates differential association (Sutherland, 1947) with behavioural reinforcement theory (Skinner, 1953; 1959; Bandura & Walters, 1963; Bandura, 1969; 1977). Social learning theory, a reformulation of differential association theory, provides an elaboration on the nature of the learning process.

Essentially, all social behaviour is acquired through both direct behavioural conditioning and imitation or modelling of others' behaviours (Burgess & Akers, 1966). Furthermore, behavioural acquisition and persistence depends upon differential reinforcement: "past and present rewards or punishments for the behaviour and the rewards and punishments attached to alternative behaviours" (Akers, 1977, p. 42). Specifically, Burgess and Akers (1966) propose that behaviour will result from greater rewarding consequences than adverse contingencies (i.e., costs) for the specific behaviour. Research has shown that expectancies of obtaining valued consequences (i.e., rewards) and avoiding unwanted consequences (i.e., costs) plays a central role for the commission of a moral behaviour (Backman, 1985; Graziano, 1987).

Defining for the individual what is appropriate or inappropriate behaviour, the term definitions refers to attitudes, beliefs or verbalizations. Specifically, Akers (1994; p.97) states that definitions are "orientations, rationalizations, definitions of situations and other evaluative and moral attitudes that define the commission of the act as right or

wrong, good or bad, desirable or undesirable, justified or unjustified."

Furthermore, social learning theory distinguishes between positive, negative and neutralizing definitions. Positive definitions define a criminal act as desirable and acceptable. In contrast, negative definitions define an illegal act as undesirable, unacceptable and wrong. Neutralizing definitions define a criminal act as excusable, justifiable and tolerable. If the behaviour is positively (a positive definition) or at least justifiably (a neutralized definition) rather than undesirably (a negative definition) defined, the more likely an individual will engage in the behaviour (Akers, 1977). Through differential association (Sutherland, 1947), an individual is exposed to and learns positive or negative normative definitions. Overall, definitions are conducive to criminal behaviour where the positive and neutralizing definitions outweigh the negative definitions (Akers, 1977).

To date, research in social learning theory has been used to explain and predict diverse behaviours ranging from adolescent drinking, drug and smoking behaviour (Akers & Gang, 1996) to marital violence (Mihalic & Elliot, 1997). For example, Skinner and Fream (1997) demonstrate that measures of differential association, differential reinforcement and punishment, definitions and sources of imitation were significantly related to computer crime.

Broader than differential association theory, social learning theory focuses on both the variation in the content (i.e., differential association theory) and effectiveness (i.e., control theory) of socialization (Agnew, 1995). Recognizing that deviance may result from the breakdown in socialization as well as positive socialization for deviance,

antisocial attitudes can occur from (1) the lack of effective instruction in beliefs, (2) the reinforcement of both procriminal and antipcriminal beliefs or (3) the reinforcement of amoral beliefs (Agnew, 1995).

Recognizing that there are multiple routes to criminal conduct, the General Personality and Social Psychology Model (Andrews & Bonta, 1994) postulates that the probability of engaging in criminal conduct increases when both the number and variety of the more proximal set of predispositional factors increases in comparison to the more distal contextual conditions (Andrews and Bonta, 1994). Overall, the levels of analysis within this model range from the broad structural level to the person in an immediate situation. Integrating the theoretical contributions of social learning, differential association and reinforcement approaches, the Personal, Interpersonal and Community Reinforcement (PIC-R) perspective on deviant behaviour (Andrews, 1982; Andrews & Bonta, 1994) considers factors that actively encourage and discourage criminal activity (see Figure 3).

In assimilating various theories of criminal conduct, four sets of variables are premised to impact directly on criminal behaviour: (1) antisocial attitudes, (2) antisocial associates, (3) behavioural history and (4) personality. Essentially, the PIC-R was developed to account for the interaction of the "Big Four" with the immediate situation and the costs/rewards for criminal behaviour (See Figure 3). Through the enhanced understanding of criminal behaviour, the principals of the PIC-R provide the ability to predict and influence the probability of the criminal behaviour by guiding both prediction studies and preventative and rehabilitative interventions.

Figure 2

A General Personality and Social Psychological Perspective on Criminal Conduct.

At the immediate level of analysis are the features of the immediate situation where the act occurs and is interpreted by the individual (Andrews & Bonta, 1994). At this level, the probability that a behaviour will occur is "a positive function of the sign density of rewards for that class of behaviour and a negative function of the signalled density of the costs for that behaviour" (Andrews & Bonta, 1994, p.115). The effect of the costs and rewards, however, is mediated by both antecedent and the evaluation of consequent stimuli. Both the antecedents and the consequences arise from the following four sources: (1) the actor (personally mediated control), (2) other people in the situation, (3) the act itself and (4) other aspects of the situation of action (Andrews & Bonta, 1994).

Crucial to the PIC-R model, attitudes (i.e., procriminal verses anticriminal) determine personally mediated control of the costs and rewards for the behaviour. More specifically, procriminal sentiments determine whether or not personally mediated control favours or disfavours criminal choices. Attitudes have a particularly strong influence on the "psychological moment" (Andrews & Bonta, 1994) which includes both the temptations and inhibitions that guide behaviour. In addition, similar to the mechanisms of moral disengagement (Bandura, 1996) and the techniques of neutralization (Sykes & Matza, 1957), antisocial attitudes represent justifications and exonerating statements that the person has available in any particular situation (Andrews & Bonta, 1994). Antisocial associates can impact criminal activity by influencing the individual's reactions in the immediate situation or indirectly by fostering and supporting the adoption of antisocial attitudes.

The Level of Supervision Inventory (LSI: Andrews, 1982; LSI-R: Andrews & Bonta, 1996) and the Criminal Sentiments Scale (CSS: Gendreau, Grant, Leipziger & Collins, 1979; Andrews, 1985) – theoretically based assessment tools – are able to demonstrate both the empirical and practical utility of the PIC-R. Designed for and used by probation officers to classify offenders according to their risk for deviant behaviour and the need for treatment, the LSI assesses a variety of both static and dynamic risk factors: Criminal History, Education/Employment, Finances, Family/Marital, Accommodations, Leisure/Recreation, Companions, Alcohol/Drug, Emotional/Personal, and Attitude/Orientation. More specifically, the Attitude/Orientation component assesses whether the offender's attitudes, values, beliefs and thinking are procriminal (i.e., employs rationalizations or justifications for law violations). By isolating the Attitude/Orientation subcomponent of the LSI, Bonta (1990) found antisocial attitudes were consistently correlated with recidivism for both half-way house residents and incarcerated offenders.

With the LSI containing only four questions tapping into the procriminal sentiments construct, a possibility exists that this measure might not be a comprehensive assessment of the attitude construct. In comparison, the Criminal Sentiments Scale assess attitudes, values and beliefs directly related to criminal behaviour. The reliability of the instrument has been established by psychometric and research studies (Andrews, Wormith & Keisling, 1985; Wormith & Andrews, 1984; Wormith, 1984). Furthermore, findings suggest that the CSS can distinguish between offender and non-offender populations (Andrews, Wormith, Searle & Kouri, 1973). When the LSI is used in

conjunction with the CSS, the predictive validity of the LSI increases (Andrews, Wormith & Keissling, 1985; Shields & Whitehall, 1994). Therefore, empirical evidence is starting to suggest that the CSS could potentially be useful in adjunct with an offender risk/need assessment tool.

Risk Assessment

Recently, Bonta (1996) classified three approaches used in evaluating risk for recidivistic behaviour into first generation, second generation and third generation assessments. First generation assessments usually involve an unstructured interviews and a review of file information. Decisions made regarding an offender are, therefore, based primarily on the subjective judgement and the personal discretion of the clinician (Bonta, 1996).

In contrast, second generation assessments are based on objective, empirically-based risk assessments. However, actuarial assessments are primarily composed of historical components. Although predictive, historical components can be viewed as static since they are not sensitive to variations over time. Therefore, first generation assessments are non-informative in decisions regarding the type of treatment to offer an offender (Bonta, 1996; Gendreau et al., 1996). However, actuarial instruments are superior risk assessments in comparison to clinical judgements based on unstructured interviews (Andrews & Bonta, 1994; Bonta, 1996; Jones, 1996).

For example, the Salient Factor Scores (SFS: Hoffman, 1983), used in the United States, and the Statistical Index on Recidivism (SIR: Nuffied, 1982), used in Canada, has demonstrated effectiveness in distinguishing between low and high risk offenders

(Bonta, Harman, Hann & Cormier, 1982; Nuffied, 1982). Guiding correctional workers, the risk principal (Andrews & Bonta, 1994) stipulates that intervention is most effective when intensive services are directed towards high risk offenders (Andrews & Bonta, 1994; Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990). In comparison, low risk offenders benefit from lower levels of treatment (Andrews and Bonta, 1994; Andrews et al., 1990).

Third generation or risk-needs assessments (e.g. Level of Service Inventory) recognize the role of dynamic factors in contributing to effective rehabilitation (Bonta, 1996). The LSI is a quantitative risk/needs instrument used to identify an offender's risk of recidivism and need for clinical services/intervention. With probationers, the LSI has demonstrated acceptable internal consistency ($\alpha = .72$), 3-month test-retest stability ($r = .80$), and convergent validity (Andrews, Kiessling, Mickus & Robinson, 1986).

While contributing to effective rehabilitation (Bonta, 1996), dynamic risk factors have typically received little attention in the risk prediction literature (Gendreau et al., 1996). More specifically, the lack of interest into dynamic risk factors within correctional research and practice may reflect (1) ideological concerns, (2) the belief that the measurement involves subjectivity and (3) the assessment is not as simple as input/output variables (Gendreau et al., 1996).

Interestingly, static variables (e.g., past criminal history) and dynamic variables (e.g., antisocial attitudes/associates) provide similar predictions of recidivism (Gendreau et al., 1996). If dynamic variables are correctly assessed, these variables may potentially be more potent predictors of recidivism in comparison to the major traditional static

variables (Gendreau et al., 1996). Essentially, valid measurement of dynamic variables (e.g., procriminal attitudes) recognize the importance of multi-method assessment and systematic reassessment of dynamic risk factors (Andrews & Bonta, 1994; Gendreau et al., 1996; Motiuk, 1991).

Although low test-retest scores usually imply unstable and unreliable assessment tools, this only applies to static variables that cannot be changed and not to those that can vary over time (i.e., dynamic). Differences between original assessment and reassessment of scores on a variable might, potentially, indicate a change within the individual. More specifically, a functional variable is defined as a construct that is responsive to manipulation and empirically related to outcome (Andrews, 1983).

Overall, change scores rather than initial assessment should be examined in relation to recidivism if prediction validities are to reach their upper limits (Motiuk & Andrews, 1986). To date, there is still a paucity of research examining the impact of dynamic change associated with subsequent recidivism (Andrews & Bonta, 1994).

When altered, criminogenic needs increase or decrease the probability that the offender will become involved in recidivistic behaviours (Andrews & Bonta, 1994). More than just prediction, risk-needs assessment provides information regarding the type of treatment required to address criminogenic needs (Gendreau et al., 1994). Moreover, risk-needs assessment aids the reintegration of offenders through the use of judicious release decisions and effective intervention services (Andrews & Bonta, 1994; Bonta, 1996). However, despite the theoretical and empirical evidence, there exists a predisposition among researchers and practitioners to favour personality and

psychopathology instruments over risk/needs instruments (Simourd, 1997).

Ideally, an offender classification tool in corrections should assess both risk and need (Bonta & Motiuk, 1985).

Correlates of Criminal Behaviour

To date, the majority of reviews of the factors contributing to criminal conduct have been narrative and qualitative in nature (Gendreau & Andrews, 1990; Gendreau et al., 1996). Given the subjective nature, past reviews are subject to biases whereby the authors might neglect and/or overlook crucial information. In contrast, meta-analysis is an empirically-based method for the examination of the correlates of criminal conduct with the advantage of reaching more definitive conclusions. Specifically, meta-analysis can clarify findings described in the narrative literature reviews with the potential for future replication due to the objective and quantifiable findings. Recently, meta-analytic evidence has shown that the antisocial attitude construct is a main correlate of criminal behaviour (Gendreau, Little & Goggin, 1996; Gendreau, Andrews, Goggin & Chanteloup, 1992).

While examining factors related to recidivism, Gendreau and colleagues (1996) assessed the predictive ability of dynamic versus static predictors collapsed into 8 categories: age/gender/race, criminal history, criminogenic needs, family factors, intellectual functioning, personal distress, socio-economic status, and social achievement. With all domains significantly predicting recidivism, criminogenic need factors ($r = .17$), collapsing across antisocial personality ($r = .18$), companions ($r = .18$), attitude ($r = .19$) and behaviour regarding education and employment ($r = .15$),

significantly predicted recidivism. In contrast, intellectual functioning ($r = .07$), socioeconomic status ($r = .05$), and personal distress variables ($r = .05$) were least predictive. When the predictor domains were collapsed into static versus dynamic, the mean correlations ($r = .12$ and $r = .15$ respectively) were significantly different ($F(1, 1016) = 6.18, p < .05$; Gendreau et al, 1996). Specifically, these findings support the important role third generation risk assessments of dynamic factors (e.g., antisocial associates, personality and attitudes) have in risk prediction.

While examining the correlates of criminal behaviour, Gendreau, Andrews, Goggin, & Chanteloup (1992) conducted a meta-analytic literature review focusing on the following domains: lower-class origin, personal distress, psychopathology, personal temperament / misconduct / personality and antisocial attitudes/associates. Overall, antisocial attitudes/associates had the strongest relationship to criminal behaviour ($r = .22$) which was robust across types of offenders and methodological variables. Furthermore, findings have been replicated with a young offender sample (Simourd & Andrews, 1994). Both studies revealed that there were no significant sex differences for either the ranking or the magnitude of the risk factors under investigation, thus suggesting a unique set of correlates potentially might not be necessary for female delinquency (Simourd & Andrews, 1994). Separating the antisocial attitudes/companions category of the UNB meta-analysis of adult offender recidivism, Little and Gendreau (1995) found antisocial attitudes ($r = .19$) significantly predicted recidivism. Recently, a meta-analysis of prison misconducts found that antisocial

attitudes and behaviours ($r = .11$, $p < .05$) to be a strong predictor of prison misconducts (Gendreau, Goggin & Law, 1997).

Overall, meta-analytic evidence empirically supports Andrews and Bonta's (1994) assertion that criminal behaviour can be best predicted by the following "Big Four" correlates: (1) antisocial attitudes, (2) antisocial associates, (3) antisocial behavioural history and (4) personality. Even though antisocial attitudes produce a greater common effect size, Andrews & Bonta (1994) report there has been relatively little assessment of antisocial attitudes/associates ($n = 168$) when comparing the measurement of personality factors ($n = 621$) and psychological distress ($n = 226$).

In comparison to sentimental ties to convention, however, personal distress factors, empathy, or socialization, antisocial attitudes are superior predictors of recidivism (Andrews, Wormith & Kiessling, 1985). Furthermore, antisocial attitudes provide predictive information additional to the traditional risk factors (Andrews, Wormith & Kiessling, 1985). Although, antisocial attitudes construct is not consistently used in the prediction of criminal behaviour and recidivism (Gendreau, Andrews, Goggin & Chanteloup, 1992).

Assessment of Procriminal Sentiments

A variety of scales have been developed to assess antisocial attitudes, values, beliefs and rationalizations (See Brodsky & Smitherman, 1983 and Shaw & Wright, 1967 for a complete description of the scales) with only a few properly normed (Simourd, 1997; Brodsky & Smitherman, 1983). Moreover, some scales lack reliability

and validity estimates and/or need further scale development (Brodsky & Smitherman, 1983). The main limitation of the antisocial attitudes measures is that less psychometric data is available in comparison to established standardized personality and behavioural measures (Hoge & Andrews, 1996), impeding the use of the procriminal sentiments construct in the mainstream assessment and treatment of offenders. Cumulating evidence is starting to suggest however that the Criminal Sentiments Scale and the Pride in Delinquency Scale may potentially be adequate measures of procriminal sentiments.

Adapted from the Connecticut Correctional System, the Criminal Sentiments Scale (CSS: Gendreau, Grant, Leipziger & Collins, 1979; Andrews, 1985) is one of the few measures of procriminal attitudes assessed in research, evaluation and clinical contexts. Relying upon the work of Sykes and Matza (1957) and Reckless (1967; Mylonas & Reckless, 1963), the CSS assesses the antisocial attitude and associate components of the "Big Four" associated with the PIC-R (Andrews & Bonta, 1994).

The item content of the CSS reflects "those personal attitudes, values and beliefs which discredit the moral authority of the criminal justice system, directly justify illegal activity and suggest positive identification with those who offend" (Andrews, 1985, p.2). Divided into three subscales, the CSS taps into different, although related, aspects of criminal attitudes directly related to the criminal justice system: Law, Courts, Police (LCP), Tolerance for Law Violations (TLV) and Identification with Criminal Others (ICO). The Law, Courts, Police subscale (LCP) assesses respect for the law and criminal justice system. Drawing upon the work of Sykes and Matza (1957), Tolerance for Law Violations (TLV) assesses justifications and rationalizations that an individual offers to

engage in criminal activity. In comparison, Identification with Criminal Others (ICO) assess personal judgement and projections made concerning *other* offenders.

To date, a variety of populations have been assessed using the CSS: university students, community volunteers, provincial/federal offenders, probationers, probation officers and young offenders (Andrews et al, 1985; Roy & Wormith, 1985; Wormith & Andrews, 1995). Researchers and practioners have also employed the CSS in sampling surveys, evaluation of probation services, controlled experiments of therapeutic interventions and prediction of recidivism and release failure (Wormith & Andrews, 1995).

Adequate reliability estimates have been established for both the TLV and the LCP subscales (Andrews, Wormith & Kiessling, 1985; Wormith, 1984; Wormith & Andrews, 1984) but not for ICO ($\alpha = .53$; Andrews, Wormith & Kiessling, 1985). The low levels of internal consistency might be attributable to "poorly" worded items (e.g, double negatives), thereby suggesting that the ICO may need some further scale development. Furthermore, research employing the Criminal Sentiments Scale has illustrated adequate construct validity (Andrews et al., 1985) and predictive validity (Wormith & Andrews, 1995; Andrews et al., 1985; Law, 1995).

Convergent validity has been established between the Criminal Sentiments Scale and the Level of Supervision Inventory (LSI) for both the Identification with Criminal Others and Tolerance for Law Violations subscales (Motiuk, Motiuk, & Bonta, 1992). Within two samples of young adult probationers, Andrews et al. (1985) found the CSS to be predictive of recidivism. In sample 1, recidivism was defined as any reconviction

over a three-year postprobation follow-up. In sample 2, recidivism was defined as reconviction for new offences during the probation period and self-reported unofficial criminality during the first six months of probation. Except for the Court subscale, Bonta (1990) found the CSS, Law, Police, TLV, and ICO predicted recidivism during a 1-year follow-up period with a sample of provincial offenders. While examining the dynamic nature of the CCS, Andrews & Wormith (1984) found that changes in ICO were related to recidivism by assessing ICO at intake and again six months later.

A recidivism rate of 10% was found for probationers who initially identified with offenders to a moderate degree but their scores on ICO were reduced at reassessment. Those who initially identified to a moderate degree but exhibited no change on their score, recidivated at the rate of 38%. Furthermore, offenders who increased their identification with offenders recidivated at the rate of 58%. Given the relationship with recidivism, these results illustrate the potential of association with criminal others as an important treatment target (Andrews & Wormith, 1984). Specifically this finding illustrates that while test-retest scores on these scales are low (LCP = .62, TLV = .41, and ICO = .17; Andrews et al, 1984), low test-retest scores demonstrate the dynamic nature of the CSS and its potential utility for assessing an offender's progress in treatment (Andrews & Bonta, 1994).

Recently, work has focused on revising the CSS (Andrews, 1985; Law, 1995; Shields & Simourd, 1991). To increase the sensitivity to change, Andrews (1985) modified the response format of the CSS from a yes/no response format to a 5-point Likert scale. Modifications were also made in the wording of some items to increase the

applicability of the scale (i.e., adolescents, young offenders, woman and non-offenders). While exploring the psychometric properties of the CCS, an item analysis of the scale resulted in an 18-item scale (Law, 1995). Replicating findings found with the 41-item CSS, a principal components analysis confirmed a one-factor solution tentatively labelled "cynicism towards the criminal justice system" for the revised version of the scale. Furthermore, the revised version of the CSS demonstrated adequate construct and predictive validity ($r = .23$).

In 1991, Shields and Simourd modified the CSS by (1) clarifying the wording of certain items, (2) reversing the scoring on the LCP subscales with high scores indicating greater procriminal sentiments and (3) substituting a 3-point Likert scale for a 5-point Likert scale. By clarifying items, the internal consistency for the ICO rose from .53 (Andrews et al., 1985) to .73 (Simourd, 1997). Generally, since there were only relatively minor changes to the CSS, the majority of the research on the CSS should be generalizable to the CSS-M.

Research on the modified version of the CSS suggests that it is both a reliable and valid measure of procriminal sentiments. For example, acceptable levels of internal consistency have been found for the CSS-M total ($\alpha = .73$), Law ($\alpha = .71$), Courts ($\alpha = .75$), Police ($\alpha = .76$), TLV ($\alpha = .70$), and ICO ($\alpha = .73$; Simourd, 1997). While assessing the convergent validity of the CSS-M with well-established criminal risk measures, Simourd (1997) found the CSS-M total and all subscales were significantly correlated with both the LSI-R and the GSIR.

In a sample of young offenders, the CSS-M significantly predicted both institutional predatory behaviour (Shields & Whitehall, 1994; Shields & Simourd, 1991) and recidivism (Shields & Whitehall, 1994). By using a 1-year follow-up period and a predictive criterion variable, Shields & Whitehall (1994) also found the CSS to significantly differentiate between recidivists and nonrecidivists ($t(115) = 7.8, p < .001$).

When examining the predictive efficiency (RIOCI) of the YO-LSI and the CSS-M, Shields and Simourd (1991) found that 88% of the predators and 82% of the non-predators were correctly classified with 37 nonpredators misclassified (62% false positive rate). Overall, there was an 84% improvement over chance in the identification of predators and nonpredators. Although the majority of young offenders who will engage in predatory behaviour can be identified at intake by the CSS-M and the YO-LSI, the high false positive rate (i.e., classified but not a predator) does not justify the isolation of a young offender given high scores on both measures. However, Shields and Simourd (1991) explain that high scores on both measures potentially could be used to flag a youthful offender so that enhanced services (i.e., to reduce aggression) can be provided. Furthermore, the convergent validity of the CSS-M with the Neutralization Scale (an attitudinal measure) was established ($r = .56$; Shields & Whitehall, 1994).

For federal offenders, Simourd (1997) found that the mean scores from the paper-and-pencil administration of the CSS-M subscales were consistent with previous research conducted on the CSS (Wormith & Andrews, 1995). Although the CSS is a self-report measure requiring at least a grade 6 reading ability, the scale can also be presented in an interview format. When examining the effects of administration method,

Simourd (1997) found the mean scores on the CSS-M scales to be significantly lower for the interview in comparison to self-report format. Further exploration of the data revealed that faking indices were higher for the paper-and-pencil administration sample. Specifically, these results indicate the potential of interview-based administrations being less prone to socially desirable responding in comparison to self-report methods (Simourd, 1997). Although the CSS-M, LCP, and ICO, were significantly correlated with institutional misconducts, only the ICO was significantly related to total number of convictions (Simourd, 1997). However, given the postdictive and concurrent assessment of criminality, Simourd (1997) suggests the predictive validity of the CSS-M should be a main focus of future research.

Developed to augment the Criminal Sentiments Scale, the Pride in Delinquency Scale (PiD: Shields and Whitehall, 1991) assesses a youth's attitude towards the engagement in various specific criminal activities. To date, the published literature on the scale is sparse but preliminary evidence suggests that the PiD is both a reliable and valid measure. Shields and Whitehall (1991) report that the PiD is significantly related to 1-year recidivism ($r = .38$). Furthermore, acceptable levels of internal consistency have been found for the PiD total ($\alpha = .75$), Factor 1 ($\alpha = .78$) and Factor 2 ($\alpha = .79$; Simourd, 1997).

Recently, factor analytic techniques have revealed that the PiD had two underlying factors tentatively labelled "Attitude Toward Offenses" (Factor 1) and "Criminal Subculture" (Factor 2; Simourd, 1997). Items 2, 3, 5, 7, 9, comprise Factor 1. Factor 2 consists of Items 1, 4, 10. Although evidence on the construct validity is

limited to date, Simourd and van der Ven (1998) suggest that there is a possibility of the CSS-M tapping into the "attitude toward the behaviour" component and the PiD relating to the "subjective norm" component of Azjen and Fishbein's (1980) theory of reasoned action. Furthermore, the results imply that CSS-M and the PiD are related ($r = .36$) but are tapping into different aspects of the procriminal sentiments construct.

To date, the PiD appears to discriminate between both recidivists and non-recidivists and offenders with and without institutional behavioural problems (Shields & Whitehall, 1991). Using postdictive and concurrent criterion variables, low to moderate correlations have been found between the PiD total and offence-based criteria (i.e., total number of convictions, number of different offences, total number of institutional misconducts and previous violent offence; Simourd 1997). Furthermore, the PiD was found to be significantly correlated with both the LSI ($r = .41, p < .01$) and the GSIR ($r = .32, p < .01$) which provides evidence for the PiD's convergent validity (Simourd, 1997). It should be noted that the PiD outperformed the CSS with respect to correlations for both offence-based criteria and criminal risk measures. Given the postdictive and/or concurrent assessment of offence-based criteria and criminal risk measures, a replication with a predictive criterion variable is clearly warranted. Moreover, research has suggested that the CSS might "underestimate the power of the construct" (Andrews, 1985). Therefore, if the PiD was used in conjunction with the CSS, the predictive validity of antisocial attitudes construct is likely to improve.

Recently, attention has focused on the examination of the predictive and discriminative validity of both the CSS (Mills & Knoner, 1997), CSS-M and the PiD

(Simourd & van der Ven, 1998) within a population of federal inmates. However, these investigations have lead to contradictory findings. Although Mills and Kroner (1997) hypothesised that the CSS would be predictive of recidivism, an empirical examination failed to establish this relationship. By specifically looking at violent and sexual offenders, the CSS was only consistently correlated with the postdictive criteria (prior convictions and incarcerations) for the sex offender sample. In contrast, except for the ICO subscale, the CSS was not significantly related to the postdictive criteria for violent offenders. With regards to the predictive criterion variables (both reincarceration and failure following release), the predicitive qualities of the CSS were not established for either sample.

To explain the contradictory findings between provincial and federal inmates, Mills and Kroner (1997) suggest that provincial inmates consist of both one time offenders and those who are commencing a criminal career. Generally, federal inmates have a history of criminal and antisocial behaviour. Therefore, criminal attitudes are more likely to be greater and more homogeneous within this population. Given the exclusion of one time offenders, the discriminate ability of the CSS was reduced for the sample of individuals in federal custody. Mills and Kroner (1997) conclude that the CSS may not add significantly to the predictive equation and that the inclusion of this scale in clinical prediction may be premature.

In contrast, Simourd and van der Ven (1998) found that both the CSS-M and the PiD were significantly related to criminal behaviour and can predict recidivism. With a sample of 141 Canadian federally incarcerated offenders, the CSS-M predicted

recidivism among violent but not nonviolent offenders. Conversely, the PiD predicted recidivism among nonviolent but not violent offenders. For both findings, recidivism was defined as rearrests. Noting that the evidence on construct validity is limited, Simourd and van der Ven (1998) suggest that the two scales might be tapping into different aspects of procriminal sentiments with the PiD assessing a criminal subculture construct and the CSS-M assessing attitudes towards criminal concepts (i.e., attitudes towards the law, courts, police).

By employing reincarceration as the criterion variable, Simourd and van der Ven (1998) replicated the findings of Mills and Kroner (1997) whereby the CSS was not found to be correlated with recidivism. Simourd and van der Ven (1998, p.10) suggest however that the stringent standards of reconviction and reincarceration "may not be able to capture a recidivistic event within a relatively short follow-up period".

To date, evidence suggests that a battery of reliable and valid scales assessing procriminal sentiments exists. In general, the literature suggests that antisocial attitudes must be addressed in effective treatment and prevention programs given the constant interrelations between antisocial attitudes and a variety of deviant behaviour (McGee & Newcombe, 1992). A positive alteration of offender's attitudes towards the public and legal morality is considered to be among the legitimate goals of rehabilitation (Watt & Maher, 1958). When dealing with young and adult offenders, Cressey (1955) was among the first to suggest that attitudes, beliefs and rationalizations regarding illegal conduct should be the focus in any diagnosis of criminality. Treatment should focus on assimilating offenders into groups whose attitudes, values and beliefs are law abiding in

nature. Only a few structure treatment programs targeting criminal attitudes and cognition currently exist.

In order to serve as anticriminal models and as sources of reinforcement for the their clients' anticriminal expression, correctional staff need to distinguish between anticriminal and procriminal expressions. With procriminal expression including both the association with criminal others and antisocial attitudes, a task for correctional staff is to reduce the procriminal expression of their clients.

Given the theoretical and empirical findings, there has been a lack of research into the practical use of the procriminal sentiments-criminal behaviour relationship. Simourd (1997) points out that the slow integration of these findings can be attributed to the lack of adequate assessment tools. Although evidence suggest that the CSS-M and the PiD are adequate measures, there is a need for further examination of the psychometric properties of the measures, especially the predictive validity (Simourd, 1997).

Purpose

Taking the aforementioned into account, the general purpose of this study is to verify, explore and expand upon the psychometric properties of the CSS-M and the PiD with a young offender sample. Since it is expected that both the CSS-M and the PiD will be used in conjunction with a battery of assessments, it is necessary to ensure that both measures are reliable and valid assessments of procriminal sentiments. With a sample

young offenders, the present study will assess the:

1. Internal consistency of the CSS-M and PiD. It is hypothesized that both the PiD and CSS-M will be reliable measures of the procriminal attitude construct.
2. Convergent validity of the scales with an established risk measure (YO-LSI). It is hypothesized that the PiD and CSS-M will be associated with the YO-LSI.
3. Construct validity:
 - a. It is expected that both the PiD and CSS-M will be associated with each other but will not be identical assessment tools.
 - b. The purpose of the Principal Components Analysis is to explore the component structure underlying the PiD and CSS-M to establish the number of component(s) and to determine the items that comprise the component(s).
4. Predictive criterion validity of the CSS-M and the PiD. It is hypothesized that both the PiD and the CSS-M will be significant predictors post-index offense(s).
5. Incremental predictive validity of the CSS-M and the PiD. It is hypothesized that the PiD and CSS-M will explain unique variability in recidivism over and above the YO-LSI.
6. Discriminative validity. It is hypothesized that the PiD and CSS-M mean score, individually and combined, will be able to classify recidivists and non-recidivists well above chance.

Method

Participants

Based upon archival assessments, participants in this study were young offenders who were either convicted or were awaiting trial and have been accused of committing a criminal offense. For the purpose of the present study, these criminal offense(s) were defined as the index offense(s). The young offender sample consisted of consecutive admissions to a young offender unit in the province of Ontario from June 1991 to January 1996.

In total, 724 young offender case files were reviewed. Of the 724 files, the PiD was complete for 710 and the CSS-M was complete for 705. Information on the criterion variable (recidivism) was available for 662 young offenders. A measure of recidivism was not available for 62 case files because: (1) the follow-up period was less than 2 years ($n = 59$), (2) the participant died while incarcerated for the index offense ($n = 1$), (3) the participant was not in the OMS system ($n = 2$). Overall, procriminal attitude assessments and measures of recidivism were available for 658 of the 724 participants.

Setting

The young offender unit (i.e., closed custody, maximum security) at the Ottawa-Carléton Detention Centre (OCDC) consists of 12 maximum security beds (each can hold two residents) and the following: a day room, yard, school room, and two interview rooms. Adult inmates are incarcerated in another section of the institution. This facility accommodates young offenders who committed crimes between their 16th and 18th birthdays.

Materials

The materials used in the present study are as follows: Criminal Sentiments Scale-Modified, Pride in Delinquency and the Young Offender-Level of Service Inventory.

Criminal Sentiments Scale - Modified (CSS-M: Shields & Whitehall, 1991).

Divided into three subscales, the CSS-M (See Appendix A), a self-report assessment tool, assesses attitudes towards the law, courts and police (LCP); a tolerance for law violations (TLV); and identification with criminal others (ICO). All subscales, scored on a 3-point scale with 2 = endorsement of an antisocial or a rejection of a prosocial statement, 1 = undecided responses and 0 = the rejection of an antisocial or acceptance of a prosocial statement, are summed to yield a total subscale and scale score. The total CSS-M is the sum of all items. Scores on the CSS-M can range from 0 to 123.

Consisting of items such as Almost any jury can be fixed, The police almost never help people and The law does not help the average person, the LCP subscale item scoring is reversed for items 3, 4, 5, 7, 10, 11, 12, 14, 17, 21, 23, and 25. High scores on the LCP scale indicate negative attitudes towards the law, courts and police.

The 10-item TLV subscale includes items such as It's OK to break the law as long as you don't get caught, You should only obey those laws which are reasonable and Sometimes a person like you has to break the law to get ahead in life. With scoring reversed for items 3 and 6, high scores on the TLV indicate a tolerance for law violations.

Comprised of 6 items such as People who have broken the law have the same sort of ideas about life as you and People who have been in trouble with the law are more like you than people who don't have trouble with the law, the ICO item scoring is reversed for items 2 and 6. When summed, high scores indicate an association and identification with criminal others.

Pride In Delinquency Scale (PiD: Shields & Whitehall, 1991). As a 10-item self-report measure, the PiD assesses how comfortable (i.e., pride/shame) an individual would feel participating in specific criminal behaviours. For example, Beating up a child molester, Seeing a store being robbed and not calling the police and Selling cocaine. Developed as an extension to the CSS (See Appendix B), scores on a 21-point Likert scale range from -10 to +10 with negative numbers denoting that the individual would be ashamed of committing the criminal behaviour. In contrast, positive numbers signify that the subject would be proud of committing the behaviour. Scores of 0 indicate that the subject is neutral. After summing each item score, a constant of 100 is added to make all total scores positive. When summed, high scores indicate the presence of a procriminal criminal attitude.

Young Offender-Level of Service Inventory (YO-LSI: Shields & Whitehall, 1991). Based on items from the LSI and Y-LSI, the YO-LSI is an interview-based measure which takes approximately 30 minutes to complete. Scored using a binary format with 1 indicating a problem and 0 indicating the absence of a problem, the YO-LSI (see Appendix C) contains 76 items divided into seven subcomponents: Criminal History, Substance Abuse, Education/Employment Problems, Family Problems,

Peer Relation Problems, Accommodation Problems and Psychological Variables. When summed, the higher the score, the higher the propensity to engage in future criminal behaviour. To date, acceptable internal consistency estimates have been found for the subcomponents of the YO-LSI (Shields & Simourd, 1991).

Recidivism. Recidivism occurred when a young offender was charged and sentenced to closed custody within 2 years after discharge from the index offense(s). Information on new convictions and sentences (i.e., post-index offense) were obtained from the Offender Management System (OMS). The OMS provided information on type of offense, type of sentence (i.e., closed, open or both) and sentence length.

Procedure

In an interview room at the Ottawa-Carleton Detention Centre, the CSS-M, PiD and the YO-LSI were administered both individually and orally to each young offender within 3 days of admission to the young offender unit. Included in a larger battery of psychological tests, all scales were part of a young offender intake assessment. A clinical psychologist who is trained in all the measures administered each scale to all young offenders in an interview format to ensure task demands and for clinical reasons (i.e., personalization of client-assessor relationship). Prior to the assessment, a young offender was asked if any information he /she provided could be used, at a later date, for research purposes (See Appendix D). Only those individuals who gave their consent were included in the present study.

Data Collection.

Information on recidivism was collected and coded by two psychology graduate students. One graduate student collected approximately 90% of the data. The other student collected 10% of the data. In addition, the second graduate student re-examined the coding of recidivism data for the first 90 file reviews. For one case, there was disagreement between the two coders.

Results

Descriptive Statistics

The mean score on the CSS-M was 29.98 ($SD = 15.16$) with scores ranging from 1 to 76. The mean, standard deviation, minimum score and maximum score for the subscales of the CSS-M are presented in Table 1: Law, Courts, Police (LCP), Tolerance for Law Violations (TLV), and Identification with Criminal Others (ICO). Response frequencies for the individual items on the CSS-M indicated the full use of the 3-point scale.

The mean score on the PiD was 69.26 ($SD = 32.08$) with scores ranging from 0 to 171. The mean, standard deviation, minimum score and maximum score for the individual items on the PiD are presented in Table 2. Furthermore, response frequencies for the individual items on the PiD illustrated the full use of the ± 10 -point rating scale.

Gender

Mean scores for male and female young offenders on the PID, CSS-M, LCP, TLV and ICO were not statistically different (See Table 3). The Levene's test for equality of variances revealed that homogeneity of variance had not been violated. In summary, male and female young offenders provided similar scores on the PID and CSS-M (total and subscale).

Reliability and Validity

Reliable and valid assessment tools are required before the theoretical and empirical knowledge of the procriminal attitude construct can be used on a regular basis within correctional practise. Whenever evaluative judgements and decisions are made,

Table 1

Descriptive Statistics for the PiD, CSS-M and YO-LSI.

Assessment Measure	Min. Score	Max. Score	Mean	SD
PiD	0	171	69.26	32.08
CSS-M:	1	76	29.98	15.16
LCP	0	48	16.39	9.90
LAW	0	20	4.74	4.13
CRT	0	16	5.99	3.98
POL	0	14	5.61	3.66
TLV	0	20	8.41	4.63
ICO	0	18	5.18	2.71
YO-LSI:	2	56	25.99	9.33
CRIME	0	15	6.77	3.12
DRUGS	0	9	3.53	2.15
EDUC	0	9	4.34	2.02
FAMILY	0	13	3.85	2.79
PEERS	0	12	3.90	1.98
ACCOM	0	4	1.65	1.61
MISC	0	6	1.80	1.38

Note. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others. YO-LSI = Young Offender-Level of Service Inventory. CRIME = Criminal History. DRUGS = Substance Abuse. EDUC = Education /Employment Problems. FAMILY = Family Problems. PEERS = Peer Relationship Problems. ACCOM = Accommodation Problems. MISC = Miscellaneous.

Table 2

Descriptive Statistics for PiD Items.

PiD Item	Min. Score	Max. Score	Mean	<u>SD</u>
PiD1	-10	10	6.12	5.09
PiD2	-10	10	-9.49	2.37
PiD3	-10	10	-5.15	4.75
PiD4	-10	10	-1.78	4.79
PiD5	-10	10	-5.01	4.67
PiD6	-10	10	.51	5.82
PiD7	-10	10	-5.88	5.08
PiD8	-10	10	-3.53	5.42
PiD9	-10	10	-6.93	4.56
PiD10	-10	10	1.22	7.68

Note. PiD = Pride in Delinquency.

Table 3

An Examination by T-Tests of Differences in Mean Scores on the Procriminal Attitude Measures provided by Male and Female Young Offenders.

Scale	Male		Female		t	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
PiD	69.19	(32.64)	64.64	(29.05)	1.04	ns
CSS-M	29.53	(15.16)	31.43	(16.03)	-.92	ns
LCP	16.06	(10.00)	16.83	(10.05)	-.57	ns
TLV	8.22	(4.68)	9.03	(4.72)	-1.28	ns
ICO	5.14	(2.68)	5.23	(2.79)	-.25	ns

Note. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified.

LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

APA's recommendations for education and psychological tests (1985) emphasize the importance and requirement of reporting reliability and validity estimates for all tests, inventories, checklists and questionnaires. Therefore, the primary purpose of the present study was to address systematically both the reliability and validity of the PiD and CSS-M.

Internal Consistency

When using multiple-item measures, it has become routine practise to present Cronbach's coefficient alpha (here after alpha; Cronbach, 1951) as an index of internal consistency (Schmitt, 1996). Internal consistency refers to the inter-relatedness of a set of items within a scale (i.e., repeatability of patterns among items). Ideally, alpha should be high (approximately .90) and should not fall below .70 (Murphy & Davidshofer, 1989; Nunnally, 1978). For example, an alpha of .90 signifies that 90% of the variance in the observed scores represents variance in the true scores and 10% of the variability in the test scores is attributable to error variance.

Alpha (See Table 4) was (1) high for CSS-M, PiD and LCP, (2) acceptable for TLV and (3) poor for ICO ($\alpha = .53$). The alpha of the ICO was examined further to assess whether specific items were suppressing the internal consistency of the subscale. An examination of the alpha *if a specific item was deleted* indicated that the reliability of the ICO could increase to .58 if item 41 was deleted from the subscale. The deletion of any other items would not substantially improve the internal consistency of the ICO. Empirical evidence regarding the internal consistency of the PiD and CSS-M was sufficiently strong to deem them both highly reliable measures.

Table 4

Cronbach's Coefficient Alpha for the PiD, CSS-M, LCP, TLV and ICO.

Scale	α
PiD	.82
CSS-M:	.89
LCP	.86
TLV	.73
ICO	.53

Note. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified.
 LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification
 with Criminal Others.

Inter-Correlations Among Procriminal Attitude Measures

Inter-correlations among the PiD, CSS-M and the subscales of the CSS-M are tabulated in Table 5. Significant positive Pearson product-moment correlations, ranging from .33 to .86, were evidenced among the attitude scales: CSS-M, LCP (total and separately for Law, Courts and Police), TLV, ICO and PiD. The correlations indicated that all attitude measures were reliably inter-correlated. Assessing the CSS-M only, inter-scale correlations indicated agreement between the subscales of the CSS-M in terms of assessing the same construct (i.e., procriminal attitudes).

In addition, since both the CSS-M (total and subscales) and the PiD are measures of procriminal sentiments, the correlations between these measures also provided evidence for the construct validity of the measures. Overall, these findings were congruent with prior research on the CSS (Law, 1995; Andrews, Wormith & Kiessling, 1985; Wormith & Andrews, 1984).

Validity

Essentially, validity is a judgement of the degree to which empirical evidence and theoretical rationales support the appropriateness and adequacy of interpretations and actions on the basis of a test score or other modes of assessment (Messick, 1989). The convergent, content, predictive, incremental and discriminant validity of the procriminal sentiments measures were systematically addressed by the present study.

Convergent Validity

Convergent validity was examined by correlating the PiD, CSS-M, LCP, TLV and ICO with the YO-LSI (a risk/needs assessment measure) total and subscale scores.

Table 5

Correlations Among the Procriminal Attitude Scales and Subscales

Scale	PiD	CSS	LCP	LAW	CRT	POL	TLV	ICO
PiD	1.000							
CSS	.597	1.000						
LCP	.543	.820	1.000					
LAW	.469	.789	.858	1.000				
CRT	.418	.784	.841	.575	1.000			
POL	.502	.786	.832	.587	.559	1.000		
TLV	.535	.809	.643	.545	.529	.560	1.000	
ICO	.418	.590	.447	.381	.333	.417	.461	1.000

Note. All Pearson product moment correlations were significant at $p < .001$.

PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified.

CRT = Courts. POL = Police. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

Moderate positive correlations (See Table 6) provided evidence for the convergent validity of the PiD and the CSS (total and subscale scores) with a risk/needs assessment measure. That is, the PiD and the CSS-M were positively related with a measure designed to assess an individual's propensity to violate rules and need for treatment.

Construct Validity

The purpose of the Principal Components Analysis (PCA) was to determine which items within the PiD or the CSS-M formed subsets (i.e., components) that were *relativity* independent of each other or which reflected a single underlying dimension.

PiD. A PCA with a varimax rotation was performed through SPSS8.0 on 10 items from the PiD. Loadings of variables on components and percents of variance are shown in Table 7. Using the criterion of the eigenvalue 1 rule (Kaiser, 1960) and Cattell's (1979) scree test, a two-component solution was found for the PiD items. The two-component solution accounted for 51.55% of the variability in the PiD (i.e., spread in scores). When item loadings were examined, none showed negligible loadings (i.e., less than .30).

PiD Component 1 (PiDC1), labelled "Attitude Toward Criminal Offenses", consisted of the following items: 3, 4, 5, 6, 7, 8, 9 and 10. Taken together, these items reflected an individual's comfort level (i.e., ashamed ... to ... proud) towards engaging in criminal activity. Items on PiDC1 were summed to yield a component score for each participant. When calculating a PiD total score a constant of 100 was added to make all assessment scores positive. Likewise, a constant was added to both PiDC1 (80) and PiDC2 (20) which was based on the number of component items. The mean score for

Table 6

Correlations Between the Procriminal Attitude Measures and the YO-LSI

Scale	PiD	CSS	LCP	LAW	CRT	POL	TLV	ICO
YOLSI	.424	.355	.309	.248	.260	.291	.282	.347
p	.001	.001	.001	.001	.001	.001	.001	.001
CRIME	.262	.144	.117	.090	.089	.127	.115	.171
p	.001	.001	.001	.01	.01	.001	.001	.001
DRUGS	.343	.258	.209	.149	.188	.204	.232	.233
p	.001	.001	.001	.001	.001	.001	.001	.001
EDUCAT	.257	.217	.193	.155	.139	.191	.193	.225
p	.001	.001	.001	.001	.001	.001	.001	.001
FAMILY	.119	.103	.088	.061	.098	.085	.075	.099
p	.001	.005	.01	ns	.005	.05	.05	.005
PEERS	.404	.414	.360	.295	.303	.330	.310	.443
p	.001	.001	.001	.001	.001	.001	.001	.001
ACCOM	.206	.205	.200	.165	.179	.171	.140	.160
p	.001	.001	.001	.001	.001	.001	.001	.001
MISC	.318	.310	.274	.280	.195	.228	.257	.233
p	.001	.001	.001	.001	.001	.001	.001	.001

Note. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. CRT = Courts. POL = Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others. YO-LSI = Young Offender Level of Service Inventory. CRIME = Criminal History. DRUGS = Substance Abuse. EDUC = Education/Employment Problems. FAMILY = Family Problems. PEERS = Peer Relationship Problems. ACCOM = Accommodation Problems. MISC = Miscellaneous.

Table 7

The Rotated Component Matrix for the PiD Principal Components Analysis.

Scale Item	Component 1	Component 2
PiD1		.730
PiD2		-.527
PiD3	.737	
PiD4	.651	
PiD5	.671	
PiD6	.533	
PiD7	.754	
PiD8	.772	
PiD9	.760	
PiD10	.656	
Variance Explained (%)	40.89	10.66

Note. PiD = Pride in Delinquency.

PiDC1 was 53.5 (SD = 30.0). Adequate internal consistency was achieved ($\alpha = .84$).

PiD Component 2 (PiDC2), labelled "Rating Scale Comprehension", consisted of items 1 and 2. Items 1 (Beating up a child molester) and 2 (Committing sexual assault) were designed by a clinical psychologist to be throw-away items rather than clinical assessment items. It was assumed that most young offenders would provide a high positive score for item 1 and high negative score for item 2. The purpose of these items was to familiarize young offenders to the breadth of the ± 10 rating scale. The most frequent response was +10 ($n = 295$) for item 1 and -10 ($n = 627$) for item 2. Items on PiDC2 were summed and a constant of 20 was added to yield a component score for each participant. The mean score for component 2 was 16.6 (SD = 5.58).

CSS-M. A principal components analysis (PCA) with an oblimin rotation was performed through SPSS 8.0 on the 41 items from the CSS-M. An oblique rotation was chosen over a varimax for two reasons: (1) an examination of the component plot revealed that the two clusters fell between the component axes after an orthogonal rotation and (2) the correlation in the factor correlation matrix was greater than .30. Using the criterion of Cattell's (1979) scree test and the eigenvalue 1 rule, a two-component solution was determined for the CSS-M. The two-component solution accounted for 25.05% of the variance in the CSS-M.

An examination of the pattern matrix was chosen over the structured matrix because overlapping variance among components was partialled out. Loadings of variables on components and percentage of variance are shown in Table 8. Items 30, 33 and 41 showed negligible loadings. No items were defined as complex.

Table 8

For the CSS-M, the Pattern Matrix of the PCA with an Oblique Rotation.

Scale Item	Factor 1	Factor 2
CSS1		.526
CSS2		.577
CSS3	.455	
CSS4	.497	
CSS5	.548	
CSS6		.551
CSS7	.373	
CSS8	.309	.396
CSS9		.591
CSS10	.562	
CSS11	.454	
CSS12	.460	
CSS13		.544
CSS14	.457	
CSS15		.534
CSS16		.479
CSS17	.438	
CSS18		.518
CSS19		.493
CSS20		.413
CSS21	.514	
CSS22		.313
CSS23	.436	
CSS24		.377
CSS25	.461	
CSS26	.423	
CSS27	.522	
CSS28		.518
CSS29	.539	
CSS30		

Table 7
continued

Scale Item	Factor 1	Factor 2
CSS31		.342
CSS32	.412	
CSS33		
CSS34	.525	
CSS35	.546	
CSS36	.461	
CSS37	.306	
CSS38	.405	
CSS39	.494	
CSS40	.474	
CSS41		
Variance Explained (%)	19.97	5.54

Note. CSS = Criminal Sentiments Scale - Modified.

CSS-M Component 1 (CSS-MC1), labelled "Procriminal Sentiments", was comprised of the following items of the CSS-M: 3, 4, 5, 7, 10, 11, 12, 14, 17, 21, 23, 25, 26, 27, 29, 32, 34, 35, 36, 37, 38, 39 and 40. With the exception of item 37, these items reflected a discrediting of the validity and authority of the criminal justice system (Law, Courts, Police), tolerance for engaging in illegal activity and positive identification with those who offend. Items on CSS-MC1 were summed to yield a component score for each participant ($M = 13.55$, $SD = 9.13$). Adequate internal consistency was achieved ($\alpha = .85$).

CSS-M Component 2 (CSS-MC2), labelled "Anticriminal Sentiments", consisted of the following items: 1, 2, 6, 8, 9, 13, 15, 16, 18, 19, 20, 22, 24, 28 and 31. These items reflect a belief in the validity of the criminal justice system and an intolerance for engaging in criminal activity. Items on the CSS-MC2 were summed to yield a component score for each participant ($M = 11.69$, $SD = 7.04$). When calculating a total CSS-M score, the scoring of positively worded items is reversed. For interpretation of CSS-MC2 scores, the more positive the attitude towards the criminal justice system, the lower the score. Adequate internal consistency was achieved ($\alpha = .82$).

Predictive Validity

Predictive validity estimates how accurately we can infer some future performance on an external criterion (e.g., recidivism) from knowledge based on an assessment score (e.g., PiD, CSS-M). Generally, a predictive validity coefficient is an index of the degree of the relationship between the predictor and criterion scores. The higher the correlation, the more accurately the criterion can be predicted from an assessment score.

To examine the predictive (i.e., criterion-related) validity of the procriminal attitude measures, a series of stepwise multiple regression analyses were performed on the data. In particular, a comparison of the weights (standardized regression coefficients) in the prediction of recidivism was of primary importance because of the rating scale variation between the PiD and CSS-M.

PiD and CSS-M (Total and Subscales).

An examination of the statistics associated with the overall stepwise regression equation suggested that recidivism can be significantly predicted on the combined basis of the PiD, CSS-M, LCP, TLV and ICO ($F(2,655) = 28.408$, $p < .001$; $R^2 = .08$). The multiple correlation was .28.

Zero-order correlations demonstrated that recidivism was positively related to all the procriminal attitude measures ($p < .001$): PiD ($r = .26$), CSS-M ($r = .20$), LCP ($r = .16$), TLV ($r = .16$) and ICO ($r = .21$). That is, the higher the score on a procriminal attitude measure, the more likely a young offender will recidivate in the future.

Inspection of the standardized regression coefficients when all five attitude measures were in the regression equation suggested that the PiD ($\beta = .21$, $p < .001$) and the ICO ($\beta = .12$, $p < .005$) subscale were significant predictors of recidivism. According to the standardized regression coefficients, the CSS-M ($\beta = .07$, n.s.), LCP ($\beta = .03$, n.s.) and TLV ($\beta = .03$, n.s.) were not significant predictors of recidivism within the stepwise multiple regression equation.

However, significant positive correlations among the PiD, CSS-M, LCP, TLV and ICO suggested that all five measures tapped into the same construct (i.e., procriminal

attitudes). An examination of the semi-partial correlations revealed that although there was a significant positive correlation between the CSS-M and recidivism, when all the other attitude measures were controlled for, the CSS-M did not uniquely predict recidivism ($r_{(CSS-M, PiD, LCP, TLV, ICO)} = .06$). The same relationship was evidenced for LCP and TLV (See Table 9). In contrast, the PiD ($r_{(PiD, CSS-M, LCP, TLV, ICO)} = .20, p < .001$) and ICO ($r_{(ICO, CSS-M, LCP, TLV, ICO, PiD)} = .11, p < .005$) remained significant predictors even after controlling for the other procriminal attitude measures. In summary, these findings suggested that the CSS-M, LCP and TLV might have become redundant when the PiD and ICO were included in the regression analysis. It appeared as though the CSS-M, LCP and TLV did not enhance the predicability of recidivism over and above that which the PiD and ICO explained.

These analyses do not imply that the CSS-M, LCP and TLV are not significant predictors of recidivism. In fact, when a simple regression analysis was conducted, the CSS-M significantly predicted recidivism ($F(1,656) = 26.42, p < .001; \beta = .20, p < .001$). This relationship was also established with the LCP and TLV. However, when the PiD and the CSS-M (total and subscales) were available, only the PiD and ICO explained unique variability in recidivism.

Offence Type.

The stepwise regression analysis was repeated for both property-based offenders and person-based offenders to assess the extent to which the regression findings would hold across groups of young offenders based on index offence(s). Young offenders whose index offence(s) were classified as mixed were excluded from both analyses.

Table 9

Predictive Validity of the PiD and CSS-M (Total and Subscales) with a Young Offender Sample.

Variable	r	p	β	p	Semi-Partial r
PiD	.26	.001	.21	.001	.23
CSS-M:	.20	.001	.07	ns	.06
LCP	.16	.001	.03	ns	.02
TLV	.16	.001	.03	ns	.03
ICO	.21	.001	.12	.005	.11

Note. r = correlation. β = standardized regression coefficient. p = level of significance for the standardized regression coefficients. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

Property-Based Offence Type. By isolating young offenders who committed only property crime(s) at intake, the regression equation implied that recidivism can be significantly predicted on the combined basis of the procriminal attitude measures ($F(2, 382) = 13.36, p < .001; R^2 = .07$). The multiple correlation was .27.

The zero-order correlations among the procriminal attitude measures and recidivism were all significant (See Table 10). Inspection of the standardized regression coefficients suggested that both the PiD ($\beta = .17$) and ICO ($\beta = .14$) were significant predictors of recidivism. According to the standardized regression coefficients for the regression equation, the CSS-M, LCP and TLV failed to significantly predict recidivism. Similar to the previous regression analysis, the CSS-M, LCP and TLV may have become redundant measures when both the PiD and ICO were included in the regression equation. For the procriminal attitude measures, the zero-order correlations, standardized regression coefficients and semi-partial are presented in Table 10.

In summary, the PiD and ICO were found to be significant predictors of recidivism. Although on an individual basis, there was a significant linear relationship between recidivism and CSS-M, LCP and TLV as assessed by the zero-order correlations.

Person-Based Offense Type. Selecting young offenders who committed only person-based crime(s) at intake, the overall regression equation suggested that the procriminal attitude measures combined significantly predicted recidivism ($F(1, 89) = 16.70, p < .001; R^2 = .16$). The multiple correlation was .40.

All zero-order correlations between recidivism and the procriminal attitude measures were significant (See Table 11). An examination of the standardized regression

Table 10

Predictive Validity of the PiD and CSS-M (Total and Subscales) with a Sample of Young Offenders who Committed Property-Based Offences at Intake.

Variable	r	p	β	p	Semi-Partial r
PiD	.22	.001	.17	.005	.16
CSS-M	.19	.001	.10	ns	.08
LCP	.13	.01	.02	ns	.02
TLV	.15	.001	.05	ns	.04
ICO	.20	.001	.14	.01	.14

Note. r = correlation. β = standardized regression coefficient. p = level of significance. n = 385. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

Table 11

Predictive Validity of the PiD and CSS-M (Total and Subscales) with a Sample of Young Offenders who Committed Person-Based Offences at Intake.

Variable	r	p	β	p	Semi-Partial r
PiD	.40	.001	.40	.001	.40
CSS-M	.26	.01	.03	ns	.03
LCP	.24	.01	.03	ns	.03
TLV	.20	.05	.03	ns	.03
ICO	.28	.005	.09	ns	.08

Note. r = correlation. β = standardized regression coefficient. p = level of significance. n = 91. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

revealed that the PiD ($\beta = .40, p < .001$) was the only significant predictor of recidivism. The CSS-M ($\beta = .03, ns$), LCP ($\beta = .03, ns$), TLV ($\beta = .03, n.s.$) and ICO ($\beta = .09, n.s.$) were not significant predictors of recidivism in the regression equation. For the procriminal attitude measures, the zero-order and semi-partial correlations are presented in Table 11.

Similar to the previous regression analyses, the CSS-M, LCP and TLV may have become redundant when the PiD was included in the regression equation. Unlike previous analyses, the ICO did not explain unique variability in recidivism when the PiD was in the regression equation.

PiD and CSS-M Components

The stepwise regression analysis was rerun using the components of the procriminal attitude measures derived from the PCA. The purpose of the following analyses was to establish the predictive validity for the components of the PiD and CSS-M.

PiD (Component 1 and Component 2) and CSS-M. The stepwise regression analysis was rerun using the two components (PiDC1 and PiDC2) of the PiD derived from the PCA (instead of the PiD total score) as well as the CSS-M, LCP, TLV and ICO. Overall, the regression equation implied that recidivism can be significantly predicted by the procriminal attitude measures ($F(1,655) = 34.11, p < .001; R^2 = .10$). The multiple correlation was .31.

Examination of the standardized regression coefficients when all five attitude measures are in the regression equation implied that the PiDC1 ($\beta = .25$) and ICO ($\beta = .12$) were significant predictors of recidivism. However, this relationship was not

established for the other procriminal attitude scales: CSS-M ($\beta = .06$, n.s.), LCP ($\beta = .13$, n.s.), TLV ($\beta = .03$, n.s.) and PiDC2 ($\beta = .01$, n.s.). Similar to the previous regression analysis, the CSS-M, LCP and TLV may have become redundant when the PiDC1 and ICO were in the regression equation. For all the procriminal attitude measures, the zero-order and the semi-partial correlations are provided in Table 12. In summation, the stepwise regression analysis provided empirical evidence regarding the predictive validity of the component structure for the PiD.

PiD and CSS-M (Component 1 and Component 2). The stepwise regression analysis was repeated using the two components (CSS-MC1 and CSS-MC2) of the CSS-M determined by the PCA as well as the PiD. Overall, the regression equation implied that recidivism can be significantly predicted by the procriminal attitude measures ($F(1, 655) = 26.59$, $p < .001$; $R^2 = .08$). The multiple correlation was .27.

Zero-order correlations suggested that recidivism was positively related to all the procriminal attitude measures (See Table 13). Examination of the standardized regression coefficients when all three procriminal attitude measures were in the regression equation implied that the PiD ($\beta = .22$, $p < .001$) and the CSS-MC1 ($\beta = .22$, $p < .001$) were significant predictors of recidivism.

The CSS-MC2 was significantly correlated with the PiD ($r = .54$, $p < .001$) and the CSS-MC1 ($r = .59$, $p < .001$). It is plausible that the CSS-MC2 may have become redundant when the PiD and the CSS-MC1 were in the regression equation. For reference, the zero-order and semi-partial correlations are presented in table 12.

Table 12

Predictive Validity of the PiD Component 1, PiD Component 2 and CSS-M (Total and Subscales) with a Sample of Young Offenders.

Variable	r	p	β	p	Semi-Partial r
PiDC1	.288	.001	.25	.001	.23
PiDC2	.098	.01	.01	ns	.01
CSS-M	.196	.001	.06	ns	.05
LCP	.155	.001	.01	ns	.01
TLV	.160	.001	.03	ns	.03
ICO	.207	.001	.12	.005	.11

Note. r = correlation. β = standardized regression coefficient. p = level of significance. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others. C = component.

Table 13

Predictive Validity of the CSS-M Component 1, CSS-M Component 2 and PiD with a Sample of Young Offenders.

Variable	r	p	β	p	Semi-Partial r
CSS-MC1	.194	.001	.10	.05	.09
CSS-MC2	.134	.002	.07	ns	.06
PiD	.261	.001	.22	.001	.19

Note. r = correlation. β = standardized regression coefficient. p = level of significance. CSS-M = Criminal Sentiments Scale - Modified. PiD = Pride in Delinquency.

Incremental Validity

To explore whether the attitude measures exhibit improvements in the prediction of recidivism relative to a risk/needs instrument (YO-LSI), a hierarchical regression analysis was conducted with the YO-LSI entered on the first block and all the attitude measures entered on the second. A stepwise selection procedure was used for the second block of predictor variables. The purpose of this analysis was to note whether the PiD and CSS-M entered at a later stage added meaningfully to the prediction of recidivism.

The regression equation for block 1 ($F(1, 656) = 45.02, p < .001; R^2 = .064$), indicated that the YO-LSI (the risk/needs assessment measure) significantly predicted recidivism within the 2-year follow-up period ($\beta = .253, p < .001$). In addition to the variance explained by the YO-LSI, the PiD explained a further 2.9% of the variance in recidivism ($F_{\text{change}}(1, 655) = 20.54, p < .001; R^2 = .093$). The multiple correlation was .304. The inclusion of ICO in the regression equation explained an additional .7% of the variance in recidivism ($F_{\text{change}}(1, 654) = 20.54, p < .05; R^2 = .100$).

For the final model, the multiple correlation was .315. All zero-order correlations between the procriminal attitude measures and recidivism were significant (See Table 14). An examination of the standardized regression coefficients revealed that for the YO-LSI ($\beta = .16, p < .005$), PiD ($\beta = .16, p < .001$) and ICO ($\beta = .09, p < .001$) were significant predictors of recidivism. For the regression equation, no other procriminal attitude measure significantly contributed

Table 14

Predictive Validity of the PiD and CSS-M (Total and Subscales) Over and Above the YO-LSI with a Sample of Young Offenders.

Variable	r	p	β	p	Semi-Partial r
YO-LSI	.25	.001	.16	.001	.14
PiD	.26	.001	.16	.001	.14
CSS-M	.20	.001	.03	n.s.	.01
LCP	.16	.001	.03	n.s.	.02
TLV	.16	.001	.03	n.s.	.01
ICO	.21	.001	.09	.05	.08

Note. r = correlation. β = standardized regression coefficient. p = level of significance. n = 658. PiD = Pride in Delinquency. CSS-M = Criminal Sentiments Scale - Modified. LCP = Law, Courts, Police. TLV = Tolerance for Law Violations. ICO = Identification with Criminal Others.

to the prediction of recidivism: CSS-M ($\beta = .03$, n.s.), LCP ($\beta = .03$, n.s.) and TLV ($\beta = .03$, n.s.). In summary, this analysis provided preliminary evidence that the PiD and ICO might contribute to the prediction of recidivism over and above a risk/needs assessment tool.

Discriminate Validity

The purpose of this analysis was to examine whether the mean score for the PiD and the mean score for the CSS-M, individually and combined, could classify recidivists and non-recidivists. Two by two contingency tables were created for the predictor variables (i.e., mean score on the procriminal attitude measure) in relation to the criterion (recidivism). The term “high risk cases” referred to young offenders judged likely to recidivate because their scores on the procriminal attitudes was higher than the mean for the sample. In contrast, “low risk cases” referred to those who were judged unlikely to recidivate because their scores on the procriminal attitude measures were equal to or less than the mean for the sample. The Relative Improvement Over Chance Test (RIOCI; Loeber & Dishion, 1983) statistic was used as the index of predictive accuracy because it is less sensitive to base rates and selection ratios when compared to other measures of predictive accuracy. Selection ratio refers to the method whereby individuals were selected as recidivists by means of the prediction method (i.e., mean score on the procriminal attitude measure). Base rate refers to the number of young offenders who recidivated within the sample.

PiD. Overall, the percentage of correctly classified (i.e., true positives and true negatives) young offenders was 63%. The proportion of cases judged to be at risk based on the PiD mean score who recidivated was .57. The percentage of lower risk cases who did not recidivate was 69%. Knowing that cases were high risk allowed for the accurate identification of 66% of the recidivists. Sixty percent of the non-recidivists were correctly identified by this method. The percent improvement over chance was 14%. More specifically, the RIOC was 30% (See Table 15).

PiDC1. The overall rate of correct predictions was 63%. The proportion of cases to be judged at high risk who recidivated was .57. The percentage of lower risk cases based on the mean score of the PiDC1 who did not recidivate was 69%. The proportion of correctly identified recidivists was 64%. The proportion of non-recidivists correctly identified was .63. The percent improvement over chance was 13%. The RIOC was 30%.

CSS-M. The overall proportion of predictions that proved to be correct was .60. The proportion of cases judged to be at risk based on the CSS-M score who recidivated was .54. Overall, 64% of the low-risk cases based on the CSS-M mean score did not recidivate. The proportion of recidivists correctly identified was .56. The proportion of non-recidivists correctly identified was .63. For the young offender sample, the percent improvement over chance was 10%. The RIOC was 25%.

PiD and CSS-M. The analysis was rerun to see whether mean scores on both the PiD and CSS-M could be used to classify recidivists from non-recidivists. Predicted

Table 15

The Relative Improvement Over Chance (RIOC) for the Procriminal Attitude Measures.

Scale	TP	TN	FP	FN	RIOC
PiD	194	219	99	148	30%
PiDC1	188	227	104	140	30%
CSS-M	164	230	127	137	25%
PiD & CSS-M	135	278	156	89	42%
PiD & YO-LSI	96	309	197	58	55%

Note. TP = True Positives. TN = True Negatives. FP = False Positives.
FN = False Negatives.

recidivists were defined as young offenders classified as having “high procriminal attitudes” (i.e., the risk factor) because their scores on both the PiD and CSS-M were higher than the mean for the sample.

Using this classification procedure, the proportion of correct predictions was 63%. The proportion of cases judged to be at high risk for recidivating on the basis of PiD and CSS-M mean scores who did recidivate within 2 years was .60. For those evaluated to be low risk based on the combined mean scores of the CSS and PiD, the proportion who did not recidivate was .64. Knowing that cases were high risk allowed for the accurate identification of 46% of the recidivists. Moreover, knowing that cases were low risk allowed for the accurate identification of 75.7% of the non-recidivists. The percent improvement over chance was 11%. The RIOC was 42%.

PiD and YO-LSI Using the same classification procedure as the previous analysis, the percentage of correctly classified young offenders was 61.3%. The percentage of cases judged to be at risk based on the combined mean scores of the PiD and YO-LSI was 62.3%. The percentage of lower risk cases who did not recidivate was 61.1%. The percent improvement over chance was 8.3%. More specifically, the RIOC was 55.0%.

Discussion

The PiD and CSS-M exhibit sound psychometric properties in terms of both reliability and validity. Based on previous and present research, the findings indicate that both scales can be used meaningfully in the following forensic contexts: future research studies, intervention programs and clinical assessments. The results of the present study will be discussed within the context of previous research on the PiD and CSS-M.

Recidivism. A review of the literature revealed a *surprising* lack of research investigating young offender recidivism in Canada. That is, only a few Canadian studies have provided young offender recidivism estimates. Of these, none appear to be a *benchmark* study. For example, a study by Leschied, Austin & Jaffe (1988) found the recidivism rate of youths at a one-year period following court dispositions under the YOA to be 60.5%. Recidivism was defined as new charges. Such a definition tends to be over inclusive and thus results may be inflated. In the present study, the recidivism rate was 44.3% with recidivism defined as return to closed custody within a 2-year follow-up period. This definition of recidivism was used because it identifies youth who engage in criminal activity that warrants provincial custody and ignores youth who were (1) charged with a crime but were found not guilty by a court of law and (2) guilty but the crime was not serious enough to warrant a sentence to closed custody. It is important to identify these recidivistic young offenders because their criminal actions have serious social and economic consequences.

Previous Research on the PiD and CSS-M.

The literature on the CSS (including the modified version), while limited, is more abundant than research on the PiD. To date, the published and unpublished research on the PiD is limited to a few studies (Whitehall, 1993; Simourd, 1997; Simourd & van der Ven, 1998). For the following discussion, the distinction will be made between the CSS and the modified version of the CSS with regard to prior research conducted on these measures. It is expected that the majority of the research results on the CSS should be generalizable to the CSS-M because the changes to the CSS-M were relatively minor.

Mean Scores. The mean score and the standard deviation for the CSS-M was slightly lower but comparable to that obtained in a previous research study ($\bar{M} = 33.9$, $SD = 15.1$; Shields & Simourd, 1991) using a subsample of the present study. Additionally, the mean score for the CSS-M was higher but comparable to a prior study based on a federal adult inmate study ($\bar{M} = 25.8$, $SD = 15.0$; Simourd & van der Ven, 1998).

The mean score on the PiD obtained in the present study was higher than that obtained in prior studies using federal inmate samples ($\bar{M} = 52.2$, Simourd, 1997; $\bar{M} = 60.5$, $SD = 31.8$, Simourd & van der Ven, 1998). The discrepancy in mean scores between the two sample types (i.e., young vs. adult offenders) on the PiD and CSS-M may suggest that young offenders hold a more procriminal attitude when compared directly to adult offender populations. Research is required to confirm

this relationship by comparing the procriminal attitudes of young and adult offenders.

Internal Consistency. Empirical evidence regarding the internal consistency of the PiD and CSS-M was sufficiently strong to deem them both highly reliable measures. Although slightly higher, these findings were comparable to prior results employing the CSS (Andrews, Wormith & Kiessling, 1985), CSS-M (Simourd, 1997) and the PiD (Simourd, 1997). Similar to previous results with the CSS (Andrews, Wormith & Kiessling, 1985), the level of internal consistency for the ICO was poor, although, Simourd (1997) found the ICO (CSS-M subscale) to possess adequate internal consistency ($\alpha = .73$). Replication is required to clarify the contradictory findings surrounding the internal consistency of the ICO.

If the ICO internal consistency is truly poor, further psychometric development is warranted. For example, future research efforts should focus on (1) removing items from the ICO which are suppressing the scale's internal consistency and (2) increasing the number of items to create a better sample of indicators.

Construct Validity. The construct validity of the PiD and CSS-M was examined by (1) considering the correlations between the procriminal attitude measures and (2) a Principal Components Analysis (PCA) for each measure. As hypothesized, both the PiD and CSS-M were correlated with each other; the findings suggest that both these measures are assessing the same construct (i.e., procriminal attitudes). This finding replicates previous research results concerning the relationship between the two measures (Simourd, 1997; Simourd & van de Ven, 1998).

Previous psychometric investigations isolated a one factor solution for the CSS

(Andrews & Wormith, 1984; Andrews et al., 1979). This was not established in the present study for the CSS-M. The PCA revealed the presence of two components, "Procriminal Sentiments" and "Anticriminal Sentiments", underlying the CSS-M. Both components of the CSS-M exhibit adequate internal consistency.

The result suggests that attitudes, as assessed by the CSS-M, might be a two dimensional construct whereby a young offender can hold both procriminal and anticriminal sentiments at the same time. This finding is consistent with prior research indicating that attitudes are a two-dimensional rather than an uni-dimensional construct (Andrews & Bonta, Hope, 1989; Klien, 1979; Sykes and Matza, 1957). That is, the presence of procriminal attitudes does not imply the absence of prosocietal attitudes.

Simourd (1997) suggested that the PiD had a two-factor solution and gave them tentative component labels of "Attitude Toward Offenses" and "Criminal Subculture" for components 1 and 2, respectfully. Within the context of the present study, the hypothesis that a two-component solution would be replicated with the young offender sample was supported. However, the item loadings of variables on components did not match the prior analysis on a federal inmate sample thereby failing to support the Simourd's (1997) component labels.

In the present study, Component 1, labelled "Attitude Toward Criminal Offenses", reflects an individual's comfort level towards engaging in criminal activity. Component 2, labelled "Rating Scale Comprehension", reflects rating scale comprehension items. The purpose of items on Component 2 was to familiarize

young offenders to the breadth of the 10-point rating scale. That is, these items were designed to be throw away items rather than clinical assessment items. These items were not designed to provide clinical information.

In the context of the present study, the purpose of these items was validated by the results of the PCA. Overall, items 1 and 2 should be retained in the PiD but not scored since the purpose of these items is to facilitate the comprehension of the remaining 8 items. It appeared as though PiDC2 was adding a constant to each young offender's score on the PiD. For example, the most frequent response was plus 10 for item 1 ($n = 295$) and negative 10 for item 2 ($n = 627$). In addition, the RIOC statistic was identical for the PiD and PiDC1. Based on these findings, it is recommended that the practice of scoring items 1 and 2 be discontinued and that a total score on the PiD be calculated by summing items 3 through 10 and adding a constant of 80 to make scores a positive number.

In summary, future research should be conducted to clarify the contradictory findings surrounding the construct validity of the PiD. For example, reconducting the PCA analysis on the PiD with different sample types (i.e., provincial/federal offenders, probationers, community, etc.) will assess the stability of the component structure across samples of offenders.

Convergent validity. Like the YO-LSI, both the PiD and CSS-M are measures of an individual's propensity for criminal behaviour. The expectation that both procriminal attitude measures would be associated with the YO-LSI was supported by the positive correlation between the YO-LSI and both the PiD and CSS-M. This

finding is comparable to previous research on the relationship between the YO-LSI and the CSS-M (Shields & Simourd, 1991).

Predictive Validity. Young offenders who persist in criminal activity despite incarceration are a great public concern. Discovering and empirically examining the predictors of youthful offending facilitates a more comprehensive understanding about young who engage in criminal behaviour. The hypothesis that the PiD and CSS-M (total and subscale) would be correlates of recidivism was upheld by the results of the present study.

Consequently, these findings provide support for the prediction that young offenders who recidivate have higher procriminal attitudes in comparison to those who do not recidivate. This result was consistent with previous research on the CSS within samples of provincial probationers (Andrews, Wormith & Kiessling, 1985) and provincial incarcerates (Bonta, 1990), on the CSS-M within a sample of young offenders (Shields & Whitehall, 1994) and on the PiD within a sample of federal inmates (Simourd & van der Ven, 1998). More specifically, the PiD and CSS-M appear to be a discriminate tool for distinguishing between recidivists and non-recidivists within a young offender sample.

When both the PiD and the CSS-M are available, it seems as though the PiD and ICO are the only scales which explain unique variability in recidivism with the PiD being the dominant predictor. That is, if both the PiD and CSS-M are available, the best predictor would be the PiD followed by the ICO scale of the CSS-M.

As stated earlier, the reliability of the ICO is questionable. In addition, the percentage of additional variance explained by the ICO is relatively small. If any recommendations or decisions are to be made about young offenders on the basis of the attitude construct (i.e., risk for recidivating), only the PiD needs to be used. Unlike the ICO, the PiD demonstrates both reliability and validity. If future research efforts focus on the psychometric development of the ICO and both acceptable reliability and validity estimates are found, the utility of the ICO contributing to clinical assessment recommendations and decisions should be re-examined.

The results suggest the possibility of the CSS-M, LCP and TLV becoming redundant in the regression equation when the PiD and ICO are present. These analyses do not imply that the CSS-M, LCP and TLV are insignificant predictors of recidivism. In the present study, there were reliable linear relationships between these measures and recidivism as assessed by zero-order correlations. This finding was established for the total sample and the property-based index crime subsample.

For the person-based crime subsample, the PiD was the only predictor to explain unique variability in recidivism. Although there was a reliable correlation between the ICO and recidivism, the correlation between the PiD and recidivism was stronger for the person-based crime offender subsample. More specifically, the strengthened association (e.g., the increased correlation) between the PiD and recidivism may partially explain why the ICO failed to explain unique variability in the criterion variable within this sample of person-based offenders.

If both the PiD and ICO are available, it might not be necessary to re-assess

procriminal attitudes using the entire CSS-M. This result suggests that the CSS-M could be dropped from the intake assessment battery without decreasing the ability to predict recidivism based on the procriminal attitude construct. However, specific items within the CSS-M may point to an important treatment target. If the importance of the CSS-M items as treatment targets is investigated and established, the CSS-M can be used for treatment programming purposes. For example, identifying specific aspects of an offender's attitude that requires change.

In summary, the finding suggests the inclusion of the PiD and CSS-M in a clinical predictive scheme, based on current and past research, is justified. Future research should focus on cross-validating the present study to see if the results will be replicated within other samples of young offenders as well as adult offenders.

Incremental Validity. The correlation between the YO-LSI and recidivism fell within the range (.29 to .47) of prior analyses reported in the correctional research on the LSI (Andrews et al., 1982; Motiuk & Bonta, 1991; Motiuk, Bonta & Andrews, 1990). The hierarchical multiple regression implied that the PiD and ICO explained unique variability in recidivism over and above the YO-LSI. That is, specialized measures of procriminal attitudes (i.e., a need factor) added to the predictability of a young offenders behaviour beyond a more broad based risk/need assessment measure (YO-LSI). It appears as though the PiD and ICO make an independent contribution to the prediction of criminal activity beyond that explained by a well validated risk/need assessment measure. More specifically, the result suggests that both the PiD and ICO possess incremental validity relative to the YO-LSI.

This result is consistent with the PIC-R theory whereby a broad range of risk/need variables are related to a individual's propensity to violate rules. Prior research has not examined this relationship. Future research studies should assess whether this finding holds across different forensic populations. Overall, this finding implies that the PiD and ICO might be able to augment the YO-LSI in a clinical prediction scheme focused on young offenders.

Discriminative validity. Ideally, the prediction of youthful offending on the basis of procriminal attitudes should have a high degree of accuracy. Young offenders who have higher procriminal attitudes should be more at risk for future delinquency than with those who have a more prosocial attitude. The RIOC measure of predictive accuracy illustrated improvements in the prediction of recidivism well above chance with the use of the PiD and/or CSS-M. That is, the mean score on the PiD and CSS-M, individually and combined, was able to classify recidivists from non-recidivists with a level of accuracy greater than chance.

The level of classification accuracy was higher for the PiD than the CSS-M (RIOC: 30% vs 25%). The level of accuracy increased when classifications were based on both the PiD and CSS-M mean score (RIOC = 42%). However, the PiD was able to classify recidivists better than the mean scores of the PiD and CSS-M combined (66% vs 46.0%). Conversely, the combined mean scores of the PiD and CSS-M were able to classify non-recidivists better than the mean score for the PiD alone (75.5% vs 60.0%). The highest level of accuracy was achieved when the classifications were based on the combined mean scores of the PiD and YO-LSI (RIOC = 55%).

Future Directions.

Future research into treatment programming and change score assessments is warranted and justified at the present time.

Treatment Programming. Past and present research clearly indicates that both the PiD and CSS-M are reliable and empirically related to relevant criterion variables. The results suggest that both measures would be useful for treatment planning with young offenders. For example, the PiD and CSS-M are able to identify: (1) young offenders whose attitude is procriminal in nature and (2) therapeutic targets. The research on the procriminal attitude construct has shown that interaction with prosocial models can modify an offender's criminal expression (Andrews, Young, Wormith, Searle & Kouri, 1973; Andrews, Wormith, Kennedy & Daigle-Zinn, 1977).

More specifically, attempts to develop intervention strategies designed to specifically target this need factor is the next logical step. Can the procriminal attitude expression of young offenders be reduced by a cognitive behavioural therapy? This question clearly warrants examination. To date, only a few treatment programs targeting procriminal expression are offered to offender populations (i.e., Henning & Frueh, 1996). All items within the PiD and CSS-M are dynamic in nature. The main advantage of these items is that they are susceptible to change. Focusing on variables which are able to change is a central idea behind therapeutic interventions.

Change Scores. In future research studies on the PiD and CSS-M, change scores could be the predictor rather than assessment scores at intake. As stated earlier, static

and dynamic variables (i.e., procriminal attitudes) provide similar predictions of recidivism (Gendreau et al., 1996). Valid measurements of dynamic variables recognize the importance of multi-method and systematic reassessment (Gendreau et al., 1996; Andrews & Bonta, 1994; Motiuk, 1991). Differences between the original assessment and re-assessment scores might indicate a change within an individual. Change scores, and not initial assessments, should be examined in relation to recidivism if prediction validities are to reach their upper limits (Motiuk & Andrews, 1986). If dynamic variables are correctly assessed, these variables might be more potent predictors of recidivism in comparison to the traditional static variables (Gendreau et al., 1996). To date, there remains a paucity of research examining the impact of dynamic change associated with subsequent recidivism.

It is clear that the procriminal attitude construct provides fertile ground for future research. Many theoretical questions remain unanswered and the practical implications of those questions are profound.

References

Agnew, R. (1995). Testing the leading crime theories: An alternative strategy focusing on motivational processes. Journal of Research in Crime and Delinquency, 32, 361-398.

Agnew, R., & Peters, A. R. (1986). The techniques of neutralization: An analysis of predisposing and situational factors. Criminal Justice and Behaviour, 13, 87-97.

American Psychological Association. (1985). Standards for educational and psychological testing. Washington, DC: Author.

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In J. Kuhl & J. Beckman (Eds.), Action control: From cognition to behaviour (pp. 11-39). New York: Springer -Verlag.

Ajzen, I. (1988). Attitudes, personality, and behaviour. Chicago: Dorsey.

Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. Psychological Bulletin, 84, 888-918.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour. Englewood Cliffs, N. J.-Prentice Hall.

Akers, R. L. (1977). Deviant behavior: A social learning approach (2d Ed.). Belmont, CA: Wadsworth.

Akers, R. L. (1994). Criminological theories: Introduction and evaluation. Los Angeles, CA: Roxbury.

Akers, R. L. (1996). Is differential association/social learning theory cultural deviance theory? Criminology, 34, 229-247.

Akers, R. L., & Gang, L. (1996). A longitudinal test of social learning: Adolescent smoking. Journal of Drug Issues, 26, 317-343.

Alcock, D. A., Carment, D. W. & Sadava, S. W. (1994). A textbook of social psychology. Toronto: Prentice Hall.

Andrews, D. A. (1980). The assessment of correctional outcomes. In M. J., E. R. Christensen, & S. S. DeJulio (Eds). The assessment of psychotherapy outcome. (pp. 160-201) New York; John Wiley.

Andrews, D. A. (1982). A personal, interpersonal and community-reinforcement perspective on deviant behaviour (PIC-R). Toronto: Ontario Ministry of Correctional Services.

Andrews, D. A. (1983). Some experimental investigations of the principals of differential association through deliberate manipulation of the structure of service systems, American Sociological Review, 45, 448-462.

Andrews, D. A. (1985). Notes on a battery of paper-and-pencil instruments: Part 1 assessments of attitudes and personality in corrections. Unpublished manuscript, Carleton University, Ottawa, Ontario, Canada.

Andrews, D. A., & Bonta, J. (1994). The psychology of criminal conduct. Cincinnati, OH: Anderson.

Andrews, D. A., & Bonta, J. (1995). LSI-R: The Level of Service Inventory - Revised. Toronto, Ont.: Multi-Health Systems, Inc.

Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. Criminal Justice and Behaviour, 17, 19-52.

Andrews, D. A. Kiessling, J. J., Mickus, & Kominar, S. (1983). The Level of Supervision Inventory: Risks/needs assessment in community corrections. Unpublished manuscript, Department of Psychology, Carleton University, Ottawa, Canada.

Andrews, D. A., & Wormith, J. S. (1984). Criminal sentiments and criminal behaviour. Programs User Report. Ottawa: Solicitor General Canada.

Andrews, D. A. & Wormith, J. S. (1989). Personality and crime: Knowledge destruction and construction in criminology., Justice Quarterly, 6, 289-309.

Andrews, D. A., Wormith, J. S., & Kiessling, J. J. (1985). Self-reported criminal propensity and criminal behaviour: Threats to the validity of the assessments of personality. Programs Branch User Report. Ottawa: Solicitor General Canada.

Andrews, D. A., Wormith, J. S., Kennedy, D. J., & Dan-Zinn (1977). The attitudinal effects of structured discussions and recreational association between young offenders and undergraduate volunteers. Journal of Community Psychology, 5, 63-71.

Andrews, D. A., Young, J. G., Wormith, J. S., Searle, C. A., & Kouri, M. (1973). The attitudinal effects of group discussions between young criminal offenders and community volunteers. Journal of Community Psychology, 1, 417-

422.

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. Criminology, 28, 369-404.

Austin, R. L. (1977). Commitment, neutralization, and delinquency. In T. N. Ferlinand (Ed.), Juvenile delinquency: Little brother grows up. (pp. 121-137). Beverly Hills, CA: Sage.

Backman, C. E. (1985). Identity, self-presentation, and resolution of moral dilemmas: Towards a social psychological theory of moral behaviour. In B. R. Schenler (Ed.), The self and social life (pp. 261-289). New York: McGraw Hill.

Ball, R. A. (1977). Emergent delinquency in a urban area. In T. N. Ferlinand (Ed.), Juvenile delinquency: Little brother grows up. (pp. 121-137). Beverly Hills, CA: Sage.

Ball, R. A. (1973). Ball's Neutralization Scale. In W. C. Reckless (Ed.), American criminology: New directions (pp. 202-207). New York: Appleton-Century-Crofts.

Bandura, A., Barbaranelli, C., Caprara, V. V., & Partorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. Journal of Personality and Social Psychology 71, 364-374.

Becker, H. S. (1963). Outsiders: Studies in the sociology of deviance. New York: Free Press.

Bonta, J. (1990). Antisocial attitudes and recidivism. Paper presented at the

Annual Convention of the Canadian Psychological Association, Ottawa, Ontario.

Bonta, J. (1996). Risk-needs assessment and treatment. In A. T. Harland (Ed.), Choosing correctional options that work: Defining the demand and evaluating the supply (pp. 18-32). Thousand Oaks, CA.: Sage.

Bonta, J. L., & Motiuk, L. L. (1985). Utilization of an interview-based classification instrument: A study of correctional halfway houses. Criminal Justice and Behaviour, 12, 333-352.

Bonta, J. L., & Motiuk, L. L. (1987). The diversion of incarcerated offenders to correctional halfway houses. Journal of Research in Crime and Delinquency, 24, 302-324.

Brodsky, S. L., & Smitherman, H. (1983). Handbook of scales for research in crime and delinquency. New York: Plenum.

Brown, M. (1983). Principals of educational and psychological testing. New York: Holt, Rinenar, and Winston.

Burgess, R. L., & Akers, R. L. (1966). A differential association-reinforcement theory of criminal behaviour. Social Problems, 14, 128-147.

Clark, J. P. & Wenniger, E. P. (1964). The attitude of juveniles toward the legal institution. Journal of Criminal Law, Criminology, and Political Science, 55, 482-489.

Cohen, A. K. (1955). Delinquent boys: The culture of the gang. Glencoe, IL: Free Press.

Cressey, D. R. (1955). changing criminals: The applications of the theory of

differential association. American Journal of Sociology, 61, 116-120.

Cronbach, L. J., & Meehl, P. F. (1955). Construct validity and psychological tests. Psychological Bulletin, 52, 281-302.

Eagly, A. E., & Chaiken, S. (1993). The psychology of attitudes. New York: Harcourt Brace Javanovich College Publishers.

Elliot, D. S., Huizinga, D., & Memard, S. (1989). Multiple problem youth: Delinquency, substance use, and mental health problems. New York: Springer-Verlag.

Enker, M. S. (1987). Attitudinal and normative variables as predictors of cheating behaviour. Journal of Cross Cultural Psychology, 18, 315-330.

Fishbein, M. (1967). Attitude and the prediction of behaviour. In M. Fishbein (Ed.), Readings in attitude theory and measurement (pp. 477-492). New York: John Wiley.

Fishbein, M., & Ajzen, I. (1974). Attitudes toward objects as predictors of single and multiple behavioral criteria. Psychological Review, 81, 59-74.

Fishbein, M., & Ajzen, I. (1975). Belief attitude, intention and behaviour: An introduction to theory and research. Reading, MA: Addison-Wesley.

Gendreau, P. (1996). Offender rehabilitation: What we know and what needs to be done. Criminal Justice and Behaviour, 23, 144-161.

Gendreau, P. (1996). The principles of effective intervention with offenders. In A. T. Harland (Ed.), Choosing, correctional options that work: Defining the demand and evaluating the supply (pp. 117-130). Thousand Oaks, Ca.: Sage.

Gendreau, P., Grant, B. A. Leipziger, M., & Collins (1979). Norms and recidivism rates for the MMPI and selected experimental scales on a Canadian delinquent sample. Canadian Journal of Behavioral Science, 11, 21-31.

Gendreau, P., Andrews, D. A, Goggin, C., & Chanteloupe, F. (1992). The development of clinical and policy guidelines for the prediction of criminal behaviour in criminal justice settings. Unpublished manuscript available from the Department of Psychology, University of New Brunswick, St. John, New Brunswick, Canada.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult -offender recidivism: What works! Criminology, 34, 575-607.

Gendreau, P., Goggin, C., & Law, M. (1997). Predicting prison misconducts. Criminal Justice and Behaviour, 24, 414-431

Giles, M., & Cariness, E. D. (1995). Blood donation and Ajzen's theory of planned behavior: An examination of perceived behavioral control. British Journal of Social Psychology, 34, 173-188.

Goden, Valois, Lepage, & Desharnais, (1992). Differences in perceived behaviours to exercise between high and low intenders: Observations among different populations. American Journal of Health Promotion, 8, 279-285.

Gold, M., & Osgood, D. W. (1992). Personality and peer influence in juvenile corrections. London: Greenwood Press.

Gomme, I. M. (1985). Predictors of status and criminal offenses among male and female adolescents in an Ontario community. Canadian Journal of Criminology,

27, 146-159.

Guerra, N. G. (1989). Consequential thinking and self-reported delinquency in high-school youth. Criminal Justice and Behavior, 16, 440-454.

Guerra, N. G., Huesman, L. R., & Hanish, L. (1994). The role of normative beliefs in children's social behavior. In N. Eisenberg (Ed.), Social development (pp. 140-158). Thousand Oaks, CA: Sage.

Hirschi, T. (1969). Causes of Delinquency. Berkeley: University of California Press.

Hoffman, P. B. (1982). Females, recidivism and Salient Factor Score: A research note. Criminal Justice and Behaviour, 9, 121-125.

Hoge, R. D., & Andrews, D.A. (1996). Assessing the youthful offender: Issues and techniques. New York: Plenum Press.

Hoge, R. D., & Andrews, D. A. (1994). The Youth Level of Service/Case Management and manual. Ottawa, Ontario: Department of psychology, Carleton University.

Hoge R. D., Andrews D. A., & Leishied, A. W. (1994). Tests of three hypothesis regarding the predictions of delinquency. Journal of Abnormal Child Psychology, 22, 547-559.

Hope, G. K. (1989). Religious involvement and deviance: A social learning approach. Unpublished PhD dissertation: Carleton University.

Jenson, G. F.(1973). Parents, peers, and delinquent action: A test of the differential association perspective. American Journal of Sociology, 78, 562-575.

Johnston, R. E. (1979). Juvenile delinquency and its origins: An integrative theoretical approach. Cambridge, England: Cambridge University Press.

Jones, P. R. (1996). Risk prediction in criminal justice. In A. T. Harland (Ed.), Choosing correctional options that work: Defining the demand and evaluating the supply (pp. 33-68). Thousand Oaks, Ca.: Sage.

Law, M. A. (1995). Assessing antisocial attitudes: A revision of the Criminal Sentiments Scale. Unpublished master's thesis, Department of Psychology, Carleton University, Ottawa.

Leschied, A. W., Austin, G. W., & Jaffe, P. G. (1988). Impact of the young offenders acts on recidivism rates of special needs youth: Clinical and policy implications. Canadian Journal of Behavioural Science, 20, 322-331.

Loeber, R., & Dishion, T. J. (1983). Early predictors of male delinquency: A review. Psychological Bulletin, 94, 68-99.

Mak, A. S. (1991). Testing a psychological control theory of delinquency. Criminal Justice and Behaviour, 17, 215-230.

Mak, A. S. (1990). Psychosocial control characteristics of delinquents and nondelinquents. Criminal Justice and Behaviour, 18, 287-303.

Mak, A. S. (1987). Psychosocial control characteristics and adolescent delinquent behaviour. Unpublished doctoral dissertation. Australian National University, Canberra.

McGee & Newcombe, (1992). General deviance syndrome: Expanded hierarchical evaluations at four ages from early adolescence to adulthood. Journal of

Consulting and Clinical Psychology, 60, 766-776.

Merton, R. K. (1957). Social theory and social structure. New York: Free Press. Mihalic, S. W., & Elliot, D. (1997). Short and long term consequences of adolescent work. Youth and Society, 28, 464-498.

Mills, J. F., & Kroner, D. G. (1996). The criminal sentiments scale: Predicative validity in a sample of violent and sex offenders. Journal of Clinical Psychology, 53, 399-404.

Minor, W.W. (1980). The neutralization of criminal offense. Criminology, 18, 103-120.

Monahan, J. (1981). Predicting violent behaviour. Beverly Hills, CA: Sage.

Motiuk, L. (1991). Antecedents and consequences of Prison adjustment: A systematic assessment and reassessment approach. Unpublished doctoral dissertation, Carleton University, Ottawa, Ontario, Canada.

Motiuk, L. (1993). Where are we with our ability to assess risk? Forum on Corrections Research, 5, 14-19.

Motiuk, L., & Porporino, F. (1989). Field test of the Community Risk/Needs Measurement Scale (Research Report No. R-06). Ottawa: Correctional Service of Canada.

Motuik, M. S., Motiuk, L. L., & Bonta, J. (1992). A comparison between self-report and interview based inventories in offender classification. Criminal Justice and Behavior, 19, 143-159.

Mylonas, A. D., & Reckless, W. C. (1963). Prisoner's attitudes toward law

and legal institutions. Journal of Criminal Law, Criminology and Police Science, 54, 479-484.

Nettler, G. (1978). Explaining Crime. New York: McGraw-Hill.

Norman & Smith (1995). The theory of planned behaviour and exercise: An investigation into the role of prior behaviour, behavioural intentions, and attitude variability. European Journal of Social Psychology, 12, 403-415.

Nuffield, J. (1982). Parole decision-making in Canada. Ottawa: Solicitor General of Canada.

Reckless, W. C. (1967). The crime problem. New York: Appleton-Century Crafts.

Roy, R. E., & Wormith, J. S. (1985). The effects of incarceration: Measuring criminal sentiments. Ottawa, Canada: Ministry of the Solicitor General of Canada.

Schwendinger, H., & Schwendinger, J. (1969). Delinquent stereotypes of probable victims. In M. Klien (Ed.), Juvenile gangs in context (pp. 91-105). Englewood Cliffs, NJ: Prentice-Hall.

Shaw, I. W. & Wright, J. M. (1967). Scales for the measurement of attitudes. New-York: McGraw-Hill Book company.

Shields, I. W. (1993). The use of the Young Offender-Level of Service Inventory with adolescents. IARCA Journal on Community Corrections, 5, 10-26.

Shields, I. W. & Simourd, D. J. (1991). Predicting predatory behavior in a population of young offenders. Criminal Justice and Behaviour, 18, 180-194.

Shields, I. W., & Whitehall, G. C. (December, 1991). The Pride in

Delinquency Scale. Paper presented at the eastern Ontario correctional psychologists' winter conference, Burritts Rapids, Ontario.

Shields, I. & Whitehall, G. C. (1994). Neutralization and delinquency among teenagers. Criminal Justice and Behaviour, 21, 223-235.

Simourd, D. (1997). The criminal sentiments scale-modified and pride in delinquency scale: Psychometric properties and construct validity of two measures of criminal attitudes. Criminal Justice and Behaviour, 24, 52-70.

Simourd, D. J., & van der Ven, J. (1998). Assessment of criminal attitudes: Criterion related validity of the criminal sentiments scale modified and the pride and delinquency scale.

Simourd, L., & Andrews, D. A. (1994). Correlates of delinquency: A look at gender differences. Forum on Corrections Research, 6, 26-31.

Skinner, W. F. & Fream, A. M. (1997). A social learning analysis of computer crime among college students. Journal of Research in Crime and Delinquency, 34, 495-518.

Sutherland, E. H. (1947). Principles of criminology (4th ed.). Philadelphia: Lippencott.

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization- A theory of delinquency. American Sociological Review, 22, 664-670.

Vallerand, R. J., Deshaies, P., Cuerrier, J. P., Pelletier, L. G., & Mongeau, C. (1992). Ajzen and Fishbein's theory of reasoned action as applied to moral behavior: A confirmatory analysis. Journal of Personality and Social Psychology, 62, 98-109.

Wormith, J. S. (1984). Attitude and behaviour change of correctional clientele: A three year follow-up. Criminology, 22, 595-617.

Wormith, J. S. & Andrews, D. A. (1984). Criminal sentiments and criminal behavior: A construct validation. Ottawa, Canada: Ministry of the Solicitor General of Canada.

Wormith, J. S., & Andrews, D. A. (1995). The development and validation of three measures of criminal sentiments and their role in the assessment of offender attitudes. Paper presented at the annual convention of the Canadian Psychological Association, Charlottetown, Canada.

Appendix A

Criminal Sentiment Scale-Modified

1. Pretty well all laws deserve our respect.
2. It's our duty to obey all laws.
3. Laws are usually bad.
4. Law is rotten to the core.
5. You cannot respect the law because its there only to help a small and selfish group of people.
6. All laws should be obeyed just because they are laws.
7. The law does not help the average person.
8. The law is good.
9. Law is fair.
10. The law makes slaves out of most people for a few people on top.
11. Almost any jury can be fixed.
12. You cannot get justice done in court.
13. Lawyers are honest.
14. The crown often produces fake witnesses.
15. Judges are honest and kind
16. Court decisions are pretty well always fair.
17. Pretty well anything can be fixed in court if you have enough money.
18. A judge is a good person.
19. The police are honest.

20. A cop is a friend to people in need.
21. Life would be better with fewer cops.
22. The police should be paid more for their work.
23. The police are as crooked as the people they arrest.
24. Society would be better off if there were more police.
25. The police almost never help people.
26. Sometimes a person like me has to break the law to get ahead in life.
27. Most successful people broke the law to get ahead in life.
28. You should always obey the law even if it keeps you from getting ahead in life.
29. It's OK to break the law as long as you don't get caught.
30. Most people would commit crimes if they knew they wouldn't get caught.
31. There is never a good reason to break the law.
32. A hungry man has the right to steal.
33. It's OK to get around the law as long as you don't actually break it.
34. You should only obey those laws that are reasonable.
35. You're crazy to work for a living if there's an easier way, even if it means breaking the law.
36. People who have broken the law have the same sort of ideas about life you .
37. You prefer to be with people who obey the law rather than people who

break the law.

- 38. You're more like a professional criminal than the people who break the law now and then.
- 39. People who have been in trouble with the law are more like you than people who don't have trouble with the law.
- 40. You have very little in common with people who never break the law.
- 41. No one who breaks the law can be my friend.

Appendix B

Pride in Delinquency Scale (PiD)

I'm going to read you a list of behaviours. You may have done some of them; there are probably some you haven't done. It doesn't really matter if you've done them or not. What I'd like you to do is imagine for a moment that you had done each of them, and tell me how you'd feel about yourself if you had done them: proud or ashamed. In fact, I'd like you to rate each of them on a scale that goes from positive ten to negative ten. You'd give it a positive number if you'd be proud to do it, and a negative number if you'd be ashamed to do it. The bigger the number, the more proud or ashamed you'd be. So if you gave it a positive 8, 9, or 10, you'd be extremely proud to do it. If you gave it a negative 4, 5, or 6, you'd be moderately ashamed to do it. If you gave it a positive 1 or 2, you'd be just a little bit proud. If you had no feelings, if you'd be right in the middle, you'd give it a 0. Let me give you a few examples before we begin. Most people would give a positive 10 to saving the life of a drowning child, because they'd be extremely proud to do a thing like that. Most people would give a negative 10 to murdering a young child, because they'd be extremely ashamed to do a thing like that. Most people would give 0 to waking up in the morning, because they wouldn't be proud or ashamed to get up. They just get up and get going. Now remember, I want you to tell me how you'd feel about doing each of these things, not how most people would feel. Ready? Here's the first one:

1. Beating up a child molester.
2. Committing sexual assault.
3. Breaking into a family's home when no one is in and stealing jewellery and a VCR.
4. Seeing a store being robbed and not calling the police.
5. Driving home after a party when you've had too much to drink.
6. Striking someone who insults you; let's say they call you a "goof".
7. Selling cocaine.
8. Carrying a concealed weapon, like a pistol, without a license.
9. Pointing a shotgun at a store clerk your own age and telling him/her (same gender as the client) to hand over all the money in the till.
10. Getting away from the police after a high speed chase.

Appendix C

Young Offender Level of Service Inventory (YO-LSI)

Criminal History:

1. Prior closed custody incarceration behavioural reports.
 2. Two or more prior convictions.
 3. Three or more present offenses
 4. Arrested under the age of 16 (age)
 5. Charges laid while in open custody or while on probation.
 6. Shoplifting.
 7. Vandalism/Mischief.
 8. Break & Enter.
 9. Assault/Violence: (vs.: family/nonfamily/authority figure, weapon used)
 10. Armed Robbery.
 11. Trespassing/Loitering.
 12. Breach of Probation/Open Custody.
 13. Sexual Offenses/Misconduct.
 14. Theft (over or under).
 15. Possession of Stolen Goods.
 16. Forgery/Fraud
- Arson/Firesetting
- Impaired Driving
- Escape/AWOL

Criminal History Subtotal ____

Substance Abuse

17. Smokes tobacco.
18. Has ever used illicit drugs.
19. Regular use of cannabis.
20. Regular use of other drugs
(Specify: _____)
\$/wk. Spent on drugs _____
has used needles _____
has used solvents _____
21. Charged or convicted of possession or trafficking drugs.
22. Alcohol abuse.
23. Substances use interferes with daily functioning (have caused:
family problems _____
school/work problems _____
medical problems _____
24. Crimes for drugs, alcohol.
25. Crimes while intoxicated.

Substance Abuse Subtotal _____

Educational/Employment Problems

Highest grade completed _____

Participated well in school/job _____

- 26. Not in school on the street
Learning disabilities _____
- 27. Truant when in enrolled in last year.
- 28. Has failed a grade.
- 29. Poor school achievement.
- 30. Poor classroom behaviour in latest year.
- 31. Suspended or expelled from school.
- 32. Poor relations with peers.
- 33. Poor relations with authority.
Bullied at school.
No job on the street.
Worked <50% of last year.
Never worked a full year.
Source of finance.
Debts, Budgeting.
- 34. Has never been employed.
- 35. Has been fired.
Education/Employment Subtotal _____

Family Problems

- 36. Receives social assistance.
- 37. Chaotic family.
- 38. Poor or no relations with (step)mother.

- 39. Poor or no relations with (step)father.
- 40. Poor relations with siblings.
Relations with other relatives.
- 41. Perception of poor parental supervision.
- 42. Has been in a group home.
- 43. Often away from home.
- 44. Criminal history: father, mother, sibs.
- 45. Psychiatric history: father, mother, sibs.
- 46. Substance abuse: father, mother, sibs.
- 47. Physical abuse: father, mother, sibs.
Was neglected.
Emotional abuse.
Has witness family violence.
- 48. Sexual abuse.
- 49. Siblings have been in a group home.
Family Problems Subtotal _____

Peer Relationship Problems

- 50. Could make better use of leisure time.
- 51. No prosocial personal interests.
No organized activities.
- 52. Socially isolated.
- 53. Has criminal acquaintances.

- 54. Has criminal friends.
- 55. Has very few prosocial acquaintances.
- 56. Has very few prosocial friends.
- 57. Peers outside age range.
- 58. Strong allegiance to criminal peers.
- 59. Has sexual experiences.
- 60. Is promiscuous.
- 61. Is unconcerned with birth control.
- 62. Has children.

Satisfied with romantic situation.

Peer Problems Subtotal _____

Accommodation Problems

- 63. Lives away from parents/guardians.
- 64. Housing problems or lives in project.
- 65. Frequent address changes (3 in last year).
- 66. High crime neighbourhood.

Accommodation Subtotal _____

- 67. History of psychological intervention.
- 68. Attempted suicide.
- 69. Supportive of delinquency.
- 70. Poor attitude toward sentence.
- 71. Has tattoos.

- 72. Absence or reasonable future plans.
- 73. Intends to continue crimes.
- 74. Psych intervention is recommended.
- 75. Intellectual disorder suspected.
- 76. Belligerent during interview.

Miscellaneous Subtotal _____

YO-LSI Total Score _____