

**Development of a Reliable Self-Report Instrument for the Assessment of
Criminogenic Need**

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EXECUTIVE SUMMARY

The Antecedents to Crime Inventory (ACI) was created to assist clinicians in identifying individuals' antecedents to offending. The ACI is a self-report questionnaire consisting of high-risk situations (or needs) that may place an offender at risk of re-offending. At present the ACI is a useful screening instrument for determining individual treatment needs and may form an integral part of a multi-method criminogenic need assessment. The ACI was determined to be a reliable instrument, however its validity is still somewhat premature. Although not explicitly developed as a recidivism prediction instrument, meaningful differences existed between recidivists and successful releases on several domains. Further, the goal to develop a self-report measure to assist clinicians to identify criminogenic needs appears to have been met. This report describes the process of constructing and validating the ACI and concludes by presenting a version for use in the criminal justice system.

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INTRODUCTION

Within the field of addictive behaviours, the relapse prevention model has been developed as a maintenance program to enable individuals in treatment to prevent relapse and maintain newly adopted behaviour patterns (George & Marlatt, 1986). Since then the concept of identifying high risk situations and their relation to relapse has been extensively applied in the areas of the assessment and treatment of sexual offenders (Laws, 1986; Marshall & Barbaree, 1990). It is believed that a distinct pattern occurs, known as the offence cycle (Pithers, 1990), whereby offenders repeat antisocial behaviours in response to being presented with similar cues. These cues can be either events or dispositions and are referred to as antecedents.

That specific antecedents may exist which consistently relate to antisocial behaviour became fused with the broader literature of criminogenic needs with the application of relapse prevention to the treatment of non-sexual offenders (McGuire, 1995). The idea that an offence cycle exists and can be delineated for an offender has contributed to an increased understanding regarding the treatment and management of offenders (Quinsey & Walker, 1992). This idea has been incorporated into contemporary protocols for the assessment of offenders criminogenic needs (Level of Supervision - Revised, Andrews & Bonta, 1995; Offender Intake Assessment, Motiuk, 1997; Psychological Intake Assessment, Serin, 1997). Criminogenic needs are "dynamic attributes of the offender that, when changed, are associated with changes in the probability of recidivism" (Andrews & Bonta, 1998).

It has been recommended that within the context of contemporary risk appraisals a multi-method assessment be preferred (Motiuk & Serin, 1998). Currently there exist several structured clinical interviews and case-based reviews for assessing criminogenic needs (Leis, Motiuk, & Ogloff, 1995), however there are no explicit self-report measures. The purpose of this report is to describe an effort to complement existing assessment approaches with a reliable self-report measure

of antecedents to criminality. Several authors have investigated antecedents to events such as alcohol relapse (Annis & Davis, 1989) and sexual reoffending (Pithers, 1991) in addition to the identification of early or developmental factors (Loeber & Dishion, 1983; Moffitt, 1993). In an effort to identify more proximal cues to reoffending, Zamble and Quinsey (1997) conducted a series of interviews with offenders yielding a range of factors consistent with earlier findings but with increased emphasis on emotional events.

The Personal, Interpersonal, and Community-Reinforcement (PIC-R; Andrews & Bonta, 1998) perspective on criminal behaviour encouraged the identification of factors thought to influence the engagement in antisocial behaviour. This perspective emphasizes the need to understand behaviour within the context of the individual, their situation, and their relations with others. Research investigating relapses across various addictions (Cummings, Gordon, & Marlatt, 1980) supports this model, finding that 71% of all relapses were precipitated by negative emotional states (35%), interpersonal conflict (16%), and social pressure (20%).

Zamble and Quinsey (1991) investigated more specific precursors to offending in a sample of offenders. In those who reported drinking 8 standard drinks per day, 53% linked this use to verbal or physical aggression. Furthermore, in the month preceding an offence, dysphoric mood depression (23%), anger (17%), and anxiety (15%) were noted as precursors. For those who had committed a robbery, financial gain was cited 88% of the time while peer pressure and boredom were less frequently cited, reflecting 10% of respondents' reasons. This evidence provides support for the inclusion of these domains in the assessment of antecedents to criminality. Although these factors are unlikely to apply uniformly across all offenders, the results may serve to inform intervention and supervision strategies.

Currently several need areas have been identified and are consistently considered in offender assessment: Employment; Marital / Family Relationships; Associates / Social Interaction; Substance Abuse; Community Functioning; Personal / Emotional Orientation; Attitude. A more detailed description of these domains and the literature supporting their designation as criminogenic needs is available elsewhere (Correctional Service Canada, 1998). The development of the Level of Supervision Inventory (Andrews, 1982) represented an initial effort at formalizing the assessment of these criminogenic needs among offenders. This was a departure from psychologists' efforts to identify dispositions or traits in offenders relating to psychopathology (Blackburn, 1996). Subsequent research has demonstrated that high scores (high needs) on the LSI correlate with recidivism (Andrews, 1989).

Precursors to reoffending can be categorized (Pithers, 1991) as predisposing (early), precipitating (immediate), and perpetuating (ongoing) risk factors. Predisposing risk factors, while important in taxonomic research, are static and not responsive to intervention. The perpetuating risk factors are ongoing problems in an offender's life, and are therefore assessed post-treatment during community follow-up. It is the precipitating risk factors, occurring in the 6 months prior to the offence, which are the focus of the ACI.

The ACI is a self-report questionnaire intended to reflect the following proximal cues: impulsivity; social pressure; excitement; anger; social alienation; substance abuse; financial concerns; interpersonal conflict; and family conflict. Clinical lore suggests these nine areas, while not exhaustive, reflect variables considered to be related to criminality. For instance, Zamble and Quinsey (1997) describe impulsivity, anger, social alienation, and financial pressures as proximal cues that offenders' report lead to their commission of crimes. Impulsivity, anger and excitement are important in poorly regulated individuals and therefore relevant domains for inclusion in a self-report measure of criminogenic need. Pithers, Beal,

Armstrong and Petty (1989) report clinician's ratings of social alienation or depression, anger, and substance abuse to be important precursors to sexual offending. Also, Andrews (1982) notes the importance of financial difficulties and the commission of crimes to secure money. Lastly, conflict both within and outside the family is considered relevant to criminality (Williamson, Hare, & Wong, 1987).

The process for the identification of high-risk situations using detailed clinical and criminal records has been described by Pithers et al. (1989). Although their guidelines regarding conducting clinical interviews and training of staff was intended for the assessment of sexual offenders, they appear equally applicable to non-sexual offenders. It was intended that the development of the ACI would augment this process, potentially identifying key areas for additional probing within an interview.

Scale Creation

The rationale for creating the ACI was to delineate the antecedent categories into detailed circumstances, both additive (extended stimuli) and subtractive (diminished stimuli), that were representative of criminogenic needs and could be completed as a self-report inventory. While information obtained from an interview incorporates the assessor's perceptions and insights, the self-report provides the forum for which the offender can identify their own needs, an important component of offender assessments (Blackburn, 1992). Moreover, the ACI represents areas of need that are represented in the psychological literature and that may not be as well articulated in the existing assessment strategies of criminogenic need. The addition of the ACI may facilitate a more accurate measurement of criminogenic needs and assist in the development of more precise intervention strategies.

The development of a summated rating scale, such as the ACI, entails numerous phases. The purpose of this report is to describe the process of constructing the ACI and to present a reliable self-report instrument for the assessment of antecedents to antisocial behaviour.

The first phase in the construction of the ACI was to clearly define what the scale was intended to measure. A review of the empirical literature yielded 9 distinct domains considered antecedents to antisocial behaviour. The development of reliable domains (described in Table 1) for assessing antecedents to crime was the intention in creating the ACI.

The next phase entailed writing an initial item pool to be subjected to statistical analysis later in the process of scale construction. A list of 145 items was derived representing different circumstances that might precede the commission of a criminal act (see Appendix A for list of items). Each item is evaluated according to whether the thoughts or situations preceded their crime (never, rarely, often, and almost always). The incorporation of both multiple items per domain and multiple response choices was intended to increase response precision.

Table 1 Domain definitions of the ACI

Domains	Definition
Impulsivity	Inability to delay gratification; lack of planning; lack of forethought.
Social Pressure	Doing what others expect; inability to say "no" to others.
Excitement	Need for immediate gratification; sensation seeking; proneness to boredom.
Social Alienation	Feelings of inadequacy; lack of purpose; need to belong and be accepted by others.
Substance Use	Excessive use of drugs and alcohol; commits crimes in order to maintain habit.
Financial	Need for money; inability to maintain a job.
Interpersonal Conflict	Poor conflict resolution skills; inability to formulate and enforce personal boundaries.
Family Conflict	Inability to resolve routine family conflicts; unrealistic expectations of family members.

Item Selection

Internal criterion: A sample of 364 men offenders institutionalized at several Ontario facilities (Millhaven Assessment Unit, Joyceville, Frontenac and Pittsburgh) completed the 145-item ACI. This sample was mostly representative of the men offender population drawn from an admission unit, at a medium and minimum security institution. The intention of this step was to perform an item analysis in order to choose a set of items that formed an internally consistent domains and scale as a whole. Throughout the process of scale reduction, the aim was to obtain parsimony without compromising on internal

consistency. Internal consistency was measured using coefficient alpha, which is the degree to which the items in the scale (or domains) measure the same construct.

In an effort to find those items that formed an internally consistent scale, a reliability analysis was performed for each domain. The rationale for conducting the analysis in this manner was to ensure that the same underlying construct was measured. Moreover, this scale was designed to provide insight into the various domains with no meaning attached to a total score for the scale. The reliabilities for the initial item pool are listed in Table 2. The alpha levels and mean inter-item correlations were all within the acceptable to admirable range. However, the number of alpha's above .90 is an indication that there is redundancy among the items within the domains (Crocker & Algina, 1986). Considering that the 145-item scale was much longer than desired, the redundancy could be minimised by reducing the length of the scale.

Table 2 Domain Reliabilities for the Initial Item Pool

Domains	No. of Items	Alpha	Mean Inter-item <i>r</i>
Impulsivity	25	0.91	0.31
Social Pressure	10	0.88	0.43
Excitement	10	0.88	0.43
Anger	15	0.92	0.44
Social Alienation	25	0.95	0.42
Substance Use	10	0.89	0.45
Financial	10	0.90	0.48
Interpersonal Conflict	20	0.93	0.42
Family Conflict	20	0.91	0.37

There were three primary strategies adopted in this item reduction process. The first was to decide upon an optimal number of items per domain. The second was to examine the nature of the intercorrelations among the items and delete one of the two items that were highly intercorrelated or uncorrelated with each other. Finally, the third was to retain those items that had the highest item-remainder correlations.

First, items with inter-item correlations ranging between 0.15 and 0.60 were considered for inclusion while those outside this range were eliminated. This process was performed to ensure that the items were neither unrelated or a replication of other items within the domain. The next step examined the item-remainder correlations. This analysis compares each item with the sum of the remaining items in order to determine how well each individual item relates to the other items in the domain. Those items with low item-remainder correlations were also considered for elimination. When an item had an inter-item correlation outside the range for inclusion, the item with the lowest item-remainder correlation was deleted. After this was done all items with the lowest item-remainder correlations were deleted until the domain consisted of 8 items. The outcome of this process was a reduction in the initial item pool from 145 items to 72 items.

The revised 72-item ACI was subjected to a reliability analysis to ensure that the item deletion process did not reduce the alpha's below an acceptable level of 0.70 (Nunnally, 1978). Table 3 displays the results of this analysis demonstrating that an acceptable reliability and average inter-item correlation was maintained. Although the alpha's were reduced somewhat from the initial item pool, this was due primarily to the reduced variability caused by the elimination of items.

Table 3 Reliability of the 8-item Domains

Domains	No. of Items	Alpha	Mean Inter-item <i>r</i>
Impulsivity	8	0.84	0.40
Social Pressure	8	0.83	0.39
Excitement	8	0.84	0.41
Anger	8	0.88	0.48
Social Alienation	8	0.89	0.50
Substance Use	8	0.86	0.44
Financial	8	0.87	0.47
Interpersonal Conflict	8	0.88	0.49
Family Conflict	8	0.84	0.43

External criterion: One of the most bothersome aspects of self-report inventories is the possible effect of biases such as self-deception and impression management. Individuals high in self-deception have a propensity to be overconfident in their response choices while those high in impression management tend to over-report desirable behaviours and under-report undesirable behaviours. In either case, the completion of the self-report questionnaire will not be in accordance with their true feelings or actions. In order to determine whether the ACI was subject to response bias, the Balanced Inventory of Desirable Responding (BIDR; Paulhus & Reid, 1991) was administered to a subset of the sample ($n = 97$). This information was used as an external criterion for item selection facilitating the elimination of those items for which social desirability was highest.

The items were correlated with both the impression management and self-deception subscales of the BIDR. The numerous correlations inflated the probability of Type I errors resulting in the adoption of a more conservative level

for rejection ($p = 0.01$). The results suggested that some of the domains were subject to more bias, particularly to self-deception, than other domains (see Appendix B). For instance, both forms of bias equally influenced excitement and social pressure. On the other hand anger, social alienation, substance abuse and interpersonal and family conflict were strongly influenced by only self-deception. The financial domain was unrelated to any form of bias. The nature of the correlations (negative) suggest that as the offenders engage in more self-deception they are less likely to endorse the items as antecedents to their antisocial behaviour.

Using the BIDR as an external criterion for item elimination, it was decided that 2 additional items within each domain would be eliminated. A scale consisting of 6 items per domain was decided upon as there was a substantial reduction in reliability using 5 items per domain. The outcome of this process was a reduction from 145 items in the initial item pool to a 54-item scale. The items that constitute each domain are listed in Table 4 (see Appendix C for the testing version).

Table 4 Domain Items of the ACI

Domains	Items
Impulsivity	When I suddenly had an urge to do it When I thought I needed to show others I was in control When it just felt good at the time When I wondered about my self-control and felt like testing it When I couldn't wait to do it legally When I wanted to show off in front of others
Social Pressure	When I gave my word and couldn't back down When someone told me about a surefire score When I had to save face When someone approached me with a plan and I didn't know how to say no When everyone else was doing it When I came across the same situation that had prompted me to commit crimes previously
Excitement	When someone dared me not to When I lived on the edge When I would remember how good it felt When I needed some excitement When I was bored When I felt restless and couldn't settle down
Anger	When I felt really pissed off When I was fed up with others putting me down When I felt someone deliberately tried to hurt me When I was angry When I was frustrated with someone When someone took advantage of me

Social Alienation	<p>When I was afraid that things weren't going to work out</p> <p>When I couldn't seem to do anything I tried</p> <p>When I couldn't seem to do anything right</p> <p>When I felt I didn't fit in with others</p> <p>When life seemed to lack all meaning</p> <p>When I felt life was useless</p>
Substance Use	<p>When I needed money to buy more booze</p> <p>When I was so drunk that I couldn't remember</p> <p>When I was somewhat drunk</p> <p>When I needed money to buy more drugs</p> <p>When I was so stoned that I couldn't remember</p> <p>When I was somewhat stoned</p>
Financial	<p>When I couldn't find a job</p> <p>When my welfare/UIC ran out</p> <p>When I couldn't find a job that paid more than minimum wage</p> <p>When I had to borrow money from friends</p> <p>When I quit my job</p> <p>When I owed money to others</p>
Interpersonal Conflict	<p>When someone made fun of me</p> <p>When I felt jealous over something a friend had done</p> <p>When someone treated me with disrespect</p> <p>When I fought with friends</p> <p>When others interfered with my plans</p> <p>When others took advantage of me</p>
Family Conflict	<p>When my kids didn't do as they were told</p> <p>When my wife/girlfriend wanted me to stop seeing my friends</p> <p>When my kids had problems at school</p> <p>When my kids were bothering me</p> <p>When my wife/girlfriend yelled at me</p> <p>When my wife/girlfriend wanted me to take a crappy job</p>

Reliability

The elimination of 91 items from the initial item pool rendered it necessary to repeat a reliability analysis with the new 54-item scale. Although a reduction in the reliability coefficients was expected, it should be insubstantial if the appropriate items were deleted. The reliability coefficients, mean inter-item correlations, and domain descriptives are listed in Table 5. The results demonstrate excellent domain reliabilities. The reliability for the entire scale was 0.95 with a mean inter-item correlation of 0.31. Since a total score is not meaningful with this scale the domain reliabilities are of greater relevance.

Table 5 Reliability of the 6-item Scale

Domains	Alpha	Mean Inter-item <i>r</i>	Mean	<i>SD</i>
Impulsivity	0.80	0.40	3.32	3.68
Social Pressure	0.79	0.40	3.95	3.92
Excitement	0.80	0.40	3.41	3.67
Anger	0.85	0.48	3.52	4.04
Social Alienation	0.86	0.51	3.44	4.12
Substance Use	0.84	0.48	3.95	4.50
Financial	0.83	0.45	3.91	4.10
Interpersonal Conflict	0.84	0.48	2.10	3.03
Family Conflict	0.79	0.42	1.22	2.37

Note: Possible range of scores per domain is 0 to 18.

The number of items strongly correlating with the BIDR prompted the development of a domain measuring response bias. This domain was created from items excluded during item analysis and which met the following criteria: 1) were endorsed by more than 80% of the normative sample, 2) were representative of the domains, and 3) formed an internally consistent domain.

An examination of the items produced 13 items that met the first criteria. These items were examined to determine whether they met the last two criteria. The 6 items (Table 6) that were chosen represented 5 different domains and produced the greatest reliability. The response set domain had a mean of 1.62, standard deviation of 2.89, alpha coefficient of 0.82 and a mean inter-item correlation of 0.43.

Table 6 Response Set Domain

Domain	Items
Response Set	When I felt uncomfortable around others When I tried to impress others by buying them drugs When someone didn't like me for no good reason When I thought friends were trying to control me and I wanted to feel more independent When my wife/girlfriend reminded me that her parents told her I wouldn't amount to anything When my wife/girlfriend and I were having sexual problems

Validity

Convergent validity: The retrospective nature of self-report measures elicits concerns regarding the validity of the information. For instance, an offender could have been angry when committing the offence, but no longer reports being angry several months later and this may affect their response patterns on the ACI. In an effort to partially address the issue of validity, clinicians were asked to consider file and case history information, criminal records, and interview information for 139 of the offenders (38% of the total sample) and to *independently* assess the extent to which the offender's criminality might be explained by one or more of the domains.

The correlation between psychologists' ratings of antecedents and the obtained domain scores are presented in Table 7. The results demonstrate that there was strong agreement between independent ratings by clinicians and offenders' self-reported antecedents to criminality.

Table 7 **Correlations between ACI Domains and Psychologists' Ratings of Antecedents**

Domains	<i>r</i>	<i>n</i>
Impulsivity	0.31**	139
Social Pressure	0.27*	134
Excitement	0.29**	138
Anger	0.54**	138
Social Alienation	0.28**	139
Substance Use	0.68**	135
Financial	0.47**	135
Interpersonal Conflict	0.22*	137
Family Conflict	0.23*	138

* $p < .01$. ** $p < .001$.

Predictive validity: The validity of the ACI is still somewhat premature. However, at the time the initial item pool was assessed, the Statistical Information on Recidivism Scale (SIR; Nuffield, 1982) was concurrently administered to a sample of 97 offenders. The validity of the ACI would be partially supported if it was negatively correlated with the SIR (lower scores reflect higher risk). Furthermore, this analysis would determine whether antecedents identified by the ACI were related to the prediction of risk. To control for the increased probability

of a Type I error due to the numerous correlations, a more conservative level of rejection was adopted (0.01). Referring to Table 8, most domains were unrelated to the SIR. This is not surprising given that, due to the floor effect, there was very little variability in the ACI scores. Despite this, the substance use and financial domains emerged as potentially important antecedents as the risk of re-offending increases. These domains are discussed as 'potentially important' since their correlations did not meet the 0.01 criteria.

Table 8 Domain Correlations with the SIR ^a

Domain	Total SIR	Risk Group ^b
Impulsivity	-0.01	0.04
Social Pressure	-0.10	0.08
Excitement	0.00	0.04
Anger	0.01	-0.01
Social Alienation	-0.04	-0.04
Substance Use	-0.17	0.18
Financial	-0.18*	0.16
Interpersonal Conflict	0.10	-0.11
Family Conflict	0.09	-0.09

^a These are semi-partial correlations controlling for self-deception.

^b Risk group: very poor (-30 to -9), poor (-8 to 5), very good (6 to 27).

* $p < .05$.

Discriminant validity: Follow up data was available on 277 of the normative sample. Of this sample, 40.1 % ($n = 111$) did not recidivate while 59.9% ($n = 166$) recidivated. A multivariate analysis of variance (MANOVA) was performed in order to determine whether recidivists differed from non-recidivists on any of the ACI domains.

The overall MANOVA model was significant ($F(10, 266) = 2.26, p < .05, \eta^2 = 0.08$) indicating that at least one of the domains differed between the groups. Follow-up comparisons demonstrated that for 4 of the 10 domains (using $p < 0.01$) recidivists scored significantly higher than non-recidivists. The domains are as follows (see Table 9 for descriptive statistics): substance use ($F(1, 275) = 6.56, p < 0.01; \eta^2 = 0.02$), excitement ($F(1, 275) = 6.71, p < .01; \eta^2 = 0.02$), financial ($F(1, 275) = 13.83, p < .001; \eta^2 = 0.05$), and social pressure ($F(1, 275) = 9.15, p < 0.01; \eta^2 = 0.03$). Although the recidivists tended to score higher across these domains, the small effect sizes suggest the differences are more a function of power than meaningful differences.

Table 9 Descriptive Statistics of the Domains for Recidivists and Non-Recidivists

Domains	Recidivists		Non-Recidivists		Sig.
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Impulsivity	3.45	3.56	2.90	3.20	ns
Social Pressure	4.39	3.99	3.04	3.09	**
Excitement	3.83	3.60	2.72	3.32	**
Anger	3.47	3.85	3.21	4.09	ns
Social Alienation	3.68	4.32	2.81	3.58	ns
Substance Use	4.52	4.43	3.17	4.08	**
Financial	4.53	4.22	2.77	3.27	***
Interpersonal Conflict	2.21	3.12	1.68	2.61	ns
Family Conflict	1.21	2.28	0.83	1.65	ns
Response Set	1.71	2.62	1.08	2.21	ns

** $p < .01$. *** $p < .001$.

Of those who recidivated ($n = 166$), 54.8% of them committed a new violent offence while 45.2% committed a non-violent offence. A MANOVA was performed to determine whether the groups differed across any of the domains. The overall model was not significant ($F(10, 154) = 0.15$, ns; $\eta^2 = 0.01$) and therefore the violent and non-violent recidivists did not differ on any of the domains (see Table 10 for descriptive statistics).

Table 10 Descriptive Statistics of the Domains for Violent and Non-Violent Recidivists

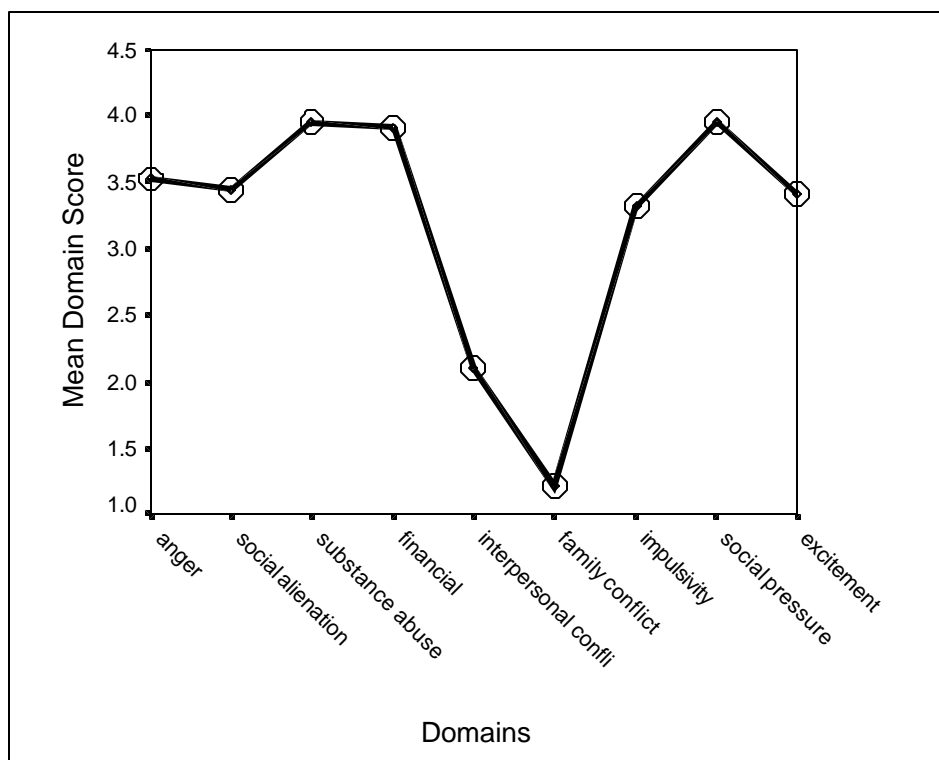
Domains	Violent		Non-Violent		Sig.
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Impulsivity	3.31	3.34	3.62	3.82	ns
Social Pressure	4.21	3.80	4.61	4.22	ns
Excitement	3.69	3.40	4.00	3.86	ns
Anger	3.20	3.75	3.80	3.98	ns
Social Alienation	3.44	4.20	3.99	4.47	ns
Substance Use	4.37	4.22	4.69	4.70	ns
Financial	4.38	4.07	4.70	4.42	ns
Interpersonal Conflict	2.04	3.10	2.41	3.15	ns
Family Conflict	1.18	2.18	1.26	2.40	ns
Response Set	1.62	2.68	1.82	2.56	ns

Norms

The final scale for assessing antecedents to crime was completed and is considered internally consistent with minimal influence due to social desirability. An advantage of the subject pool used in scale construction was that it represented the population for which the scale was intended for use, optimizing the probability that future samples of similar characteristics will respond in a

comparable fashion. Thus, the distributional characteristics of this sample were used as norms, facilitating interpretations of individual scores in relation to the distribution of scores in the population (Figure 1).

Figure 1 Profile of the Normative Sample



The raw scores were transformed into percentiles in order to create domains with the same mean and standard deviation. Using this type of standardized scale the domains could be placed on the same profile chart (see Appendix D). Unlike the linear T-score, percentile transformations are equivalent to area T-scores which are interpretable when the data is not normally distributed (as in this case). The profile sheet, to be used for assessments, contains the raw scores for the

domains in the body and the corresponding percentile equivalents located on the left-hand side. The shaded area encompasses the mean (46) and 1 standard deviation on either side of the mean (± 13). Plotting an individual's score on this sheet is useful for identifying needs that may be important treatment targets.

CONCLUSION

Spector (1992) has noted that a good scale is one that is reliable, valid, appropriate to the population of people who use it, and developed with concern for possible effects of bias. Throughout the construction of the ACI these basic principles were adhered to in an effort to produce a reliable and valid instrument for use in assessing offenders criminogenic needs.

The item selection process reduced the initial item pool from 145 items to 54 items while maintaining acceptable reliability. This step involved both internal and external criteria for item selection and produced a scale that was internally consistent with minimal effects due to response bias. However, although several items were deleted from the scale due to high response bias, the extent of the correlations with the BIDR suggests that the ACI should be given in conjunction with a social desirability scale. This is probably prudent for usage of self-report batteries with offenders as a general practice. Although response bias cannot be completely eliminated, it can be identified and minimized, which is why an internal response set scale was developed.

The normative profile and the relation with the BIDR suggest that the offenders may be more willing to admit to antecedents that require less personal ownership than others. For instance, blaming criminal activity on factors outside of oneself, such as alcohol or money, requires less insight than admitting that involvement in criminal activity is the result of a personality characteristics such as high impulsivity or need for excitement. Furthermore, the circumstances, setting and reasons for using the ACI, as well as instructions may have a considerable influence on the resultant profile.

There are three potential problems with the use of the ACI. First, the profile sheet illustrates that the ACI is subject to a floor effect whereby most offenders endorse very few of the items. Second, the like all self-report instruments, the ACI is subject to response bias. Efforts to address this issue in the scale development,

both in terms of item selection and development of a response set, should help minimise this concern. Finally, the profile of the normative sample presented in Figure 1 illustrates that the interpersonal and family conflict domains are infrequently endorsed. Relative to other domains, this suggests that there may either be an inherent problem with the domains, the offenders lack insight into these domains, or they do not represent highly relevant antecedents to crime.

Although the results did not demonstrate strong predictive and discriminant validity, the ACI remains a useful instrument as an adjunct to existing appraisals of offender risk and need. Although not explicitly developed as a recidivism prediction instrument, meaningful differences existed between recidivists and successful releases on several domains. Further, the goal to develop a self-report measure to assist clinicians to identify situations that place offenders at risk of offending appears to have been met. Future applications in the areas of treatment planning, sensitivity to treatment changes, and risk management strategies will determine the utility of the ACI.

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APPENDIX A

1. When I didn't think of the consequences
2. When it was expected of me by others
3. When I was bored
4. When I was angry
5. When I wanted to prove I was right
6. When I was depressed about things in general
7. When I needed money to buy more booze
8. When I couldn't find a job
9. When I felt sad
10. When I wanted to prove I didn't need help
11. When I had an argument with a friend
12. When I had met a good woman
13. When I needed some excitement
14. When others tried to tell me what to do
15. When I had become a father
16. When I felt I hadn't done my best
17. When others made me feel uncomfortable
18. When I was frustrated with someone
19. When I couldn't provide food for my family
20. When I had an argument with my wife/girlfriend
21. When I wanted to show off in front of others
22. When I felt lost with nowhere to turn
23. When someone tried to put me down
24. When I had to save face
25. When I wanted to get even
26. When I felt life was worthless
27. When I needed money to buy more drugs
28. When others made me feel uptight
29. When my kids were bothering me
30. When I suddenly had an urge to do it
31. When I gave my word and couldn't back down
32. When someone dared me not to
33. When I felt really pissed off
34. When I felt under a lot of pressure
35. When I felt alone
36. When I was so drunk that I couldn't remember
37. When I couldn't pay the rent
38. When I felt down and wanted to feel better
39. When I didn't stop to think
40. When I felt rejected
41. When my wife/girlfriend was nagging at me to do something
42. When I was anxious or tense
43. When I didn't have a chance to check with others

44. When my kids were ashamed of me
45. When I felt under a lot of pressure
46. When someone treated me with disrespect
47. When I felt someone treated me unfairly
48. When I got fired from my job
49. When someone hurt a family member
50. When I heard of an easy score
51. When I couldn't seem to do anything right
52. When someone gave me their word and then let me down
53. When everyone else was doing it
54. When I was so angry I wanted to hurt someone
55. When I felt it was no use, I was headed back to jail
56. When I was so stoned that I couldn't remember
57. When a close friend was emotionally hurt
58. When my wife/girlfriend yelled at me
59. When I was confident and relaxed
60. When I came across the same situation that had prompted me to commit crimes previously
61. When I lived on the edge
62. When I felt I would explode I was so angry
63. When I thought I could do anything and not get caught
64. When I felt no one really cared what happened to me
65. When I was somewhat drunk
66. When I quit my job
67. When I was afraid that things weren't going to work out
68. When I wondered about my self-control and felt like testing it
69. When someone didn't like me for no good reason
70. When my kids didn't do as they were told
71. When I felt restless and couldn't settle down
72. When I thought I was cured and could finally control myself
73. When my wife/girlfriend did something I didn't want her to
74. When I couldn't seem to do anything I tried
75. When I felt inferior to others
76. When someone took advantage of me
77. When I owed money to others
78. When my wife/girlfriend wanted me to stop seeing my friends
79. When I thought friends were trying to control me and I wanted to feel more independent
80. When I lacked the energy to do things
81. When others took advantage of me
82. When I was out with others and wanted to show off
83. When I felt someone deliberately tried to hurt me
84. When I felt empty inside
85. When I was somewhat stoned
86. When others interfered in my plans

87. When my wife/girlfriend wanted me to take a crappy job
88. When I thought I needed to show others I was in control
89. When I wanted to impress others
90. When I would remember how good it felt
91. When I was afraid for my safety
92. When I felt powerless to say no, even though I didn't want to do it
93. When everything was going badly for me
94. When I tried to impress others by buying their drinks
95. When my welfare/UIC ran out
96. When I felt guilty about something
97. When I couldn't wait to do it legally
98. When I felt jealous over something a friend had done
99. When my wife/girlfriend reminded me that her parents told her I wouldn't amount to anything
100. When I remembered the thrill it gave me before
101. When others ignored me
102. When my kids left their toys out for me to trip over
103. When I thought about how unfair life was
104. When I fought with friends
105. When someone made fun of me
106. When I couldn't get social assistance (welfare/UIC)
107. When my kids had problems at school
108. When I did things on the spur of the moment
109. When I started to withdraw away from others
110. When I didn't get along with people at work
111. When someone approached me with a plan and I didn't know how to say no
112. When someone stole something of mine
113. When I felt I didn't fit in with others
114. When I was drinking
115. When I felt someone was treating me differently
116. When my kids got caught stealing
117. When I didn't use self-control
118. When someone told me about a surefire score
119. When others felt I wouldn't because it was too risky
120. When I was fed up with others putting me down
121. When it just felt good at the time
122. When life seemed to lack all meaning
123. When I tried to impress others by buying them drugs
124. When I couldn't find a job that paid more than minimum wage
125. When I felt uncomfortable about others
126. When I thought I finally had it together and could control myself
127. When someone made fun of me
128. When my kids misbehaved
129. When I wanted to show others I wasn't afraid

130. When I was unable to accomplish my goals
131. When my wife/girlfriend fooled around on me
132. When things were going well
133. When I couldn't perform sexually
134. When I trusted someone and they let me down
135. When I had to borrow money from friends
136. When my wife/girlfriend flirted with another man
137. When I thought I was so careful that I wouldn't get caught
138. When it seemed like things were coming together
139. When I said something I regretted and wished I could take it back
140. When someone encouraged me to
141. When I felt betrayed
142. When I had no hope for the future
143. When I was using drugs
144. When I was in a good relationship
145. When my wife/girlfriend and I were having sexual problems

APPENDIX B

Items	Impression Management	Self-deception
<i>Impulsivity</i>		
30	-.23	-.15
88	-.05	-.21
121	-.12	-.19
108	-.27**	-.23
137	-.31**	-.17
21	-.19	-.25
68	-.10	-.40**
97	-.27**	-.19
<i>Social Pressure</i>		
31	-.29**	-.20
118	-.23	-.10
24	-.09	-.22
53	-.18	-.24
82	-.24	-.28**
111	-.07	-.15
2	-.29**	-.14
60	-.29**	-.10
<i>Excitement</i>		
13	-.31**	-.34**
32	-.01	-.12
61	-.33**	-.22
90	-.19	-.22
42	-.09	-.33**
3	-.26**	-.40**
129	-.20	-.31**
71	-.17	-.39**
<i>Anger</i>		
33	.02	-.22
120	-.04	-.31**
76	-.06	-.39**
83	-.15	-.25
141	-.23	-.35**
4	-.09	-.33**
18	.08	-.30**
62	-.18	-.35**
<i>Social Alienation</i>		
6	-.14	-.40**
64	-.22	-.39**
67	-.07	-.21
74	-.03	-.28**

Table continues

Items	Impression Management	Self-deception
51	-.09	-.32
113	-.11	-.37**
122	-.15	-.31**
26	-.16	-.30**
Substance Use		
7	-.11	-.37**
36	-.09	-.28**
65	-.24	-.31**
94	-.11	-.33**
123	.01	-.31**
27	-.13	-.29**
56	-.09	-.31**
85	-.12	-.23
Financial		
8	-.12	-.21
95	-.16	-.08
124	-.16	-.16
48	-.18	-.24
77	-.15	-.20
135	-.18	-.23
66	-.12	-.08
37	-.25	-.14
Interpersonal Conflict		
127	-.01	-.29**
98	-.15	-.25
46	-.14	-.27**
104	-.02	-.30**
52	-.23	-.30**
81	-.15	-.38**
86	-.08	-.34**
115	-.18	-.35**
Family Conflict		
70	-.03	-.26**
99	-.06	-.31**
131	-.20	-.31**
78	-.01	-.29**
107	-.04	-.20
29	-.06	-.24
58	.03	-.23
87	-.02	-.17

Note: Item numbers correspond to items listed in Appendix A.

** $p < 0.01$.

APPENDIX C

ACI

Instructions

This questionnaire was designed to help you in identifying the thoughts and situations that may place you at risk of committing a crime.

The list includes a number of thoughts and situations that might occur before you think about committing a crime. Read each item carefully and decide whether that thought or situation applies to you.

Evaluate the item on the following scale and circle the corresponding number. Try to consider all your crimes when evaluating the item.

Circle:

- "0" If these thoughts or situations have **NEVER** occurred before you committed a crime.
- "1" If these thoughts or situations have **RARELY** occurred before you committed a crime.
- "2" If these thoughts or situations have **OFTEN** occurred before you have committed a crime.
- "3" If these thoughts or situations have **ALMOST ALWAYS** occurred before you committed a crime.

Think back over your crime(s) and evaluate whether the following situations occurred prior to you committing these crimes. Rate the items on the following scale.

0	1	2	3
NEVER	RARELY	OFTEN	ALMOST ALWAYS

- | | | |
|-----|---------|--|
| 1) | 0 1 2 3 | When I suddenly had an urge to do it |
| 2) | 0 1 2 3 | When I gave my word and couldn't back down |
| 3) | 0 1 2 3 | When someone dared me not to |
| 4) | 0 1 2 3 | When I felt really pissed off |
| 5) | 0 1 2 3 | When I was afraid that things weren't going to work out |
| 6) | 0 1 2 3 | When I needed money to buy more booze |
| 7) | 0 1 2 3 | When I couldn't find a job |
| 8) | 0 1 2 3 | When someone made fun of me |
| 9) | 0 1 2 3 | When my kids didn't do as they were told |
| 10) | 0 1 2 3 | When I felt uncomfortable around others |
| 11) | 0 1 2 3 | When I thought I needed to show others I was in control |
| 12) | 0 1 2 3 | When someone told me about a surefire score |
| 13) | 0 1 2 3 | When I lived on the edge |
| 14) | 0 1 2 3 | When I was fed up with others putting me down |
| 15) | 0 1 2 3 | When I couldn't seem to do anything I tried |
| 16) | 0 1 2 3 | When I was so drunk that I couldn't remember |
| 17) | 0 1 2 3 | When my welfare/UIC ran out |
| 18) | 0 1 2 3 | When I felt jealous over something a friend had done |
| 19) | 0 1 2 3 | When my wife/girlfriend wanted me to stop seeing my friends |
| 20) | 0 1 2 3 | When I tried to impress others by buying them drugs |
| 21) | 0 1 2 3 | When it just felt good at the time |
| 22) | 0 1 2 3 | When I had to save face |
| 23) | 0 1 2 3 | When I would remember how good it felt |
| 24) | 0 1 2 3 | When I felt someone deliberately tried to hurt me |
| 25) | 0 1 2 3 | When I couldn't seem to do anything right |
| 26) | 0 1 2 3 | When I was somewhat drunk |
| 27) | 0 1 2 3 | When I couldn't find a job that paid more than minimum wage |
| 28) | 0 1 2 3 | When someone treated me with disrespect |
| 29) | 0 1 2 3 | When my kids had problems at school |
| 30) | 0 1 2 3 | When someone didn't like me for no good reason |
| 31) | 0 1 2 3 | When I wondered about my self-control and felt like testing it |
| 32) | 0 1 2 3 | When someone approached me with a plan and I didn't know how to say no |
| 33) | 0 1 2 3 | When I needed some excitement |
| 34) | 0 1 2 3 | When I was angry |
| 35) | 0 1 2 3 | When I felt I didn't fit in with others |
| 36) | 0 1 2 3 | When I needed money to buy more drugs |
| 37) | 0 1 2 3 | When I had to borrow money from friends |
| 38) | 0 1 2 3 | When I fought with friends |

0	1	2	3
NEVER	RARELY	OFTEN	ALMOST ALWAYS

- 39) 0 1 2 3 When my kids were bothering me
40) 0 1 2 3 When I thought friends were trying to control me and I wanted to feel more independent
41) 0 1 2 3 When I couldn't wait to do it legally
42) 0 1 2 3 When everyone else was doing it
43) 0 1 2 3 When I was bored
44) 0 1 2 3 When I was frustrated with someone
45) 0 1 2 3 When life seemed to lack all meaning
46) 0 1 2 3 When I was so stoned that I couldn't remember
47) 0 1 2 3 When I quit my job
48) 0 1 2 3 When others interfered with my plans
49) 0 1 2 3 When my wife/girlfriend yelled at me
50) 0 1 2 3 When my wife/girlfriend reminded me that her parents told her I wouldn't amount to anything
51) 0 1 2 3 When I wanted to showoff in front of others
52) 0 1 2 3 When I came across the same situation that had prompted me to commit crimes previously
53) 0 1 2 3 When I felt restless and couldn't settle down
54) 0 1 2 3 When someone took advantage of me
55) 0 1 2 3 When I felt life was useless
56) 0 1 2 3 When I was somewhat stoned
57) 0 1 2 3 When I owed money to others
58) 0 1 2 3 When others took advantage of me
59) 0 1 2 3 When my wife/girlfriend wanted me to take a crappy job
60) 0 1 2 3 When my wife/girlfriend and I were having sexual problems

SCORING

DOMAINS:
Impulsivity[Sum Items 1,11,21,31,41,51]
Social Pressure[Sum Items 2,12,22,32,42,52]
Excitement[Sum Items 3,13,23,33,43,53]
Anger[Sum Items 4,14,24,34,44,54]
Social Alienation[Sum Items 5,15,25,35,45,55]
Substance Use[Sum Items 6,16,26,36,46,56]
Financial[Sum Items 7,17,27,37,47,57]
Interpersonal Conflict[Sum Items 8,18,28,38,48,58]
Family Conflict[Sum Items 9,19,29,39,49,59]
Response Set[Sum Items 10,20,30,40,50,60]

Transfer the total domain scores onto the profile sheet

APPENDIX D

Percentile	Impulsivity	Anger	Excitement	Social Pressure	Social Alientation	Substance Abuse	Financial	Interpersonal Conflict	Family Conflict	Response Set
100	13 - 18	13 - 18	12 - 18	13 - 18	13 - 18	14 - 18	13 - 18	9 - 18	7 - 18	8 - 18
98	10 - 11	11 - 12	11	12	11 - 12	13	12	8	6	7
96		10	10	11		12	11	7	5	
94	9		9	10	10	11	10			6
92		9		9	9	10				
90	8		8	9		9	9	6		
88		8		8	8	9			4	5
86				8						
84	7		7				8	5		
82		7			7	8				
80										4
78	6			7			7		3	
76			6			7				
74		6			6			4		
72							6			
70				6						
68	5		5			6				3
66					5					
64		5							2	
62				5				3		
60						5	5			
58	4									
56		4	4		4					2
54										
52							4			
50				4		4		2		
48										
46	3	3	3		3				1	
44										
42						3	3			1
40				3						
38										
36	2	2	2		2			1		
34						2				
32				2			2			
30									0	0
28		1			1					
26	1		1			1				
24				1			1	0		
22										
20		0			0	0				
18	0		0							
16				0			0			