DEVELOPMENT AND USE OF A YOUNG OFFENDER PSYCHOSOCIAL SCREENING ASSESSMENT

by

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Summary

The broad aim of this work is to examine the utility of the Secure Care Psychosocial Screening (SECAPS) in the assessment of young offenders placed in secure care. The SECAPS is a standardised assessment, designed by the present author, that can be administered by trained non-psychologist staff. Its purpose is to provide a brief yet broad assessment of criminogenic needs, recidivism risk, self-harming risk, responsivity factors (including numeracy, literacy and intelligence) and to record some personal background information. The development and content of the SECAPS is described and normative data, test-retest stabilities and scale internal consistencies are reported. The assessment records of the first 904 youths approached to do the SECAPS in secure care institutions in South Australia were examined. Full offending histories were available for the first 458 youths approached and for a separate sample of 152 young offenders who underwent the SECAPS in a later period. Separate studies examined the following: (a) recent substance use by young offenders and its relationship with recidivism; (b) the incidence, correlates and relationship with recidivism of tattooing among young offenders; (c) the levels of basic skills (reading, writing, time telling, mental arithmetic) and non-verbal intellectual functioning and their relationships with recidivism; (d) the construction and validation of an actuarial recidivism risk index; (e) the correlates of suicidal behaviours and the prediction of future suicide attempts; (f) the relative influences of conduct problems, ADHD signs and depressed affect on future substance use.

A major finding was that a valid actuarial measure of recidivism risk could be constructed using offending history and selected SECAPS items. The index was validated on an independent sample and a correlation (r) of .36 with recidivism status at 6 months post-release was obtained. Among other important findings were the significant concurrent and prospective associations between ADHD signs and substance use, recidivism and suicide attempts. The results suggest that ADHD signs might increase the risk of each of these behaviours - an implication being that assessments and intervention plans with young offenders should consider ADHD status.

Variables associated with negative affect and social withdrawal were unrelated to either recidivism or future substance use. While these adjustment problems should not be ignored, they do not appear to be criminogenic needs.

Tattooed status had no significant relationship with recidivism. While more specific aspects of being tattooed and recidivism await further investigation, tattooed status as a dichotomous variable should not be used as a risk indicator.

Young offenders were found generally to have poor literacy and numeracy skills. The largest discordance between intellectual functioning and basic skill levels was among Aboriginal youths, which suggests that Aboriginal young offenders are at greatest need of educational assistance.

Substance use was widespread among young offenders, with alcohol and marijuana predominating. Of these, alcohol appears to have a closer association with offending. It is suggested that ways of more effectively restricting adolescents' access to alcohol need to be considered.

The results obtained support the utility of the SECAPS assessment and were used to guide further improvements to the screening content. Changes included the addition of items about structured leisure activities, the quality of domestic relationships and youths' expressed reasons for offending.

Declaration

I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text.

Aldis L. Putniņš Date

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Chapter 1
Introduction

The investigations reported here describe a body of research that stems from the use of a psychosocial screening assessment for young offenders known as the Secure Care Psychosocial Screening (SECAPS; Putniņš, 1998a). A traditional approach to research, which within psychology is perhaps most often found in its experimental sub-disciplines, is to formulate a problem or hypothesis and then design and carry out a study that addresses the question. Usually the study will either only partially answer the posed question or the results will generate new hypotheses to be tested. In either case, a series of studies result, each being a refinement or an extension of a previous study. A linear unfolding in the pursuit of knowledge can be seen to occur. Unlike that model, the program of research described here radiates outwards in different directions from a common core, that core being responses to the SECAPS by young offenders. At the most general level, the aims here are to verify the usefulness of this screening instrument and, if possible, to improve it. Consistent with the scientist-practitioner model, it is important for applied psychologists to empirically evaluate and refine the tools that they use to inform their decision making. However, in many cases there are no observations, tests or outcome measures that can definitively confirm the usefulness of an assessment tool. Rather, usefulness is something that is incrementally demonstrated by an accumulation of applied experience and of research. In the case of the SECAPS, its usefulness can be considered with regard to what it is intended to achieve. The three main functions of the SECAPS are:

to serve as a tool to aid staff who work with young detainees in the assessment of a variety of background variables, needs (particularly criminogenic needs), risks (of both self-harming and offending) and responsivity factors (including basic skills and intellectual ability) of individual young offenders;

to collect data about various characteristics of young offenders in secure care to aid broader policy and program planning decisions by program managers and justice administrators. In this function, the SECAPS can be regarded as a psychosocial epidemiological survey tool;

to serve as a database for research to explore the associations and possible causal links between various factors related to delinquency, an important aim being not only to further the theoretical understanding of various problems often encountered among

young offenders but to assist better assessment and more effective intervention planning. Results from this function feed back into enhancing the first purpose, that is, using the SECAPS as an individual assessment tool.

The usefulness of any assessment tool or procedure cannot be fully evaluated independently of the service system within which it is embedded. In addition to an assessment's technical properties, usefulness is also determined by whether and how workers use it and whether appropriate resources (e.g., intervention programs and further specialised assessments) are available to capitalise on the results. While it is acknowledged that these are important matters that applied psychologists should both be aware of and try to influence, the current investigations are largely limited to the epidemiological and research functions mentioned above. However, in order to reduce features that might discourage its routine use, a number of important implementation issues were taken into account when the SECAPS was developed, in particular considerations of its length, complexity and ease of individual assessment report preparation.

The development of the SECAPS and the associated research program has extended over many years, during which time many of the results reported here have been disseminated through publications and conference presentations. Results from initial field trials of SECAPS items relating to substance use and self-harming behaviours are reported in Putniņš (1995a). Early results about tattoos are reported in Putniņš (1997a). A later and more comprehensive analysis regarding tattoos and delinquency is reported in Putniņš (2002a), which, with minor revision, forms the chapter in this work about tattoos. An analysis of basic skills and intelligence among young offenders is presented in Putniņš (1999a), which, with a larger sample and extension to consideration of relationships with recidivism, forms the relevant chapter here. The results presented in the first research chapter about substance use have been disseminated through two publications (Putniņš, 2001a, 2003a). Results from the chapter about recidivism prediction are presented in Putniņš (in press) and are summarised in Thompson and Putniņš (2003). A slightly abbreviated version of the chapter about suicide attempts has been published (Putniņš, 2005). Results from the SECAPS research program have been presented at a number of conferences (Putniņš, 1998b, 2000a, 2001b, 2002b, 2003b), the 1998 paper being the foundation of the second research chapter about underlying causes of substance use.

A note about theory

Theories that attempt to explain crime are not merely exercises to satisfy intellectual curiosity. In seeking to explain it is hoped that this will give direction in how to control or reduce crime. While theoreticians have been very productive in this area, the number and variety of theories (e.g., see Cunneen & White, 2002; Curran & Renzetti, 2001; Shoemaker, 1984) that offer either full or partial explanations of criminal conduct is so great that it is a daunting task to try to describe them, much less to critically evaluate them.

Theories of crime vary in their breath and level of explanation. At a macro-social level, radical or neo-Marxist theories that are rooted in class conflict would suggest that the elimination of class distinctions and economic inequality will reduce crime. The law is regarded as a tool used by the ruling class to maintain its privileged status. Such theories seek to explain aggregate crime rates, the distribution of crime or the social construction of what is a crime. Somewhat more limited in scope are feminist theories. These do not attempt to explain all criminal behaviour, but by focussing on gender inequality and male-dominance, they offer explanations of the characteristics of crimes committed by females, of crimes committed against females, and of differences in the treatment of females and males in the criminal justice system. But irrespective of what broad forces influence overall rates and types of offending, there exist differences between individuals. Despite exposure to the same broad forces, some individuals offend while others do not. It is these individual differences that are of interest to psychologists and others working in correctional settings.

While there is no clear dividing line that distinguishes psychological theories of crime from other theories, those that offer some explanation for individual differences in criminal conduct could be regarded as being psychological, or at least having a psychological component. A focus on individual differences does not deny forces that influence either rates of crime in the general community or in some sections of the community.

Examples of contemporary theories of crime that offer explanations for individual differences include strain, control, self-control, and social learning theories. Agnew's (1992) General Strain Theory, at its simplest, takes as its starting point the observation that unpleasant experiences (strains) often upset people. The three major types of strain are failure to achieve positively valued goals (e.g., money, respect), the loss of positive stimuli (e.g., the loss of a valued personal relationship or object), and the presentation of negative stimuli (e.g., abuse, homelessness). Strains can be either actual or expected. These can be

reacted to and dealt with in a number of ways. In Agnew's theory anger is a pivotal emotion. If the reaction to strain is anger, inhibitions are lowered, accompanied by a desire for revenge. Particularly if associated with cognitions (rationalisations) that make criminal acts seem acceptable, and if socially supported by others of like mind, crime can often be the outcome. In essence, strain can lead to anger, which if not controlled can lead to crime. Reducing strains or learning more effective ways of coping with strains become the focus of intervention.

A different perspective is offered by control theories. These posit that the degree to which individuals are bonded to conventional society is the major determinant of criminal behaviour. The perspective is not as much about what causes crime but rather what are the conditions that facilitate being law-abiding. Hirschi's (1969) version of control theory suggests that attachments to and sensitivity toward significant others, commitment (investment in) conventional pursuits, involvement in conventional activities, and belief in the legitimacy of the law are the major elements that tie individuals to conventional society. Such bonds and activities are antithetical to seeking gratification by illegal means and are what need to be fostered to reduce crime.

In a later development, Gottfredson and Hirschi (1990), in their General Theory of Crime, proposed that self-control is the major psychological characteristic that determines an individual's propensity to commit crimes. Elements of low self-control include impulsiveness, insensitivity toward others, risk-taking, shortsightedness (not reflecting on less immediate consequences), a preference for the physical rather than mental, and nonverbal rather than verbal problem-solving. Whether a criminal act occurs is determined by the confluence of lowered self-control and opportunity. Their description of self-control has much in common with Hare's (1993) concept of psychopathy. But, whereas Hare's interest is in an extreme category or taxon (i.e., psychopaths), Gottfredson and Hirschi are interested in self-control as a dimension that can account for all criminal conduct. Self-control, according to Gottfredson and Hirschi, is an acquired trait that is largely determined by child-rearing practices. Immediate strategies to reduce crime would include reducing offending opportunities. Longer term strategies would focus on parenting and child socialisation.

Andrews and Bonta (2003) suggest that the main correlates of crime are antisocial cognition (values, attitudes), antisocial associates, a history of antisocial behaviour, and antisocial personality. These are collectively described as the "Big Four" – "big" being

used to distinguish them from other, predictively less strong correlates. While a list of correlates does not constitute a theory, Andrews and Bonta consider that an adequate theory should explain such correlates. Their theoretical work, described as the Personal, Interpersonal, and Community-Reinforcement (PIC-R) Perspective on Criminal Conduct, is a social learning model, the most fundamental principles of which are drawn from radical behaviourism. Behaviour is determined by antecedents (stimuli) and consequences (rewards and costs). While immediate environmental responses shape behaviour, personal characteristics such as physical and cognitive ability influence the ability to learn and respond. The authors acknowledge that such characteristics are, to some degree, biologically determined. Personal, interpersonal, and community factors influence the contingencies of action. Stability of these contingencies accounts for stability of behaviour over time. Allowing for cognitive mediation (symbolic control) is one of the points where their model departs from radical behaviourism. Andrews and Bonta describe their PIC-R perspective as both comprehensive and flexible and as one that recognises that there can be different pathways to crime, depending on the specific personal and environmental controlling conditions that each individual is exposed to. Unlike Gottfredson and Hirschi (1990), who consider that self-control is largely established by around age 7, by adopting a learning model Andrews and Bonta are of the opinion that the acquisition of skills relating to self-control is not restricted to a narrow developmental period and can be developed by training at any point in the life course. Habit strength might make such training more difficult at later ages, but not impossible.

The above is a very brief outline of selected theories to illustrate the variety of psychological approaches to explaining crime. Debate continues about which theory is conceptually most sound, is most parsimonious, is most consistent with the facts about crime, is most informative for planning interventions or best predicts new facts about crime. No theory is generally accepted as the orthodox model of crime in the way that Darwin's theory of evolution is accepted in biology or the Theory of Relativity in physics. While no critical analysis of individual theories will be offered here, some general observations can be made about current explanations of crime.

Agnew (1995) has argued that it is difficult to distinguish many leading theories of crime when focussing on their independent variables because most of these are shared. In essence, the observed (manifest) phenomena that are used to support various theories are often similar. It is not so much the empirical observations but rather their interpretations -

their meanings or implied latent constructs - that are different. Further difficulties for causal explanations arise from the rather crude state of knowledge about the relationships between correlates of criminal conduct. In this context Farrington (1994) has noted that "In explaining the development of offending, a major problem is that most risk factors tend to coincide and to be inter-related….The concentration and co-occurrence of these kinds of diversities make it difficult to establish their independent, interactive and sequential influences on offending and antisocial behaviour. Hence, any theory of the development of offending is inevitably speculative in the present state of knowledge" (p. xxvii). This can only be overcome by more research, particularly more studies with longitudinal designs in a broader range of social and cultural settings. Farrington further cautions that, while theories need to be wide ranging, they should not "become so complex that they explain everything but predict nothing" (p. xxxi).

It is possible that no one all-encompassing theory of crime can be developed because certain types of crime, such as sex offences versus burglaries or persistent versus intermittent offending, might not be fully explained by the same factors. Perhaps a more modest aim might be to try to explain most, or at least a significant proportion of the variance in crime, with supplementary theories for special cases or more limited aspects of offending. Irrespective of what might emerge in the future regarding crime theories, empirical research has already described a large number of psychological and social factors associated with crime, many of which have been incorporated into existing theories as either causal factors or, due to common associations, as risk markers. While the development of the SECAPS was not theory-driven, a number of the SECAPS items measure constructs that are considered to have explanatory importance in various theories described above.

Guiding principles

Many social factors can influence offending risk at a group level. Examples include civil conflict, prevailing community values, economic exploitation, political and/or economic inequality, racism, tolerance of violence and other antisocial behaviours in the media, mass entertainment and advertising, the availability of alcohol and other psychoactive substances, urban decay and so on. These can influence overall offending rates and many are suitable targets for intervention. However, most of these factors are too broad for individual correctional practitioners to have much direct influence on. They are

matters that require policy decisions at a senior political level followed by the implementation of large-scale social programs. Perhaps the best that justice workers can do in relation to these broad factors is to advocate on behalf of their clients for appropriate policies and social programs.

However, in work with individual offenders there is accumulating evidence that some interventions can help to reduce the risk of offending (Cooke & Philip, 2001). To guide the selection of who should be intervened with, the focus of the interventions and how they should be delivered, Andrews (1995) has argued that three important principles should underpin offender assessment and treatment, namely, those of needs, risk and responsivity.

Needs - To better understand what works and does not work at an individual level, it is necessary to first consider the notion of individual needs. These are things that are required for an individual's successful functioning. This is a broad concept that encompasses many different areas of adjustment. Everyone has a variety of personal needs. Services in areas such as education, health, disability, housing and so on have been created for those who require assistance to meet them. However, irrespective of what other problems they might have, the only reason why offenders are involved with the criminal justice system is that they have offended. An important aim of the justice system is, therefore, to prevent (or, more realistically, to reduce) offending. The needs that are of greatest importance and relevance when considering offenders are those that influence offending risk. These are criminogenic needs and should be the main targets of assessment and intervention. Other welfare concerns (general needs) that are unrelated or only weakly related to offending should not obscure this, particularly as other agencies already exist to service more general needs. This is an important point because general needs are often confused with criminogenic needs. Interventions that focus on general needs are less likely to reduce offending risk than are those that focus on criminogenic needs, that is, needs that are more directly related to offending. However, where young offenders are in the care of the state by virtue of residing in a state-run institution, then irrespective of each youth's formal guardianship status, the state is acting *in loco parentis* and has a duty of care for the general welfare of such youths. While in such cases general needs cannot be ignored, attending to these should be in addition to, rather than instead of, the consideration of criminogenic needs.

The desirability of assessing the needs of young offenders is attested to by the fact that almost all states in the USA have been reported to carry out regularly some kind of

needs assessment of juvenile offenders (Towberman, 1992), though the breadth of these assessments varied from state to state. However, only a minority of states reported using standardised assessment instruments, and none in Towberman's survey (conducted from 1988 to 1990) indicated that their instruments were empirically based. Empirically based instruments do, however, exist, some examples of which are described by Hoge and Andrews (1996) and Wiebush, Baird, Krisberg, and Onek (1995). Their use and development appears to be increasing, spurred on in large part by a desire for assessment consistency.

Risk - Most decisions made by the police, judiciary, parole/review boards and various staff involved with offenders are at least to some extent based on predictions of future behaviour. M.R. Gottfredson and Gottfredson (1988) have described this as the "ubiquitous centrality of prediction" in the criminal justice system. Prediction can involve trying to estimate the probability of a successful outcome, such as successfully completing a particular program, or it can be an attempt to predict an undesirable outcome, in which case it is often referred to as a risk assessment. In the justice area, risk assessment topics can, among other things, include general recidivism risk (e.g., Cumberland & Boyle, 1997), risk of violence or dangerousness (e.g., Black & Spinks, 1985; Rice, 1997), risk of committing specific crimes such as sexual offences (e.g., Bélanger & Earls, 1996; Quinsey, Lalumière, Rice, & Harris, 1995), risk of domestic violence (e.g., K. Williams & Houghton, 2004), absconding risk (e.g., Thornton & Speirs, 1985) and the risk of deliberate self-harm (e.g., Cullen, 1985).

Not all youths are at equal risk of reoffending. Most youths stop offending after their first few offences (Cain, 1996). It would seem, therefore, to be inefficient to intervene with these youths when most will cease offending naturally. There is, however, a small percentage of youths who go on to offend with increasing frequency. This smaller percentage of chronic offenders requires more intensive services. There is some evidence with adult offenders that providing intensive services to low risk offenders leads to higher offending rates (perhaps due to enmeshing them more deeply in the justice system), whereas high risk offenders benefit from more intensive interventions (Andrews et al., 1990). A later meta-analytic investigation of young offender treatment outcomes (Dowden & Andrews, 1999) concluded that correctional interventions were significantly more effective when delivered to higher-risk youths than to lower-risk offenders. Assessing

offending risk is, therefore, an important part of planning interventions for individual youths.

Some factors used to assess recidivism risk are static because they are not amenable to change. Static factors can be things such as gender, age at first offence, nature of first offence, first penalty type and so on. Static risk factors do not have to be simple historical variables such as age at first offence. They can be of a more complex kind such as personality variables. These, however, are only applicable if the particular personality variables in question have a high degree of temporal stability. One such factor that might qualify is psychopathy. This is a relatively stable personality disorder defined by features such as "persistent disregard for social norms and conventions; impulsivity, unreliability, and irresponsibility; lack of empathy, remorse and emotional depth; and failure to maintain enduring attachments to people, principles, or goals" (Hare, 1991, p. 45). Psychopathy is associated with a variety of deviant behaviours, including criminality (Hare, 1993), and measures of psychopathy have been incorporated into various risk assessment procedures such as the Violence Risk Assessment Guide (Borum, 1996).

Risk factors that can change over time are known as dynamic risk factors. Because they can change and are regarded as being causally related to the outcome variables, such factors can also be targets for intervention to reduce risk. Dynamic risk factors can also be described as needs. This change in language moves from the descriptive to the prescriptive. That is, rather than merely describing a particular variable or relationship it suggests, either implicitly or explicitly, that something should be done to bring about change in the factors examined to effect a more desirable outcome. Whether dynamic risks are described as needs will depend to some extent on the justice system within which an assessment instrument is developed and applied. If the main orientation of the system is punitive retribution, there might be little consideration of either risks or needs. If the dominant concern of the justice system is community protection through the use of incapacitation of offenders, then the focus might be primarily on determining risk in order to decide matters such as whom to incarcerate and for how long. If the justice system has a strong welfare and rehabilitative focus, then needs will be considered in offender assessments. Of course most justice systems, and particularly juvenile justice systems, are multifaceted in their approaches and aims. At times this can create tension because the various aims are not always completely compatible. Nevertheless, in most juvenile justice systems both risk and needs are usually assessed, though with varying emphases. Thus,

the assessment of risk is often combined with the assessment of needs, either intentionally or by virtue of a risk assessment containing dynamic risk factors that can also be regarded as criminogenic needs.

Responsivity - Another factor that needs to be taken into account when considering interventions for offenders is responsiveness. Because of individual differences, consideration needs to be given to whether a particular program matches not only the needs but also the abilities and learning styles of each individual. Although at first glance the term responsivity suggests motivational factors that reflect a preparedness to change or accept intervention, responsivity is a broader concept that extends to contextual factors that might need to be taken into account when considering how to intervene. There is little point in putting a youth in a program that requires reading if the youth is illiterate, that requires abstract reasoning if the youth is intellectually very dull, that requires sitting still and paying attention if the youth suffers ADHD, that requires parental involvement if parents are unavailable, or that requires punctuality if the youth cannot tell time. Therefore, needs assessments will be more useful if they include measures that indicate the youth's capacity (e.g. motivation, ability to concentrate, literacy etc) to respond to various tasks, deficits in which might need to be attended to before particular programs can be offered, together with relevant background (contextual) information. If specific deficits or contextual factors that influence responsivity cannot be immediately remedied or altered, programs might require modification to better suit some individuals.

Types of assessment

Drawing to some degree on the above principles, Bonta (1996) has described the historical development of risk assessment in terms of three broad approaches. First-generation risk assessments are unstructured and rely on the discretionary judgement of experienced practitioners. Difficulties regarding reliability and validity might arise if different assessors gather and consider different information, weight factors differently or use different decision making rules. Second-generation assessments rely predominantly on static historic factors with known statistical associations with the outcome. While such methods are empirically grounded, consistent in their application and transparent, they do not inform about what areas could be considered for intervention if a subject is at elevated risk. Furthermore, measuring changes in risk levels due to changes in lifestyle or interventions is problematic using static factors. Third-generation assessments incorporate

dynamic (i.e., changeable) factors. Dynamic factors are thought to indicate areas of criminogenic need that might be useful targets for intervention and, when incorporated into the prediction algorithm, might serve to make the instrument sensitive to changes in risk status over time. Bonta suggested that a yet to be developed fourth generation of assessment methods could be instruments that incorporate responsivity factors. As discussed above, these are neither risk indicators nor criminogenic needs but are factors that could influence how interventions might be best delivered taking into account individual differences in learning style. While Bonta's description of different generations of assessment methods is conceptually clear, in practice the distinctions are not always so stark, there often being a blending of various aspects of the so-called "generations".

First generation assessment methods have been and continue to be widely used. While there is a growing awareness of the limitations of unstructured assessments, some clinicians are resistant to entirely surrendering clinical judgement to statistical methods. Hart (1998) has argued for the use of structured clinical judgement using guidelines based on empirical research rather than complete reliance on actuarial instruments. This could be regarded as empirically informed rather than empirically determined decision making. Although Hart offers little more than anecdotal evidence to support the superiority of this method, it seems to make good sense that assessments should, at the least, consider a core of risk factors that have been empirically demonstrated to be associated with the outcome of interest. Not only does this ensure that certain empirically relevant information is taken into account by each assessor, by standardising this information and making it common to all assessments of a particular type, consistency between assessors could be expected to be enhanced. Whether this is simply an improved version of first generation assessments or is a category that falls outside of Bonta's (1996) model is not entirely clear. Perhaps it could be viewed as a synthesis of the first and later generation approaches in which clinical judgement and empiricism are merged.

Examples of second generation risk assessments currently being evaluated (see Wilson & Rolleston, 2004) for use with young offenders are the Risk Screen for Youth Offenders (RSYO) and the Risk of re-Conviction × Risk of re-Imprisonment model (RoC*RoI; Bakker, Riley & O'Malley, 1999). The main purpose of the RYSO is to identify youths who are likely to continue offending as adults (life-course persistent offenders) as opposed to adolescence limited offending. Both the youth and a significant other are interviewed. Four sections cover the following areas: "Initiating events before 2

years of age (e.g., early abuse or neglect), Early behaviour disorder 4-10 years (e.g., inattentive, hyperactive), Early delinquent behaviour 8-12 years (e.g., fighting, shoplifting), and Early criminal offending 10-15 years (e.g., criminal offences)" (Wilson & Rolleston, p. 10). These are static developmental risk factors.

The RoC*RoI was developed on a very large sample of persons convicted of imprisonable offences in New Zealand. The items consist of static personal characteristics (such as age and sex), history of incarceration and time at large, seriousness of offending, and offence type. It can be scored from official records alone and in a very short time. A similar risk assessment based on static risk factors has been developed (Cain, 1996) for the prediction of recidivism among young offenders in New South Wales.

An example of a third generation risk assessment instrument is the Wisconsin Juvenile Probation and Aftercare Assessment of Risk (WJPAAR; reproduced in Ashford & LeCroy, 1988). This is a brief measure consisting of only eight items, viz. Age at first adjudication, Prior criminal behaviour, Institutional commitments, Drug/Chemical abuse, Alcohol abuse, Parental control, School disciplinary problems, and Peer relationships. It is a mixture of static (e.g., age at first adjudication) and dynamic (e.g., peer relationships) risk factors.

Although Bonta (1996) suggested that a yet to be developed fourth generation of instruments might include responsivity factors, instruments that include responsivity factors do exist. An example is the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002). In their review, Hannah-Moffat and Maurutto (2003) observed that the YLS/CMI, or variations of it, was the assessment instrument most widely used with young offenders in Canada. Related instruments used in Australia include the Australian adaptation of the YLS/CMI (Hoge & Andrews, 1995a) and the Victorian Risk and Needs Tool (RANT, see Day, Howells, & Rickwood, 2003). The YLS/CMI's content areas are: Prior and current offences/dispositions; Family circumstances/parenting; Education/employment; Peer relations; Substance abuse; Leisure/recreation; Personality/behaviour; Attitudes/orientation; Other needs/special considerations. The last content area is described as largely being responsivity factors, though in fact it includes a number of general needs. These pertain to a variety of family characteristics and personal adjustment problems.

A relatively new instrument that could be regarded as a fourth generation assessment tool is the ASSET (Youth Justice Board, 2003). It is widely used in the assessment of young offenders in England and Wales and is impressive with regard to the breadth and

detail of its content. The assessment records individual characteristics, psychosocial features and population-wide influences relevant to offending risk and uses multiple information sources. The core assessment has 10 sections that cover the following: Offending behaviour; Living arrangements; Family and personal relationships; Education; Employment and training; Neighbourhood; Lifestyle; Substance use; Physical health; Emotional and mental health; Perception of self and others; Thinking and behaviour; Attitudes to offending; Motivation and change; Positive factors; Indicators of vulnerability; Indicators of serious harm to others. Various additional assessment modules are available for youths at particular points in the justice system (e.g., those being considered for bail or who are on remand) and for special risks (e.g., of serious harm to others) and needs (e.g., mental health issues).

The instruments described above are not exhaustive of all the risk-needs assessment tools used with young offenders (more detailed discussion of the assessment of risk is provided in Chapter 8 while the assessment of needs is considered further in Chapter 2). Nonetheless, they illustrate a variety of possible assessment approaches. The aim of the investigation here is to evaluate an instrument that is intended to provide a reasonably broad standardised initial assessment of risk, need, and responsivity among young offenders. Constraints on the assessment are that it has to be administered in a relatively short time by staff who do not necessarily have tertiary qualifications in a clinical or behavioural science discipline. When considered for use in this context, each of the described assessment tools has major limitations. First generation assessments are by definition unstandardised and therefore do not meet one of the set conditions. Second generation assessments, such as the RYSO and the RoC*RoI, fail to include need and responsivity factors. Moreover, the RYSO requires one to two hours to complete, which fails to satisfy the time condition. Third generation assessments do not include responsivity factors. Furthermore, in the case of the example of a third generation assessment given above (i.e., the WJPAAR), Ashford and LeCroy (1988) failed to support its predictive validity. One reason for this outcome might be that, although there only 8 items, to score a number of the items requires the assessor to integrate a large amount of information about which he/she then has to make an overall judgement. Subjectivity in decision making, and a perhaps a lack of consistency between assessors in the information gathered to arrive at the judgement, might have contributed to the WJPAAR failing to be a valid measure of offending risk. While a criticism of the first generation assessment

approach has been its subjectivity, a number of second and third generation assessments do not entirely escape this problem. One way of enhancing the consistency of assessments without changing the assessment itself might be to restrict its use to more highly qualified staff, though this would violate one of the assessment constraints mentioned earlier.

The YLS/CMI has been found to be a valid measure of offending risk (Andrews & Bonta, 1995b) and contains criminogenic needs and some responsivity factors. However, in a recent evaluation, Flores, Travis, and Latessa (2003) found that the average assessment time reported by assessors was 65.8 minutes. This does not meet the administration time condition for a short screening assessment. Another shortcoming of the YLS/CMI is that no direct assessment of basic skills (e.g. literacy and numeracy) is incorporated into the assessment. These could be considered to be important responsivity factors. While an item in the Other needs/special considerations section asks whether a youth has a learning disability, this is difficult to answer without direct testing if other reliable information sources are not immediately available (which is often the case when a youth has just been admitted to secure care). The ease of administering the YLS/CMI is also an issue. Most of the items require interpretive judgement to be exercised by the assessor. This is something that not all unqualified youth practitioners will feel comfortable with and might create resistance among some to using the assessment. Even among staff with higher qualifications difficulties might be experienced. Flores et al. (2003) surveyed staff who in some way utilised the YLS/CMI. At least 93% of the practitioners had tertiary level qualifications. On a 1-10 scale, the ease of using the assessment received a mean rating of 4.9, suggesting that many practitioners found the assessment to be moderately difficult to use. Flores et al. (2003) concluded their very detailed evaluation of the YLS/CMI with the comment that "…agencies planning to use the instrument only for initial risk assessment should consider using a shorter and more economical assessment tool." (p. 47).

The ASSET is a very comprehensive assessment of risk, needs and responsivity factors. Its predictive validity has been confirmed (Baker, Jones, Roberts, & Merrington, 2003). Its length, however, precludes using it as a quick screening instrument. Like the YLS/CMI, no direct measures of basic skills are used in the assessment. Also similar to the YLS/CMI, many of the items require interpretive judgement, though fairly detailed guidelines and examples are provided to aid assessors. Each assessment section concludes with an assessor rating of how much that factor is associated with the likelihood of

continued offending. The ratings for each section are later summed to give a global estimate of recidivism risk. Baker et al. found that "Practitioners were often wary of the 0-4 rating system and sometimes found it difficult to use. The most common concern was in regard to the perceived subjectivity of the ratings" (p.16). Such methods, while empirically defensible, could pose problems for some staff and might hamper the implementation of the assessment unless particular care is given to selection and training of those who give the assessments.

None of the assessment instruments considered above satisfy all the requirements for a risk-needs screening assessment that is predictively valid, brief, relatively easy to use by non-tertiary qualified youth workers and that includes important responsivity factors. I am unaware of any other instruments that meet these requirements.

Development of the SECAPS

In work with young offenders, sometimes long-standing problems are uncovered only after extensive contact with a client. Some client problems go unnoticed, not because of deliberate concealment or dissimulation but simply because an insufficiently wide range of questions are asked during the early stages of work with a client. Some examples from personal experience come from assessing youths who had been regularly supervised by social workers, residential care workers, teachers and other trained staff for a number of years. Despite contact notes and assorted assessments accumulating in increasingly thick client files, I came across adolescents who, unbeknown to any previous note-taker, interviewer or assessor, were either completely illiterate, substance dependent, or intellectually handicapped, these being just some of the more significant problems uncovered. It became clear that much of this could have been avoided had the major areas of need and adjustment been covered more systematically during earlier assessments. However, in the absence of a screening protocol devised for the purpose, it is difficult for youth workers and other staff to always be aware of the many different areas of functioning that might be relevant to a youth's adjustment.

Time and professional resources are usually too limited to permit lengthy and detailed assessments of all young offender clients. Even if resources permitted such assessments, it could be regarded as wasteful and unnecessarily intrusive - being rather like ordering a CAT scan and a full neurological work-up for everyone who gets a headache. What is

needed is a brief screening procedure, much like a standard health check, that can alert to the need for more complex assessments.

Assessments of youths are often idiosyncratic, reflecting differences not only between clients but also between assessors and the circumstances in which assessments take place. Who will be assessed, who will carry out the assessment, what will be assessed, how it will be assessed, why it will be assessed and for whom it will be assessed all influence the ways assessments are done. Different assessments over time for the same client often cannot be readily compared nor can different clients be easily compared with each other. In other words, there is often a lack of standardisation.

Furthermore, without some degree of quantification it is very difficult to make valid generalisations, and without generalisations one's understanding and ability to intervene, plan or advocate are hampered. For example, the credibility of the argument that young offenders might need special literacy programs would be enhanced if, in addition to giving some individual examples - which have limited generalising power - one was also able to objectively state that *x*% of this group did not have survival literacy skills. That is the sort of information that managers, for example, need to know in order to plan services and to justify a redirection or an increase in resources. They need to know what the dimension of the problem is. Special needs advocacy for young offenders has been hampered due to the paucity of systematically collected, standardised and quantified data.

The SECAPS was developed to provide a brief yet broad standardised assessment of youths coming into secure care. Its purpose is to enable quick identification of areas of functioning where problems or deficits might occur relating to a youth's safety, well-being or reoffending risk. The SECAPS does not provide a definitive assessment of any behaviour. However, it can signal potential areas of concern that might require further investigation. Secure care centre staff use the assessment to inform case management decisions about youths in their care. Depending on the needs of individual youths, such decisions can include placing a youth on suicide watch, recommending remedial tuition in literacy and numeracy, further assessment and personal support if the youth reports persistent low mood, consideration of the need for anger management program involvement, offering drug and alcohol use counselling, and so on.

While the SECAPS is not intended to replace more detailed individual assessments, it is sufficiently brief to allow the rapid screening assessment of most youths being placed in secure care at the cost of only very moderate additional demands on staff time. Some

criminogenic needs assessments are not practical for use as screening devices due to the time required for administration. For example, the Juvenile Justice Assessment Instrument (Stein, Lewis, & Yeager, 1993) takes 2½ hours to administer. By contrast, a SECAPS assessment can normally be carried out with no more than 30 minutes of direct client contact. This time frame was self-imposed during the development of the screening instrument. If assessments necessarily took longer than 30 minutes, other demands on staff time could result in a reduction of when and with whom the assessments are done. It was important to maximise the viability of the assessments being carried out as widely as possible, both in order to reduce the chances of someone with major problems going undetected and to give a broad and reasonably representative picture of incarcerated youth. Only by collecting the same basic data on all or most youths could these goals be achieved. For this to occur, the assessment procedure needed to be simple and brief. Simplicity was necessary so that, if required, non-professional staff could reliably carry out the assessments with no more than a few hours training. This does not completely eliminate the need for qualified professional involvement - a psychologist is still required to calculate a client's intellectual functioning level from one of the tests used in the SECAPS. It is also preferable that a professional worker oversees the production of the SECAPS assessment reports. However, the face-to-face part of the assessment can be delegated to other workers if circumstances warrant this, such as in a large institution that has few professionally qualified staff.

Because the SECAPS assessment includes many of the topics that would be covered in more detailed young offender assessments, where more assessment information is required the SECAPS can be used as a semi-structured interview guide. The same basic data are collected as in a routine SECAPS assessment but more time can be spent seeking further details and elaborations to responses, exploring additional topics and, if necessary, administering supplementary tests.

Data from individual screenings are entered into the SECAPS electronic database. Narrative reports can then be generated which summarise all the information obtained from each individual. This reporting function is an important feature of the SECAPS. Report writing can be a tedious and time-consuming task that can often take up the largest part of the time allocated to any one assessment. As the aim of SECAPS assessments is to rapidly screen and make the information quickly available, this can only be achieved (without significantly increasing staff numbers) by automating a large part of the report

preparation procedure. Most of the SECAPS item responses are numerically coded. Each item's coded value, when entered into the SECAPS database program, generates a descriptive statement. These statements make up the bulk of each report. However, a few items requiring non-standardised responses (e.g., what is the precise nature of a hearing problem) can be described in short memo fields adjacent to the relevant items. Additional information (spontaneous elaborations, follow-up questions, observations, recommendations, conclusions) not covered in the standardised part of the assessment can be added at the end of each report. This avoids the assessment becoming something that is too mechanical and insensitive to individual experiences and needs. Individual records or reports can be retrieved at any time. All or any subset of records can be easily extracted for statistical analysis, including producing group statistical profiles. Such profiles can be used for a number of purposes. They can provide a yardstick against which to compare admissions in order to see how typical or atypical any individual is. Group profiles can be used to identify the frequencies of various problems and, thus, help inform programming decisions for groups rather than just considering ad hoc programs for individuals. Moreover, as Hubbard, Travis, and Latessa (2001) have pointed out, "automation facilitates validation" (p.38). The database can also be used to further explore research questions concerning young offender risks and needs. Without the associated electronic database the large-scale use of the SECAPS would not be possible. In brief, the main functions available in the program are:

- client registration, assessment recording and narrative assessment report generation;
- client combination: clients and their various assessments can be combined without the need for re-entry of data. For example, if Joe Bloggs and Joseph Blogs are found, after being assessed at different times and at different centres, to be the same person, their assessments can be saved under one selected name;
- data importing and exporting: if the SECAPS program is used in multiple sites within a jurisdiction, assessment records can be exported and imported, thereby keeping assessment records at different locations up to date;
- data conversion: all results can be exported and converted into a numerical format that can be read by most spreadsheet, statistical and database programs;
- statistical and record functions: client lists (including by selected criteria) can be viewed and printed. Group statistical profiles (frequency counts and percentages for all

- data backup function;
- text file creation: computer generated SECAPS reports can be saved to a text file that can be imported into commonly used word processing programs for further editing or reformatting if required.

Another important feature of the SECAPS is that it includes direct measures of basic educational skills and intellectual functioning. Day, Howells, and Rickwood (2003) have noted "…that responsivity is relatively neglected in offender assessment systems throughout the world…" (p.205). Support for this observation is lent by the finding that few community corrections agencies in the USA assessed responsivity factors (Hubbard et al., 2001). The importance of assessing skills that influence learning is highlighted in a recent evaluation of the literacy demands of cognitive-behavioural offending programs for offenders (Davies, Lewis, Byatt, Purvis, & Cole, 2004). Frequently there was a mismatch between the literacy levels that programs required (generally high) and what the offenders were capable of (often low). Appropriate matching of offenders and programs requires the consideration of basic skills and intelligence.

Development of the SECAPS assessment procedure commenced in 1992. Some items were field-trialed in 1992 and the first database and report generating program was written and trialed the following year. The SECAPS has been routinely used since the beginning of 1994 as a screening tool for youths admitted into secure care in South Australia and at various times in other states and the Australian Capital Territory. As practical experience in the assessment's use has accumulated, minor modifications to the item content have been made together with improvements to the functionality of the electronic database. This is part of an evolving process of refinement.

The next chapter describes the content of the SECAPS, item interpretation, descriptive statistics and psychometric characteristics of various SECAPS items and scales. Chapters 3 to 7 present a number of studies that examine substance use, suicide attempts, tattoos, and basic educational skills among young offenders. While questions about prediction are considered in each study, that of recidivism risk culminates in chapter 8, in which the development and validation of a general recidivism risk measure is described. Chapter 9 discusses revisions to the SECAPS made in the light of both research results and experience in its use and concludes with consideration of the utility of the SECAPS.

Chapter 2
SECAPS content

The content of the SECAPS version investigated here is presented below in summary form under the headings with which the items appear in the SECAPS report:

Background - where assessed, by whom and when; youth's age, sex and ethnic background; whether currently under a Care Order (i.e., under the Guardianship of Minister responsible for child welfare and protection); age at which first arrested or charged for offending;

Sight & hearing - descriptions of any reported problems in relation to either sight or hearing;

Natural family & residence - whether both natural parents are still alive and whether they are still living together or were living together when both were alive if either is deceased; number of natural siblings; whether substance abuse or criminal behaviour is reported amongst immediate natural family members (parents/siblings); where the youth resided during the month preceding placement in secure care;

Literacy - results from a brief reading test indicating whether the youth is likely to have "survival" level reading skill (reading age of at least 10 years); results from a brief dictation task;

Numeracy - ability to perform mental arithmetic procedures with simple money handling problems;

Time telling - ability to tell time from both digital and analogue clocks;

Non-verbal intellectual functioning - brief screening to determine whether the youth is likely to be functioning above the Borderline Range (IQ ≥ 80), within the Borderline Range (IQ = 70-79) or in the Mentally Retarded Range (IQ ≤ 69);

Drugs & alcohol - substances used and frequency of use during the month preceding secure care placement; previous intravenous drug use; quantities of alcohol and marijuana usually consumed; substances used at time of last offence; youth's opinion as to whether he/she has a problem with drugs or alcohol;

Current mood - mood self-rating; how long the youth has experienced this mood; feeling of despair/hopelessness;

Self-destructiveness - recent suicidal thoughts; past suicide attempts and recency of last incident; past incidents of deliberate self-injury and recency of last incident;

Social relationships - numbers of close friends; ability to get on with others; whether most friends have been in trouble with the law;

Aggressiveness - temper; frequency of fights;

Tattoos - whether has tattoos; if has tattoos, whether he/she wants them removed;

School / employment - suspensions or expulsions; truancy; when left school or whether still attending school/college; time spent in regular paid employment;

Attention & restlessness - concentration; impulsiveness; physical restlessness; boredom as a problem; assessor-observed restlessness and/or distractibility;

Additional comments & observations - comments, observations, elaborations, additional information, or recommendations that the assessor might wish to make.

Administration instructions for the SECAPS are presented in Appendix 1. Record forms with the full text of all the items are presented in Appendix 2. The numeracy and time telling tasks are presented in Appendices 3 and 4 respectively. All the items under the headings "Drugs & alcohol" through to "Attention & restlessness" are presented in a written questionnaire (called the *General Background Questionnaire*) that, the youth's literacy permitting, can be self-administered.

Item selection, interpretation and descriptive results

Items were included in the SECAPS assessment because they either:

- were known from the research literature (e.g., Stouthamer & Loeber, 1988) to be associated with increased offending risk (empirical support for each item is discussed in the next section);
- are relevant to the youth's immediate safety and well-being;
- point to functional limitations which staff need to be aware of in order to have realistic expectations about the youth;
- identify longer term needs that might require psychosocial or educational remediation.

All items and tasks selected needed to be brief to allow a wide coverage of different areas without the total screening taking more than 30 minutes. Many youths are restless, have poor concentration or are just plain surly. A longer screening procedure would have a lower successful completion rate (at present fewer than 2% of youths decline to do the screening). Furthermore, a longer screening procedure would jeopardise staff cooperation, particularly as staff carry out SECAPS assessments in addition to their other duties. A

longer assessment might be put off to a later time and could, through repeated delays, sometimes not be done at all.

In order for youths to settle and to minimise the effects of any substances they might have used, SECAPS assessments are not normally carried out during the first 24 hours of a youth's placement. Assessed youths include both those on remand as well as those serving detention orders. The assessments are carried out by youth workers, psychologists or social workers and take about 30 minutes to complete. Reassessments are usually undertaken if a youth is re-admitted and more than 12 months have elapsed since their last assessment. However, particularly during the first 12 months of the assessment program's implementation, a few youths were reassessed in less than 12 months.

Initially the intention had been to screen youths whose stays were expected to last more than a few days. However, the volume of youths and limited numbers of assessors soon revealed this to be impracticable. It was then determined that youths would normally be assessed only if their stay in secure care was expected to be a fortnight or longer. This restriction was put in place purely on pragmatic grounds. Custody statistics for a 12-month period (1994/95) for the South Australian Department for Family and Community Services reveal that 53% of admissions to custody were for no longer than three days (usually in police custody until the next day of sitting of the youth court). Only 21% of admitted youths had stays of longer than 14 days. The volume of custodies in this period (905 individuals with a total of 1715 custody episodes) was such that with existing resources it would have been impossible to screen all youths, nor would there have been any need to as most were released after only very short stays. In recent years, however, as the SECAPS has become increasingly regarded as an important standard procedure for new admissions, and as the number of staff trained and available to carry out the assessments has increased, the stay eligibility criterion has been reduced to about a week.

Detailed normative data by age, sex and Aboriginality are provided in Appendix 5. Subject numbers for individual items vary due to missing data, the applicability of some items only to particular subgroups, and the addition of some items to the screening content after the assessment program had been in operation for some time.

Items in the SECAPS report are clustered under headings that indicate their conceptual or empirical relationships. The first are basic background items (date, place, assessing officer, name, date of birth, age, ethnic background, gender). The remainder are separately described below together with statistical data from an analysis of the first 901 youths (of

904 approached) in South Australia's two youth secure care centres assessed between 1994 and 1999 with the SECAPS. Of the assessed youths, 82% were aged 14 to 17 years, 91% were males and 27% described themselves as being Aboriginal.

Data were available from an earlier unpublished survey (carried out by the author in 1995) in which some of the SECAPS items were administered to whole classes of students at two high schools in metropolitan Adelaide. Personally sensitive items, such as those concerning substance use and suicide, were omitted as a condition of the schools' participation. A group testing procedure was used that guaranteed the anonymity of each respondent. Results for these youths are also reported below. One of the schools was in a middle class area; the other was in a lower socioeconomic class area. The total number of students assessed was 136. However, to increase comparability with the young offenders (most of whom are males), only results for the male students are reported here (n=80; 94% aged 15 to 17 years; all non-Aboriginal).

SECAPS items

Item 4. Is the youth currently under a Care Order in this State?

An affirmative response means that the responsible government department has assumed legal guardianship of a youth, that is, the government has taken on the legal responsibilities associated with being a parent. It is important for staff to be aware of this and the continuing legal and welfare obligations that their agency will have toward those on Care Orders after their release from secure care. Being under a Care Order also suggests particular problems in the youth's family background that could impinge on his/her future adjustment.

Among the young offenders assessed, 13% were recorded as being under a Care Order.

Item 5. Age when first arrested or charged for offending.

Earlier ages of juvenile offending onset are associated with increased risk of continuing to offend (Loeber & Stouthamer-Loeber, 1987; Katsiyannis & Archwamety, 1997). Among adult prisoners, a history of early versus late juvenile delinquency onset has been found to be associated with more individual and family behaviour problems (Vitelli, 1997).

Analysis of SECAPS data also found a modest but significant (r = -.23, n=891, p<.001) relationship between this variable and an index of conduct problems (see the last section in this chapter for details about this index). Of the young offenders assessed, 50% reported having been charged or arrested by age 13.

Items 6 (a,b) & 7 (a,b). Self-reported problems with eyesight or hearing.

These items were deliberately placed near the beginning of the assessment so that any sensory problems reported by the youths could be taken into account during the rest of the assessment. Sensory defects can interfere with schooling, literacy, accurately following instructions, job performance and so on. Youths are usually aware of such defects and are able to report them if asked. Where possible, defects confirmed by further investigation should be corrected. Very few youths in secure care centres wear glasses, despite 19% of them reporting some problem with their sight. While not all of these either need or can be helped by corrective spectacles, among those who could be helped, many refuse to wear glasses. A further 9% reported having some difficulty with their hearing. The frequencies of sight and hearing problems found here are very similar to those obtained from health assessments conducted by nursing staff with incarcerated youths in a New South Wales youth detention centre (viz. 18% sight and 9% hearing problems - see Fasher, Dunbar, Rothenbury, Bebb, & Young, 1997).

Little information is available about the incidence of sensory defects among young offenders compared to the general population. A recent review of health interventions in criminal justice settings failed even to mention this topic (see Hammett, Gaiter, & Crawford, 1998). Glueck and Glueck (1950) did not find a difference in the incidence of eye or ear defects between delinquents and non-delinquents. Although the sampling procedures in some studies of hearing impairment among incarcerated adults are so flawed (e.g., Dahl, 1994; Belenchia & Crowe, 1983) that no legitimate generalisations can be made, a large scale study by Melnick (1970) of adult inmates found that their hearing status was similar to that of the general population. In relation to youths in Australia, a 23% incidence of reported vision problems in a large random sample of 12-16-year-old students in Western Australia (Zubrick et al., 1995) was very similar to that found here (20%) among young offenders in the same age range. In the same study, a 4% incidence of hearing problems was reported, which is lower than that found here (9%). This discrepancy might be due to reporting differences. For example, some offenders describe

selective hearing due to inattention as a hearing problem. As this is not a sensory defect, this should not be recorded here as a hearing problem, though it is possible that lapses of assessor vigilance might occasionally result in incorrect recording. It is also possible that middle ear infections (and the associated increased risk of hearing defects) are more frequent among lower socioeconomic class subjects. Young offenders are more likely to have lower socioeconomic backgrounds. Therefore, their risk of ear infections and hearing defects is increased.

Even if sensory defects are no more frequent among offenders, it is possible that delinquents cope less well with sensory adversity, particularly as they often have problems with diligence and persistence. It is also possible that sensory problems among young offenders are remediated less often.

Items 8 (a,b) & 9 (a,b). Are both parents alive and living together?

It is important to know what potential parental supports might be available to the youth. Research shows that children from intact natural families are at significantly lower risk of both beginning to offend and of continuing to offend compared to those from broken family backgrounds (Chen & Kaplan, 1997; Putniņš, 1984; Sarantakos, 1997). Historically in Australia, changes in the rate of sole parenting have very closely paralleled changes in crime rates (Sullivan, 1997). There is also evidence that the risk of attempting suicide is significantly increased among adolescents (particularly for girls) living in non-intact families (Garnefski & Diekstra, 1997). Rates of other non-psychotic psychopathologies also tend to be higher among those from single-parent families (Mäkikyrö et al., 1998).

Among the youths in secure care 10% (vs. 1% of students) reported that their father was deceased and 3% (vs. 1% of students) that their mother was deceased. A further 11% and 2% respectively (vs. 5% and 3% of students) did not know whether their father or mother were alive. Where both natural parents were alive, in only 25% of cases (vs. 67% of students) were the parents living together. Where one or both parents were deceased, in only 26% of cases were the parents known to be living together when both were alive.

Item 10. Number of natural siblings.

Numbers of siblings and delinquency risk are positively associated (Robins, West, & Herjanic, 1975; Rutter & Giller, 1983). The reasons for this are not entirely clear but the

evidence (including Australian studies, e.g. Meschemberg, 1974) is consistent. Among youths assessed here, 4% reported being only children while 62% had 3 or more siblings. Apart from potentially acting as a marker for increased risk, particularly in the presence of other adverse factors, knowing that a youth has siblings can point to an external source of social support for those who might be finding it hard to cope with being in secure care. This item also helps to identify a pool of other high risk children and adolescents who might be in need of intervention or monitoring. That the siblings of offenders are at increased risk of antisocial outcomes is indicated by the high rates of disruptive disorders among the brothers of male delinquents found in a study by Wasserman, Miller, Pinner, and Jaramillo (1996).

Items 14 & 15. Familial criminality and substance abuse.

Criminal behaviour and/or substance abuse among other immediate natural family members point to environmental and biological factors that might place a youth at heightened risk of both behaviours. Rutter and Giller (1983) concluded that "Of the parental characteristics associated with delinquency, criminality is the most striking and most consistent" (p. 182). Heightened risk of antisocial behaviour has been found to be related to increased antisocial behaviour among siblings (Jones, Offord, & Abrams, 1980). This association remains significant even after controlling for childhood aggression and family environment factors (Fagan & Najman, 2003). Studies in both the UK (Farrington, Barnes, & Lambert, 1996) and the USA (Farrington, Jolliffe, Loeber, Stouthamer-Loeber, & Kalb, 2001) have confirmed that not only is offending strongly concentrated in families but that criminal convictions by any family member significantly increase the probability of convictions among every other family member. Little of this association was due to co-offending. Parental substance abuse and a family history of substance use disorder are also related to substance use and other deviant behaviours among youths (Chassin, Pillow, Curran, Molina, & Barrera, 1993; Giancola, in press; Merikangas & Dieker, 1998; Patterson, Reid, & Dishion, 1992; Weintraub, 1990).

Among the youths in secure care, 59% reported law-breaking by other natural family members and 43% reported substance abuse among immediate natural family members.

Item 16. Where the youth was living during the month before secure care.

This can give some indication of previous accommodation circumstances, social relationships and future accommodation needs. Among the most frequent responses were: with parents - 48%; own accommodation - 17%; with other relatives - 13%; community residential care - 7%. By comparison, it has been calculated that across Australia in June 1997, 88% of all 15-19 year-olds were living with their parents (Australian Bureau of Statistics, 1997b). The percentage of Indigenous 15-19 year-old youths living with their parents in 1994 was somewhat lower (64%), though they were more likely to be living with other relatives (14%) than were general population youths (3%).

Items 17 (a,b) & 18. Literacy - reading and writing skills.

Poor scholastic performance and learning problems are frequently encountered among young offenders. Survival literacy is necessary for adequate functioning in the community, in school and in most workplaces. Among the youths in secure care 26% were found to have a reading age of less than 10 years. Low scores suggest a need for further assessment and a possible need for remedial assistance. This item precedes the *General Background Questionnaire* and is also used as a guide to whether the *GBQ* needs to be read to the subject.

The Concise Word Reading Tests' Form C (R. Andrews, 1965, 1974) was selected precisely because it is concise and has Australian norms. Its brevity is achieved with the sacrifice of some information. While other (albeit more time-consuming) reading tests can give a more precise reading age over a wider age range, the requirement here is simply to ascertain whether a subject has survival level (10 years or greater) reading skill or not. This does not, however, preclude substituting the Concise Word Reading Test with other measures if suitable ones are available.

In writing the dictated 9-word sentence, "*One quick brown fox jumped over the lazy dogs*", 30% of young offenders (vs. 6% of students) tested made 2 or more spelling errors. This percentage is close to the percentage of youths identified as having a reading age of less than 10 years (i.e., 26%). If it is assumed that, in general, the reading and writing skills of young offenders are at similar developmental levels, then the cut-off point of 2 or more errors on the writing task is likely to be at a similar level to the cut-off point of less than 10 years on the reading task.

The dictation sentence is a variation of the more familiar sentence, "*The quick brown fox jumps over the lazy dog*" - often used as a typing exercise because it contains every letter of the alphabet. This makes it attractive as a short writing task. However, "*the*" appears twice, which is wasteful repetition in an exercise limited to only nine words. Therefore the first word was changed to "*One*". In addition, *"jumps"* was changed to "*jumped"* so as to slightly increase the spelling difficulty. Subjects who are prone to make errors by spelling phonetically will be more readily identified as they will be inclined to write "*jumpt"*. In order to retain the letter *s,* "*dog*" was made a plural (i.e., *dogs*).

Items 19 & 20. Numeracy - money handling and time-telling.

Basic numeracy skills are required for adequate functioning in the community, school and the workplace. The most relevant of all numeracy skills necessary for daily survival needs are the ability to work out money sums for common purchases and to be able to tell the time.

Among the young offenders 37% (vs. 6% of students [13% if missing responses are counted as errors]) made three or more errors on six mental arithmetic sums involving money for purchases and 15% (vs. 8% of students) could not reliably tell the time from analogue clocks. Low scores suggest a need for further assessment and a possible need for remedial assistance.

Item 21. General Background Questionnaire (GBQ):
GBQ item 1 (a-h). Substances used during the month before secure care.

Young offenders are at very high risk of using and misusing psychoactive substances (Putniņš, 1992, 1995b; Putniņš & Harvey, 1992). Substance use might, in turn, be related to increased offending risk and to increased risk of deliberate self-harming (Putniņš, 1995a). Substance use here is recorded only for the subjects' last month in the community. The limited and recent period should reduce recall distortion. The recency of the period enquired about also means that any problem behaviours identified will still be likely to be relevant to the youth's immediate needs. These are dynamic needs that can respond to changes in circumstances. This contrasts with measures such as estimates of lifetime (or other lengthy period) use of substances which yield scores that can only slowly be added to but never taken away from. Being largely static, such measures will on retest be insensitive to genuine changes in subjects.

Research with criminal populations indicates that assessments of drug use based on either structured interview or self-administered questionnaire yield very similar results (Broome et al., 1996). Therefore, the mode of information gathering has little effect on the outcome.

The young offenders reported using the following substances once or more often during the month before they were placed in secure care: alcohol - 73%; marijuana - 81%; hallucinogens - 25%; sedatives/hypnotics - 23%; narcotics - 10%; stimulants - 22%; inhalants - 11%. Use of alcohol and marijuana several times a week or more often was reported by 20% and 55% of the young offenders respectively.

GBQ item 2. Intravenous drug use.

Intravenous drug use that involves needle sharing can present health risks such as HIV infection and hepatitis. Intravenous administration also suggests that another barrier to some types of drug use has been broken down (most people do not have needles if they can avoid it). The potential for risky behaviours and serious abuse is likely to be increased among those who have taken drugs intravenously. Prior intravenous drug use varied with age among the assessed young offenders and was highest among non-Aboriginal males in the 18-20 years age group. Overall, 25% of the young offenders reported having taken drugs intravenously. This is a much higher rate than reported among either Australian secondary school pupils (Cooney, Dobbinson, & Flaherty, 1993) or the 2% reported for Australian general population samples (Makkai & McAllister, 1998). However, it is consistent with rates of intravenous drug use reported among detained youths in NSW (Zibert, Hando, & Howard, 1994; Fasher et al., 1997).

GBQ items 3 & 4. Quantities of alcohol and marijuana typically consumed.

While frequency of use is usually sufficient to identify likely substance abuse for the less conventional substances (namely: hallucinogens, sedatives/ hypnotics, narcotics, stimulants and inhalants), frequency alone is not always a good indicator of misuse in relation to alcohol and marijuana. There is, for example, a difference between someone who consumes small quantities (e.g., 1-2 drinks/day) regularly and someone who drinks less often but who typically has 10 or more drinks (binge drinks) on a day when alcohol is used. Previous research (Putniņš, 1992) found that the best two measures of adolescent alcohol involvement were items about both the frequency and the quantity of use. The

argument supporting inclusion of a measure of quantity was, by analogy, extended here to marijuana use.

Of those delinquents who used alcohol at all, 81% reported typically consuming 5 or more drinks on a drinking day. Among those who reported any use of marijuana, 77% reported typically smoking it 6 or more times on any day when it was used.

GBQ item 5 (a,b). Substances used, if any, when last offence was committed.

Answers here can highlight one of the important risk factors related to offending because the very act of offending, not just being an offender, is often associated with substance use.

Among the young offenders, 63% used a substance at the time of committing their last offence, the most commonly used substance being alcohol (62% of all those who used a substance).

GBQ item 6. Self-reported problem with drugs or alcohol.

Even when reporting high or dangerous levels of use, adolescents often deny having a substance use problem (McLennan et al., 1998). Despite this, 24% of youths in secure care felt that they had a problem with drugs or alcohol and, thus, might have had some motivation to change. The recognition of a problem is often the beginning of dealing with it. Such youths should be offered the opportunity to receive counselling, bearing in mind that counselling is unlikely to be productive for those with no or little motivation.

GBQ item 7 (a). Current mood rating (scale of 0 [worst feeling possible] to 10 [best feeling possible]).

This item is similar to the "Feeling Thermometer" used by Rotheram (1987) in the assessment of affective states. Low mood (dysphoria) can be an indicator of depression, emotional instability or increased suicide risk - depression being the most common characteristic shared by suicide attempters (Allen, 1987). It can also, however, simply be a transitory state that resolves itself fairly quickly with little drama. For this reason a low rating should not be interpreted in isolation from other data and psychopathology should not necessarily be inferred. Depression or dysphoria do not appear to be causes of delinquency or conduct disorder, but they are often among the outcomes of these problem

behaviours due to the conflict, marginalisation and the like that these young people experience (Frick, 1998).

Among youths in secure care, 22% gave themselves low (i.e., scores of 0-2) mood ratings (vs. 4% of students). The modal rating was 5 for both groups. However, the students' scores were skewed more towards the higher values than were those of the offenders. Among the non-Aboriginal young offenders, there was a trend for mood ratings to decline (i.e., to become more dysphoric) with increasing age. For example, the mean mood rating for non-Aboriginal males went from 5.2 for ages 11-13 years to 4.0 at 18-19 years. This age trend is consistent with the finding among adolescents that average levels of emotional distress increase with age (Blum & Rinehart, 1997). However, no such trend was observed for the Aboriginal subjects.

GBQ item 7 (b). Duration of current mood.

Low mood ratings that are reported to be of longer duration than a few weeks might suggest a depressive disorder. Such cases require further investigation.

Most (80%) youths in secure care reported experiencing their current mood for no longer than a few weeks.

GBQ item 8. Statement about feelings of hopelessness/despair.

This item is similar to some of the response alternatives in the *Beck Depression Inventory* (Beck & Steer, 1987). While depression is the psychological state most frequently associated with suicide, feelings of hopelessness are also frequently associated with increased suicide risk (Morano, Cisler, & Lemerond, 1993). Depression or dysphoric mood is very widespread, which reduces its usefulness as a predictor of suicide risk. Some subjects might feel depressed but at the same time hold the belief that things will get better, that is, they have something positive to look forward to. At greater risk of suicide or deliberate self-injury are those who cannot see their circumstances improving. Indeed, Weishaar (1996) has described hopelessness as "the cognitive feature most consistently related to suicide ideation, intent, and completion". Moreover, research indicates that feelings of hopelessness make a contribution to self-harm risk in adolescents independently of the degree of depression (McLaughlin, Miller, & Warwick, 1996; Negron, Piacentini, Graae, Davies, & Shaffer, 1997).

Of the youths in secure care, 6% fully endorsed the hopelessness/despair statement, 33% gave partial endorsement and 61% recorded no agreement with the statement.

GBQ items 9 (a,b), 10 & 11 (a,b). Recency of previous deliberate self-injury and suicide attempts, and current suicidal ideation.

The best predictor of future behaviour is past behaviour. Therefore, in assessing the current risk of deliberate self-injury and suicide, it is important to know whether any such behaviours have occurred in the past. A longitudinal investigation in Sweden over 20 years (Mützell, 1997) suggests that persons who have previously made a suicide attempt are at continued high risk of death due to suicide.

The more recent the last attempt, the greater is the current risk. If a subject reports a very recent incident, this should be followed up with supplementary questions by the assessing officer before the end of the SECAPS session (e.g., lethality of the attempt, circumstances leading up to the attempt, whether the subject feels he/she is at imminent risk of another attempt). The questioning does not need to be particularly detailed - that can be done in a subsequent specialist assessment if deemed necessary. However, some assessment of whether the subject is in imminent danger needs to be made in order to judge whether immediate action is required to ensure the youth's safety. In making that assessment, it is useful to take into account the subject's responses to the mood, hopelessness, social isolation (ability to get on with others and number of close friends) and substance use items (high rates of substance use are associated with increased risk of self-destructive behaviour, Putniņš, 1995a). Obviously, the item about current suicidal ideation also needs to be considered, even though thoughts about suicide are not unusual in the general adolescent population (Graham et al., 2000).

Among youths in secure care, 26% reported having recently thought about suicide, 35% reported having deliberately injured themselves in the past (vs. 19% of students) and 27% reported having made a suicide attempt. Of those who had made suicide attempts, half (51%) made an attempt during the preceding 6 months. Slightly more than half (56%) of those who had deliberately self-injured did so during the preceding 6 months. Young offenders appear to have higher rates of suicide attempts and deliberate self-injury. The combined rate of suicide attempts and/or deliberate self-injury during the preceding 6 months among West Australian 15-16-year-old high school students was 9% (Zubrick et

al., 1995), which is less than half the rate of either suicide attempts or deliberate self-injury among the young offenders here.

There are, however, limits on what can be predicted in this area. Although deaths by suicide among Australian adult prisoners are at a rate about 10 times higher than among the general population (Dalton, 1999), deaths of juveniles in custody are extremely rare events. In Australia, there have been 14 deaths (not necessarily all suicides) in juvenile secure care during the 20-year period 1980-1999 (Dalton, 2000). This is an annual rate of less than one death a year for the whole country. During the 10-year period 1990-99, only one of the deceased youths was an Indigenous Australian. Rare events, if not associated with a unique marker, are very difficult to predict. Deliberate self-harming (irrespective of suicidal intent) is more common in juvenile secure care than is completed suicide. Figures for NSW put the incidence in 1996-97 at 2.5% of all admissions (Council on the Cost of Government, 1998), though the true figure is likely to be higher as practical experience suggests that many incidents go unreported. Although still a difficult task, predicting deliberate self-harming or suicide attempts is more realistic than trying to predict completed suicide.

GBQ item 12. Number of close friends.

Socially isolated youths might present as a management problem in secure care where, of necessity, they are forced to interact quite closely with other youths. They might lack social skills or their social isolation might indicate emotional withdrawal due to depression. Biggam and Power (1997) have confirmed an empirical relationship between diminished social support and psychological distress (anxiety, depression, and feelings of hopelessness) among incarcerated young offenders while Negron et al. (1997) found that adolescent suicide attempters socially isolated themselves more than did suicide ideators. Loneliness is often associated with both suicidal ideation and attempted suicide (Stravynski & Boyer, 2001). Having close friends is a resource that a youth can potentially draw upon and suggests some degree of interpersonal skill and self-confidence. A socially isolated youth might require additional supports such as contacts with family members and extra attention by staff.

Of youths in secure care, 5% reported having no close friends (vs. 0% of students).

GBQ item 13. Self-rated ability to get on with other people.

Both statistically and in content, responses to this item are closely related to responses to the previous item and can suggest a lack of self-confidence, a lack of interest or energy for intimate social interaction, poor social skills or emotional withdrawal.

Among youths in secure care 7% (vs. 5% of students) felt that they did not get on well with most people. Responses indicating social isolation on both this and the previous item might be related to increased risk of self-destructive behaviour.

GBQ item 14. Offender status of friends.

Offending and associating with other offenders are closely related (Farrington, 1994). Associating with antisocial peers during early adolescence has been found to be a particularly strong predictor of later offending (Lipsey & Derzon, 1998). Most delinquent conduct occurs in the company of others (Emler, Reicher, & Ross, 1987). Thus, having a majority of friends who are not offenders is a good prognostic sign.

Of youths in secure care, 70% (vs. 21% of students) reported that a majority of their friends were offenders.

GBQ items 15 & 16. Having a bad temper and frequency of physical fights.

These items are statistically associated. Anger management is a problem for many young offenders. Self-reported anger has been found to predict later aggressive behaviour among young offenders in secure care (Cornell, Peterson, & Richards, 1999). The emotional volatility indicated by a bad temper is associated with impulsivity, offending, fighting and increased risk of acting out self-destructive impulses. In their review of predictors of delinquency, Loeber and Stouthamer-Loeber (1987) noted that aggressiveness appears to play an important role in the development of chronic offending. Those who respond in the hostile direction on either or both of these items might be considered as candidates for participation in an anger management program such as the Systematic Training for Anger Reduction (STAR) program (Putniņš & Harvey, 2001). Aggressiveness is also a risk factor for suicide attempts when other risk factors, such as depression and suicidal ideation, are present (Stein, Apter, Ratzonis, Har-Even, & Avidan, 1998).

Of youths in secure care, 55% (vs. 28% of students) reported having a bad temper and 26% reported getting into fights once a month or more often (vs. 5% of students).

GBQ item 17 (a,b). Tattoos and their removal.

Research elsewhere has shown a significant relationship between having tattoos and increased offending risk among both adolescent and adult males (Farrington, 1991). The Lifestyle Criminality Screening Form, designed to measure behavioural dimensions that are diagnostic of a criminal lifestyle, includes an item about tattoos (Walters, 1997; Walters, Revella, & Baltrusaitis, 1990; Walters, White, & Denney, 1991) as does the Young Offender-Level of Service Inventory (Shields & Simourd, 1991) . In a study in Victoria, 97% of prisoners with a history of injecting drug use were found to have tattoos (Crofts, Thompson, Wales, & Hernberger, 1996). This does not mean that all persons with tattoos are or will be offenders, though more offenders than non-offenders have tattoos. Tattoos can be a badge of membership with which a youth asserts his identification with a delinquent sub-group. Tattoos can also lead others to identify the youth as belonging to such a sub-group and to then reinforce that identity by their subsequent expectations and treatment. Often the tattoos that young offenders have are crudely executed, offensive and very visible (e.g., on their hands). Not only does this create a negative image and negative expectations among many people, it can interfere with the youths' opportunities, for example, getting a job that involves close contact with the public (Bekhor, Bekhor, & Gandrabur, 1995). Many young offenders regret having tattoos and would like to have them removed (Ross, 1985). Where possible, this should be facilitated as it will improve their chances of successful community adjustment. A desire to remove tattoos suggests that a youth might no longer wish to be identified as a delinquent (Putniņš, 1997a).

Of youths in secure care, 19% had tattoos (vs. 5% of students). Of these, 35% expressed a wish to have them removed.

GBQ items 18, 19 & 20 (a,b). Current school attendance or age of leaving school, school truancy and expulsions/suspensions.

Histories of poor scholastic achievement, poor school behaviour and early school leaving are quite common among young offenders. Among youths in secure care, 83% reported having been suspended or expelled from school (vs. 19% of the student sample). School exclusion has been found to be closely associated with subsequent offending (Pritchard & Cox, 1998).

Of the offenders, 72% (vs. 11% of the students) reported regularly truanting at least once a week when at school. Studies elsewhere have found truancy to be strongly related to later offending (Loeber & Stouthamer-Loeber, 1987). An earlier study of South Australian juvenile delinquents (Meschemberg, 1974) found greatly increased rates of truancy among recidivists presenting at court compared to first offenders.

Of the assessed young offenders, only 19% had been attending school or TAFE college immediately prior to their detention. Of those no longer attending school, 15% had ceased attending by age 13. By comparison, in Australia in 1994 80% and 60% respectively of 16 and 17-year old youths were still at school (Australian Bureau of Statistics, 1997b).

An absence of school-related behaviour problems might be a positive prognostic sign. If school or college attendance was current before a youth came into secure care, and particularly if there are few behaviour problems associated with school, efforts should be made to allow the youth to continue his/her educational program. Positive school experiences can help to reduce the risk of antisocial behaviour (Rutter et al., 1998).

GBQ item 21 (a,b). Experience of being in paid employment.

To get and hold a job suggests the possession of a degree of initiative, diligence, perseverance and ability which is antithetical to the short-term, hedonistic and impulsive character of many chronic delinquents. Having held a job for some time might be a positive prognostic sign, particularly as a repeated failure to sustain consistent work behaviour is one of the diagnostic criteria for both Antisocial Personality Disorder (American Psychiatric Association, 1994) and psychopathy (Hare,1991). Lack of such work experience could, of course, be due to a number of factors which might need to be examined further in order to determine whether there are any needs or deficits that might be amenable to intervention.

Among the young offenders 16 years and older, while 93% had left school only 54% had ever had a regular paid job working at least 10 hours a week and only 22% had held such a job for longer than 6 months. These are consistent with annual figures for all youths admitted into custody in South Australia, namely: among the 16-18 year olds 8% were attending school, 11% were employed and 81% were unemployed (Juvenile Justice Advisory Committee, 1997).

GBQ items 22, 23, 24 & 25. Concentration, impulsiveness, restlessness and coping with boredom.

These items measure signs that are features of Attention Deficit Hyperactivity Disorder (ADHD). ADHD is known to occur more frequently among young offenders, is often a precursor of conduct disorder (Taylor, Chadwick, Heptinstall, & Danckaerts, 1996) and is a risk factor for the development of antisocial personality disorder and substance use disorders later in life (Manuzza, Klein, Bessler, Malloy, & LaPadula, 1998). While affirmative answers to these items by themselves do not allow a diagnosis of ADHD to be made, such responses at least raise the question of the presence of ADHD and suggest a need for further assessment. The presence or absence of observable hyperactivity at the time of the assessment is not crucial to the diagnosis of pervasive ADHD (Tripp & Luk, 1997). It should also be noted that the signs of ADHD become less overt with increasing age, even though the disorder is still present. Because of this, Barkley (1990) has suggested that the number of observable symptoms required to make a diagnosis of ADHD should, compared to younger children, be less in adolescents. Furthermore, the validity of the *DSM-IV* (American Psychiatric Association, 1994) ADHD age-of-onset criterion (7 years) has recently been challenged as having little empirical or conceptual justification (Applegate et al., 1997; Barkley & Biederman, 1997). Although not directly affecting the SECAPS assessment, it is worth keeping these points in mind should positive responses to these items lead to further investigation and consideration of the possibility that a particular youth might be suffering ADHD.

Attention deficit is not an all or nothing condition. Rather, it is a continuum with usually only the more extreme cases receiving the diagnosis. Nevertheless, many young offenders, even if failing to gain a formal diagnosis of ADHD, often have signs of attention deficit, albeit in less severe and perhaps situational (as opposed to pervasive) forms. In such cases many of the strategies for managing their behaviour are still the same as for ADHD (except for the use of medication). Examples of these strategies are to make tasks more interesting and stimulating, provide immediate feedback, provide many and varied activities, keep tasks short and intersperse longer tasks with breaks and provide one-to-one or small group teaching/supervision both in order to reduce distractions and to more closely monitor, correct and reward on-task behaviour.

Among assessed youths in secure care, 40% (vs. 17% of students) reported often having difficulty maintaining concentration, 66% (vs. 38% of students) reported frequently being impulsive and 51% (vs. 29% of students) reported physical restlessness. Boredom was reported to be a major problem by 73% of young offenders (vs. 34% of students) and is frequently associated with offending risk. Youths often say that their offending and drug taking is, at least partly, a response to boredom, which is consistent with research findings that delinquency and physiological underarousal are related (Coren, 1999). Affirmative responses to this item highlight the need for stimulating prosocial recreational activities - both within secure care and after release into the community.

Item 19. Non-verbal intellectual functioning level.

The Coloured Progressive Matrices (CPM; Raven, 1976) is used as a brief measure of non-verbal intellectual functioning. It is a relatively culture-fair measure and does not rely on knowledge gained from formal schooling. With adolescents, it cannot be used to reliably measure different levels of intellectual functioning above the Borderline level (i.e., IQ=80 or greater). In the SECAPS, it is used to identify those youths who might have significantly lowered intellectual functioning. It is not used to assess over the full spectrum of intellectual functioning - that would have required a more time-consuming test. While direct normative data for the CPM with adolescents are not available, results have been published from a study of 1,847 school children who completed both the CPM and the Standard Progressive Matrices (SPM) (see Table CPM XVIII in Raven & Court, 1989 and/or Chapter 4 in Raven, Court & Raven, 1990). These results allow CPM scores to be converted to SPM score equivalents. SPM norms - which are readily available for adolescents in various countries, including Australia (de Lemos, 1989) - can then be used to determine the subject's likely non-verbal IQ range.

The tasks of converting the CPM scores and determining the intellectual functioning level are undertaken by a psychologist. Regarding the use of Australian norms, those for untimed SPM administration are used. All subjects older than 16:2 have their SPM standard scores calculated using the 15:9 - 16:2 age norms. Normative data for older subjects are based on student samples and are, therefore, biased due to selective school retention after 15 years of age (the duller subjects are more likely to drop out). For this reason, norms based on the older student groups should not be used. Applying the 15:9 – 16:2 age norms to older youths is unlikely to affect the accuracy of the calculated SPM

standard scores as there is little change with age in SPM scores over the 15-25 years age span (de Lemos, 1989). Recently a parallel form of the CPM was published (Raven, Raven, & Court, 1998; Styles & Raven, 1998). This is particularly useful if a youth is retested within a short time. A brief alternative measure of non-verbal intellectual functioning that could be substituted for the CPM in this screening assessment is the Kaufman Brief Intelligence Test's (Kaufman & Kaufman, 1990) matrices scale.

Scores in the SECAPS report are described as falling within either the above Borderline range, Borderline range, or below Borderline range. Low scores suggest a need for further assessment, particularly if there is a discrepancy between the CPM results and the literacy, numeracy and time-telling task results. If low scores are recorded on all these tasks, it is highly likely that a low CPM score reflects a genuinely lowered ability level. However, if the literacy, numeracy and time-telling tasks indicate adequate levels of functioning while the CPM score is low, this can indicate either an unreliable CPM score or a significant reduction in visual-spatial problem solving (i.e., non-verbal functioning) relative to other areas of cognitive ability. In either case, further assessment will be required to clarify the situation.

Young offenders as a group are generally found to have below average levels of intellectual functioning (Hirschi & Hindelang, 1977), though of course there are many individual exceptions. Although lowered verbal intellectual functioning among delinquents has been highlighted by some researchers (e.g., Quay, 1987), others (e.g., Kratzer & Hodgins, 1999) report finding a more global reduction in intellectual functioning among delinquents. Reviewing predictors of juvenile recidivism, Cottle, Lee, and Heilbrun (2001) reported that verbal and full scale IQ scores were significant but weak predictors, while non-verbal IQ had no significant association. Stattin, Romelsjö, and Stenbacka (1997) found that higher intelligence helped to protect against the adverse effects of various behavioural and home background factors associated with increased offending risk. However, the relationship between intelligence and offending risk is not strong and should not overshadow other, often more potent, risk factors (Cullen, Gendreau, Jarjoura, & Wright, 1997).

It is important to have some notion of what a youth's intellectual ability might be so as to both avoid unrealistic expectations and to provide for any special needs, for example in the area of job training. Many young offenders have difficulty understanding court and other legal processes. Both common-sense and research (Howard & Tyrer, 1998) indicate

that such difficulties will be greater among the intellectually dull and learning disabled. For those subjects on remand, the results from both the intellectual and literacy assessment components of the SECAPS can help to identify those who might require additional assistance to understand and prepare for their forthcoming court appearance. Non-verbal intellectual functioning might be best regarded as a responsivity factor that influences an individual youth's learning style and suitability for particular interventions.

Among youths in secure care, 28% were found to be functioning in the Borderline range of non-verbal intellectual ability (ie, IQ = 70-79) and 6% were below the Borderline range (IQ < 70, i.e., Mildly Intellectually Deficient or lower).

Item 20. How cooperative was the youth with the assessment.

This item is basic to any psychosocial assessment. If the youth proves to be particularly uncooperative, the validity of the data gathered might need to be considered. Degree of cooperativeness can be related to the youth's social maturity, intellectual skills, attention span, tolerance for frustration, anger control, a distressing event immediately preceding the assessment or interrupting another activity that the youth felt was important. It might also reflect staff failing to adequately prepare the youth for the assessment.

Of the assessed young offenders, 96% were described as being either very or fairly cooperative.

Item 21. Observed restlessness/distractibility.

A few youths with pervasive attention deficits will continue to exhibit restless and distractible behaviour during the assessment, though generally most, because of the novelty, relative brevity of the assessment and the individual attention received, will not display such behaviour in an extreme form. Other factors that can influence restlessness/distractibility are the same as those mentioned under the preceding item.

Of the assessed young offenders, 21% were observed to be "somewhat" and 4% to be "very" restless or distractible at the time of the assessment.

Item 22. Additional comments and observations.

This item is self-explanatory. It is not standardised and simply permits the assessor to add any further information that the subject might have provided (particularly responses to any follow-up questions), any interpretive comments that the assessor might wish to make

and recommendations. Normally this is no more than a couple of paragraphs in length and can, if the youth proves to be unremarkable, consist of no more than a few sentences.

Other content considerations

With an administration time limit of about 30 minutes, the amount of material that can be collected from a subject is obviously restricted and decisions need to be made about what will and will not be included. As a guide to what might be assessed, Towberman (1992) in her survey of needs assessments grouped juvenile need items into a list of nine theoretical factor groupings. The items were based on what was reported to be assessed in various American states together with characterisations of high-risk, high-need offenders provided by different juvenile justice agencies. The factors are:

- Substance abuse
- Emotional/psychological problems
- Violent behaviour
- Sexual abuse/deviance
- Family problems
- Peer problems
- Educational deficits
- Vocational deficits
- Physical problems

The assessment of these factors is by no means universal - no more than 51% of states in the USA reported assessing any particular one. Furthermore, the factors are not exhaustive - for example, antisocial attitudes are not included. Other cognitive variables such as moral reasoning maturity are likely to play an important role in offending risk (Palmer & Hollin, 1998) and could be a fruitful area for intervention (Arbuthnot & Gordon, 1986; Putniņš, 1995b, 1997b). Unfortunately, the assessment of such variables requires time and, in some cases, specialised training, thus precluding their inclusion in time-limited screening instruments such as the SECAPS.

Most of the factors listed by Towberman (1992) are explored in varying degrees in the SECAPS assessment with specific items about substance abuse, emotional/psychological problems, violent behaviour, family problems, peer problems and educational deficits. In the area of emotional/psychological problems it was decided to concentrate more on depressive signs (mood and feelings of despair) rather than on anxiety, though they are often difficult to separate (e.g., see Krug & Laughlin, 1976). Neither should be regarded

as a criminogenic need as there is little evidence that either is a precondition or a cause of delinquency. In the case of anxiety, there is some evidence to suggest that it might even have a weak protective effect (e.g., Hawkins et al., 1998). A person with a "have no fear" attitude would have fewer inhibitions to indulge in risky behaviours. Depressive signs are, however, important in the consideration self-harming risk among young offenders, hence their inclusion in the SECAPS as a personal rather than as a criminogenic need. In some circumstances they might also be regarded as responsivity factors – youths with depressed mood might be more difficult to engage in certain types of programs.

The SECAPS is not a health assessment. Health assessments are already routinely done in South Australian secure care centres (and in most other jurisdictions in Australia) by nursing staff and medical consultants. Therefore physical problems in the SECAPS are restricted to inquiries about sight and hearing.

Individual details about training and work histories are so idiosyncratic that initially it was thought to be too difficult to collect standardised information applicable to all or most subjects in a short space of time. However, recently items have been added about whether youths have ever been in regular paid employment and, if so, the longest time in any one job. Skills in basic numeracy and literacy, age of school leaving, non-verbal intellectual functioning and work history together can provide some insight into vocational deficits.

The only area among those listed by Towberman that is not touched on in the SECAPS is sexual abuse/deviance. Although histories of sexual abuse are more common among delinquents and substance users than among the general population (Harrison, Fulkerson, & Beebe, 1997; Howing, Wodarski, Kurtz, Gaudin, & Herbst, 1990; Takii, 1992) and are associated with other forms of adolescent maladjustment (Garnefski & Arends, 1998), it was felt that, given the delicacy of this topic for many youths and assessors, it would be difficult to broach, justify to the youth and accurately assess in a short time. The validity of screening data in this area might be suspect, particularly as research elsewhere has shown very limited consistency over time in responses to a simple question about previous sexual abuse/assault. For example, Scott and Aneshensell (1997) found that, of those initially reporting such experiences, 41% denied such experiences when reassessed 12 months later. Lowenkamp, Holsinger, and Latessa (2001) reported that neither physical nor sexual abuse added to the accuracy of recidivism prediction once other risk factors had been controlled for. Moreover, research findings suggest that child neglect has a more direct causal path to juvenile delinquency than does child abuse

(Weatherburn & Lind, 1997). It appears that the relationship between child abuse and delinquency is largely due to abuse acting as a proxy variable for neglect. This is consistent with the finding that violence (including violent offending) is better predicted by child maltreatment and neglect than by either physical or sexual abuse (Hawkins et al., 1998). Child neglect could, therefore, be considered for inclusion in the SECAPS. Unfortunately, there is no simple and reliable self-report measure of past neglect for use among young offenders. A related measure could be whether the youth is currently or ever has been under a Care Order. Current Care Order status is recorded in the SECAPS, but not past Care Order status. Past Care Order status was enquired about in the first version of the SECAPS, but it soon became evident that most youths were unable to answer this reliably and assessors seldom did file checks, therefore this item was omitted from later versions. The best measure of neglect is likely to come from file information regarding child abuse/neglect notifications and previous social assessment reports, provided such file information is accessible. This, however, would become a more time-consuming task than is allowed for in the SECAPS assessment. However, if time, assessor interest and agency commitment permit, gathering such information is not precluded as an addition to the SECAPS assessment. As a caution, it should be noted that neglect is not necessarily a unitary concept and that the relationships of its components to recidivism are not always consistent. For example, Kingree, Phan, and Thompson (2003) found that, while emotional neglect had a weak but positive relationship with recidivism among adolescent detainees, physical neglect had a negative relationship.

No standardised personality measures were considered for inclusion in the SECAPS. The time needed to complete them alone precluded their use. Moreover, few personality measures have been shown to be able to consistently predict young offender recidivism. For example, although the Jesness Inventory (Jesness, 1972, 1988) was specifically designed to be used with young offenders, a number of longitudinal studies (Martin & Clarke, 1969; Ogden, 1973; Putniņš, 1980; Saunders & Davies, 1976) have failed to confirm its predictive validity. Another instrument widely used in North America is the MMPI (Minnesota Multiphasic Personality Inventory), though results regarding its use as a predictive instrument with young offenders are equivocal (Arbuthnot, Gordon, & Jurkovic, 1987). The MMPI psychopathic deviate scale was unrelated to recidivism in a study of 244 incarcerated youths (Benda & Tollett, 1999) and the more recent MMPI-A has failed to distinguish between young violent offenders, non-violent offenders and public school

students (Katz & Marquette, 1996). In addition, the large numbers of items in all the different forms of the MMPI discourages its use due to the attention and literacy problems often encountered among delinquent youth and the limited time available for a screening assessment. While there is some support (e.g., Heaven, 1996; Putniņš, 1981, 1982) for the predictive utility of some of the Junior and Adult Eysenck Personality Questionnaire scales (Eysenck & Eysenck, 1975; Eysenck, Eysenck, & Barrett, 1985), more replication studies are needed before their use can be confidently recommended.

The already mentioned PCL-R (Hare, 1991) has gained wide acceptance in forensic circles in North America. Its use for routine and quick screening is, however, problematic. It requires a high level of professional training to use, requires comprehensive file information and/or ready access to other secondary sources of information, takes some hours to administer and score and has characteristics that might not be universal nor even common to all English speaking countries. For example, Cooke (1997) has noted large differences in the incidences of psychopathy (as measured by the PCL-R) between Scottish and North American prisoners (the latter being much higher) and differences in the levels of various traits that contribute to Hare's conception of psychopathy. One of these is the trait of "glibness/superficial charm". Cooke remarked that "superficial charm, although it does exist among some Scottish prisoners, exists only rarely. It may be that cultural pressure militates against glibness and superficial charm in the Scottish context, whereas glibness thrives in the 'have a nice day' culture of parts of North America" (p.7). A similar caution might be appropriate for the Australian context compared to North America. In any case, more work is required on the cultural portability of the Hare PCL-R before it can be considered for routine use elsewhere. Nevertheless, some traits measured by the PCL-R, such as impulsivity and a need for stimulation, do appear to have cross-cultural generalisability and have been incorporated into the SECAPS.

The above raises an important point, namely that due to cultural, social and legal differences between various countries and jurisdictions, a risk assessment instrument developed in one place cannot necessarily be assumed to be valid elsewhere. Local conditions might place limits on some aspects of the assessment (e.g., how long it can take, who the assessors will be, what kinds of items can or need to be included). Some items that are predictive in one setting might not be predictive in others. Even if all the items are valid predictors, normative differences might require local restandardisation. Such

considerations made it desirable to develop a new screening instrument (i.e., the SECAPS) for use in South Australia rather than to adopt an existing instrument from elsewhere.

Another drawback to many personality measures is that the items often seem irrelevant to youths. They sometimes query why they are being asked such questions and challenge the assessor to justify their relevance to the current situation. At times, some will suspiciously (and not always without basis) suggest that they are being asked trick questions intended to find out whether they are "crazy". Examples are easy enough to find, such as "Would you like to explore an old haunted castle"? (Junior Eysenck Personality Questionnaire) or "Do you always wash before a meal"? (Adult Eysenck Personality Questionnaire). Generally young offenders are more accepting of (and thus more cooperative with) questions that are factual and have an evident connection with important issues in their lives. The SECAPS items were selected with this observation as a guiding principle.

An area of functioning that had been considered for inclusion in the screening was verbal intelligence. However, no adequate brief measures could be located. Either the measures were too lengthy or they were too closely bound to educational and other experiences to be judged to be culture fair tests - an important consideration given the number of Aboriginals and early school leavers among detained youths. A candidate test would be something like the Similarities subtest from the WISC-III (Wechsler, 1991). Such a test would be fairly brief, would not require the subject to have any literacy skill, would tap fluid/abstract verbal reasoning and would not be as obviously tied to formal learning as would measures of either vocabulary or general knowledge. Although easy to administer and score by professional psychologists, the use of such a measure could be problematic in the hands of non-professional youth workers who are expected to carry out many of the routine SECAPS assessments. Reliability in adhering to required standards in administration, recording and scoring could be an issue, as might be the use of a test (or part thereof) which is restricted to registered psychologists. In any case, an analogue of the WISC-III Similarities subtest would need to be found or developed, as use of the original would probably prove to be too expensive in a mass screening procedure. This has not been done and thus there is at present no direct measure of verbal intelligence in the SECAPS.

Over time, as experience with the SECAPS has accumulated, some new items have been added and a few have been removed. The most notable among those no longer in the

SECAPS was an item about whether the youth had had a steady girl/boy-friend for longer than three months. There were two reasons for its inclusion. First, some youths cease offending when they reach certain critical points in their lives. One of these critical points - particularly for young males - can be an intimate relationship with a non-offending female who disapproves of the youth's criminal activities (see Woodward, Fergusson, & Horwood, 2002). Not only are the social rewards for offending thereby reduced, but rather than risk the dissolution of the relationship the youth will sometimes cease offending. If the question was answered in the affirmative, a follow-up question at this item could determine what the youth's status was with regard to current romantic involvements and whether these might help to reduce his/her offending risk. In practice, however, a follow-up question was seldom asked and assessors seldom referred to this item in their comments or deliberations regarding recommendations.

The second reason for this item's original inclusion focussed on the personal characteristics that might be associated with differing capacities for prolonged emotional intimacy. While having a steady girl/boy-friend for longer than three months will not necessarily prevent offending (particularly if the partner is also an offender), the lack of a capacity for sustained intimacy and longer term interpersonal commitment might be associated with psychopathy – a factor related to increased offending risk. "Failure to maintain enduring attachments to other people" is one of the hallmarks of psychopathy as described by Hare (1991, p.45). This item's inclusion in the SECAPS was experimental in the sense that prior empirical support for its use with adolescent offenders was absent. It was justified on the basis of theory and findings with adults. However, analysis after 680 youths had been assessed with the SECAPS failed to reveal any significant statistical relationships between this item and other indices of deviance (substance use, conduct problems, attention deficit hyperactivity problems, age of first offence, offending and/or substance misuse by other family members) for either females, Aboriginal males, and non-Aboriginal males in 14-15 and 16-17-years age subgroups. The lack of statistical association with relevant SECAPS items and its minimal use by assessors led to it being removed from the assessment. Subsequent research elsewhere (Zimmer-Gembeck, Siebenbruner, & Collins, 2001) indicates complex relationships between various aspects of adolescent dating behaviour and externalising behaviour problems. It is likely that the single SECAPS item on this topic could not capture this complexity. Although this item is no longer part of the current SECAPS assessment, response frequency data collected up to

when its use was discontinued are included in Appendix 5 (along with the response frequencies of other SECAPS items).

Measurement consistencies, reliabilities/stabilities and research indices

Youths are normally reassessed with the SECAPS if, on re-admission to secure care, more than 12 months have elapsed since their last SECAPS assessment - though during the initial stages of the development of the SECAPS program some subjects were reassessed sooner. These assessments can provide data on score reliability. A few words of caution, however, are necessary. First, as these are mainly youths who have been re-admitted to secure care, it might be expected that they will be a more homogenous group than the population of all youths who come into secure care. Item score variability will likely decrease and score distributions can be expected to be somewhat skewed, thus reducing the magnitude of some test-retest coefficients. That is, test-retest coefficients obtained with this group are likely to be lower than coefficients obtained with a broader subject sample. Second, test-retest reliabilities are usually calculated on relatively short retest periods - around two weeks being a commonly used interval. Here, however, the test-retest intervals are substantially larger. This means that differences in scores between one assessment and the next will be due not only to test error (i.e., less than perfect reliability) but also genuine change in the variables measured - particularly for those variables that are dynamic in character. Therefore, the coefficients reported here are probably lower than those that would be obtained using shorter test-retest periods. Because of the extended time between assessments, strictly speaking the test-retest coefficients should be regarded as stability rather than as reliability measures.

Results are presented for the first 207 youths to undergo repeat SECAPS assessments. Only first (A_1) and second (A_2) assessments are considered here. Where data are missing, exact subject numbers are specified.

Sample characteristics

Males = 92% Non-Aboriginals = 69%

Age at first assessment (A_1) *Mean* = 14.9 yrs, *SD* = 1.4 Range = 11-18 yrs

Age at second assessment (A_2) *Mean* =16.2 yrs, *SD* = 1.4 Range = 12-19 yrs

Time between A_1 and A_2:

Mean = 509.7 days *SD* = 236.0 Range = 24 - 1468 days

Reliabilities and consistencies:

Age of being first charged or arrested by the police (*n*=203)

r =.67

Concise Word Reading Test raw score (*n*=201)

r =.91

Classification of reading ability into "survival" (10 years or more) and "below survival" (less than 10 years) levels (*n*=201)

At the second assessment, 89% of the youths fell into the same reading category that they were in at their first assessment. Among those whose reading classification changed, 82% went from "below survival" at the first assessment to "survival" at the second assessment. This was an expected result and is likely, in view of the extended time elapsed between assessments, to be due to subject maturation.

Writing task - words spelt correctly (*n*=111 - the reduced number of subjects is due to this item being incorporated into the SECAPS some time after the screening program had commenced)

r =.83

Classification of writing ability into "survival" (8-9 words correct) and "below survival" (less than 8 correct) levels (*n*=111)

At A_2, 87% of the youths were placed in the same category as they had been at A_1. Of those whose classification changed, 57% went from "below survival" to "survival".

Numeracy - total correct (*n*=204)

r =.77

Basic money handling skills - "acquired" (4-6 correct) vs. "not acquired" (less than 4 correct) (*n*=204)

At their second assessment, 84% of subjects fell into the same reading category that they had at their first assessment. Of those subjects whose money handling skill classification changed, 64% went from "not acquired" at A_1 to "acquired" at A_2. These reclassifications and their direction were expected due to subject maturation during the time elapsed between assessments.

Coloured Progressive Matrices raw score (*n*=120 - on reassessment with the SECAPS, subjects were not normally required to repeat the CPM, hence the reduced subject numbers for this item)
r =.67

Standard Progressive Matrices standard score (*n*=120)
There was no significant difference (matched pairs *t*-test, *p* =.94) between scores at A_1 (*Mean* = 89.4 *SD* = 16.9) compared to scores at A_2 (*Mean* = 89.5 *SD* = 15.4).
r =.49

Classification into intellectual functioning (IQ) ranges (*n*=120)
At A_2, 71% of subjects fell into the same category (i.e., either Above Borderline, Borderline or Below Borderline) as they had done at A_1. No subjects who were "below borderline" (IQ ≤ 69) at A_1 were classified as "above borderline" (IQ ≥ 80) at A_2. Similarly, no subjects who were classified as "above borderline" at A_1 were classified as "below borderline" at A_2.

Time telling (*n*=206)
At A_1, only 2% of subjects made errors telling digital time. The same was found at A_2. On the analogue time items, 22% of subjects made an error at A_1 and 13% made an error at A_2. The improvement over time is likely in some cases to be due to tuition while in secure care and partly due to increasing maturity. Of the subjects who made an error at A_2, 73% had also made an error at A_1.

Research indices

A number of indices have been constructed using SECAPS items by combining both conceptually and empirically related items. These, together with formulas for their

computation using SECAPS database item labels, are presented below, followed by test-retest and internal consistency data. Due to differences in wording, the scores of some items are reversed (resulting in their subtraction rather than addition) in the computations of some indices.

Psychoactive substance use - sum of the frequencies of use of alcohol (ALCO), marijuana (MARIJ), hallucinogens (HALLU), sedatives/hypnotics (SEDHYP), narcotics (NARC), stimulants (STIM), and inhalants (INHAL).
PSU = ALCO + MARIJ + HALLU + SEDHYP + NARC + STIM + INHAL

Suicidality Index (SI) - sum of previous recent thoughts about suicide (SUICIDE), and previous suicide attempts (ATTSUIC).
SI = SUICIDE + ATTSUIC

Attention deficit and hyperactivity disorder signs - sum of problems with concentration (CONCEN), impulsiveness (IMPULS), difficulty sitting still (RESTLS), and boredom (BORED) a major problem.
ADHD = CONCEN + IMPULS + RESTLS + BORED

Depression - combination of current mood (MOOD), feelings of hopelessness (HOPLESS), number of close friends (NUMCLOS), rated ability to get on with others (GETON), and recent suicidal ideation (SUICIDE). The mood and feelings of hopelessness items' score ranges are adjusted to make them similar to the other three items.
DEPRESS = (MOOD/5) + (HOPLESS/2) - NUMCLOS - GETON - SUICIDE

Conduct problems - combination of most friends have been in trouble with the law (FRNDLAW), bad temper (BADTEM), suspended or expelled from school (SUSEXSCH), regular truancy (TRUANT) and frequency of fighting (FIGHTS).
CONDUCT = FRNDLAW + BADTEM + TATS + SUSEXSCH + TRUANT - FIGHTS

The observed minimum and maximum scores for the various indices (see Table 1) in most cases correspond to the theoretical score limits except for the substance use index,

which has a theoretical maximum of 35, and the depression index, which has a theoretical minimum of -6.5. All the skewness statistics are within a -1 to +1 range. The largest kurtosis value was 1.29. Departures from normality do not appear to be extreme.

Table 1: *SECAPS research scales' descriptive statistics*

	n	Range	Min.	Max.	*M*	*SD*	Skewness	Kurtosis
1st assessment								
ADHD signs	896	4.00	4.00	8.00	5.71	1.27	0.25	-0.99
Depression	889	7.50	-6.50	1.00	-1.26	1.32	-0.77	0.67
Substance use	897	23.00	7.00	30.00	12.59	4.01	0.97	1.29
Suicidality	897	2.00	2.00	4.00	2.53	0.76	1.02	-0.52
Conduct	898	7.00	2.00	9.00	4.99	1.53	0.24	-0.61
2nd assessment								
ADHD signs	206	4.00	4.00	8.00	5.55	1.31	0.36	-0.10
Depression	206	6.40	-5.40	1.00	-1.16	1.39	-0.92	0.74
Substance use	205	24.00	7.00	31.00	13.18	4.26	0.87	1.18
Suicidality	205	2.00	2.00	4.00	2.58	0.79	0.91	-0.80
Conduct	206	7.00	2.00	9.00	4.99	1.44	0.46	0.05

Note: The range, minimum, and maximum values are observed rather than theoretical. The origins of both the skewness and kurtosis statistics are 0.

The reliabilities for the above scales (see Table 2) are somewhat variable but appear to be adequate for research purposes and possibly for clinical use. The internal consistencies for the largest assessment group (young offenders at the first assessment) are all in the range .47 to .65, which is consistent with Boyle's (1991) suggestion that item-homogeneity coefficients should ideally fall in the range of .3 to .7. Lower values indicate a strong likelihood that the measure is multidimensional and internally inconsistent while higher values suggest redundancy and a lack of item breadth. The test-retest coefficients obtained with young offenders retested within six months (.48 - .60) were very similar in magnitude to the internal consistency coefficients for the same indices. Although there was some variability, the test-retest coefficients tended to be lower with longer retest intervals.

Test-retest reliability is usually assessed over a relatively brief time span - long enough for the subject's recollection to have dimmed about how they responded on the first test occasion, but not long enough for major change to occur in the variables being measured. Periods of one to two weeks are frequently used retest intervals. The intervals reported here for individual subjects, however, range from a minimum of just under one month to a little over three years, with most subjects being retested after more than one year. The amount of time elapsed is likely to result in real changes in the target variables. Therefore the coefficients reported here reflect not only measurement reliability but also the temporal stability of the variables. As estimates of reliability alone, these test-retest coefficients are generally likely to be underestimates.

Table 2: *Test-retest and alpha coefficients of SECAPS research scales*

	Test-retest stability††				Alpha coefficient		
Assessments	1st-2nd	1st-2nd	1st-3rd	2nd-3rd	1st	2nd	1st
Group†	YO_a	YO_b	YO	YO	YO	YO	HS
Scale							
Substance use	.60	.29	.34	.35	.63	.62	-
Suicidality	.51	.35	.60	.52	.65	.70	-
ADHD signs	.52	.36	.36	.49	.58	.62	.68
Depression	.48	.28	.45	.33	.48	.57	-
Conduct problems	.50	.52	.25	.32	.47	.41	.71
n	20	185-186	44	44	889-898	205-206	129-132

Note: The high school student sample was obtained from 136 non-Aboriginal students surveyed at two Adelaide metropolitan high schools (males 59%, females 40%, not recorded 1%; age range 15-18 years). This is described in the section *Item selection and interpretation*. Missing data further reduced the numbers for individual items. As not all the SECAPS items were administered to the students, only the ADHD signs and Conduct problems scales could be fully computed. The young offenders all were incarcerated youths.

† YO = young offenders (YO_a = less than 6 months between assessments, YO_b = 6 months or more between assessments), HS = high school students

†† Days between 1st-2nd assessments (YO^a) *M*=103.5 *SD*=47.2 Range=24-176
Days between 1st-2nd assessments (YO^b) *M*=553.5 *SD*=204.9 Range=184-1468
Days between 2nd-3rd assessments *M*=490.6 *SD*=153.0 Range=226-882
Days between 1st-3rd assessments *M*=948.2 *SD*=298.9 Range=311-1711

Tests are often normed and refined in a research context; subjects are informed about the research nature of the project and are assured complete confidentiality. How each individual responds usually has no personal consequences for him or her. The SECAPS assessment, however, was developed in applied settings and information gained from the subjects was forwarded to other staff. Subjects were aware of this and could, if so inclined, distort some of their responses. Whether they did or not would have depended, among other things, on how they were feeling at the time, their immediate awareness that decisions might be made on the basis of their responses and whether they wanted to influence these decisions. This introduces a further source of error when assessing the reliability of the SECAPS scales.

Although youths could decline to do the SECAPS assessment by simply refusing, this was not openly offered to them as an option. At the very outset, SECAPS assessments were introduced as a routine screening tool to help staff better understand the individual youths in their care. Reassurances offered to youths (to minimise response distortion) were that the assessment was routine, all youths in similar circumstances were expected to do it (i.e., they were not being singled out for special scrutiny), the assessment was not ordered by the court and its primary purpose was to provide information for those staff who would be working with them. The assessment was usually described to the youths as "a routine assessment that involves checking your reading and arithmetic and finding out a little about your background". This was in order to allay apprehensions about people trying to be too invasive about their privacy. Furthermore, the order of the items and tasks was to present those that might be seen as less threatening regarding personal disclosure early in the assessment. Thus, items regarding suicide, substance use, fights and so on were given only after the items about sight, hearing, numeracy, time telling, reading, where they had been living and so on had been asked. Despite these precautions, it is inevitable that some subjects will distort their responses. The tendency to distort will itself vary over time depending on circumstances and the subjects' psychological states. An indicator of this variability can be found in an examination of the assessors' ratings of the subjects' cooperativeness. The correlation of these ratings between the first and second assessments was very low (r = .10, n = 117). While rater reliability might contribute to this in part, it is likely also to reflect the changing moods and circumstances of the youths, particularly given the relatively long inter-test periods. In other words, under optimal research conditions the reliabilities might have been somewhat higher. An indicator that this might

be so is suggested in a comparison of the high school students' and the young offenders' alpha coefficients. The high school students were introduced to the task as a research project and were tested under conditions that guaranteed their anonymity. On the two scales where comparisons can be made, the high school students had higher internal consistencies than did the young offenders (.68 vs. .58-.62 for ADHD signs; .71 vs. .41-.47 for Conduct problems). This is consistent with the hypothesis that distortion occurs more often among young offenders, though it does not prove it. An alternative hypothesis, or at least an additional contributing factor, might be that, due to their higher levels of ADHD signs, poorer verbal skills and lowered intellectual functioning, young offenders are simply less reliable in their self-reports.

From data for the individual scales, it can be seen that Substance use had a moderately high retest coefficient for intervals of less than six months. This declined in magnitude as the retest interval increased. This was expected given that real changes over time are likely to occur in individual youths' substance use. Furthermore, variability will be more evident when a short time period is sampled, as was done here (i.e., the last month before being placed in secure care). Similarly, the test-retest coefficient for the suicidality index was lower among first assessment youths whose retest interval was longer than six months compared to those retested in less than six months. With the elapse of time, the presence of recent suicidal ideation will vary, less serious suicidal gestures are often forgotten or reinterpreted (Klimes-Dougan, 1998) and new suicide attempts will occur among some subjects.

The ADHD signs scale had moderate to moderately high internal consistency and moderately high retest reliability over a shorter (less than six months) time span. It compared quite favourably with the test-retest reliability of the Attention Problems scale of the widely used Youth Self-Report (.59 with a 7-month interval; Achenbach, 1991).

Some data regarding the criterion validity of the ADHD signs scale are also available. Bickel and Campbell (2002) recently carried out an investigation into the mental health of 50 youths incarcerated in a youth detention facility in Tasmania. The assessment instrument used was the Adolescent Psychopathology Scale (APS; Reynolds, 1998), which measures 20 clinical disorders described in the *DSM-IV* (American Psychiatric Association, 1994). Most of the youths also underwent SECAPS assessments as part of the detention facility's routine assessment program. SECAPS data were recently retrieved and matched with the APS ADHD scale T-scores. The product-moment correlation

between the SECAPS ADHD signs scale and the APS ADHD scale was .52 (n =41, p <.000). This is a moderately strong association and supports the concurrent validity of the ADHD signs scale.

The Depression scale's internal consistencies and under six month interval test-retest coefficient were moderately strong. Test-retest coefficients from longer intervals were weaker, reflecting that mood is a changeable condition and that emotional lability is particularly widespread among delinquents. The often transitory nature of mood is illustrated in the finding that 78% of the respondents indicated that they had experienced their current mood state for no more than a few weeks. Although not particularly stable over longer periods, it does appear to tap an underlying trait which displays low to moderate reliability.

The Conduct problems scale displayed moderately strong reliability for both shorter and longer retest intervals between the first and second assessments. Coefficients obtained with third assessment data were relatively weak. The relatively few items in each of the SECAPS scales will, of course, tend to reduce their test-retest reliability and reduce the strength of their associations with other variables (see Boyle & Pickles, 1998). When time is limited, assessors must choose between either attempting a wide-ranging assessment (with likely reduction in reliability) or a more detailed assessment of fewer areas of adjustment (better reliability but reduced breath). Ideally, one would like to have both a broad and detailed assessment, but resources and agency commitment do not always support this option.

The next six chapters describe the results of a number of studies that are based on analyses of SECAPS data.

Chapter 3
Young offenders and substance use

Psychoactive substance misuse has been related to a number of undesirable health, social, legal and economic outcomes. Increased risks of blood-borne diseases such as HIV and hepatitis B and C, suicide, motor vehicle fatalities, violence, and psychological and physical dependence are just some examples. It is also widely recognised that criminal offending and the use of psychoactive substances are often associated activities. While both substance misuse and crime are of concern to the community, these concerns are multiplied where the two areas overlap. Frequent media reports about drug driven crimes (particularly for the maintenance of expensive narcotics dependencies) fuel these concerns. Legislators and law enforcement agencies struggle with questions of decriminalisation, legalisation or a get tough "war on drugs" approach to the problem. The judiciary searches for more effective ways of dealing with substance using offenders - drug courts being a recent example. Health and welfare agencies seek more therapeutic intervention services, often focussing on harm minimisation, while both school based and public educational and awareness campaigns are regularly launched.

Overseas studies have long since indicated a close link between substance use and juvenile offending (e.g., Loeber & Stouthamer-Loeber, 1987). This link has been confirmed in a number of studies of young offenders both in police detention (Makkai & McGregor, 2002) and in youth detention centres in different Australian states. Crundall's (1987) study of youths in training and reception centres in Victoria found that residents (not all of whom, however, were offenders) reported higher incidences of lifetime use of a variety of substances than did similarly aged students. Supplementary questions regarding alcohol use revealed high rates of recent binge drinking and severe physical effects. For example, 25% of the 14-17-year-old drinkers reported loss of consciousness due to drinking in the previous month. Some figures for the use of other substances during the preceding month were given, but as there was no indication of how many of the subjects had been in the community during that period, it is not possible to describe accurately the typical community substance use pattern of all the youths.

Howard and Zibert (1990) studied drug use among detained young offenders in New South Wales. Although they concluded that similarly aged school attenders used substances less often than did detained youths, direct comparative data were presented

only for whether subjects had ever used cannabis. Furthermore, asking subjects to estimate their total lifetime use of substances, as was done by Howard and Zibert, has potential problems with regard to accurate subject recall. An absence of information about recent use or use over a more restricted period further limits the interpretation of their data.

Watts (1992) surveyed young offenders in custody in Perth. He found that, compared with a local community sample of adolescents, young offenders reported much higher incidences of marijuana, LSD, glue and amphetamine use. Daily use of cannabis, alcohol, amphetamines and glue was reported by 27%, 10%, 11% and 10% of the subjects, respectively. Although the results are likely to reflect fairly recent use, the non-specification of a defined and limited period detracts from their accuracy.

A 1999 survey of detainees in NSW juvenile justice centre (Copeland & Howard, 2001) revealed marked increases in amphetamine, opiate and cocaine use compared to a similar survey in 1994 (Hando, Howard, & Zibert, 1997). For example, reports of having ever used opiates increased from 19% in 1994 to 50% in 1999. Both these and a study of juvenile detainees in Queensland (Lennings & Pritchard, 1999) included estimates of frequency of use of the various substances for the last month before incarceration. These provide better insights into the youths' recent substance use than do lifetime estimates and are clinically more relevant.

Previous to the present study, only two quantitative studies about substance use among young offenders have been carried out in South Australia. A survey (Putniņš, 1992; Putniņš & Harvey, 1992) about alcohol use among 197 young offenders in secure care in Adelaide found that alcohol misuse was widespread and that 24% of the youths could be described as being "alcoholic-like drinkers". Only 1% of a local high school student comparison group recorded such a level of drinking. The young offenders typically consumed more drinks on any drinking occasion than did the high school students. Moreover, 57% of the young offenders reported consuming alcohol at the time of their last offence. Of these, two-thirds acknowledged having been drunk.

A later survey (Putniņš, 1995a) among 216 young offenders in secure care in Adelaide found that, compared to Australian high school and TAFE student groups, offenders more often reported use of most substances during a 1-month period (2-14 times more, depending on the particular substance). The exception was alcohol. Seventy-four per cent of the offenders reported using alcohol during their last month in the community prior to their incarceration. This was within the range (albeit at the upper end) reported for various

student groups. However, as the earlier alcohol use survey found, it is likely that the quantity of use (number of drinks consumed on any one occasion) is much higher among young offenders. Amongst the young offenders surveyed, the least frequently used substances were narcotics (8% reported any use during a 1-month period) while the most frequently used substance was marijuana (79% reported any use during a 1-month period).

Patterns of drug use can both differ between locations and change over time. Furthermore, descriptions of the levels of substance use can vary between studies due to different survey methods and questionnaires. Survey samples are often limited in size and/or representativeness and direct comparisons with non-offender or general population samples have sometimes been lacking. No one study can be expected to be definitive about substance use in a particular population. Rather, it is the accumulation of information and perspectives from various studies over time that will build a comprehensive picture about the nature and extent of substance use. It is in the context of contributing to a more comprehensive picture that this study has been undertaken. It builds on the last study described above (i.e., Putniņš, 1995a) by using similar core measures but with a larger number of subjects, thereby permitting a more detailed analysis of the relationships between background variables and substance use.

The data presented here were gathered from SECAPS assessments of youths in secure care. These assessments are intended to inform staff about each youth's psychosocial needs and possible risks. Among the risks considered is that of reoffending. To assist such risk assessments it is important to know what are the relationships between the use of various substances and later offending. The causal relationships between the use of various substances and offending by youths are complex and likely to consist of both bi-directional relationships and common causes (Rutter, Giller, & Hagell, 1998) and might be different for different substances. This clouds the question of to what degree substance use is predictive of, rather than just concurrent with, offending. Thus, an important part of this investigation is to examine the longitudinal relationships between substance use and criminal recidivism. Few such studies with young offenders have been undertaken elsewhere (see Cottle, Lee, & Heilbrun, 2001) and none previously in Australia.

A word of caution is required. The data presented here describe associations between substance use and offending status. They do not indicate the direction of causal relationships or even whether direct causal relationships exist. To convincingly demonstrate such relationships would require an experimental design in which variables

can be systematically manipulated by the investigator. Such a design was not used here, the current study being more in the nature of a survey. This is not to say that causal relationships do not exist between variables described by the data, only that a stronger research design would be needed before definitive statements about causality could be made.

In cases where a statistical association exists between two variables, for example between use of a substance and being an offender, at least three types of (not necessarily mutually exclusive) relationship are possible:

a) use of the substance increases offending risk;
b) being an offender increases the risk of using the substance; and
c) some or all of the covariation might be due to the influence of common factors (such as limited parental supervision) and not due to a direct causal relationship between the two variables.

Measures of statistical association alone cannot decide which of the above correctly describes the causal relationship. This does not mean that the data presented here cannot be used to suggest causal relationships, only that they cannot prove such relationships. Where, perhaps on the basis of theory or other studies, a particular relationship is suspected, the consistency of the data with the hypothesised relationship can be considered, thereby either lending support or casting doubt on the validity of the hypothesis. Furthermore, while a statistical association by itself is not enough to prove a causal relationship, lack of a statistical association tends to indicate the absence of certain kinds of causal relationships.

A further caution is to remind that the results presented here are those of young offenders in secure care. They are not necessarily representative of the population of all active young offenders. Most young people who at some time commit a criminal act are never placed in secure care. Those who are incarcerated tend to be more serious or chronic in their offending.

Method

Subjects and procedure

Youths admitted to South Australia's two secure care centres for young offenders whose expected stays are a week or longer are routinely assessed using the SECAPS. Of the first 904 youths approached for assessment, three declined to cooperate and one

completed only the first few items. The remaining 900 youths who completed the assessment are the subjects of this study. All the assessments were carried out between 1994 and 1999. In cases where individuals were assessed more than once, in order to avoid double counting of subjects, unless otherwise specified, only the results of first assessments are reported here. To date, this is the largest sample of Australian young offenders whose drug and alcohol use has been quantitatively described.

The examination of the relationship between self-reported substance use and subsequent reoffending used the full court adjudicated offending histories to the end of 1997 of all youths who completed SECAPS assessments during the first three years of the assessment program (viz. 1994-1996). Discarding 4 assessments in which no substance use responses were recorded left 454 youths with relevant assessment data. Removing subjects who either died or were not released from secure care 6 months or more before the end of the follow-up period (i.e., the end of 1997) further reduced the number of youths considered in the recidivism analyses to 447. Some of these were readmitted to secure care during the study period and underwent a second assessment. Among the youths who had a second assessment, one did not have any recorded responses to the substance use items, leaving 139 youths with relevant second assessment data. Of these, the 103 who were released from secure care 6 months or more before the end of the follow-up period were included in the recidivism analyses.

Measure

All the assessment items were part of the SECAPS. Among the items of particular interest here were those that enquired about how often various substances were used during the last month before each youth was placed in secure care. Substances listed (as given on the questionnaire) were:

alcohol (beer, wine, spirits);

marijuana (grass, hash);

acid, LSD, datura[1], magic mushrooms or other hallucinogens;

sedatives or sleeping tablets such as Mogadon, Serepax, Valium, Rohypnol or similar (without doctor's prescription);

heroin, morphine or other narcotics;

cocaine, speed, pep pills or other stimulants (without doctor's prescription); and

[1] Also known as Angel's Trumpet - a garden plant with hallucinogenic properties.

sniffed (breathed deeply) from spray cans or sniffed items such as glue, petrol, thinner, butane gas or similar.

These are summarised as: alcohol (Alco); marijuana (Marij); hallucinogens (Hallu); sedatives/hypnotics (Sed/Hyp); narcotics [i.e., opioids] (Narc); stimulants (Stim); inhalants (Inhal). Substances under "sedatives/hypnotics" included anti-anxiety agents. Frequency of use was indicated on a five-point scale, namely: never; once or twice a month; once or twice a week; several times a week; daily or almost daily. Other substance use items inquired about any previous intravenous drug use, the typical quantity of alcohol or marijuana used on a day when these substances are used, what substances, if any, were used at the time of committing their last offence, whether the respondent felt they had a problem with substance use and whether any natural parents or siblings had had problems with drugs or alcohol (see Appendix 2 for the exact wording of the items).

As the information collected about substance use derives from self-reports, questions about its accuracy due to either poor recall or deliberate distortion can be raised. While poor recall might occur on some occasions, it is unlikely to be a serious source of error. Unlike some other drug and alcohol use surveys that enquire about use over prolonged periods, here frequency of use was limited to the last month in the community. This was done deliberately, in part to avoid potential problems with trying to remember and estimate behaviours distant in time. Similarly, the item about substances used when they offended was restricted to the last (and therefore, most recent) offence, thereby reducing the possibility of incorrect recall or confusion between different offending occasions. The item regarding intravenous drug use asked whether substances had ever been taken by injecting. The simplicity of this question, the salience of the event and the lack of estimation required (no frequency estimate was requested) all encourage accurate recall.

A potentially more serious source of error is deliberate distortion. Error can occur in the direction of either inflating or minimising reports of use. Given the setting and the circumstances of the assessment, youths could be expected more often to under-report rather than over-report their use of substances. Lack of anonymity might influence disclosure, though Kulik, Stein and Sarbin (1968) found no significant differences in the levels of reported drug use among either high school students or incarcerated juvenile delinquents when anonymous and non-anonymous reporting (albeit in a research context) were compared. Results from studies in the USA, using biological analyses to check on the accuracy of self-reports (see Fendrich & Xu, 1994; Feucht, Stephens & Walker, 1994;

Makkai & McGregor, 2002; Mieczkowski, Newel, & Wraight 1998), indicate that under-reporting is more likely in relation to very recent use (previous 2-3 days) of hard drugs such as cocaine and heroin. Reports of use over the last four weeks tend to be more accurate. It is the longer period that is inquired about in the SECAPS. There are other factors here that reduce the tendency to not reveal the full extent of substance use. First, the SECAPS assessment is introduced to each youth as a routine assessment that is primarily intended to assist staff to become more aware of needs and issues concerning the youth. It is pointed out that it is not a court ordered assessment. This helps to reduce the anxiety that some youths have about the assessment. Second, the substance use items come later in the SECAPS assessment and follow a number of items about the subject's family and residential circumstances, vision and hearing problems, literacy, numeracy and other areas of functioning. This gives time for the assessor to establish a rapport with the youth and for the youth to settle in to the assessment. Third, substance use is so widespread among young offenders that it is statistically normative for their group. In a residential facility populated with young offenders, fear of condemnation by admitting to substance use is minimal.

A further aid to more complete disclosure is the use in the SECAPS assessment of a self-administered (the youth's literacy permitting) pencil-and-paper questionnaire to describe their substance use. Harrison (1997) reported that a number of studies have found greater disclosure using this format compared to face-to face interviews.

Although there are exceptions, it has been the experience of SECAPS assessors that where alternative sources of information about a youth's substance use have been available, on most occasions there is reasonably good concordance between the youth's report and other sources.

The outcome in the recidivism analyses was any proven offending (either youth or adult court adjudicated) that occurred within 6 months of release after the SECAPS assessment. Offences were counted as having been committed according to when the offences occurred, not when they were adjudicated. Offence records were obtained from the Office of Crime Statistics in the South Australian Attorney-General's department. Only records of offences dealt with by South Australian courts were available, with the exception of one youth who from press reports was known to have been convicted of a serious criminal matter in another jurisdiction. While the records of all youths were followed up for a minimum of 6 months post-release, in most cases adjudication records

were able to be checked for longer periods. Of the youths who completed a first SECAPS assessment, 99.3% were able to be followed up for a minimum of 9 months, and 98.2% for a minimum of 12 months. Of those with completed second assessments, 89.3% were able to be followed up for a minimum of 9 months, and 75.7% for a minimum of 12 months. This ensured that most new offences committed during the initial 6-month post-release period would be finalised, recorded and able to be included in each youth's offending history. Selection of a much longer outcome period would reduce the numbers of cases available for analysis. Furthermore, if recidivism rates over longer periods were very high (as in fact was the case here), then the strength of relationships between recidivism and other variables would be attenuated due to the limited variability of recidivism. A detailed discussion concerning the selection of the outcome period and how this can influence the incidence of recorded recidivism is presented in Chapter 8. As previous predictive studies have often examined violent recidivism as a separate outcome (e.g., Gendreau, Goggin, & Smith, 2002), note was taken of whether any of the post-release offences were violent offences.

Statistical methods

The bivariate associations between the substance use variables (assessed while the young offenders were in secure care) and later recidivism status are examined using product-moment correlations and chi-square tests. Some of the youths were re-admitted to secure care and were re-assessed a second time. Thus, two sets of substance use and post-release recidivism data are available. As the number of second assessments is smaller than the number of first assessments, greater weight needs to be placed on the first assessment results. From previous prediction studies (e.g., Cottle, Lee, & Heilbrun, 2001; Gendreau, Goggin, & Smith, 1996) it is known that most single variables have only weak to modest relationships with recidivism and that results often vary between studies. One way of increasing confidence in results is to raise the alpha value so that only highly significant results are accepted. A disadvantage is that relatively weak yet genuine relationships will be dismissed. Another strategy is to set alpha at a modest level (i.e., $p \leq .05$) and to look for consistency in the results. The latter approach is adopted here. The second assessment data are retained as a means of checking the consistency of the results from the analysis of the first assessment data. It is expected that any significant relationships will at best be modest in strength. If a variable has a weak though positive and significant relationship in

the analysis of the first assessment data, confidence in the relationship being genuine will be increased if it also observed to have a positive relationship in the analysis of the second assessment data. If, however, the relationship in the second assessment data is zero or negative, then despite the larger subject numbers in the first assessment data, one would be hesitant to accept the first assessment result as genuine. As the second assessment data are based on smaller subject numbers, they have less statistical power. Therefore the levels of statistical significance of the second assessment results are less important than are consistencies in direction and strength compared to the first assessment results.

Regarding scaling, the predicted outcome (recidivism) is dichotomous. Dichotomous variables can be treated as having interval scale properties (Nei, Hull, Jenkins, Steinbrenner, & Bent, 1975). The substance use items of greatest interest in this analysis are reports of the frequencies of substances used during the last month before placement in secure care. These are measured on a 5-point ascending scale (none; 1-2 / month; 1-2 / week; several times / week; daily or almost daily). The scale can be treated in one of two ways. The first is as a physical time scale. If, for simplicity, a month is regarded as being 4 weeks (28 days), then the scale values would be as follows: none = 0; 1-2 / month = 1.5; 1-2 / week = 6; several times / week = 16; daily or almost daily = 26. The values are the midpoints of the frequency ranges. This is an interval scale. The second is to treat the frequencies as a psychological scale of perceived intensity, similar to a psychophysical scale. This is how the measured scale points were selected and how the scale is analysed here. The scale values are 1 to 5 (none=1…daily=5), the scale being treated as approximately interval. The two scales are mathematically related ($y \approx x^2$-1, where y = time scale values and x = psychological scale values). In practice the results of analyses of the two types of scales yield very similar results, largely because product-moment correlations suffer little error when different scoring systems are compared to any selected "true" scoring system (Labowitz, 1970).

Results

Due to incomplete responses to some items, subject numbers for individual item results are often a little less than 900. The items regarding quantities (these are in addition to the "frequency of use" items) of alcohol and marijuana typically consumed and the item about intravenous substance use were added to the SECAPS some time after the assessment program commenced, which is why the results for these items are based on reduced subject numbers.

Sample characteristics

Of all the respondents, 90% were males. Ages for the total group ranged from 11 to 20 years, with most subjects (82%) falling within the 14-17-year age range. As can be seen in Table 1, the mean age of the females was more than half a year lower than that of the males. Aboriginal youths tended to be a little younger than non-Aboriginal youths. The few subjects who were 18 years or older were all incarcerated for offences committed before they turned 18 (the age of adult criminal responsibility in South Australia).

While 27% of the youths described themselves as Aboriginal, the proportion of Aboriginal subjects differed markedly between males and females. Aboriginals accounted for 24% of all male subjects and 49% of all female subjects. Why the proportion of Aboriginals among the girls is so much greater is not known. The imbalance is not due to sampling error but simply reflects the percentages of Aboriginals by gender in secure care. For example, during 1999 23% of all male young offenders and 51% of all female young offenders placed in custody were Aboriginal (Office of Crime Statistics, 2000).

Table 1: *Mean ages and subject numbers of young offenders by sex and Aboriginality*

	Aboriginal		Non-Aboriginal		Total	
	Age	*n*	Age	*n*	Age	*n*
Male	15.7	198	16.1	616	16.0	814
Female	15.3	42	15.4	44	15.3	86
Total	15.7	240	16.0	660	15.9	900

Substance use frequencies

A large majority (91%) of the young offenders admitted using at least one of the listed substances during the month preceding their incarceration. Alcohol (73%) and marijuana (81%) were the most widely used, though substantial proportions of subjects reported using other substances (between 11% and 25%, depending on the substance).

The young offenders' results are compared in Table 2 to those for Australian male secondary students of similar mean age. Male students were used as the comparison group because the vast majority of the young offenders were males. While the proportion of young offenders reporting any use of alcohol during a recent 1-month period was similar to that recorded for the students (who reported about their last 4 weeks), all other substances were used by the offenders 2-5 times more often (depending on the substance).

Table 2: *Percentages of young offenders (n=900) and secondary students (n=2498) reporting any use of various substances during 1-month periods*

	Substance						
Group	Alco	Marij	Hallu	Sed/Hyp	Narc	Stim	Inhal
Young offenders	73	81	25	23	10	22	11
Students	68	32	5	5	2	5	5

Note: The student sample consists of male 16-year-old high school students from all Australian states and mainland territories (Letcher & White, 1998). Unpublished student figures for alcohol and stimulants (ecstasy, cocaine or amphetamines) from the same survey were made available by the Centre for Behavioural Research in Cancer, Victoria.

A detailed breakdown of the frequency of use of various substances by young offenders within a 1-month period is presented in Table 3. While any use of marijuana was reported slightly more often than was any use of alcohol during the same period, the predominance of marijuana becomes more apparent when high frequency use is examined. Whereas 10% reported daily or almost daily use of alcohol, 44% reported using marijuana at the same rate - an incidence more than four times greater. Other substances are also widely used. However, if daily or almost daily use over a prolonged period is one of the characteristics of dependency (though not sufficient by itself to diagnose dependency), then from Table 3 it can be seen that few youths are likely to as yet be dependent on the so-called "hard drugs".

A field trial during 1993 of some of the SECAPS items (see Putniņš, 1995a) used the same substance use items as here, though with a smaller sample of young offenders. The only notable, albeit small, demographic difference between the earlier field-trial group and the current study group was that the field-trial group had slightly more females than the

current study group (15% vs. 10%). An important methodological difference was that, rather than being part of a routine assessment where results would be available to other staff, the earlier assessment was carried out by nursing staff and was introduced as a research project. Participation was voluntary and individuals were told that their responses were confidential - response records would not be placed in departmental files or made available to other staff. The motivation to dissimulate was therefore reduced. Despite this difference, the substance use profiles obtained in the current investigation are very similar to the profiles in the earlier study (see Figures 1 and 2). This suggests that the results reported here have not been severely distorted by under-reporting due to less confidentiality. Differences between these two groups are much less than either those between the offenders and students (see Table 2) or between the age, gender and ethnic subgroups in the current study group (compare the differences in Figure 1 with those in Figures 3 and 4).

Table 3: *Percentages of youths (n=898-900) using substances at various frequencies during the last month before placement in secure care*

	Substance[a]						
Frequency	Alco	Marij	Hallu	Sed/Hyp	Narc	Stim	Inhal
None	27	19	75	77	90	78	89
1-2 /month	29	11	15	13	4	12	5
1-2 /week	24	15	6	4	3	4	2
Several /week	10	12	2	4	1	3	1
Daily/almost	10	44	2	1	2	3	2

[a] 10 youths (1% of the total) reported using other substances not covered by the categories used here

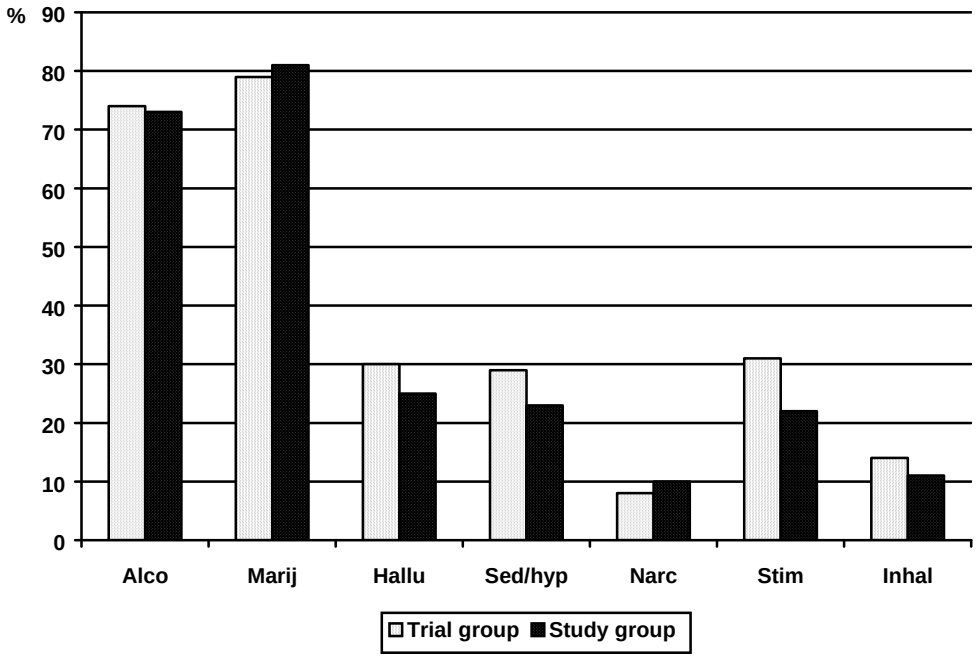

Figure 1: Substances used during the month prior to detention by SECAPS trial (*n*=216) and current study groups (*n*=900)

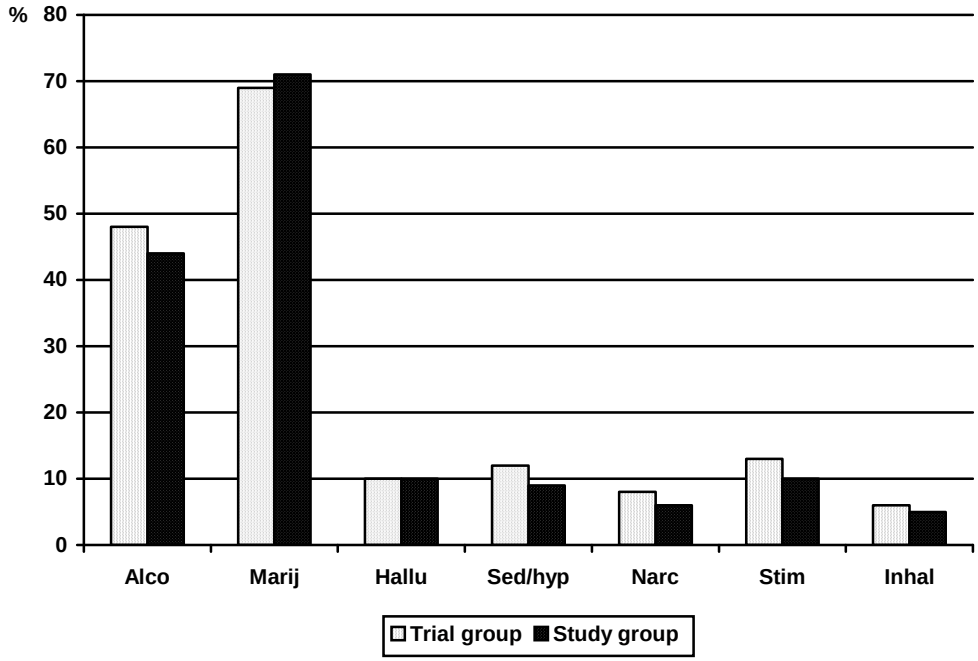

Figure 2: Substances used weekly or more often during the month prior to detention by SECAPS trial (*n*=216) and current study groups (*n*=900)

Quantities consumed

For most substances frequency of use is sufficient to indicate the degree of misuse. However, in the case of both alcohol and marijuana the quantity typically consumed can also be an important indicator of misuse. The SECAPS includes items about the amounts of alcohol and marijuana typically consumed on a day when these substances are used. Only those who indicated some use of these substances during their last month before incarceration answered these items.

Of the 455 youths who used alcohol during the month before placed in secure care and reported how many drinks they normally consumed on a drinking day, 19% indicated 1-4 drinks, 28% indicated 5-9 drinks and 53% indicated 10 or more drinks. Moderate drinking seems to be rare.

Of the 514 youths who used marijuana during the last month before being placed in secure care and reported how many times they normally smoked marijuana on a day when marijuana was used, 33% indicated 1-5 times, 41% indicated 6-19 times and 26% indicated 20 or more times. Heavy consumption appears to be the norm.

Intravenous drug use

The item about whether subjects had ever taken substances by injecting was later introduced into the SECAPS. Results are, therefore, available for only the last 224 youths assessed in this sample. Injecting drug use at some time was reported by 25% of respondents. By contrast, general population figures are considerably lower. For example, the general population National Drug Strategy Household Surveys of 1995 and 1998 both gave figures of 1.6% lifetime experience of injecting substance use among 14-19-year olds (Australian Institute of Health & Welfare, 1999).

High rates of intravenous drug use have been observed among detained youth in other Australian states. Lennings and Pritchard (1999) reported a rate of 42% in their Queensland sample, Hando, Howard and Zibert (1997) reported a rate of 24% among youths in NSW detention facilities while Copeland and Howard (2001) recently reported a rate of 36% among NSW juvenile detainees. Among a slightly older group of youths admitted to the Melbourne Juvenile Justice Centre, 73% reported ever having injected drugs (Ogilvie, Veit, Crofts, & Thompson, 2000).

While no question about what drugs were injected is asked in the SECAPS assessment, studies with young drug users in other states (Ogilvie et al., 2000; Williams &

Crane, 2000) and a national survey (Adhikari & Summerill, 2000) indicate that amphetamines and opiates are the most commonly injected substances.

Recent offending and substance use

In addition to the association between relatively high use of psychoactive substances and being a young offender in secure care, there also appears to be an association between the act of offending and substance use. More than half (60%) of those surveyed reported using a substance at the time of their last offence. Of those reporting such use, 62% had used alcohol; 53% marijuana; 8% hallucinogens; 15% sedatives/hypnotics; 4% narcotics; 9% stimulants; and 3% inhalants. Polysubstance use (use of more than one substance) was quite common - 42% of those who reported using a substance when they last offended had used 2 or more substances at the time.

Admitted problems with substance use

A SECAPS item asks respondents whether they feel they have a problem with their drug or alcohol use. About a quarter (24%) acknowledged that their use of substances was a problem. This is the same proportion (24%) reported in Hando et al.'s (1997) New South Wales survey of young detainees but is slightly less than results from Lennings and Pritchard's (1999) Queensland survey (33%) and Howard, Copeland, Nicholas and Karacanta's (2001) recent NSW survey (34%). There was a trend for self-acknowledged problem use to increase with age, from 15% among under 15-year-olds to 29% among those 17-years or older.

As could be expected, reported problem use was related to increased substance use frequencies. A composite measure of substance use (formed by summing the use frequencies of all substances used in the last month before incarceration) had significant correlations with reported substance use problems at both the first ($r = .37$, $n = 895$, $p \leq .01$) and second ($r = .36$, $n = 205$, $p \leq .01$) SECAPS assessments. Furthermore, the correlations between the frequencies of use of each individual substance and reported problems with substance use were all positive and statistically significant.

Background factors

Age - As can be seen in Figure 3, use of most substances increases with age. This is most pronounced with narcotics and stimulants. Among those 14 years or younger 4% and

10% respectively reported using narcotics and stimulants during their last month before being placed in secure care. These rates approximately triple among young offenders 17 years or older (13% and 27% respectively reported using narcotics and stimulants during their last month before incarceration). The increased use of these substances is closely paralleled by increases with age in intravenous drug use. An experience of injecting use was reported by 9% of those 14 years or younger, 17% of those 15-16 years of age and by 41% of those aged 17 years or older. The relationship with age is weakest for marijuana, hallucinogens and sedatives/hypnotics. This is further confirmed by the correlations between substance use frequencies and age (see Table 4). While the data in Figure 3 describe any use during the last month before incarceration, the correlations take into account the varying frequencies of use within the month by substance users. Although half of the correlations are statistically significant, they are not strong. This is likely to be partly due to a skewing of most of the distributions (i.e., departure from even numbers of users and non-users) and a degree of homogeneity across different ages in the substance using behaviour of youths in secure care.

An exception to the general trend toward increased use with age is observed for inhalants. Inhalant use was reported by 22% of those 14 years or younger, 11% of those 15-16 years of age and by 5% of those aged 17 years or older. An inverse relationship between inhalant use and age has also been observed in Australian student samples (e.g., Crundell, 1993; Letcher & White, 1998). The reason for the increased use of inhalants among younger youths is likely to be accessibility. Glue, aerosol cans, butane gas, petrol and so on are cheap, plentiful and easy to obtain. With increasing age other substances become more readily available to potential users. The decrease in inhalant use with age does not necessarily signal a reduction in substance use by former inhalant users. It is likely that inhalants are often replaced by substances that have become easier to access.

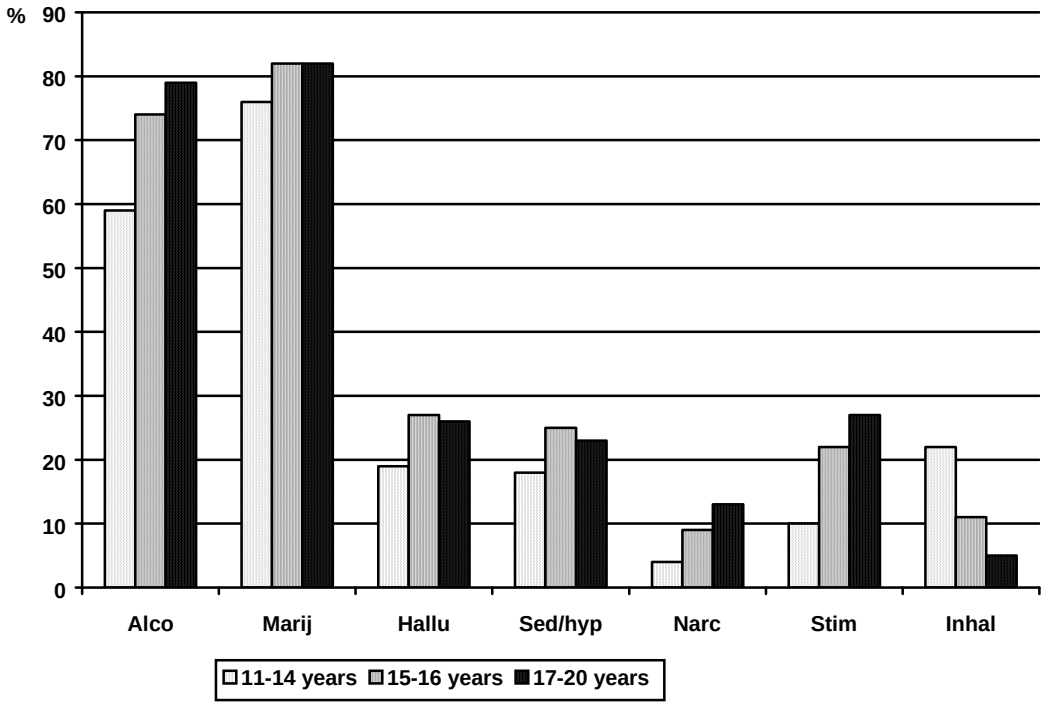

Figure 3: Substances used during the month prior to detention by age (11-14 years, *n*=165; 15-16 years, *n*=355; 17-20 years, *n*=380)

Table 4: *Correlations between age at time of assessment and frequencies of substance use*

	Alco	Marij	Hallu	Sed/Hyp	Narc	Stim	Inhal
1st assessment (*n*=898-900)	.16**	.07*	.02	.05	.08*	.15**	-.16**
2nd assessment (*n*=205-206)	.09	.01	.12	.10	.10	.21**	-.15*

*$p \leq .05$ **$p \leq .01$ (2-tailed)

Gender and Aboriginality - In order to see whether the overall pattern of substance use varies markedly by gender or Aboriginality, comparative data are presented in Figure 4 and Table 5. To reduce differences that might arise due to different age distributions among various subgroups, this analysis was restricted to youths (*n*=736) aged 14-17. Due

to the female group already being relatively small (*n*=64), separate analyses for Aboriginal and non-Aboriginal girls were not undertaken.

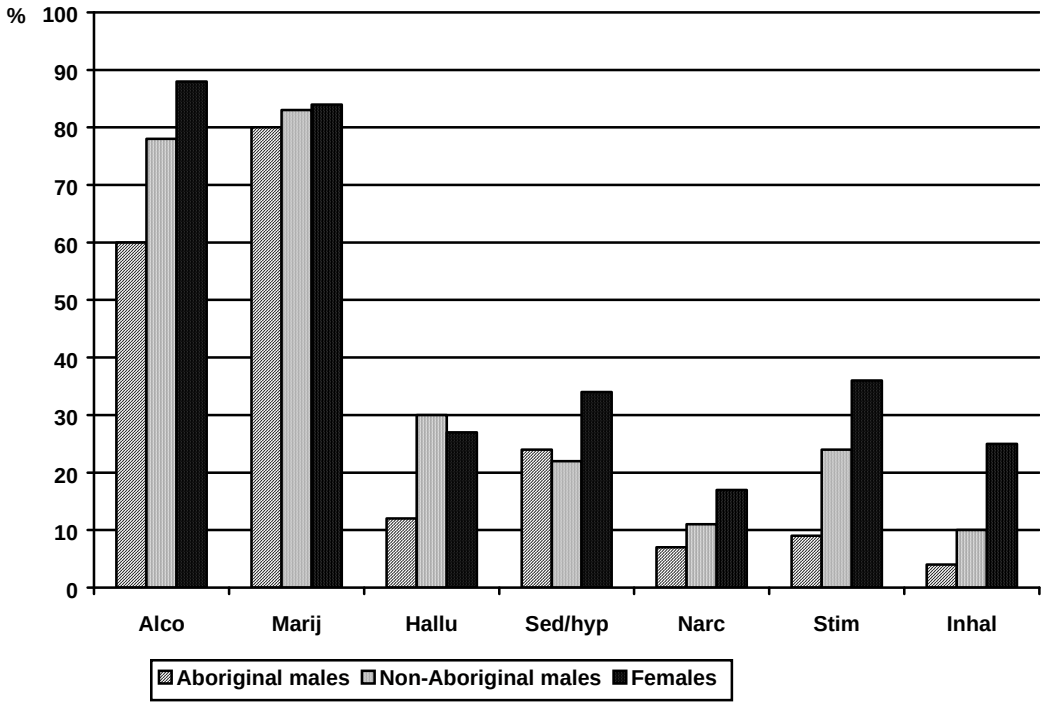

Figure 4: Substances used during the month prior to detention by 14-17-year-old Aboriginal male (*n*=162), non-Aboriginal male (*n*=509) and female (*n*=64) offenders

There are some broad similarities between the groups. For example, alcohol and marijuana were the most often reported substances. However, differences are also evident. Inspection of Figure 4 suggests that the non-Aboriginal males tend to occupy a mid-position between the females and the non-Aboriginal males in their use of most substances. This was confirmed by examining an index of general substance use frequency formed by summing the use frequencies of all the substances. Using *t* tests it was found that the females had a significantly ($p < .001$) higher mean score ($M = 14.2$, $SD = 4.9$) than did the non-Aboriginal males ($M = 12.8$, $SD = 3.85$), who in turn had a significantly ($p < .001$) higher mean score than did the Aboriginal males ($M = 11.6$, $SD = 3.3$). It seems that female young offenders placed in secure care are a vulnerable group. Their overall use of substances was higher than that of the other two subgroups. Greater use of inhalants and stimulants in particular were noted. The females' incidences of any use of either substance during the month before incarceration were significantly ($p<.05$) higher than those of the

male subgroups. They also tended to have more often taken drugs by injecting, though only the comparison with the Aboriginal males reached statistical significance (p=.05). Aboriginal males generally reported less use of most substances (though their use was still quite high compared to the student figures presented in Table 2). Similarly, compared to females and non-Aboriginal males, they significantly less often ($p \leq .05$ in both comparisons) reported any intravenous drug use. They also tended to less often report having used substances when they last offended (borderline significant trend [p=.06] compared to non-Aboriginal males; non-significant trend compared to females). Contrary to expectations, their incidence of inhalant use was lower than that of either the non-Aboriginal males (p=.05) or the females (p<.001). Inhalant use (particularly petrol sniffing) is perhaps more often encountered among Aboriginal youth in relatively remote rural areas, whereas the vast majority of Aboriginal youths in secure care come from Adelaide or major rural urban centres (Putniņš, 1999a).

Table 5: *Percentages of detained youths (14-17 years) who reported using a substance at the time of their last offence, any prior intravenous drug use and current problems with substance use*

	Aboriginal Males n=163	Non-Aboriginal males n=509	All females n=64
Used substance when offend	46	62	65
Has injected[a]	10	28	35
Admitted use is problem	20	25	31

[a] Respondent numbers are lower at this item (39, 116 and 17 respectively) due to its later addition to the SECAPS

Family - The SECAPS assessment includes a question about whether any other members of the immediate natural family (viz. mother, father, siblings) have had a problem with drugs or alcohol. No definition of what is "a problem" is offered to the youths. Each respondent's interpretation of this question is, therefore, rather subjective. Forty-three percent (n=386) of the entire sample of young offenders replied that at least one of their natural parents or siblings had had a problem with drug or alcohol use, 4% (n=38) replied

that they did not know while 53% (*n*=476) denied such problems. The provision of guidelines about what constitutes problem use might have given different results. Nevertheless, the results suggest that many of the offenders have family backgrounds in which close family members have used psychoactive substances at levels regarded by the youths as being problematic.

Substance use and recidivism

The current analysis considers recidivism status (any new proven criminal matter dealt with by South Australian courts) at 6 months from the time of release following each youth's SECAPS assessment. Of the first assessment respondents (*n*=447), 92% were males and 27% described themselves as being Aboriginal. Ages for the total group ranged from 11 to 19 years (mean age=15.9 years), with most subjects (83%) falling within the 14-17-year age range. Among the second assessment respondents (*n*=103), 95% were males and 31% described themselves as being Aboriginal. Ages for this group ranged from 13 to 19 years (mean age=16.3 years), with most subjects (89%) falling within the 15-18-year age range. All subjects who were 18 years or older were incarcerated for offences committed before they turned 18. New violent, other (i.e., all offences not classified as violent), and any new offences committed within 6 months after release were recorded for 18.1%, 65.1%, and 67.6% respectively of the youths who completed first assessments. New violent, other, and any new offences committed within 6 months after release were recorded for 13.6%, 59.2%, and 60.2% respectively of the youths who completed second assessments. Thus, almost all the recidivists committed non-violent ("other") offences, almost all the recidivists who committed a violent offence also committed non-violent offences, and violent offences were committed by a little more than a quarter of the recidivists after either assessment. Violent offences were not recorded according to how serious each offence was. More offence details than were readily available would have been required to accurately describe the degrees of harm inflicted on the victims. Recidivism rates for any new offences for the demographic subgroups examined in this section were as follows: first assessments - Aboriginal males, 67.7%, non-Aboriginal males, 68.5%, females, 60.5%; second assessments – Aboriginals, 54.5%, non-Aboriginals, 63.4%.

Table 6: *Correlations between frequency of substances used during the last month prior to incarceration and recidivism status 6 months after release*

	Alco	Marij	Hallu	Sedhyp	Narc	Stim	Inhal
1st assess (*n*=445-447)							
Any offending	.08*	.01	.02	.04	-.02	.05	.10*
Violent offending	.13**	-.01	.05	.09*	.06	.08	.16**
Other offending	.08	.00	.03	.01	-.03	.04	.08*
2nd assess (*n*=103)							
Any offending	.23*	-.02	.05	.11	.10	-.04	.21*
Violent offending	.09	.05	.16*	.04	-.05	-.06	.14
Other offending	.21*	-.04	.02	.10	.10	-.03	.22*

* $p \leq .05$ ** $p \leq .01$ (one-tailed)

Results are presented in Table 6 for the relationships between substances used and subsequent reoffending. None of the relationships are strong. Although the correlations between the use of various substances and violent recidivism might be attenuated relative to those for non-violent recidivism due to greater departures from 50/50 splits in the violent recidivism base rates, no obvious pattern of use distinguishes recidivism for violent offences from recidivism for non-violent forms of criminal offending (see Appendix 6 for details about the coding of violent and non-violent offences). There had been an expectation that greater use of any substance would be positively related to recidivism. While most of the correlations (though not all) were positive, many were too small to be of either practical or statistical significance. The substances most consistently related to recidivism were alcohol and inhalants - 9 of the 12 correlations involving these substances were statistically significant whereas only 2 of the other 30 correlations were significant.

An examination of the relationship between substances used at the time youths committed their last offences and subsequent recidivism (see Table 7) did not reveal any consistent trends.

Table 7: *Correlations between the use of various substances at the time of the last offence and recidivism status 6 months after release from secure care*

	Alco	Marij	Hallu	Sedhyp	Narc	Stim	Inhal
1st assess (*n*=444)							
Any offending	.04	-.01	.00	-.00	-.00	.05	.03
Violent offending	.05	-.01	-.04	.03	.10*	.00	.17**
Other offending	.02	-.03	.02	-.01	.01	.06	.03
2nd assess (*n*=103)							
Any offending	-.06	-.07	-.08	.01	.08	.04	.14
Violent offending	-.06	.13	.25**	-.01	-.04	-.02	.10
Other offending	-.08	-.06	.08	.02	.08	.05	.14

* $p \leq .05$ ** $p \leq .01$ (one-tailed)

The use of particular substances is often transitory or episodic. This is evident from the correlations between substance use frequencies reported at the first and second SECAPS assessments (see Table 8). A minimum of 6 months was specified in order to reduce the chances of some subjects not being released between their first and second assessments. (Normally SECAPS assessments are repeated only for readmitted youths and if more than 12 months have elapsed since the last assessment. However, during the initial implementation of the SECAPS assessment program some youths were reassessed in less than 12 months and, in a few cases, without having been released. As the question of interest here is about the stability or consistency of behaviour at different times rather than the reliability of self-report, cases where first and second assessment reports might relate to the same period of use have been eliminated.) In Table 8 it can be seen that the stability coefficients are all quite low, particularly for the less frequently used substances. This can be expected to reduce the strength of the relationship between the use of particular substances and subsequent reoffending. For example, of 12 reassessed youths who in their first assessment reported recent use of narcotics, only two reported recent use of narcotics

in their second assessment. Then of the 25 youths who in their second assessment reported recent use of narcotics, only two had earlier reported any use of narcotics.

Table 8: *Correlations between substance use frequencies reported at the first and second SECAPS assessments where 6 months or more had elapsed between assessments*

	Alco	Marij	Hallu	Sedhyp	Narc	Stim	Inhal
r	.33**	.40**	.14*	.13*	.09	.09	.12

Note: Time between assessments ranged between 184 - 1468 days ($M = 554$); $n = 186$ for all substances except inhalants ($n = 185$).
* $p \leq .05$ ** $p \leq .01$ (one-tailed)

The relationship between reported problem use of substances by other immediate natural family members and recidivism was examined. Responses were coded as: No = 1, Don't Know = 2, Yes = 3. No significant relationships were found between recidivism status 6 months after release and responses to this item at either the first ($\chi^2 = .699$, $df = 2$, $n = 446$) or second ($\chi^2 = .722$, $df = 2$, $n = 103$) SECAPS assessments.

The use of some substances might be predictive of offending in some demographic groups but not in others. If, however, general predictive measures are sought then these must demonstrate some degree of predictive consistency across different groups. Results are presented in Table 9 that are relevant to these issues. Neither self-reported problems with substance use nor the use of a psychoactive substance at the time of the last offence were consistently related to recidivism.

Examining the different groups, the results for females stand out. In this group, with the exception of marijuana use, all the substance use variables are either significant or display positive trends in their relationship with recidivism. Some of the relationships were quite strong, such as the correlation of .47 between recidivism and the use of sedatives/hypnotics.

Of the individual substances, only alcohol and inhalants had consistently positive correlations across the different groups. The correlations were weakest in the first assessment non-Aboriginal male subgroup, though the correlations in this group increased

Table 9: *Correlations between self-reported frequencies of substances used during last month before incarceration, any substance use at the time of last offence, self-reported problem use and recidivism status 6 months after release from secure care*

	1st assessments			2nd assessments†	
	Females (all)	Non-Abor. Males	Abor. males	Non-Abor. (m+f)	Abor. (m+f)
Alcohol	.26	.04	.14	.13	.37*
Marijuana	-.11	.02	.06	-.14	.19
Hallucin.	.40**	-.01	-.10	.04	.03
Sed/Hyp	.47**	-.06	.10	.07	.21
Narcotics	.22	-.03	-.05	-.13	.32*
Stimulants	.25	.04	.01	-.09	.05
Inhalants	.31*	.08	.05	.22*	.19
Use offend	.27	.04	-.02	.02	-.01
Problem use	.28*	-.08	.01	-.02	.31*
Alco + inhal	.38**	.07	.16	.22*	.37*
Other subs	.35**	-.00	.02	-.08	.24
n	*36-38*	*310-311*	*97-98*	*71*	*32*

Note: Use offend = used a substance at the time of the last offence; Problem use = youth considers his/her substance use to be a problem; Alco + inhal = Alcohol use frequency + Inhalant use frequency; Other subs = Marij + Hallu + Sed/Hyp + Narc + Stim.
† There were too few females ($n = 5$) among those retested to allow separate analysis by gender.
* $p \leq .05$ ** $p \leq .01$ (one-tailed)

among those who were reassessed. These positive relationships are generally strengthened when alcohol and inhalant use frequencies are summed to form a combined measure called *Alcin*. This combined measure had highly significant correlations with recidivism status after both first (r=.12, p=.007, n=446) and second (r=.28, p=.002, n=103) assessments. Using the effect size descriptions for point-biserial correlations suggested by Cohen (1988), the first and second assessment Alcin-recidivism relationships can be described as

"small" and "moderate" respectively. Examining the various subgroups it is seen that all the correlations between Alcin and recidivism are positive and that three of the five correlations are statistically significant. By contrast, an index of all the other substances used (*Other subs*) failed to show any relationship with recidivism in the three largest subgroups and was statistically significant only for the female subgroup.

Discussion

The results indicate that a large proportion of detained young offenders had used psychoactive substances during the last month before their incarceration. Furthermore, they used most substances considerably more often than did similarly aged student groups and reported a much higher incidence of intravenous drug use than did general population samples. While alcohol and marijuana use dominated, a variety of other substances were also frequently used.

Although the use of most substances tended to increase with age, a degree of homogeneity was also evident. Most youths in both the youngest and oldest groups reported some recent use of both marijuana and alcohol. Hallucinogen use and sedative/hypnotic use were only weakly related to age. Although the proportions of youths using narcotics and stimulants increased more markedly with age, this was to some extent counterbalanced by increased use of inhalants in the younger age groups. Overall, recent use of psychoactive substances is typical of most young offenders placed in secure care irrespective of age.

When comparing similarly aged (14-17-years) subgroups it was found that proportionately fewer Aboriginal males admitted using substances during the preceding month. They also reported lower rates of intravenous drug use. However, the interpretation of the lower rates of substance use and other substance related behaviours among young Aboriginal males offenders is hampered by an absence of comparative studies about the accuracy of self-reports by Aboriginal youths. The results are open to at least two different interpretations. First, it is possible that male Aboriginal youths are generally less involved in substance use. Second, it is possible that Aboriginal males are more reluctant to disclose their substance use (which would be similar to findings with Blacks in The USA [see Fendrich & Xu, 1994]). To decide with any confidence between these interpretations requires a study using biological measures to validate the comparative accuracy of the self-reports of both Aboriginal and non-Aboriginal youths.

Compared to males, females in secure care tended to more frequently report the use of various substances during the preceding month. A similar gender difference has been reported among young offenders in Victoria (Dunne & Xantidis, 2001). This is in contrast to surveys of secondary school students (e.g., Letcher & White, 1998) that generally find females' self-reported illicit substance use to be lower than that of males. The number of females here is not particularly large and their results might not be very reliable. Bearing this in mind, one explanation for their more frequent use of different substances could be that females are simply more willing to disclose their substance use. In other words, it is not that females actually use substances more often but rather that they are more willing to reveal their substance use. I have found only one published study to date (carried out in the USA) using biological measures as a benchmark that has examined this question with young offenders (Kim, Fendrich, & Wislar, 2000). It was concluded that there was no significant gender difference in disclosing marijuana use and no significant gender differences in disclosing cocaine use among either Black or White respondents. Hispanic girls, compared to boys, however, were significantly less likely to disclose their cocaine use. Although the evidence is limited, it does not seem that a gender difference in willingness to disclose substance use is likely to explain the higher rates of self-reported substance use among offender girls who complete SECAPS assessments.

An alternative explanation for the observed gender difference might be found in the suggestion that there is a greater reluctance to apply more severe judicial sanctions to females. South Australian figures for 1999 (Office of Crime Statistics, 2000) show that females accounted for 19.7% of all juvenile apprehensions made by the police, 14.9% of finalised appearances before the Youth Court (where at least one charge was proved) and 5.7% of all detention orders imposed by the Youth Court. While the reduction in the percentage of females between apprehension and detention does not by itself prove processing bias, it is consistent with such a hypothesis. If processing bias exists, with females on average needing to be more extreme in their offending before getting a custodial sentence, then the known close association between criminal offending and other antisocial behaviours could explain why females in secure care also reported a wider range of substance use. Although this explanation is speculative, its tenability is supported by a study in Arizona of the pre-trial diversion of drug offenders (Alozie & Johnston, 2000). A gender processing bias was found, with female offenders generally being treated more leniently than male offenders.

The degree of confidentiality that is assured to the youths makes little difference to the use frequencies that are reported. While this does not inform about the general accuracy of using self-reports as measures of substance use, it does suggest that data gathered from youths in secure care under conditions of different levels of confidentiality are likely to be of similar validity.

Substance use was strongly associated not only with young offender status but also with the offending act itself, with more than half the offenders reporting using substances at the time of the last offence. That marijuana use is often associated with the act of offending is not surprising given that marijuana is the most frequently used of all the psychoactive substances. A large proportion (44%) reported daily or near daily use of marijuana, often in large quantities. The close association between offending and marijuana use might be largely coincidental rather than causal simply because a large proportion of young offenders at any one time are under the influence of marijuana.

Alcohol is used much less often than marijuana. For example, only 10% report daily use of alcohol and a further 10% report drinking several times a week. However, when it is used it is usually to excess, with 53% claiming to consume 10 or more drinks on a drinking day. Binge drinking is the norm. Furthermore, although alcohol is not the most often used substance, it is the substance most often associated with the actual act of offending. This association may be largely due to the strong disinhibiting properties of alcohol and its known effects on judgement, impulsivity and risk taking.

Regarding the prediction of recidivism, as no obvious pattern of recent substance use distinguished general offending, violent offending and non-violent offending, further discussion considers only general offending. Neither the use of a substance in general (*Use offend*) nor the use of any particular substance at the time of the last offence consistently predicted recidivism - nor did self-reported problems with substance use. Although marijuana was the most widely used substance, there was no support for its use as a marker of increased offending risk. Results with adolescents elsewhere have found a much closer association between alcohol use and offending than between marijuana use and offending (White, Tice, Loeber, & Stouthamer-Loeber, 2002). Recent alcohol and inhalant use appear to be the substances that are most consistently predictive of recidivism across different offending types and across different demographic subgroups. Both alcohol and inhalants are central nervous system depressants and both have disinhibiting affects. The use of inhalants might also indicate less maturity and poorer self-control, particularly

as, unlike other substances, they tend to be used by younger detainees. Mackesy-Amiti & Fendrich (1999) found that inhalant users reported more criminal activity than did other drug users and suggested that inhalant use had more in common with general delinquency than it did with general drug use. The link between alcohol use and offending has been particularly well documented, including among young people (e.g., Komro et al., 1999). A combined index of recent alcohol and inhalant use might be a useful addition to a broader recidivism risk assessment instrument.

Although the recent use of other substances failed to show any consistent relationship with recidivism in most of the subject subgroups examined, there was a trend among the females for all substances except marijuana to be related to increased recidivism risk. Due to the relatively small number of females here, replication is needed on a larger sample. If this finding is confirmed, however, it could indicate that, for the optimal prediction of offending risk, gender differences in the predictive strength of some variables should be taken into account.

Although research with adults points to a significant association between crime (particularly acquisitive crimes) and regular use of heroin (e.g., Stewart, Gossop, Marsden, & Rolfe, 2000), among the juvenile male subjects studied here recent use of narcotics had no power to predict recidivism. It could be speculated that this is because few youths use narcotics and even fewer are dependent – most of their narcotics use probably still being experimental or recreational. Many youths have not established consistent or regular patterns of use, suggesting that much of their use, particularly of substances other than marijuana and alcohol, is capricious and might often be transitory.

The statistical weakness of recent substance use as a marker for increased offending risk observed here might be due to a number of factors. While there is a close association between substance use and the act of offending, the stability of substance use among youths over time might be too weak for most substances to be reliable predictors. Perhaps self-reports of recent substance use by youths in secure care are too distorted to be valid. Although there is little evidence to suggest that there is severe distortion in most of the young offenders' self-reports, the use of physical drug testing is one possible way of verifying the accuracy of these items in the SECAPS. Dissimulation might be reduced and the stability of use patterns might be increased if, rather than very recent substance use, reports of use over a longer period are used. While lifetime use is likely to be difficult to estimate accurately, perhaps the regular use of various substances during the preceding 6

months might be a more stable measure. This possibility is being explored by introducing such an item into the next revision of the SECAPS assessment.

There also exists the problem of homogeneity. While there is good concurrent discrimination between young offenders and non-offenders with regard to their substance use, perhaps those who are placed in secure care and remain long enough to be assessed are not all that different from each other. Most markers, including substance use, at least when taken singly, would have no more than weak relationships with recidivism. The situation might be similar to choosing basketball players. While height might be a reasonable predictor of who will get into a team, once a team has been established and there has been some attrition among the players, height will probably be a poor predictor of basketball playing ability within teams.

Substance use in many previous studies has been found to have only a very modest relationship with recidivism. From an analysis of 60 studies involving almost 55,000 subjects, Gendreau, Goggin and Little (1996) reported a weighted mean Pearson *r* of .10 for substance abuse and adult recidivism. Cottle, Lee and Heilbrun (2001) in their analysis of studies that examined recidivism among young offenders obtained weighted mean effect sizes (Z_r) of .15 for substance abuse and recidivism (6 studies, 1,111 subjects) and .01 for substance use and recidivism (2 studies, 9,366 subjects). Overall, substance abuse was very modestly predictive but substance use was not. In the light of these results it is not surprising that stronger relationships were not observed between substance use and recidivism in the present sample.

Although approximately a quarter of the youths in secure care acknowledge having a problem with their substance use, practical experience suggests that not all those who report high levels of substance consider themselves to have a problem. A frequently heard response is: “I don’t have a problem ’cause I can stop whenever I want”. In the minds of these youths, problem use is mainly associated with the notion of dependence and not with other difficulties that might be associated with intemperate use. They often fail to acknowledge the health, legal and interpersonal hazards that can arise from substance use irrespective of whether a dependency has developed. Few youths are substance dependent but many display concerning levels of use.

Effective ways of reducing substance abuse among high risk groups such as young offenders need to be found. Although self-evident and easy to say, it is hard to do. As Saunders and Baily (1993) have pointed out in relation to alcohol use, adolescents do not

live in a social vacuum and are very much influenced by the wider society in which they live. While it is likely that changes in patterns of substance use will be determined largely by changes in the behaviour and attitudes of the broader community, this should not prevent the search for targeted group or individual interventions. Unfortunately young offenders have proven to be difficult subjects to work with. Many do not willingly acknowledge that their use of substances is a problem. Even among those who do, not all are motivated to seek or accept counselling. Incarceration has little effect on subsequent substance use (Stitzer & McCaul, 1987) and drug and alcohol education programs have generally had disappointing results (Gorman, 1997; Orlandi, 1996; Shamai & Coambs, 1992). However, tried and failed interventions continue to be used either because they are familiar, give an outward impression of doing something that is goal directed or seem to have face validity (i.e., accord with common-sense), despite outcomes that point to a lack of effectiveness. Experience with the widely used but ineffective DARE (Drug Abuse Resistance Education) program is a particularly good example (see Clayton, Leukefeld, Harrington, & Cattarello, 1996; Lynam et al., 1999; Rosenbaum & Hanson, 1998) - though see Botvin (2000) for a more optimistic assessment of school based prevention programs. Some programs are retained and are thought by their promoters to be useful on the basis of process evaluations. At times there is confusion between process evaluation and outcome evaluation. Process evaluation can include measures of participation rates, parents' or teachers' judgements about the relevance of the information presented, youths' satisfaction with the presentation style, how interesting they found the material and so on. None of these, however, are necessarily related to reductions in substance use or associated problem behaviours, which remain the ultimate goals of such programs and which should be the subject of outcome evaluation. Process evaluation is sometimes presented as a proxy for outcome evaluation. While outcome research is often difficult to do, it is the area where more research effort needs to be directed so that intervention programs are not implemented on the basis of "feel good" measures but rather on the basis of relevant behaviour change.

A recent nationally representative survey of drug treatment program participants in the USA found that, on average, adolescents (unlike the treated adults) had higher rates of substance use at follow-up than they did before treatment (Office of Applied Studies, 1998). As there was no control group, it cannot be definitely concluded that treatment had no positive effect. It is conceivable that the outcome might have been even worse without

treatment. However, the possibility that treatment might unintentionally result in worse outcomes cannot be ruled out. In any case, the finding of increased post-treatment substance use highlights the difficulty in identifying effective (i.e., empirically verified and replicated) clinical interventions for substance misusing youths and, more specifically, for young offenders. There is a need to explore new avenues of intervention and, most importantly, to empirically evaluate both existing and new interventions. Clearly, a range of different approaches is needed, with delinquents perhaps requiring different strategies to non-delinquents. At the same time it must be conceded that the search for effective focussed substance treatment programs for young offenders might bring little reward. It is possible that for most delinquent youths their substance use is a manifestation of a general problem behaviour syndrome (see Jessor & Jessor, 1977; Le Blanc & Girard, 1997; Zhang, Welte, & Wieczorek, 2002). If so, perhaps the forces shaping general deviancy need to be treated rather than substance use directly. This is consistent with the findings from a longitudinal study by Stice, Myers, and Brown (1998). These researchers found that high delinquency appeared to be the important link between consumption and problem use. They concluded that interventions targeting the youths' delinquency might be more effective than interventions directed at their substance use. A specific target for intervention among at least some of the youths studied here might be the family system, particularly as problem substance use by other immediate family members was reported by 43% of the young offenders. Consistent with the suggestion that broader interventions rather than a narrow focus on substance use are required are findings that interventions such as Multisystemic Therapy (Henggeler, 2001) are effective in reducing both delinquency and substance use among delinquent adolescents whereas specific substance abuse treatments do not (Dowden & Andrews, 1999).

Despite growth in the use of a variety of psychoactive substances, the association between alcohol use and crime remains strong. A recent Australian general population survey of persons 14 years and older found that during a 12-month period 28% of the respondents had experienced verbal assault, 6% had been physically assaulted and 15% had been put in fear by persons under the influence of alcohol (Teece & Williams, 2000). The proportions were higher in the younger age groups and for males.

The availability of alcohol could be considered as a broad area for increased intervention and control. Raising the legal drinking age in all states in the USA to 21 years resulted in significant decreases in alcohol related traffic fatalities among 18-20 year olds

(O'Malley & Wagenaar, 1991). Surprisingly, little research was done about the effect on crime, though there is some evidence that homicide rates among young people subsequently declined (Parker & Rebhun, 1995). In an analysis of homicide rates and alcohol consumption in the United States from 1934 to 1995, Parker and Cartmill (1998) concluded that declining alcohol consumption contributed to a fall in homicide rates. In Australia the lowering of the legal drinking age at different times in different states led to increases in both traffic related and non-traffic related injuries (Smith, 1986; Smith & Burvill, 1986). Smith and Burvill (1987) also demonstrated that the lowering of the legal drinking age at different times in different Australian states was accompanied by significant increases of 20-25% in juvenile offending. Given this relationship and the finding that both raising and lowering the legal drinking age has an effect on traffic related injuries, it can be argued that raising the legal drinking age could also be considered as a means of reducing alcohol related crime among juveniles. While such an intervention would not prevent under-age drinking, it would likely raise the age at which unsupervised experimentation begins. Alcohol's role as a gateway drug (Ellickson, Hays, & Bell, 1992; Golub, Labouvie, & Johnson, 2000; Kandel, 1975) further suggests that reducing alcohol use might reduce the progression to other substances. Interestingly, a national survey in 1992 found majority support in all Australian states for raising the legal drinking age (McAllister, 1995). A national survey in 1998 found that this had fallen to below 50% (Fitzsimons & Cooper-Stanbury, 2000), though public support for a variety of other measures to reduce underage drinking remained high. In a more recent national survey (viz. National Drug Strategy Household Survey, 2001) the absolute proportion of all respondents supporting raising the legal drinking age was again below 50%. However, when only support and non-support responses are considered (i.e., undecided and equivocal responses are discarded) then 56% of the respondents were found to support raising the legal drinking age.

Conclusion

Despite the prominence given in the media to the issue of "hard drugs", the substances most frequently used by both young offenders and non-offenders were the so-called "soft drugs", namely alcohol and marijuana. Of these, alcohol appears to have a stronger direct association with acts of offending - most likely due to its strong disinhibiting properties. Ways of more effectively restricting adolescents' access to alcohol need to be considered.

The other substance type that showed a degree of predictive consistency across different groups was inhalants. An index of recent alcohol and inhalant use, although predictively too weak to use on its own, might be a useful addition to a broader recidivism risk assessment.

While few youths are likely to have as yet developed significant substance dependencies, needle use is relatively common. In light of the risks of blood-borne diseases that can be transmitted by needle sharing, intravenous drug use by young offenders should be a serious public health concern.

Interventions to reduce substance use need to be evaluated with regard to their major objective, namely the reduction of substance misuse. Obvious as this might seem, it is seldom achieved. There are various impediments to carrying out such research. However, a significant step forward would be to make more professional and material resources available for quality outcome evaluations. The alternative is to continue to provide interventions that often lack an evidence base and which might at times even be harmful.

Chapter 4

Correlates and predictors of suicide attempts among incarcerated youths

Although criminogenic needs and risks are important considerations in assessments and interventions with juvenile detainees, a duty of care means that more general needs cannot be ignored, particularly those relating to health and safety. For this reason suicide prevention is high on the priority list of most agencies that deal with incarcerated young offenders. This concern is accentuated by the fact that various suicide risk factors are more prevalent among young offenders than the general youth population. For example, a marker for increased suicide risk is substance use. Increases in youth suicide rates have been noted in many countries (Davis, 1992). In Australia this increase was most notable from the mid-1960s to the end of the 1980s when the suicide rate among 15-19-year-olds more than doubled, though the rate seems to have stabilised during the last decade (see Australian Bureau of Statistics, 2000). Some authorities (e.g., Downey, 1990-91; Hassan, 1990; Hepworth, Farley, & Griffiths, 1988; Schaffer, Gould, Fisher, & Trautman, 1996) have noted parallel increases in psychoactive substance use and youth suicide and have suggested that the two are causally linked. Consistent with this suggestion, studies in different countries have identified psychoactive substance abuse by adolescents as a high risk factor for suicidal behaviour (see Bukstein et al., 1993; Chappel, 1998; Choquet, Kovess, & Poutignat, 1993; Crumley, 1990; Juon, Nam, & Eusminger, 1994; Kaminer, 1992; Man, Leduc, & Labreche-Gauthier, 1993; Miller, Chiles, & Barnes, 1982; Runeson, 1990). Kirkpatrick-Smith, Rich, Bonner, and Jans (1991-92), in their study of high school students, found that substance abuse accounted for variance in suicidal ideation scores independently of other significant predictors such as depression and feelings of hopelessness. Similarly, Sanislow, Grilo, Fehon, Axelrod and McGlashan (2003) found that after controlling for depression, substance abuse remained significantly associated with suicide risk scores among detained youths.

Conduct disorder and antisocial behaviour are also often found among young suicide attempters and suicide victims (Brent et al., 1993; Grossman, 1992; Kaminer, 1992; Schaffer, 1974; Slaby & McGuire, 1989). Conduct disorder, antisocial behaviour, and substance abuse clearly occur more frequently among young offenders than non-offenders. This suggests that young offenders can be expected to be at increased risk of suicidal behaviour. Confirmation of increased suicide risk has been obtained in a number of

studies. For example, in Utah, USA, 63% of all youth suicide completers were found to had had contact with the juvenile justice system (Gray et al., 2002). Elsewhere in North America incarcerated youths have been found to report higher prevalences of suicide attempts than those reported for high school students (Penn, Esposito, Schaffer, Fritz, & Spirito, 2003). Similar results have been obtained in Australia. In a survey of 126 incarcerated youths in South Australia, 21% responded that they had previously made a suicide attempt and 29% reported recent thoughts about suicide (Putniņš, 1995a). A similar prevalence of suicide attempts (viz. 24%) was reported for 299 incarcerated youths in New South Wales (Copeland, Howard, Keogh, & Seidler, 2003). By comparison, in an Australian national survey (Keys Young, 1997) a suicide attempt prevalence of 7% was found among 12-24-year-olds, which is considerably lower than those reported in the preceding two studies of offender youths. However, in a study of 100 incarcerated youths in New South Wales (Fasher et al., 1997) 9% recorded having made a suicide attempt. How questions are asked and the assessment context (assessed by whom and why) might influence responses. Different times, locations and assessment methods are likely to yield different prevalence rates. In North America, for example, Penn et al. reported that 12% of incarcerated young offenders had made a suicide attempt whereas Rohde, Seeley and Mace (1997) obtained a prevalence of 19%. In both cases, however, these were higher than lifetime prevalences found among high school students (see Andrews & Lewinsohn, 1992; Velez & Cohen, 1988).

Many suicide attempts are impulsive. Simon et al. (2001) found that among adolescent and young adult suicide attempters 24% spent less than five minutes between the decision to kill themselves and making the attempt. It was also noted that there was an increased risk of impulsive suicide among those who had been in a physical fight. The authors concluded that inadequate control of aggressive impulses was likely to be a major risk factor for impulsive suicide attempts. Among youths significant relationships between physical fighting with either suicide attempt or suicidal ideation remain even after controlling for the presence of affective and conduct disorders (King et al., 2001). Similarly, Haavisto et al. (2003) concluded that violent behaviour is associated with suicide attempts independently of depression. A number of other studies have found that aggressive behaviour and impulsivity both confer vulnerability for suicide (e.g., Brent et al., 2003; Brodsky et al., 2001; Conner et al., 2001; Conner, Duberstein, Conwell, & Caine, 2003; Hoberman & Garfinkel, 1988; Plutchik & van Praag, 1995; Stein, Apter,

Ratzonis, Har-Even, & Avidan, 1998). Aggression and impulsivity are often closely related. Joireman, Anderson and Strathman (2003) reported that various forms and measures of aggressive behaviour were significantly associated with increased impulsivity. There is strong empirical support for the proposition that low self-control (of which impulsivity is a core feature - see Gottfredson & Hirschi, 1990) is related to crime and other antisocial behaviours (Pratt & Cullen, 2000). Offenders can, therefore, generally be expected to be more impulsive than non-offenders. This is likely to be one of the factors that contribute to their increased risk for suicidal behaviours.

Conduct disorder is often co-morbid with attention deficit hyperactivity disorder (ADHD). In a national study in Australia, Sawyer et al. (2000) found that among children and youths with conduct disorder more than half had ADHD and slightly more than a quarter also had a depressive disorder. Depression is frequently encountered among incarcerated youths (Domalanta, Risser, Roberts, & Risser, 2003). Its relationship with youth suicide is well established (see Gould, Greenberg, Velting, & Shaffer, 2003). Less clear and less researched is the relationship between ADHD and suicidal behaviour. Brent et al. (1993) failed to find a difference in the incidence of ADHD between 67 suicide completers (based on post-mortem assessments) and 67 matched community controls. Renaud, Brent and Birmaher (1999) also failed to find significant differences in ADHD prevalence between adolescent suicide completers with disruptive disorders and community controls with disruptive disorders. However, their study had very low power due to using only 18 control subjects and restricted variation due to subjects in both groups being selected for having disruptive disorders (ADHD being a disruptive disorder). In contrast, Weiss and Hechtman (1993) reported higher rates of suicide attempts in a cohort of ADHD diagnosed children followed through into adulthood. A recent study in northern Russia of 271 incarcerated male young offenders with conduct disorder diagnoses found significantly higher prevalences of ADHD among both suicide ideators and attempters than among non-suicidal youths (Ruchkin, Schwab-Stone, Koposov, Vermeiren, & King, 2003). In an investigation of hospitalised youths who had recently made suicide attempts, only the high lethality group contained a number of individuals with diagnoses of a major depressive episode and comorbid ADHD (Nasser & Overholser, 1999). While factors such as the severity of depression or hopelessness failed to distinguish between the different lethality of attempt groups, the results suggested that those with ADHD might be at greater risk of more serious attempts, though this trend was not statistically significant. A more

compelling study is one based on an analysis of a very large managed health care database in the US (Swensen, Kruesi, Allen, Beusching, & Secnik, 2002). It was discovered that patients with an ADHD diagnosis had significantly higher rates of self-inflicted harm. One outcome ("adverse effect on personal behavior") was a broad measure that encompassed intentional injuries, some of which might have been suicide attempts, though others, such as alcohol toxicity, were marginal in the degree to which the harm could be considered intentional. Incidents that were clearly suicide attempts were separately recorded and were also found to occur significantly more often among patients with an ADHD diagnosis compared to control subjects, even after the effects of substance use and depression were controlled for. Given that elevated levels of impulsiveness are a feature of both the combined and predominantly impulsive/hyperactive types of ADHD (see *DSM-IV*, American Psychiatric Association, 1994), and that ADHD is often comorbid with mood disorders and conduct disorder, it would be surprising if there was not a relationship between ADHD and suicidal behaviours. However, the evidence to date is very limited.

Completed suicide by young offenders in secure care is a relatively rare event. No national data for the USA are available (Boesky, 2002). In Australia during the period 1990-2000 nine deaths were recorded for inmates of justice detention centres (Collins & Mouzos, 2001) - an average of slightly less than one a year. Some of these deaths were by suicide, though no figures of the exact proportion for the full period have been published. However, suicide attempts are more common. Kosky and Lawlor (1992) found that approximately one in every 100 juvenile inmates whose stays were longer than seven days made a serious suicide attempt during their stay. The need for risk appraisal and continuous vigilance by staff while youths are in secure care is obvious. The risk for many youths continues to be high after they have been released to the community, prompting suggestions for more comprehensive post-release planning and support in the community for those at increased risk (see Howard, Lennings, & Copeland, 2003).

The aim of this study is to examine, by analysing data gained from the SECAPS assessment, the correlates and predictors of suicidal behaviours among incarcerated South Australian young offenders. Although a number of previous studies of incarcerated youths have examined the concurrent correlates of suicidal behaviours, few have examined prospective predictive relationships and none are known to have examined the prospective relationships of ADHD behaviours and suicide risk. These are a particular focus of the current study.

Method

Subjects and procedure

The subjects were the first 900 youths in South Australia to complete the SECAPS in secure care. Due to missing data the responses to individual items are often a little less than 900. Of these youths, 206 were reassessed (207 were approached and one declined) when readmitted to secure care. Readmitted youths are normally assessed again if more than 12 months have elapsed since their last assessment, though during the first year of the screening program some youths were reassessed in less than 12 months.

Measure

Items from the SECAPS assessment that are considered here include self-reports about the frequencies of use of various substances during the month immediately prior to their placement in secure care. The sum of the use frequencies forms a substance use scale that with the offenders assessed here has an internal consistency (alpha) of .63 (n=897). Other substance use items ask about any previous intravenous substance use and whether the respondents feel that they have a problem with substance use. Items relating to ADHD signs (difficulty with concentration, difficulty sitting still, impulsiveness, difficulty coping with boredom) are summed to create an ADHD scale with an internal consistency of .58 (n=896). Data collected earlier from a sample of high school students yielded an alpha of .68 (n=129) for this scale. Conduct problem items (school expulsions/suspensions, regular truancy when enrolled at school, frequency of fighting, bad temper, delinquent friends) are summed to form a conduct problems scale (young offenders - alpha=.47, n=899; high school students - alpha=.71, n=132). Self-harming is assessed by items about whether the respondent has ever deliberately self-injured together with recency of last self-injury, whether they have ever tried to kill themselves together with recency of last attempt, and recent suicidal ideation. Mood is rated on a 0-to-10-point scale (worst feeling possible=0, best feeling possible=10), together with a further item about how long the current mood state has been experienced. Related items ask about the number of close friends, how well they get on with others, and feelings of hopeless or despair about their future. The mood, hopelessness, number of friends, getting on with others, and recent suicidal ideation items are summed (after reducing the mood and hopelessness items' score ranges to make them comparable to the other three items) to form a depression scale (alpha=.48, n=889). The

alpha of this measure with the suicidal ideation item removed is .41 (n=891). This modified scale is used to avoid spurious associations when examining the relationship between affective state and suicidal behaviour when the latter includes suicidal ideation.

Adjudicated offending histories were available for the first 458 youths assessed. These included the number of prior proven offences (not counting bond and bail related matters) finalised by either Family Conference or the Youth Court in South Australia.

Results

Of the 900 youths initially assessed, 90% were males and 27% identified as being Aboriginal. Ages ranged from 11 to 20 years, with most subjects (82%) falling within the 14-17-year age range. Those who were 18 years or older were all incarcerated for offences committed before they turned 18 (the age of adult criminal responsibility in South Australia). Of the 206 youths who completed a second assessment, 92% were males and 31% identified as being Aboriginal. Ages ranged from 12 to 19 years, with most subjects (85%) falling within the 15-18 year age range.

Previous suicide attempts and recent suicidal ideation were both reported by a little over a quarter of all subjects at both the first and second assessments (see Table 1). There was little difference in the frequencies reported at the two assessments and little difference on these items between Aboriginal and non-Aboriginal youths. At the first assessment, females significantly more often reported previous suicide attempts (χ^2=22.93, df=1, p<.001) and current suicidal ideation (χ^2=16.98, df =1, p <.001) than did the male subjects - in both cases approximately twice as often. (Unless otherwise indicated, all significance tests reported here are two-tailed.) No analyses by gender of the second assessment data were undertaken due to the small number of females (n=16) in that group.

There was some inconsistency in the reporting of suicide attempts. Some who at the first assessment acknowledged making an attempt denied any previous attempts at the later assessment. Among the reassessed youths 45 had earlier reported making suicide attempts. Of these, 38% denied any previous attempts when asked the same question at their second assessments.

Table 1: *Frequencies of attempted suicide and recent suicidal ideation*

	Attempted suicide		Recent suicidal ideation	
	% yes	*n*	% yes	*n*
1st assessment				
All	27.1	899	26.0	897
Males	25.1	813	23.6	812
Females	46.5	86	48.2	85
Aboriginal	28.5	239	29.4	238
Non-Aborig.	26.7	660	24.7	659
2nd assessment				
All	32.2	205	25.2	206
Aboriginal	32.8	64	26.6	64
Non-Aborig.	31.9	141	24.6	142

Table 2: *Recency of last suicide attempt*

When	1st assessment (%)	2nd assessment (%)
Last few days	11.9	4.5
Last few weeks	11.5	16.7
Last few months	27.2	13.6
More than 6 months	49.4	65.2
n	243	66

Among those who reported making suicide attempts, between a half and a third (first and second assessments respectively) reported having made an attempt during the 6 months prior to being assessed (see Table 2).

Suicidal ideation and previous suicide attempts were significantly associated at both assessments (r =.48, n =897, p <.001 and r =.53, n=205, p<.001). The strong empirical and conceptual associations between these items justify combining them to form a suicidality index (SI). These items are at the core of what is likely to alert assessors to increased risk of attempting suicide. The SI was unrelated to age at either assessment (r =-.01, n=897 and r =-.03, n=205).

Slightly more than a third of respondents at both the first and second assessments (35.2% and 36.6% respectively) reported deliberately injuring themselves at some time. Deliberate self-injury correlated significantly with the Suicidality Index at both assessments (r=.47, n=897, p<.001 and r=.54, n=205, p<.001). The strength of these relationships might in part be due to overlap in the recording of self-injury and suicide. The wording of the item is: "Have you ever deliberately injured yourself by cutting, burning or some other means?" The intention was to record self-injuries other than suicide attempts (which were asked about separately). However, experience with processing the completed assessments indicates that on a number of occasions youths recorded suicide attempts as deliberate self-injuries. In retrospect the item should have been more clearly worded with regard to its intent. For present purposes it cannot be used as a measure of non-suicidal self-injury due to it being confused by some respondents with suicide attempts. For this reason no further analysis of this item will be presented here.

Concurrent relationships with the Suicidality Index are presented in Table 3. As females significantly more often reported current suicidal ideation and previous suicide attempts than did males, concurrent relationships between suicidality and other variables at the first assessment were examined by gender. There were too few females in the second assessment to allow separate analysis. The directions and magnitudes of most associations with suicidality were very similar for males and females. Various indicators of problem substance use (higher use frequencies of multiple substances, self-reported problem use, intravenous substance use) were associated with suicidality, as were measures of conduct problems, ADHD signs and depression. The number of prior adjudicated offences was not significantly associated with suicidality in any group.

Table 3: *Concurrent relationships (*r*) with the Suicidality Index*

	No. prior offences	Depress[a]	Bad temper	Conduct	ADHD	Sub. use frequency	Problem sub. use	Has injected[b]
1st assess[c]								
Males	-.06	.29***	.18***	.16***	.21***	.21***	.20***	.20**
Females	.09	.24*	.22*	.32**	.21*	.30**	.14	.34
All	-.06	.28***	.19***	.17***	.21***	.24***	.19***	.22***
2nd assess[d]								
All	.13	.40***	.32***	.23***	.27***	.25***	.39***	.09

[a] Depression scale with suicidal ideation item removed.
[b] This item was later added to the SECAPS, hence the reduced participant numbers.
[c] For males, *n*=200 for *has injected*, *n*=414 for *number of prior offences*, and *n*=807 to 812 for other items. For females, *n*=24 for *has injected*, *n*=40 for *number of prior offences*, and *n*=84 to 85 for other items. For all, *n*=224 for *has injected*, *n*=454 for *number of prior offences*, and *n*=891 to 897 for other items.
[d] For all, *n*=57 for *has injected*, *n*=139 for *number of prior offences*, and *n*=204 to 205 for other items.
*$p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 4: *Predictive relationships (τ) between first assessment measures and attempted suicide status at the second assessment*

	No. prior offences	Depress [a]	Bad temper	Conduct	ADHD	Sub. use frequency	Problem sub. use	Suicidal ideation
Attempt suicide	.05	.03	.18*	.16*	.17*	.20*	.09	.09

Note: Only subjects who in their first assessment denied any previous suicide attempts were included. As the item "Has injected" was later added to the SECAPS, few first assessment youths who responded to this item had as yet completed a second SECAPS assessment, thus precluding its inclusion in this table. For the item *number of prior offences*, n =110; for all other items n=144 to 145.

[a] Depression scale with suicidal ideation item removed.

*$p \leq .05$

While the conduct problems measure was significantly associated with suicidality at both assessments, inspection of the results of the individual items that made up the conduct measure indicates that reporting having a bad temper was as closely related with concurrent suicidality as was the composite conduct variable.

The prediction of suicide attempts was examined only among those youths who at the first assessment denied any previous suicide attempts. Those who reported a suicide attempt at the second assessment are thus presumed to have made the attempt at some time after the first assessment. This removes the influence that differences in prior attempted suicide status (and its concurrent associations with the predictor variables) might have on the predicted outcome. Only assessments that were 6 months or more apart were considered. Time between assessments ranged from 6 months to 4 years, with a mean time of 1.53 years. The relationships between variables measured at the first assessment and subsequent attempted suicide status are presented in Table 4. Neither depression scale scores nor suicidal ideation at the first assessment significantly predicted later attempted suicide status. This held for each depression scale item when examined separately. The full depression scale (i.e., with suicidal ideation included) also failed to significantly predict reports of later suicide attempts (r=.10, n=145, p=.22).

While rated mood by itself was not a significant predictor, a closer examination revealed that the length of time low mood (3 or less on a 0-10 scale) was experienced was significantly associated with subsequent suicide status. In Table 5 it can be seen that 14% of those who experienced low mood for no more than a few days subsequently reported a suicide attempt, whereas 55% of those who experienced such mood for a few weeks or more reported a subsequent suicide attempt - a statistically significant difference (Mantel-Haenszel χ^2=5.70, df=1, p=.02). A dichotomised mood by time variable (prolonged low mood vs. other) measured at the first assessment among those who initially denied prior attempts had a significant correlation with attempted suicide status at the second assessment (r=.20, n=145, p=.02).

Conduct problems were significantly predictive of suicide status. As with concurrent relationships with suicidality, bad temper alone was as strong a predictor as the composite conduct measure (of which bad temper is a component). The number of prior offences was unrelated to future suicide attempts in this sample. ADHD signs and substance use frequency were both significantly predictive, though acknowledging having a problem with substance use was not.

Table 5: *Attempted suicide status at the second assessment by the time that low mood was experienced at the first assessment*

Time low mood experienced	Attempted suicide		Total
	No	Yes	
Few days	18 (86%)	3 (14%)	21 (100%)
Few weeks	4 (50%)	4 (50%)	8 (100%)
Few months	1 (33%)	2 (67%)	3 (100%)
Total	23 (72%)	9 (28%)	32 (100%)

Note: Only subjects who in their first assessment denied any previous suicide attempts were included.

The question of whether combining the significant predictors of future suicide attempt status might help to improve the identification of youths most at risk of suicide attempts was considered. As the conduct problems measure was no more strongly predictive than its component item bad temper, and as the conduct measure was no longer significantly predictive once bad temper was removed from the measure, the conduct measure was not included in the predictive index. The remaining variables that had significant bivariate relationships with future suicide attempts (all were of similar strength with correlations between .17 - .20) were substance use frequency, ADHD signs, bad temper, and the dichotomised mood variable (i.e., prolonged low mood vs. other). A simple additive method (similar to the Burgess method in recidivism risk prediction) was used with approximately equal weighting given to each variable. Due to the different score ranges for each variable, adjustments were needed to make the ranges approximately equal. The ADHD signs index has a 5-point score range and was left unadjusted. Bad temper scores (1-2) were multiplied by 4 to give a similar range. Prolonged low mood (low mood that had lasted for a few weeks or longer) was scored 5. All other mood and time combinations were scored 1. Substance use scores were divided by 5. This reduced the range of observed scores from 7 - 30 to 1.4 - 6.0. The predictive index was the sum of all the items after adjusting for individual variable score ranges. A moderately strong and highly significant relationship between this index (calculated at the first assessment) with suicide attempt status at the second assessment was obtained (r=.36, n=183, p<.001). After

controlling for initial suicide status by considering only those who at the first assessment reported no prior attempts, a slightly reduced, but nevertheless highly significant, predictive relationship between the index and later suicide attempt status was obtained (r=.28, n=144, p<.001). The ROC AUC value was .70 (95% CI = .60 - .79).

The ability of past suicide attempt status to predict future suicide attempt status was examined. Among those who at the first assessment reported a previous suicide attempt, in order to know whether a suicide attempt reported at the second assessment was a new event it is necessary to know when the attempt occurred. Suicide attempt recency response options ranged from "last few days" to "more than half a year ago". Provided that there are at least 6 months between the first and second assessments, it can be presumed that second assessment reports of attempts made within the last "few days", "few weeks" or "few months" all refer to events that occurred after the first assessment. However, where "more than half a year ago" is selected it is not possible to know whether a reported attempt occurred before or after the first assessment. The predictive validity of first assessment suicide attempt status was, therefore, restricted to predicting suicide attempts reported to have been made within 6 months of the second assessment (i.e., "few days", "few weeks" or "few months" responses) and only if 6 months or more had elapsed between the assessments. Due to limitations of the data collected, this was necessarily a narrower prediction task than was able to be considered for the other risk variables. A significant relationship was found (r=.39, n=144, p<.001) between first assessment suicide attempt status and reports of more recent suicide attempts at the second assessment. With this same sub-group and outcome the previously described 4-item suicide attempt prediction index had a correlation of .37 (n=142, p<.001). Adding first assessment suicide attempt status to the prediction index (after adjusting this item's scores to a similar range to the other variables) increased the index's correlation with recent suicide attempt status to .43 (n=142, p<.001).

Discussion

Consistent with most previous studies, the young offenders assessed here reported prevalences of suicide attempts that were considerably higher (approximately four times) than the general youth population rate (estimated at about 7% for Australian youths - Keys Young, 1997). This confirms that they should be regarded as a high-risk population. A quarter of the young offenders also reported having recently thought about suicide – a

similar proportion to that obtained by Fasher et al. (1997) with a sample of offenders admitted to a juvenile detention centre in New South Wales. However, thoughts about killing oneself appear to be quite common among adolescents. Kosky, Sawyer and Gowland (1990) reported that 13% of a remand male youth sample in Adelaide gave "very or often true" responses to the statement "I think about killing myself" while only 4% of a community male youth sample indicated similar agreement. The true proportion experiencing such thoughts is likely to be larger as Kosky et al. omitted "somewhat or sometimes true" responses in their published results. Martin, Kuller and Hazell (1992) found that 28% of their South Australian high school student sample had thoughts about killing themselves during the previous 6 months. Similarly, Zubrick et al. (1995) reported that 24% of 15-16-year-olds in a large random sample of Western Australian high school had experienced some suicidal thoughts during the preceding 6 months. A lower prevalence of suicidal ideation (12%) during the past 12 months was reported in a national Australian survey of youths 13-17 years of age (Sawyer et al., 2000). Whether young offenders have thoughts about suicide significantly more often than do non-offenders cannot be definitively determined here due to the different wordings of items used in this and other studies. The SECAPS item asks, "Have you recently had thoughts about killing yourself?" While "recent" is open to interpretation, the expectation was that most respondents would take this to mean within the last few days or weeks. Assessors were instructed to give this time frame if a youth asked for further explanation. Practical experience in administering the SECAPS strongly suggests that most young offenders interpret "recent" to refer to a period similar to the expected time frame. It is, therefore, likely that suicidal ideation is more common among young offenders than among either the high school students samples reported by Martin et al. and Zubrick et al. – both of which were questioned about 6-month periods – or Sawyer et al.'s national youth sample. To make the meaning of this item clearer the next SECAPS revision will include the words "during the last week". Although suicidal ideation is closely associated with reporting past suicide attempts, the high incidence of suicidal ideation in both delinquent (high risk) and non-delinquent (low risk) populations is likely to diminish its power to predict future attempts.

Marked gender differences in suicidal behaviour were found among the young offenders. These were consistent with findings elsewhere that females are more likely to make suicide attempts and to think about suicide (Goodman & Scott, 1997; Substance

Abuse and Mental Health Administration, 2001; Wichstrøm & Rossow, 2002). However, completed suicide among adolescents is far more common among males than females. In Australia during the period 1996-1998 the rate (per 100,000) of completed suicides among 15-19-year-old males was 17.7 whereas the rate for like-aged females was 5.0 (Australian Bureau of Statistics, 2000).

Recall of suicide attempts showed some variability between assessments. This was not altogether unexpected. Particularly if a suicide attempt is of low lethality, with time its salience diminishes and some will either forget or reinterpret the event (Klimes-Dougan, 1998). Mood at the time of completing the SECAPS assessment might also influence recall. Someone who is depressed and ruminatively introspective might more likely recall such acts than will someone with elevated mood. Depression has been found to enhance the recall of negative events (Williams, Watts, MacLeod, & Matthews, 1997).

A concurrent, but not a predictive, association between suicidality and the depression scale was found. Although dysphoric mood (3 or less on a 0-10-point scale) at the first assessment was reported by 33% of the respondents, most (55%) reported experiencing such a mood for no more than a few days. For many, their dysphoric mood appears to be transitory. In some cases it possibly reflects an initial reaction to being placed in secure care. Estimates of the incidence of dysphoric mood among adolescents vary considerably due to differences in measuring instruments, cut-off points and sample characteristics. Compas, Ey and Grant (1993) cite incidences from various studies of between 15% and 40%, although these figures overestimate single point incidence as they include studies that enquired about behaviour over 6-month periods. Nevertheless, it would appear that dysphoric mood is a fairly common occurrence among adolescents, which is why, on its own, it is a poor indicator of suicide risk, despite depression being the single most frequent concomitant of suicidal behaviour (Allen, 1987). Miller, Chiles and Barnes (1982) found that juvenile delinquent suicide attempters had on average experienced only moderate degrees of depression for relatively short periods (less than a week). Poor temporal stability might explain why the depression index (and its correlate, suicidal ideation) failed to significantly predict future suicide attempt status. However, those who reported experiencing their low mood for some weeks or longer were found to be more likely to subsequently report suicide attempts. It is possible that those who reported more prolonged low mood either tended to subsequently experience low mood more often or tended to have a qualitatively different form of dysphoria, perhaps with stronger biological

involvement than those with shorter reactive episodes. This has implications for the management of long-term suicide attempt risk among youths who report extended periods of low mood. In addition to managing immediate risk by steps such as close monitoring and social support, they might require further assessment to consider the need for anti-depressant medication or cognitive-behavioural therapy and continued post-release support.

The findings in this study, consistent with research elsewhere (e.g., Garnefski & de Wilde, 1998; Wannan & Fombonne, 1998), confirm that substance use is associated with suicidal behaviour. Substance use frequency, self-reported problem use, and injecting use were all significantly related to concurrent suicidality. While the predictive validity of injecting use could not be tested due to a lack of data, substance use frequency was found to significantly predict future suicide attempt status. Self-reported problem use was not significantly predictive. The reason is likely to be the low temporal stability of this measure (r=.11 between first and second assessments). However, the frequency of recent use of a variety of substances was significantly associated with subsequent suicide attempts. Although imperfect on its own (as are all single variables), substance use must be included in any assessment of adolescent, particularly delinquent, suicide risk.

Young offenders as a group are at increased risk of antisocial behaviours, suicidal behaviours, and of substance use and misuse. While contextual and other external factors are important determinants of each of these behaviours, impulsivity is also known to be associated with each. This common association is likely to be one of the links that helps to account for their apparent covariation. Impulsive individuals tend to act, often in extreme ways, on momentary thoughts and emotions. Lack of foresight, the ignoring of long-term consequences and undeliberated risk-taking are all aspects of impulsiveness. Impaired or restricted self-control is another possible description of such behaviours. A number of authors (Allen, 1987; Barker, 1988; Hoberman, 1989; Miller, Chiles, & Barnes, 1982; Slaby & McGuire, 1989) have commented on the element of impulsivity that characterises many adolescent suicides and attempted suicides. While depression or dysphoric mood is perhaps the most frequently encountered precursor of suicidal behaviour, the majority of depressed or dysphoric people do not make suicide attempts. It is suggested here that those who are also impulsive are at greater risk of acting on their dysphoric mood. Impulsivity has also been described as one of the universal personality-behavioural correlates of delinquency (Ellis, 1987) and has been found to account for a substantial

portion of the variance of delinquent behaviour (Rigby, Max, & Slee, 1989). The relationship of impulsivity to drug use is probably bi-directional (Moeller & Dougherty, 2002). Mayer (1988) found that adolescent alcohol abusers scored low on a measure of self-control (i.e., were more impulsive) while Tcheremissine, Lane, Cherek, and Pietras (2003) reported greater impulsivity among adults with past substance use disorders compared to controls. Longitudinal research with adult males suggests that prolonged alcohol abuse increases impulsivity (McNeill, 1987). Disinhibition or increased impulsivity is an immediate short-term effect of many substances. Many youths who die by suicide have been found at post-mortem to have high levels of alcohol and illicit drugs (Hillman, Silburn, Green, & Zubrick, 2000). This highlights both the need to consider substance abuse in all clinical assessments of suicidal behaviours and the need for effective substance use treatment programs as one of the strategies for combating these behaviours.

Children and youths with attention deficit hyperactivity disorder (ADHD), a prominent feature of which is impulsiveness, are also at greater risk of antisocial behaviour, conduct disorder and substance abuse (Henker & Whalen, 1989; Pratt, Cullen, Blevins, Daigle, & Unnever, 2002; Washbusch, 2002). The effects of impulsiveness are not restricted to adolescents. O'Boyle and Brandon (1998) support the view that among adult substance abusers impulsivity is a core feature that leads to multiple substance use, more severe addiction and suicide attempts. Consistent with this, significant concurrent and longitudinal associations between suicidality and ADHD signs were found among the incarcerated youths investigated here. Although the correlation between ADHD signs and subsequent attempted suicide status is not particularly strong, it is clinically meaningful. Among those who at their first assessment denied a previous suicide attempt, 7.7% of the subjects who reported no more than one ADHD sign (n=39) reported a prior suicide attempt at the second assessment. This contrasts with 31.4% of those with two or more signs (n=105) subsequently reporting a suicide attempt - a threefold increase. In addition to being a marker for increased risk of attempting suicide, ADHD might be a causal factor. As already noted, impulsivity (one of the core symptoms of ADHD) is often a feature of subjects who either attempt or commit suicide. Impulsive individuals are inclined to immediate reaction and gratification rather than reflection and the inhibition of inappropriate responses. Many suicide attempts, particularly by youths, follow a very short contemplation of the act and are, therefore, often impulsive in nature. Impulsivity is likely, in conjunction with other factors, to contribute to many suicide attempts among

young offenders. As persons who are high on ADHD signs can be expected to also be more impulsive, then ADHD, if present, should be considered an appropriate treatment target to reduce the risk of suicidal behaviour among at risk individuals. This is a particularly relevant consideration with young offenders. Due to the high comorbidity of conduct disorder and ADHD (Sawyer et al., 2000), many youths in secure care are likely to have ADHD. For example, using the Adolescent Psychopathology Scale (Reynolds, 1998), Bickel and Campbell (2002) found that 46% of the youths assessed in a Tasmanian youth detention centre met that measure's criteria for ADHD. As this was a self-report measure, information from teachers or parents might have altered the diagnosis in some cases. Nevertheless, the results suggest that the incidence of ADHD among incarcerated youth in Australia is likely to be quite high. Additional evidence comes from a survey of wards of the state in NSW that found that 35% of the sample had at some time been diagnosed as having ADHD (Community Services Commission, 1996). Although lower figures of between 11% and 17% (depending on whether specific impairment criteria are used) were obtained for a large sample of detained youths in Illinois, USA (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002), these still well exceeded the 3% to 5% prevalence of ADHD among school-age children reported in *DSM-IV*.

Reporting having a bad temper was associated here with increased risk of a later suicide attempt. Various forms and measures of aggressive behaviour have been found to be significantly associated with increased sensation seeking and impulsivity (Joireman, Anderson, & Strathman, 2003) - traits also frequently found among young offenders, youths with ADHD, and substance users. The irritability that characterises a bad temper can also be a feature of children and adolescents with mood disorders. Some researchers have suggested that the treatment of impulsive aggression or the provision of violence prevention interventions might assist to reduce suicide risk (Brent et al, 2002; Conner et al., 2001). This is as yet untested. There have been few controlled studies of psychosocial interventions with suicidal youths and no controlled studies of the use of anger management programs as an intervention have been reported in recent major reviews (Gould et al., 2003; Miller & Glinski, 2000). However, the consistent findings, both here and elsewhere, of a relationship between impulsive aggression and suicidal behaviour strongly suggest that the use of anger management programs should be considered as part of a suicide risk management strategy with at-risk young offenders. As such programs are

already available in many detention centres, extending their use to suicidal youths should not be difficult to implement.

In their recent review Gould et al. (2003) identified past suicide attempts as one of the strongest predictors of completed youth suicide. Although suicide risk decreases with time after an attempt, Suominen et al. (2004) found that increased risk persists for many years. The validity of using past suicide attempt status to predict future suicide attempts was confirmed here. A history of past attempts should always alert assessors to the need for further investigation of current suicide risk.

Many of the associations recorded here are likely to have been attenuated due to limitations of the measures used. Brief measures, which in a number of cases here were single items, usually have lower reliabilities than do longer measures. Lowered reliability in turn tends to reduce the strength of observed statistical associations. Furthermore, most of the single-item measures used in this study were dichotomies. Where a latent variable is continuous (e.g., degrees of having a bad temper), using a dichotomous measure (e.g., bad temper, yes or no) results in a loss of information that is likely to attenuate statistical associations. Base rates can also influence the strength of associations. In the case of dichotomies, the further is the departure from a 50/50 split in the responses, generally the weaker will be associations with other variables. While departure from an even split on a dichotomised variable reflects certain population characteristics that are not necessarily measurement error, very high or low base rates in particular populations can reduce the strength of statistical associations compared to populations where the split is more even. Base rate extremes, however, are unlikely to have substantially influenced the results reported here as all the main dichotomous measures (viz. bad temper, suicidal ideation, intravenous substance use, prior suicide attempt, problem substance use) had base rates of between 24% and 55% (see Appendix 5). Although all the multiple item measures (viz. ADHD, substance use frequency, conduct, depression, suicidality) had score distributions that were to some degree skewed, none had skewness statistics outside the range of -1.0 to +1.0. While increased skewness can attenuate product-moment coefficients, results from a simulation study by Barrett (2001) indicate that skewness below 2.0 has only a minor attenuating effect. Thus, the main source of attenuation here is likely to be lowered reliabilities due to the brevity of individual measures. This suggests that some weak, but nevertheless genuine, relationships might not have been detected in this study. That possibility can only be tested by further investigations using more reliable measures.

Another limitation here is that no information about the lethality of suicide attempts was available. Furthermore, while the results highlight various risk indicators and potential targets for intervention, it is not suggested that these alone should be used to estimate suicide risk. Contextual and other factors should also be considered in individual assessments.

Conclusion

The results presented here provide support for the clinical utility of using part of a relatively simple and brief psychosocial screening measure to appraise the suicide risk of incarcerated young offenders. Substantial proportions of the assessed youths reported past suicide attempts and recent thoughts about suicide. The validity of using past suicide attempts to identify youths at increased risk of future attempts was confirmed. Other factors that were both concurrently and prospectively associated with suicidal behaviours (even after controlling for prior suicide attempt status) were substance use, prolonged dysphoric mood, ADHD signs, and having a bad temper. These factors not only have predictive value but should also be considered as appropriate targets when intervening to reduce suicide risk. It is suggested that one of the factors linking suicidal behaviour, ADHD signs, substance use, and being bad tempered is impulsiveness. This trait is widespread among offenders and is likely to explain, at least partially, both the observed co-variation of the aforementioned behaviours and why they are encountered more frequently in this group than in the general population. Interventions that help to reduce impulsiveness can be expected to help ameliorate these behaviours. Impulsiveness is a core symptom of some forms of ADHD. As ADHD signs appear to be related to increased risk of suicide attempts, and as ADHD is usually a treatable disorder, it is suggested that, if it is diagnosed, consideration should be given to including it as a target in the treatment plans of suicidal young offenders.

Chapter 5

Substance use among young offenders: thrills, bad feelings or bad behaviour?

One approach to better understanding and controlling psychoactive substance use (PSU) is to investigate and treat related comorbid conditions. In this context Wexler (1995) has called for more systematic study of the relationships between attention deficit hyperactivity disorder (ADHD), antisocial personality disorder and PSU among criminal offenders. From a developmental perspective it is important to investigate these conditions when PSU usually first emerges, that is, during adolescence. Conduct disorder is the adolescent precursor of adult antisocial personality disorder and is part of a continuum of conduct problems. The link between conduct problems and PSU has been confirmed in many studies of general, clinical, and juvenile delinquent populations (e.g., Hagell & Newburn, 1996; McMurran & Hollin, 1989; Robins & McEvoy, 1990; Schonfield, 1976). Even among incarcerated delinquents, those with the most conduct problems display the highest incidences of PSU (Neighbours, Kempton, & Forehand, 1992).

Across various age groups, children and youths with increased ADHD behaviours are at increased risk of antisocial outcomes (Farrington, Loeber, & Van Kammen, 1990; Lahey et al., 1988; Loeber et al., 2003; Pratt, Cullen, Blevins, Daigle, & Unnever, 2002; Weiss & Hechtman, 1993), even after controlling for coexisting conduct problems (Babinski, Hartsough, & Lambert, 1999; Dalteg & Levander, 1998; Taylor et al., 1996; but see Satterfield & Schell, 1997, for a failure to replicate this last finding). ADHD behaviours are also associated with PSU. For example, significant relationships between sensation seeking and PSU have been reported (Ball, Carroll, & Rounsaville, 1994; Wood, Cochran, Pfefferbaum, & Arneklev, 1995), increased impulsivity is often encountered among substance abusers (W.L. Johnson, Malow, Corrigan, & West, 1993) and, among subjects with PSU disorder, those who have comorbid ADHD generally have a longer duration of PSU disorder and a slower remission rate (Wilens, Biederman, & Mick, 1998). Alcohol (but not other substance) abuse relapse among adolescents after treatment has been associated with probable ADHD status at intake, even after controlling for conduct-disordered behaviour (Latimer, Ernst, Hennessey, Stinchfield, & Winters, 2004). Klitenberg, Andersson, Magnusson, and Stattin (1993) found that childhood hyperactive behaviour predicted both subsequent alcohol problems and violent offending. White et al.

(2002) also found a significant association between ADHD signs, illegal activity and alcohol use, but not with marijuana use. However, Grilo et al. (1995) reported no difference in the frequency of ADHD between clinic-referred groups with and without PSU disorder, though this might simply reflect biases in referring practices, particularly as the incidence of ADHD was elevated in both groups. Only cigarette use was significantly higher among hyperactives in Hartsough and Lambert's (1987) study, but low levels of substance use (e.g., no subjects in either the hyperactive or control groups had used inhalants, cocaine or amphetamines during the previous 2 months) limited the chances of finding significant differences. This is not an uncommon problem in general population samples. Other problems encountered in some investigations include substantial loss of subjects to follow-up and no control of demographic variables such as age. Nevertheless, there is considerable consistency in the results of a number of longitudinal studies (Barkley, Fischer, Edelbrock, & Smallish, 1990; Boyle et al., 1992; Boyle et al., 1993; Fergusson, Lynskey, & Horwood, 1993; Gittleman, Mannuzza, Shenker, & Bonagura, 1985; Latimer et al., 2004; Lynskey & Fergusson, 1995; Mannuzza et al., 1991; Tapert, Baratta, Abrantes, & Brown, 2002). Most of these (Latimer et al. and Tapert et al. being exceptions) indicate that, while ADHD behaviours are a risk factor for conduct problems which in turn are a risk factor for PSU, in the absence of conduct problems ADHD behaviours do not increase the risk of PSU.

What has not been fully explored is whether differences in ADHD behaviours among subjects with conduct problems, such as young offenders, are related to rates of PSU independently of the degree of conduct problems. Clinical experience suggests that those young offenders who are most involved in substance use also display the highest rates of ADHD behaviours. This is consistent with the observation that sensation seeking and difficulty coping with boredom (both are related to ADHD behaviours, particularly to impulsivity [Zuckerman, 1993]) are common among young offender drug users. For example, more than half the young offenders surveyed by Howard and Zibert (1990) nominated boredom as a factor influencing their substance use. ADHD behaviours might independently influence PSU once certain behavioural constraints, as indicated by the degree of conduct problems, have been loosened. On the other hand, PSU and conduct problems among young offenders might be such intertwined measures of general deviance that ADHD behaviours have no independent influence on PSU after their common

relationship with conduct problems is controlled for. The empirical examination of this problem is one of the aims of this investigation.

ADHD behaviours and conduct problems fall within the construct of disruptive or externalising behaviour problems. However, in relation to young offenders the question also needs to be asked: to what extent do internalising problems contribute to PSU? Khantzian (1985) asserted that drug addicts often self-medicate, that is, they use psychoactive substances in order to help cope with distressful subjective states. Similarly, Jenson and Howard (1999) suggested that juvenile probationers might use hallucinogens to cope with depression. Could this help to explain the relatively high rate of PSU among young offenders? The relationship between internalising problems and conduct problems among adolescents is not altogether clear. Contradictory results have been obtained in different studies (e.g., Brook, Whiteman, Finch, & Cohen, 1995; Farrington, 1995; Loeber, Stephanie, Keenan, & Lahey, 1995; Putniņš, 1982), though increased comorbidity of conduct problems with depression is a common finding (e.g., Sawyer et al., 2000). But this does not demonstrate a causal relationship. Whether there are higher incidences of internalising problems among youths with conduct problems is largely irrelevant to invoking the self-medication model to explain PSU among offenders. How youths cope with internalising problems is a different question to what are prevalences of internalising problems. It could be argued that, irrespective of their prevalence, when such problems occur youths with conduct problems are more prone to cope by self-medicating. This could be due to factors such as lower frustration tolerance, poorer self-control or greater opportunity due to increased access to substances. While acknowledging that results from previous research are inconsistent, Beyers and Loeber (2003) have suggested that there might be a bi-directional relationship between depression and conduct disorder. Measures of substance use were, however, not included in their study.

The self-medication model received only limited support in a study of high school students (Walter, Vaughan, & Cohall, 1991). A drawback was the very restricted range of substance use reported (e.g., only 1.6% of the subjects used marijuana a few times a week or more and none had ever used heroin), thereby potentially reducing the strength of associations between substance use and other variables. In Henry et al.'s (1993) study, after controlling for early conduct problems, depressive symptoms at age 11 years predicted multiple PSU four years later among males but not among females whereas Boyle et al. (1992) and Boyle et al.(1993) reported no significant relationship between

early emotional problems and later PSU. Kilpatrick et al. (2000) have argued that the stresses from experiencing or witnessing violence can precipitate substance use as a coping response. Although they found positive relationships between exposure to violence and substance use in a large general population sample of adolescents, the association could have been due to common factors such as delinquency rather than distress. In a longitudinal study Miller-Johnson, Lochman, Coie, Terry and Hyman (1998) concluded that conduct problems predicted subsequent substance use but that depressive problems, in the absence of conduct problems, did not significantly increase substance use. Similar results with a large sample of girls were obtained by Bardone, Moffitt, Caspi, Dickson and Silva (1996). Steele, Forehand, Armistead and Brody (1995) found that boys with higher internalising problem scores later used less marijuana and hard drugs in early adulthood. In one of the few studies of juvenile delinquents, Neighbours et al. (1992) suggested that delinquents' abuse of substances could be seen as self-medication to reduce anxiety or depression. However, their findings in support of this hypothesis were, in their own words, "not robust" (p.385). Among adolescent psychiatric inpatients Grilo et al. (1995) found no difference in depression but fewer anxiety disorders in those with, compared to those without, PSU disorder. Spirito, Mehlenbeck, Barnett, Lewander and Voss (2003) concluded that increased alcohol use and related problems among adolescent suicide attempters are a function of behaviour, rather than mood, disturbance. In contrast, Riggs, Baker, Mikulich, Young and Crowley (1995) reported that depression among delinquents was associated with increased substance dependence diagnoses. Thus, it appears that the evidence in relation to self-medication among adolescents is equivocal and that research with juvenile delinquents is scant. Further exploration of this problem with a sample of young offenders is another aim of this investigation.

Method

Subjects and procedure

The subjects were the first 900 youths to complete the SECAPS in South Australian youth detention centres. Due to missing data the responses to individual items are often a little less than 900. Of these youths, 206 were reassessed (207 were approached and one declined) when readmitted to secure care. Readmitted youths are normally assessed again if more than 12 months have elapsed since their last assessment, though during the first year of the screening program some youths were reassessed in less than 12 months.

Measure

Items from the SECAPS that are considered here include self-reports about the frequencies of use of various substances (viz. alcohol; marijuana; hallucinogens; sedatives/hypnotics; narcotics [opiates]; stimulants; inhalants) during the month immediately prior to their placement in secure care. Frequencies of use are indicated on a five-point scale from none to daily. The sum of the use frequencies forms a substance use scale that, with the offenders assessed here, had internal consistencies (alpha) of .63 (*n*=897) and .62 (n=206) at the first and second assessments respectively. Items relating to ADHD signs inquire about difficulty with concentration, difficulty sitting still, impulsiveness, and difficulty coping with boredom. These are summed to create an ADHD scale (first assessment alpha=.58, *n*=896; second assessment alpha=.62, *n*=206). Data collected earlier with a sample of high school students yielded an alpha of .68 (*n*=129). This scale's concurrent validity is supported by the finding (see chapter 3) that it correlates .52 with the Adolescent Psychopathology Scale's (Reynolds, 1998) ADHD scale. Conduct problem items ask about school expulsions/suspensions, regular truancy when enrolled at school, frequency of fighting, bad temper and delinquent friends. These are summed to form a conduct problems scale (young offenders - first assessment alpha=.47, *n*=899; second assessment alpha=.41, *n*=206; high school students - alpha=.71, *n*=132). Mood is rated on a 0-10 point scale from "worst feeling possible" to "best feeling possible". Related items ask about the number of close friends, how well they get on with others, feelings of hopeless or despair about their future, and recent suicidal ideation. These are summed (after reducing the mood and hopelessness items' score ranges to make them more comparable to the other three items) to form a measure of dysphoria-withdrawal - referred to here as a depression scale (first assessment alpha=.48, *n*=891; second assessment alpha=.57, *n*=206).

Results

Of the 900 youths initially assessed, 90% were males and 27% identified themselves as being Aboriginal. Ages ranged from 11 to 20 years, with most subjects (82%) falling within the 14-17-year age range. Those who were 18 years or older were all incarcerated for offences committed before they turned 18 (the age of adult criminal responsibility in South Australia). Of the 206 youths who completed a second assessment, 92% were males and 31% identified themselves as being Aboriginal. Ages ranged from 12 to 19 years, with

most subjects (85%) falling within the 15-18-year age range. There were too few females among those with second assessments to permit analyses of prospective relationships by gender.

Zero-order product-moment correlations between substance use and ADHD signs, depression scores and conduct problems were calculated (see Table 1). Regarding all prospective relationships, only assessments that were 6 months or more apart were considered. Times between first and second assessments ranged from 6 months to 4 years, with a mean of 1.53 years. Significant concurrent (i.e., synchronous) relationships between substance use and ADHD signs were found at both assessments. First assessment substance use did not significantly predict second assessment ADHD signs. After controlling for first assessment ADHD scores, the relationship of first assessment substance use with second assessment ADHD signs fell close to zero (*pr*=.02). Prospectively, first assessment ADHD signs significantly predicted second assessment substance use. The correlation between first assessment ADHD signs and second assessment substance use remained significant both after controlling for first assessment substance use (*pr*=.17, *p*=.02) and after additionally controlling for first assessment conduct problem scores and age at the first assessment (*pr*=.16, *p*=.03).

Table 1: *Zero-order concurrent and prospective relationships (*r) *between substance use and ADHD signs, depression scores and conduct problems at first (1) and second (2) assessments*

	ADHD 1	ADHD 2	Depress 1	Depress 2	Conduct 1	Conduct 2
Sub use 1	.21***	.09	.19***	.12	.32***	.23**
n	893	186	886	186	896	186
Sub use 2	.24***	.22**	.07	.22**	.18*	.37***
n	184	205	184	205	185	205

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$ (2-tailed)

Conduct problems and substance use were significantly correlated at both assessments and each significantly predicted the other prospectively at the zero-order level. First

assessment conduct problems (controlling for first assessment substance use) had a partial correlation of .09 (ns) with second assessment substance use while first assessment substance use (controlling for first assessment conduct problems) had a partial correlation of .07 (ns) with second assessment conduct problems. Thus, once their concurrent relationships at the first assessment were controlled for, substance use and conduct problems did not significantly predict each other prospectively.

Although depression scores and substance use had significant concurrent relationships at both the first and second assessments, neither had a significant zero-order prospective relationship with the other. The magnitudes of the prospective correlations were reduced further after concurrent first assessment relationships with the respective predicted variable were controlled for. First assessment depression scores and second assessment substance use, controlling for first assessment substance use, had a zero correlation (*pr*=.00) while first assessment substance use scores and second assessment depression, controlling for first assessment depression scores, had a non-significant correlation (*pr*=.07).

Discussion

An important finding was that ADHD signs made a significant contribution to explaining substance use independently of the relationship with conduct problems. This suggests that, unlike the previously described findings with general community samples, substance use among young offenders is influenced not only by the propensity to persistently violate legal rules and social norms but also by the increased arousal needs that persons who are high on sensation seeking/ADHD behaviours are likely to have. If this is so, then the treatment of substance abuse among serious and habitual young offenders needs to also address their arousal needs. Additional support for this position is found in a study by Fergusson and Lynskey (1996) who reported that lower novelty seeking (the opposite of high sensation seeking or high arousal need) is associated with increased adolescent resilience to externalising problems such as substance use and offending. High novelty seeking in childhood has been found to be a predictor of later substance use in adolescence (Masse & Tremblay, 1997) and a broad impulsive sensation-seeking trait has been found to predict subsequent substance use disorders among late adolescent students (Sher, Bartholow, & Wood, 2000). In a prospective investigation, an index of neurobehavioural inhibition (based on measures of affect, behaviour and cognition) in childhood significantly predicted future substance use and substance use

disorder (Tarter et al., 2003). Similarly, others (V. Johnson & Pandina, 1993; Pandina, Johnson, & Labouvie, 1992) have reported that arousability is strongly related to substance use intensity. Strategies that are successful in the treatment of ADHD might, therefore, be incorporated into substance abuse programs for this client group. Consistent with this, Wills and Stoolmiller (2002) have indicated that decreasing distractibility and impulsive responding (core ADHD symptoms) might help reduce substance use escalation. In some cases the treatment strategy could include a trial of stimulant medication, as has been suggested by Horner and Scheibe (1997). Riggs (1998) has also pointed out that comorbid ADHD might worsen the course of both conduct disorder and substance use disorders and should, if present, be considered as a target for intervention. This is particularly important in light of Lynam's (1996) argument that children with concurrent hyperactivity-impulsivity-attention and conduct problems are at special risk of becoming chronic offenders. Support for this view is provided in findings that more adolescents with comorbid conduct disorder and ADHD report using various substances and generally have more negative outcomes than do youths with either disorder alone (Molina, Smith, & Pelham, 1999; Waschbusch, 2002). Whether psychostimulant treatment of ADHD influences the risk of developing later substance abuse has been recently considered in a meta-analytic review (Wilens, Faraone, Biederman, & Gunawardene, 2003). It was concluded that stimulant treatment in children and adolescents tends to reduce the risk of later developing substance use disorders. However, irrespective of what treatment strategies might be adopted, an implication of these results is that adequate assessment procedures should be put in place with high-risk populations, such as youths in secure care, so that those with ADHD can be identified.

Another important finding was the lack of any significant association between substance use and dysphoria-withdrawal as measured by the Depression scale, suggesting that self-medication (i.e., using psychoactive substances to cope with unpleasant internal states) is not a strong determinant of substance among young offenders. The lack of significant relationships between substance use and dysphoria-withdrawal is consistent with results elsewhere that internalising problems, such as depressed mood, nervousness and withdrawal, are poor predictors of juvenile delinquency (Farrington & Loeber, 1999). This is further supported by the absence of a significant association between the Depression scale used here and post-assessment recidivism (see Chapter 8). Similar outcomes have been reported in the area of adult offender recidivism prediction (Bonta,

Law, & Hanson, 1998; Gendreau, Goggin, & Little, 1996; Hanson & Bussière, 1998). Together, these results suggest that the direct treatment of internalising problems or personal distress among young offenders will have little effect on their reoffending risk. This is not to say that such treatment is not warranted for other reasons, but as a strategy to reduce delinquency its value is questionable.

After controlling for their concurrent relationship, conduct problems and substance use did not significantly predict each other. This suggests that much of their non-random variance is shared. Perhaps in this group conduct problems and substance can be largely viewed as two different manifestations of general deviancy.

The limited variability of certain behaviours sometimes found in general community samples, such as substance use among young subjects, can limit the strength of relationships between variables (Dembo, Williams, Wothke, & Schmeidler, 1994). This can be overcome by studying populations that have higher prevalences of the relevant variables, such as detention centre inmates. The type of measures used is an important consideration. As ADHD is part of a behavioural dimension rather than a taxon (Levy, Hay, McStephen, Wood, & Waldman, 1997), the use of dimensional (as done here) rather than categorical measures of ADHD not only better reflect reality but also, by retaining more information, increase the chances of uncovering significant relationships. However, the measures used were necessarily brief as they were part of a broad time-limited screening assessment. This resulted in scales that had limited score categories. For example, the ADHD scale was made up of four dichotomous response items, which when summed resulted in a scale with only five score categories. This is a coarse approximation of a continuous scale. Bollen and Barb (1981) found a 10% attenuation in the strength of correlation using a 5-category measure compared to its continuous counterpart. Thus, due to measurement coarseness, some attenuation of associations between the variables measured by the SECAPS scales is likely to have occurred. Attenuation of associations due to imperfect reliability of the SECAPS scales is also likely. Exacerbating this is the brevity of the measures used. In general, scale reliability tends to increase as the number of items in a scale increase. While the measures' internal consistencies were moderate, this did not prevent obtaining meaningful results, though replication using more reliable measures is desirable. The use of collateral information, especially in relation to ADHD, would be particularly useful.

Conclusion

In answer to the question posed in this study's title, psychoactive substance use among young offenders appears to be related to bad behaviour (conduct problems) and thrills (arousal needs as reflected in ADHD signs) but not to bad feelings (self-medication in response to internalising problems). This has implications both for better understanding the development of substance use in this group and for intervention strategies.

Chapter 6

Young offenders and tattoos

Groups as diverse as traditional New Zealand Maori warriors, the Japanese *yakuza*, bikie gangs such as the *Hell's Angels* and Navy seamen characteristically have tattoos. Described as 'body art', the reasons for getting tattoos often go beyond aesthetics. There is likely to be more that distinguishes between those with and without tattoos than just differences in personal artistic taste. Tattoos can be associated with group membership and, particularly among males, characteristics such as fierceness, brazenness and daring (see Figure 1 for a contemporary example of this association). Risk taking is a common element of these characteristics.

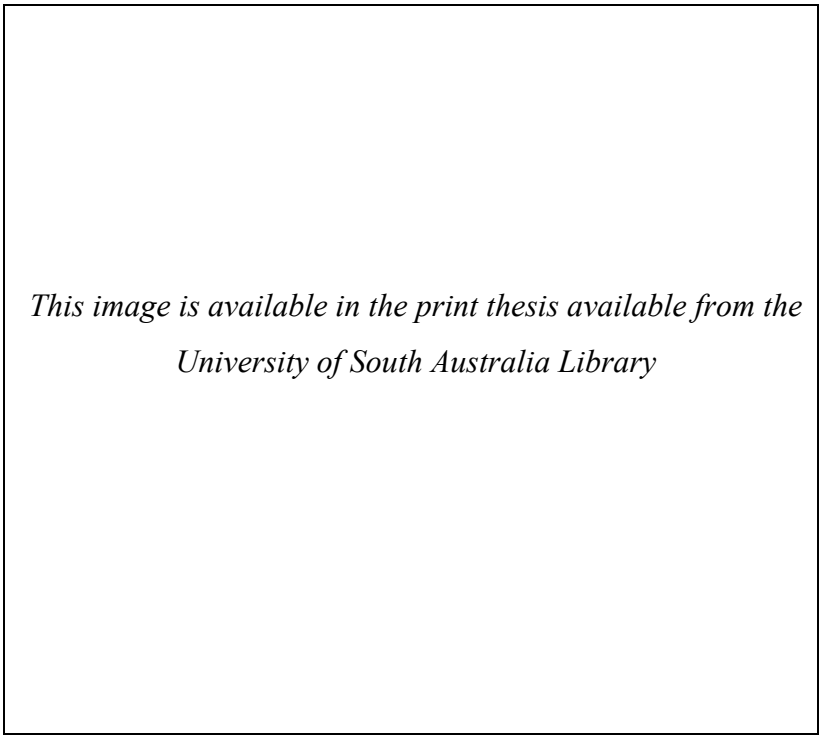

Figure 1: The post-punk entertainer Henry Rollins strikes an aggressive pose while prominently displaying his tattoos

That there seems to be a link between tattoos and risk-taking behaviours is supported in the results of a study by the National Health and Research Council Road Accident Research Unit in Adelaide of motorcycle fatalities during 1984/5. All subjects investigated at autopsy were found to have tattoos (Dr. Jack White, personal written

communication, 27th March,1996). Not only can it be presumed that road fatalities will tend to be associated with greater individual risk taking, due to their speed, power and minimal protection for the rider, the motorcycle can be generally regarded as a riskier (less safe) form of transport than is the motor car. It is reasonable to suggest that an element of thrill seeking underlies why some people, predominantly males, prefer motorcycles to cars. A link between motorcycle riding and tattoos is further suggested by events such as the *Skin and Steel Expo* held in Adelaide. Advertising for this annual event describes it as a "tattoo and bike (i.e., motorcycle) show". This association is illustrated in a recent advertisement by the motorcycle manufacturer Harley-Davidson (see Figure 2) that uses a tattooed back as a human billboard.

Reviewing the earlier literature about tattoos and various forms of social maladjustment, including criminality, Post (1968) concluded that "it would seem that there is some degree of correlation between the presence of a tattoo and the presence of a personality disorder" (p. 524), though the strength of the correlation was unclear. What types of disorder were associated with what types of tattoos also could not be specified. However, he suggested that tattoos are an expression of a person's self-concept. Manuel and Retzlaff (2002), in a prospective study of tattooing among adult male inmates, supported Post's conclusion. They found significantly higher scores on a number of personality disorder scales (including antisocial, sadistic and borderline disorders) among prisoners who subsequently acquired new tattoos compared to those who did not. Research in the United Kingdom (Farrington, 1991) has found a positive and statistically significant relationship between having tattoos and offending risk among adolescent and adult males. Having tattoos is used as a prognostic sign in criminal assessment measures such as the Lifestyle Criminality Screening Form (Walters et al., 1990) and the Young Offender-Level of Service Inventory (Shields & Simourd, 1991). This, of course, does not mean that having tattoos condemns one to offend, but it is used in these measures as a marker for increased risk.

An association between criminality and having tattoos was noted more than 100 years earlier by the Italian physician Cesare Lombroso (one of the founders of modern criminology). After examining 13,566 individuals who were categorised as honest, insane or criminal, he concluded that tattooing "is most common among criminals"

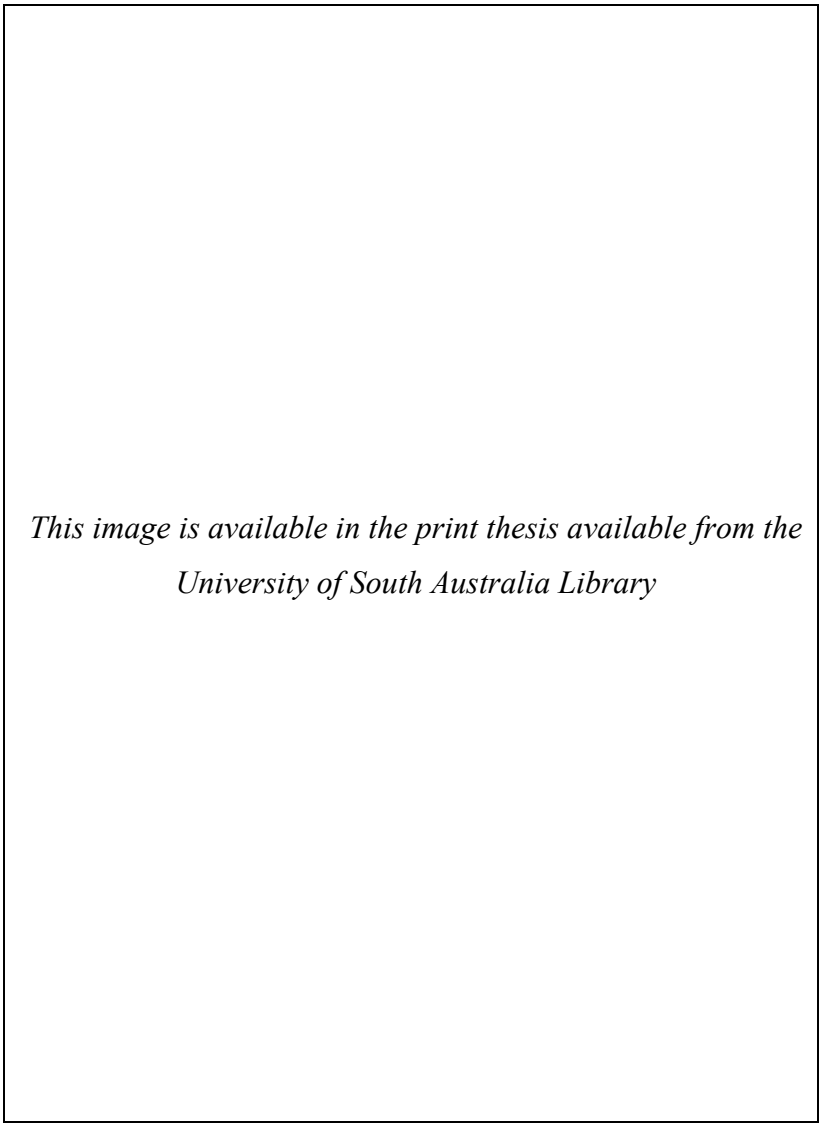

Figure 2: Advertising that links tattoos and motor bikes

(Lombroso, 1895). More recently, a 53% incidence of tattoos among male prisoners in England and Wales has been reported (Strang et al., 2000). A likely association with juvenile delinquency is suggested by the finding that the average age of acquiring their first tattoo was 16. Support for such an association is strengthened by results from a large general adolescent population survey in the US (Roberts & Ryan, 2002). Analyses indicated significant associations between having tattoos and substance use, violent behaviours, and school problems. Similarly, Braithwaite, Robillard, Woodring, Stephens and Arriola (2001) found significant associations between the use of various substances and tattooed status among incarcerated young offenders.

A relationship between increased offending risk and having tattoos in Australian populations appears to be supported by findings from a study of intravenous drug users in a Victorian prison. Almost all the subjects (97%) were found to have tattoos (Crofts, Thompson, Wales, & Hernberger 1996). Although at the time of the study the prisoners were adults, 73% had been in Juvenile Justice Centres. Furthermore, the mean age of getting their first tattoo was 15.2 years - indicating that a link between tattoos and offending might already be evident in adolescence. The notion that there is a relationship between antisocial behaviour and tattoos is widespread in the general population. Studies of children and adolescents in Perth revealed generally negative attitudes toward tattoos and an association in the minds of most participants between tattoos and either illicit activities or negative personal attributes (Durkin & Houghton, 2000; Houghton, Durkin, & Carroll, 1995).

However, compared to many other personal variables that have been explored with regard to their relationship to offending, relatively little research has been done on the prognostic significance of tattoos. Furthermore, while the incidence of tattoos is thought to be higher among offenders than among general population samples, only one study in Australia has compared the incidence rates between these groups. This earlier study in South Australia (see Putniņš, 1997a) found that tattoos were significantly more prevalent among young offenders than among similar aged high school students. The present investigation extends that earlier study by examining a larger sample of young offenders. In addition, the question of whether having tattoos might be a marker for increased recidivism risk is considered.

Method

Subjects and procedure

Of the first 904 youths approached to do the SECAPS assessment, three declined to cooperate and one completed only the first few items. A further two subjects were missing data about tattoos. Thus, 898 assessed youths are the subjects of this study. All the assessments were carried out between 1994 and 1999. In cases where individuals were assessed more than once, in order to avoid double counting of subjects, unless otherwise specified, only the results of first assessments are reported here.

The examination of the relationship between tattoo status and subsequent reoffending used the full court-adjudicated offending histories of all youths who completed

assessments during the first three years of the assessment program (viz. 1994-1996). During this period 458 youths were assessed. The number of assessments used in the analysis was reduced to 447 after exclusion due to missing tattoo item responses, death of the youth shortly after release from secure care or non-release from secure care more than 6 months before the end of the follow up period. Due to the re-admission to secure care, 140 youths underwent a second SECAPS assessment within the same assessment period (i.e., 1994-1996). Using the same exclusion criteria as for the first assessments (see above), the number of second assessments available for analysis was reduced to 103. The outcome was any proven (court adjudicated) offending that occurred within 6 months of release after the SECAPS assessment. Offence records were obtained from the Office of Crime Statistics in the South Australian Attorney-General's department. Only records of offences dealt with by South Australian courts were available with the exception of one youth who, from press reports, was known to have been subsequently convicted of a serious offence in another jurisdiction.

Measure

The assessment procedure was the SECAPS. Included in the assessment are two questions about tattoos: "Do you have any tattoos?", and "If 'Yes', would you like to have them removed". The question about tattoo removal was introduced a little more than a year after the SECAPS program had commenced. Subject numbers for this item are therefore reduced. Other items in the SECAPS assessment that were investigated with regard to their relationship to tattoos included questions about the frequency of use of various substances during the last month before being placed in secure care and items about temper, fighting and deliberate self-harming (excluding suicide attempts). Use frequencies for seven major classes of psychoactive substances were reported using a 5-point scale that ranged from no use to daily use. For ease of interpretation, irrespective of the original scoring, all variables in this chapter are coded in a positive score direction, that is, affirmative responses have a higher score than do negative responses. Thus, whereas the item about having tattoos was originally scored yes=1 and no=2 , this has been recoded so that the scoring is now in a positive direction (i.e., no=1, yes=2).

Results

Of the 898 detained young offenders whose records were examined, 90% were males (mean age = 16.0 years) and 10% were females (mean age = 15.3 years). Seventeen percent of the males and 30% of the females acknowledged currently having tattoos. There was little difference in the prevalence of tattoos among Aboriginals (17%; $n = 239$) and non-Aboriginals (19%; $n = 659$). An expected increase in the prevalence of tattoos with age was found ($r = .22$, $n = 898$, $p \leq .001$). The large difference between younger and older ages is more obvious from an inspection of Table 1. It can be seen that whereas 2% of 11-13-year old males reported having tattoos, this rose to 47% among the 19-20-year olds. Similarly, 8% of 11-13-year old girls reported having tattoos compared to 52% of those 17 years and older (Fisher's exact test, $p = .01$). To remove any confounding effects that age might have on the associations between tattoo status and other variables, all further reported correlations have been partialled for age.

Table1: *Prevalence of tattoos among young offenders by age*

	Males		Females	
Age	% tattooed	*N*	% tattooed	*n*
11-13	2	56	8	13
14	3	77	32	19
15	12	132	19	16
16	15	196	18	11
17	24	266	50	18
18	29	69	63	8
19-20	47	17	0	1
All	17	812	30	86

Comparative figures for a student sample were available from the earlier study by Putniņš (1997a). These were for 134 students between 15 to 18 years of age (79 males, 55 females) in selected classes in two Adelaide metropolitan government high schools (one in a middle class area, the other in a lower class area) who had been surveyed with various

items from the SECAPS assessment. No female students and only 9% of the male students had tattoos. In both cases the prevalence of being tattooed was significantly less than in the corresponding 15-18 year old offender subgroups (females - $p < .001$, $\chi^2 = 23.93$, $df = 1$; males - $p < .05$, $\chi^2 = 5.32$, $df = 1$).

Among males aged 15 years and older (n=679 - few younger boys had tattoos) who completed the SECAPS assessment for the first time in secure care, significant partial correlations were found between having tattoos and self-reported bad temper ($pr = .09$, $p < .05$), getting into fights ($pr = .08$, $p < .05$) and having deliberately injured themselves ($pr = .13$, $p < .001$). Among assessed girls 14 years and older (n=73 - few younger girls had tattoos) there was a significant partial correlation between having tattoos and self-reported bad temper ($pr = .27$, $p < .05$). However, no significant relationships between tattoo status and either fighting frequency or reports of deliberate self-injury were found.

As a very high prevalence of tattoos has been previously observed among incarcerated adult intravenous drug users (Crofts et al., 1996), the relationship between having tattoos and recent substance use was examined. The frequencies of use of each of the substance categories were summed to give an overall substance use score. The partial correlation between substance use and tattoo status among males 15 years and older (first assessment data) was significant ($pr = .09$, $p = .01$, $n = 678$, 1-tailed). The same relationship among males aged 16 years and older (second assessment data) was of borderline statistical significance ($pr = .14$, $p = .06$, $n = 138$, 1-tailed). Among girls (14 years and older, first assessment data) the relationship between substance use and tattoo status was not statistically significant ($pr = .05$, $n = 73$). While still failing to reach statistical significance, the correlation increased to .17 ($p = .12$) when only females 15 years ($n = 54$) and older were considered.

In addition to establishing the concurrent differences in the prevalence of tattoos among offenders and the general population, it would be useful to know whether tattoo status is a marker for increased offending risk within the young offender population. This was examined among 447 youths with first SECAPS assessments and 103 youths who were subsequently re-assessed (second assessment group). The outcome variable was recidivism status 6 months after release from secure care following the SECAPS assessment. Only youths released from secure care 6 months or more before the end of the follow-up period (end of 1997) were included in the recidivism analyses. Three types of reoffending were considered: general recidivism (any new offence), violent recidivism

(any new offence involving deliberate violence, either threatened or actual) and non-violent recidivism. In relation to new offences committed within 6 months of release, general, violent, and non-violent recidivism rates of 67.6%, 18.1%, and 65.1% respectively were recorded among the youths who completed first assessments. General, violent, and non-violent recidivism rates of 60.2%, 13.6%, and 59.2% respectively were recorded among the youths who completed second assessments. The subgroups examined following the first SECAPS assessment were males 15 years and older (n = 341) and females 14 years and older (n = 33). Among those who underwent a second SECAPS assessment, only males aged 16 years or older (n = 76) were examined. There were too few females to examine separately and no males younger than 16 years who underwent a second SECAPS assessment had tattoos. Partial correlations between tattoo status and the three recidivism variables were calculated for each subgroup. Only the correlation between having tattoos and violent recidivism (pr = .25, $p < .05$) among males following the second SECAPS assessment was statistically significant.

The item about tattoo removal was introduced into the SECAPS during a later revision of the assessment instrument. Of the 119 youths with tattoos who responded to this item, 35% indicated that they would like to have their tattoos removed. As this item applies only to youths who already have tattoos, the number of youths in the recidivism follow-up sample (a subgroup of all assessed youths) who responded to this item is small. Selecting youths 15 years or older among those who completed a first assessment (n=34; 30 males, 4 females) and those 16 years or older with a second assessment (n=17; all males), partial correlations were calculated between tattoo removal desire and recidivism status 6 months after their release from secure care. None of the correlations were significant ($p > .05$).

Discussion

The results obtained here confirm earlier findings (Putniņš, 1997a) that there is a higher prevalence of tattoos among young offenders than in a student sample. Similar results have been reported for incarcerated delinquents in New Zealand (Taylor, 1968, 1970). The prevalence of tattoos, as expected, increased with age. About half of the respondents in the oldest age groups of both genders reported having tattoos.

Recently a large survey of the Australian general population (Makkai & McAllister, 2001) found a prevalence of 10% for tattoos among both males and females aged 14 to 18 years, which is substantially lower than the prevalences among either the male or female

young offenders studied here. The prevalence of tattoos in the general population rose to a peak among 19-23 year olds (26% of females and 20% of males) and then declined with age. Interestingly, the lifetime prevalence of tattoos among those who admitted to intravenous drug use during the previous 12 months was 54% - significantly higher than the overall general population rate of 10%. A similar association between tattoos and substance use at the group level was found here. Young offenders both more often had tattoos and more frequently used psychoactive substances (Putniņš, 1995a, 2001a) than did either student or general population samples. Within the young offender sample there was a trend for youths with tattoos to report more frequent recent use of substances than did young offenders without tattoos, though the relationship was not strong. Reduced stability of the substance use measure due to sampling just a 1-month period might have tended to reduce the strength of the relationship.

An association between having tattoos and hostile or aggressive behaviours was found. Among the males there were significant relationships between tattoo status and fighting, bad temper and deliberate self-injury, though among the females only the relationship with bad temper was significant. Similarly, Carroll and Anderson (2002) found significant relationships between anger and having body art (piercings and tattoos) among "at risk" adolescent females. Although the relationships here were not strong, they indicate that for some young offenders one possible function of tattoos is to signal dominance (either real or aspired to), an aspect of which is aggressiveness. This hypothesis awaits further exploration. It could be tested by using sociometric measures to reveal dominance hierarchies within delinquent groups and then correlating the obtained dominance rankings with tattooed status.

Only one of the correlations (for first and second assessments by gender and offence type) between tattooed status and recidivism was found to be significant. Although this was in the direction of indicating that having tattoos is associated with increased risk, the lack of consistency across the subgroups and offence types suggests that tattoo status (at the crude level of recording only whether a person has tattoos) cannot be used as a reliable marker of increased recidivism risk among youths placed in secure care.

Experience in assessing youths suggests that tattoos are sometimes a cause for regret or embarrassment. Of the assessed young offenders with tattoos, slightly more than a third indicated that they would like to have their tattoos removed. This is consistent with Lepine's (1969) findings with youths in remand homes and "approved schools" (reform

schools) in England and Wales. Calculating from her results, of those with tattoos who responded to the question about having regrets, between 17% and 84% (depending on gender and type of institution) expressed regret about being tattooed and many of them desired plastic surgery to have their tattoos removed. Whether the incidence of wanting to have tattoos removed is higher among tattooed young offenders and reform school youths than among other tattooed persons is not known as no general population figures are available. A desire to have existing tattoos removed was not significantly related to recidivism risk, though the number of youths in the recidivism follow-up sample who responded to this item was small.

There are a number of pathways by which tattoos might become associated with offending. One is when someone who is already an offender gets tattoos as a badge of membership. The tattoo is a statement of who they are, of how they want others to see them and what group they belong to. In this case the tattoo is a reflection rather than a cause of delinquency, though it might further reinforce a delinquent orientation. An item in the SECAPS assessment asks youths whether most of their friends have been in trouble with the law. While 70% of the young offenders indicated that the majority of their friends had been in trouble, only 21% of the students indicated the same. Thus, young offenders are more likely to associate with others who have tattoos. This increased exposure could be expected to reduce the inhibitions of offenders to getting tattoos.

Another way in which tattoos and delinquency might be associated is more causal. A youth who is on the fringes of delinquency gets tattoos (for whatever reason), is then perceived as being deviant, is treated as such and ends up behaving as others expect him to. In other words, labelling creates expectations, which some might either live up to or be pushed toward by others. For example, having difficulty getting a job (i.e., restricting access to a constructive non-delinquent activity) because of having highly visible tattoos could, through boredom and material disadvantage, incline some youths to offend. Bekhor, Bekhor and Gandrabur (1995) found that a majority of employers surveyed in the retail, office, beauty, and hospitality industries would be reluctant to employ someone with a visible tattoo. Even within the motor trades the proportion was close to half. A survey of female youth training centre inmates in Victoria (Ross 1985) who were provided with a tattoo removal service found that among the most often stated reasons given for tattoo removal were “Can’t get jobs”, “People stare at you” and other responses indicating either

embarrassment or social stigmatisation. Not only does the general public often associate tattoos with deviance, delinquents often make the same association (Taylor, 1968, 1970).

The meaning and functions of tattoos might vary over time. Prior to the initial development of the SECAPS assessment some 10 years ago it was my observation that many young offenders in secure care had highly visible tattoos, particularly on their hands and forearms. Many of these tattoos were crudely executed by the youths or their friends (often while drunk or under the influence of some other substance) and sometimes included obscenities. Lettering such as "L-O-V-E H-A-T-E" or "F-U-C-K C-O-P-S" was occasionally encountered (one letter below each knuckle from the little to the index fingers on both hands). However, more recently there seems to have been a change in the nature of tattoos among young offenders and in the prevalence of tattoos in the general population. Tattoos among young offenders now seem to more often be placed so that they are not visible when the subject is fully clothed and are more often professionally done. Tattooed letters on the knuckles are now very rarely seen. Tattoos have also become more widespread and acceptable among young people. Makkai and McAllister's (2001) finding that a fifth of males and a quarter of females aged 19-23 years in the general population had tattoos attests to how widespread tattooing has become. The prevalence of tattoos consistently declines to about 5% among 54-60 year olds. As this was measured by lifetime prevalence rather than current tattoo status (and therefore included those who might have subsequently had their tattoos removed), it confirms the impression of the increasing popularity over time of tattoos in the general population. This is likely to dilute any association that there might be between tattoos and deviance. Rather than being closely associated with risky behaviour, tattoos are now often little more than mildly risqué. Such a view is supported by the finding that in the general young adult population the prevalence of being tattooed is slightly higher among females than males, whereas risky behaviours and most forms of behavioural deviance, including offending, are usually more prevalent among males. It is possible, however, that males' tattoos are generally more conspicuous, bolder, larger or more visually jarring in their imagery or form than are those of females. The latter's tattoos might be more discreetly placed and perhaps more often related to romantic symbolism than to symbols of masculine aggressiveness. It is also possible that the style, type, size, location or number of tattoos might tend to be different between offenders and non-offenders. This awaits empirical confirmation as no relevant quantitative data were collected among the youths assessed here.

I suggest that those youths who wish to have tattoos removed, particularly if they are highly visible, should be both encouraged and assisted to do so. The removal of tattoos might help some youths to better adjust to life in the community. The chances of being rejected in areas such as work and private accommodation on the basis of appearance are lessened and other negative labelling (stereotyping) effects are diminished. Just as important, however, is the change in self-image that the desire to have the tattoos removed might signify. For some youths the removal of tattoos could be a symbolic removal of a mark of delinquency. They may wish to see themselves - and to be seen by others - in a different way. That is, they may wish to adopt a self-concept and a projected image that no longer includes delinquency, including outward appearances that might, for some, be stereotypically associated with delinquency. Changes in identity have been found to often underpin maintenance in continued desistance from substance abuse among self-remitting substance abusers (Walters, 2000). If changes in self-image also contribute to desistance from offending (a reasonable suggestion, but one that awaits empirical confirmation), then tattoo removal in some cases could be a way of reinforcing the transformation of identity. Similar reasoning underlies a laser treatment tattoo removal program called *Campaign Clean Slate* in the city of San Jose, California. That program gives youths who wish to sever their gang ties the opportunity to remove highly visible gang related tattoos (Jensen, 1996). Tattoo removal by laser treatment is also available to prisoners within the Department of Corrections in New Zealand. An evaluation of that program found weak trends towards less violent recidivism and reincarceration among those who had tattoos removed (Wilson, 2003). The question of whether tattoo removal might foster a more conventional image that in turn might lessen recidivism risk requires further investigation.

Conclusion

Although juvenile delinquents are more often tattooed than are other youths, tattooed status is currently, at best, a very weak indicator of increased offending risk among youths placed in secure care – too weak to be of practical value in recidivism risk assessment. Both increased substance use and aggressiveness are also, albeit weakly, associated with tattooed status in this group. There is a need for more detailed study of tattoos and recidivism. While tattoo status alone is not a consistent predictor of recidivism, it is possible that other tattoo variables (e.g., size, location, number, visibility when dressed, design type) might have predictive validity. Given the higher prevalence of tattoos among

juvenile delinquents, adult criminals and intravenous drug users, it is surprising that more research has not been done about this question.

While current tattooed status might make little difference to the probability of recidivism among youths who already are delinquent, having tattoos removed might either encourage a change of self-image or might reflect such a change – a change to more conventional social norms. Encouraging and assisting youths to remove tattoos (at least those that show when fully dressed) will only be relevant to a small proportion of young offenders and could not be expected to have more than a very minor influence on offending rates or other measures of antisocial behaviour. However, with the advent of laser treatment, tattoo removal is now a relatively straightforward procedure that might help to very modestly decrease the recidivism risk of some youths. The effectiveness of tattoo removal as an intervention for those young offenders who have highly visible tattoos requires empirical investigation; at present it is no more than a considered hypothesis.

The SECAPS procedures and contents are periodically reviewed and minor revisions are made. Clinical experience and analysis of the SECAPS data help to inform this revision process. Both public perceptions and the prevalence of tattoos have changed since the SECAPS was first developed. Furthermore, tattooed status alone is currently not a reliable recidivism risk marker in the young offender population studied here. Given the differences in tattoo prevalence rates between criminal and non-criminal populations, it would be surprising if there were not aspects of tattoos that had value for the assessment of recidivism risk. However, to determine this requires more detailed study about tattoo characteristics. In light of the results presented here, the items about tattoos have been deleted in the most recent revision of the SECAPS. Should further research find aspects of tattooed status that are related to recidivism risk, then more specific items about tattoos could again be added to the SECAPS in future revisions.

Chapter 7

Literacy, numeracy and non-verbal reasoning skills of South Australian young offenders

That offenders on average have lower intellectual functioning than non-offenders is one of the most consistent psychological findings in criminology (Herrnstein & Murray, 1994). Associated with this are reports of large proportions of special education students (from 13% to 42%) among youths in correctional facilities in the United States (see Quinn, Rutherford, Leone, Osher, & Poirier, 2005; Winters, 1997). Rutherford, Griller-Clark, and Anderson (2001) cite an 11% prevalence of learning disabilities among the total young offender population compared to 5% among youths in public schools. However, as Hayes (1997) has pointed out, the prevalence of learning disabilities is difficult to determine due to problems and inconsistencies with definitions and measurement between different studies. Although high rates of learning disability have been reported, it is often uncertain whether these are learning disorders. As defined in the *DSM-IV* (American Psychiatric Association, 1994), a learning disorder is deemed to exist when educational achievement in "reading, mathematics, or written expression is substantially below that expected for age, schooling and level of intelligence" (p. 46). Whether these factors, particularly intelligence, have been appropriately taken into account to distinguish learning delays due to intellectual dullness from learning disorders is often not clear - a point that will be further explored later in this study. Nonetheless, there is a general consensus in the research literature that delinquency is associated with poor educational achievement, particularly with poor literacy (Sturge, 1982; Winters, 1997). The relationship has become so widely accepted that there is a perception in some quarters that literacy deficits are both almost universal among offenders and are a major cause of crime. This is dramatically reflected in the state of Virginia's (USA) "No Read, No Release" parole policy, introduced in 1986, for adult offenders (Williamson, 1992). There has recently, however, been some revision of this view. Black, Rouse and Wickert (1990) found that adult Australian prisoners' literacy standards were not uniformly low. Literacy in their study included what was described as "quantitative literacy", that is, the ability to perform numerical operations on information provided in written form. In some areas prisoner groups approached the levels of the general population or even exceeded them (most notably in relation to interpreting written dosage instructions for medicine - possibly resulting from a practice

effect due to the presumably higher rates of drug use among the prisoners). Although Black et al.'s study showed that lowered literacy cannot be assumed in all or even in a majority of cases, comparisons nevertheless indicated that as a group prisoners are below the level of the general population. However, the fact that some prisoners have good literacy while many non-offenders have poor literacy makes the point that the relationship between literacy and offending is neither a simple nor a universal one. No comparable studies of young offenders in Australia have been undertaken to date. Although Cairney, Lowe, McKenzie and Petrakis's (1993) investigation of youths in secure care centres in New South Wales provides many vignettes about individual youths and descriptions of the teaching practices in various institutions, no Australian studies that provide large-scale quantitative data on the literacy and numeracy levels of young offenders have been located. It is the aim here to begin to fill this gap in our knowledge.

Method

Subjects and procedure

The sample was drawn from the first 904 detainees in South Australia's youth secure care centres who were approached to complete the SECAPS. All the youths had been individually assessed with the SECAPS between 1994 and 1999. Of the first 904 youths approached for assessment, three declined to cooperate and one completed only the first few items. Some subjects have more than one assessment. Unless otherwise stated, the data presented here are from first assessments. As the numbers of subjects at the extremes of the age distribution are small and, therefore, less likely to give reliable results, only subjects aged 13-18 years were included, reducing the subject number to 861 (26.6% Aboriginals, 73.4% non-Aboriginals; 90.5% males, 9.5% females). Subject numbers for individual variables are, however, slightly less due to missing data.

For ADHD signs, money-handling, analogue time telling and spelling, additional results were available for 136 high school students attending two government high schools in metropolitan Adelaide: one to the south in a middle class area, the other to the north in a lower class area. The students were group tested in whole classes under conditions that guaranteed the anonymity of each respondent. All the high school students tested were 15-18 year olds. Although not deliberately excluded, none were Aboriginals. In 1996 Aboriginals made up 1.4% of South Australia's population (Australian Bureau of Statistics, 1997a) but in 1995 only 0.3% of year 12 students taking 3 or more subjects were

Aboriginals ("Aboriginal year 12 alarm", 1997). Thus, in addition to the small percentage of Aboriginals in the general population, their low retention rates in the later high school years further reduce their numbers in samples like this one. Despite their relatively small numbers in the community, Aboriginals are markedly overrepresented in the criminal justice system. For example, they accounted for 21% of all admissions to youth secure care in South Australia during 1995-96 (Department for Family & Community Services, 1996) and 29% of all admissions during 1999 (Office of Crime Statistics, 2000). In South Australia during 1998 Indigenous youths (in South Australia almost all persons described as Indigenous are Aboriginals) were overrepresented in secure care centres for juvenile delinquents at rates between 16 to 29 times (depending on the quarter) those of non-Indigenous youths (see Carcach & Muscat, 1999). For this reason it is important to examine their results separately.

The vast majority of the young offenders, including the Aboriginal youths, come from metropolitan Adelaide. Departmental records in relation to all secure care admissions during the 1996/97 financial year indicate that 74.6% of the Aboriginal and 85.5% of the non-Aboriginal youths were from the Adelaide metropolitan area. A further analysis based on youths in custody on two different dates (June 30, 1996 and June 30, 1997) found that the Aboriginal youths from outside Adelaide all had home addresses with major rural urban centre postcodes (namely Port Lincoln, Port Augusta, Ceduna). Very few Aboriginal youths placed in youth detention centres come from remote rural communities.

Only results for students aged 15-16 years (mean=15.8 years) are presented here. Due to selective retention, older students are unlikely to be representative of the general population of like-aged youths. In 1996 across Australia there were estimated school retention rates of 96.7% to year 10 (mainly 15-year-olds) and 83.6% to year 11 (mainly 16-year-olds) (Australian Bureau of Statistics, 1996). Beyond this age the number of youths leaving school increases significantly. An offender subgroup of 15-16 year old (mean=15.6 years) non-Aboriginals was created from the total offender sample to match the high school students.

While the students were not a random sample of all 15-16 year old youths, they are likely to be close to the modal educational performance of this group. Youths who ceased attending school in this age group could, in general, be expected to be below average educational achievers. This was counterbalanced by not including students from either

private schools or schools in upper-middle socioeconomic class areas - students from both of which could, in general, be expected to have above average educational achievement.

There was no control for the offending status of the high school students. It is fair to assume that a number of them had at some time been involved in illegal activities. The major difference between the two groups was that the detained youths' law-breaking activities had reached a point where a judicial decision was made to hold them in secure care. The students as a group, whatever illegal activities some of them might have been involved in, could be presumed to be less serious in their offending than the detained offenders.

The examination of the relationship between basic skills and subsequent reoffending used the full court adjudicated offending histories of all the 458 youths who were approached to do a SECAPS assessment during the first three years of the assessment program (viz. 1994-1996). Four youths who either refused to cooperate or completed no more than a few initial items were removed from the analysis, leaving 454 subjects. Due to missing data, the numbers for individual items are, however, lower. The outcome was any proven (court adjudicated) offending that occurred within 6 months of the first release after the SECAPS assessment. Subjects not released 6 months or more before the end of the follow-up period (end of 1997) or who died within 6 months of release (there were 3 known cases) were excluded from the recidivism analyses. Offence records were obtained from the Office of Crime Statistics in the South Australian Attorney-General's department. Only records of offences dealt with by South Australian courts were available with the exception of one youth who, from press reports, was known to have been convicted of a serious offence in another jurisdiction. As the method of analysis allowed for age to be statistically controlled, no age exclusion was used. Subjects' ages ranged from 11 to 19 years.

Measures

The various items and tests used are all part of the SECAPS. Numeracy is measured by two sets of items. The first is time telling. Subjects are asked to tell 2 digital times and 2 analogue times. As very few young offenders (2%) make errors telling digital time, detailed results will here be presented only for the 2 analogue time telling items. The other area of numeracy considered to be an important skill for everyday living is mental arithmetic in relation to money-handling for simple purchases. There are 6 items: 2

subtractions, 2 additions, 1 multiplication and 1 division. Each item is presented in written form and, if necessary (depending on the subjects' assessed reading skill), is read aloud to the youth. Each item is cast as an everyday purchase (see Appendix 3 for complete item descriptions).

Literacy is sampled by two measures. One is the Concise Word Reading Tests' (CWRT) form C (Andrews, 1965, 1974). Normed on a population of Queensland school children, form C contains 20 words that subjects are required to read out aloud. Form C was selected as it tests around the 10-year reading age level. It was not necessary to reliably differentiate small differences in skill over a larger range of reading ages. All that was needed was to economically identify subjects who were likely to have difficulties coping with basic reading tasks. Form C measures reading ages within a range of 8.8 (or less) to 12.1 (or more) years. A reading age of 10:0 years is the cut-off point used here to indicate whether the subject is likely to have acquired survival level reading skill.

It could be objected that a word recognition task is too limited as a measure of reading ability and that it should be supplemented by other measures, such as of reading comprehension. However, word recognition and reading comprehension in 15-year olds have been found to be highly correlated (r = .80; Markwardt, 1989). Despite the conceptual distinction between these skills, in practice recognition and comprehension are so closely associated that, particularly when the assessment is for screening purposes, a single measure can be used as a general estimate of reading skill.

The second literacy measure, spelling, requires writing the dictated 9-word sentence "One quick brown fox jumped over the lazy dogs". The sentence is repeated as often as the subject requires. It contains every letter in the English alphabet and is a variation of a sentence often used in typing tuition. For scoring purposes inconsistent or incorrect use of letter case is ignored.

Non-verbal intellectual functioning is assessed using the Coloured Progressive Matrices (Raven, 1976). It has demonstrated reliability and validity, is a culturally reduced test, and is described by Sattler (1992) as a "useful measure of non-verbal reasoning ability". No test is entirely culture free, but some tests are more culturally biased due to a reliance on culture specific knowledge or training. The CPM does not directly rely on knowledge gained from formal schooling and is free of linguistic influences - it can be administered to non-English speakers and deaf subjects. In part, the

CPM was included in the SECAPS because of the need for a test that could be administered to subjects of various cultural, linguistic and educational backgrounds.

The SECAPS assessment also includes self-report items that relate to problems with attention, impulsiveness, physical restlessness and coping with boredom. These are combined to form an ADHD signs scale. This is used here to examine possible relationships between ADHD signs and educational achievement. Other items within the SECAPS that have relevance to the matters considered here include self-reports about regular truancy, school suspensions/expulsions, school enrolment status and age of leaving school.

Results

Separate results are given for females, Aboriginal males and non-Aboriginal males (mean ages of 15.4, 15.9 and 16.1 years respectively). As there was little difference between the Aboriginal and non-Aboriginal girls in their scores, and as both groups were numerically small, they were combined into one group.

Regarding mental money-handling, analogue time telling and spelling, it can be seen in Tables 1, 2 and 4 that the 15-16 year old non-Aboriginal offenders as a group performed more poorly than did similar aged students - though in the case of time telling the difference was marginal (see Table 3 for the results of specific time telling and money-handling items). The differences in both mental arithmetic ($t = 5.549$, $df = 324$, $p < .001$) and spelling ($t = 4.547$, $df = 257$, $p < .001$) were statistically significant, whereas the difference in the analogue time telling scores was not ($t = 1.737$, $df = 329$, $p = .08$). While the skewness and kurtosis statistics for the reading (count of words correct), money handling, and non-verbal IQ measures were all within -1 to +1 range, the spelling (skewness = -2.06, kurtosis = 4.24) and time telling (skewness = 2.23, kurtosis = 3.35) measures displayed greater deviations from normality. Comparisons between the two groups were repeated for the spelling and time telling measures using Mann-Whitney tests. The obtained significance levels ($p<.001$ and $p=.11$ respectively) were very similar to those from the t tests, which suggests that the departures from normality are not so severe as to grossly distort the outcomes of parametric tests. Because of the high correlation between the spelling and reading scores ($r = .77$) it is reasonable to predict that the offenders' reading scores will be likewise depressed compared to student peers. Although

data about reading that would permit a direct comparison with the high school students were not

Table 1: *Money-handling items correct (%)*

Items correct (*n*)	All female offenders (81)	Aboriginal male offenders (185)	Non-Abor. male offenders (589)	Non-Abor. 15-16 yr old offenders (258)	Non-Abor. 15-16 yr old HS students (68)
0-1	17.3	28.6	6.8	7.4	1.5
2-4	49.4	50.8	35.8	40.3	10.3
5-6	33.3	20.5	57.4	52.3	88.2
Mean	3.44	2.82	4.39	4.20	5.38
SD	1.90	1.85	1.63	1.68	0.96

Table 2: *Analogue time telling items correct (%)*

Items correct students (*n*)	All female offenders (81)	Aboriginal male offenders (187)	Non-Abor. male offenders (590)	Non-Abor. 15-16 yr old offenders (260)	Non-Abor. 15-16 yr old HS (71)
0	11.1	22.5	4.1	6.2	1.4
1	6.2	6.4	6.8	7.7	5.6
2	82.7	71.1	89.2	86.2	93.0
Mean	1.72	1.49	1.85	1.80	1.92
SD	0.66	0.84	0.46	0.53	0.33

available, the offenders' reading abilities could be compared with the primary school pupils on whom the reading test was originally normed. From Table 5 it can be seen that between 20% and 41% (depending on the subgroup) of young offenders had reading ages of less
than 10 years - an age often used (albeit in a rule-of-thumb manner) as a cut-off to indicate an increased likelihood of problems coping with everyday reading tasks (so-called "survival" reading skill). A similar picture emerges when non-verbal intellectual functioning is examined. The Coloured Progressive Matrices' raw scores were converted to Standard Progressive Matrices (SPM) score equivalents (see Raven & Court, 1989; Raven, Court & Raven, 1990). Extensive SPM normative data for Australian primary and secondary students are available (see de Lemos, 1989), thereby allowing the offenders' scores to be compared to a general student population. IQ scores of 79 are at the 8th percentile, that is, 8% of the general population will score at or below this level. As can be seen in Table 6, between 31% and 47% (depending on which subgroup) of young offenders scored in this range - many more than would be expected from the general population norms. This is consistent with other findings (see Quay, 1987) that indicate a significant association between intellectual functioning and offender status.

Examining the various offender subgroups, all of which did more poorly on the basic educational and cognitive measures than did their student peers, the results of the Aboriginal males in particular stand out. Twenty-nine percent of the Aboriginal males were unable to either correctly answer more than 1 of the 6 everyday money-handling problems or consistently tell analogue time correctly. Seventeen percent could not spell more than 3 words on the 9-word spelling task and 18% could not read any words on the reading task. Their mean non-verbal IQ was significantly lower than those of either the non-Aboriginal males ($t = 6.290$, $df = 396.63$ [equal variances not assumed], $p < .000$) or the female offenders ($t = 2.177$, $df = 268$, $p = .03$), though in the latter case the difference (4.35 standard score points) was not particularly large. By contrast, there was little difference ($t = 0.253$, $df = 80$, $p = .80$) between the Aboriginal and non-Aboriginal female offenders' mean non-verbal IQ scores (0.90 standard score points). However, the difference between the male non-Aboriginals and Aboriginals in non-verbal IQ was

significantly less than their differences in reading and arithmetic. Based on pooled standard deviations, the difference in non-verbal IQ between the Aboriginals and non-Aboriginals was 0.46 of a standard deviation. The differences in arithmetic, reading, spelling and analogue time telling were 0.87, 0.67, 0.69 and 0.61 respectively, i.e., between 33% and 89% larger than the difference in non-verbal IQ. The variables were converted to *z*-scores and then analysed using general linear model procedures. Because the spelling task, due to its later inclusion in the SECAPS, had not been completed by all the youths, listwise deletion of subjects due to missing data reduced the subject number for this analysis to 536. The difference in non-verbal IQ was significantly less than the difference between the two groups in their averaged reading, writing, time telling and arithmetic *z*-scores ($F = 2.63$, $df = 1,534$, $p = .02$). The measure of non-verbal intelligence used here

Table 3: *Frequencies of incorrect responses (%) by young offenders to analogue time telling and money-handling items*

Item	Females (*n*=80-81)	Aboriginal males (*n*=183-187)	Non-Aboriginal males (*n*=587-590)
Analogue time			
1:35	13.6	26.7	7.3
9:22	14.8	24.6	7.6
Mean	1.72	1.49	1.85
SD	0.66	0.84	0.46
Money handling			
\$2 - 95¢	16.0	17.8	5.1
\$10 - \$3.35	52.5	63.8	34.9
\$2.50 + 70¢	28.8	38.4	17.0
\$1.80 + \$1.30	53.8	61.6	37.0
6 × 15¢	40.0	60.7	27.0
\$9.40 ÷ 2	57.5	74.3	39.3
Mean	3.44	2.82	4.39
SD	1.90	1.85	1.63

Note: variation in *n* is due to missing values for some items.

Table 4: *Spelling task ("One quick brown fox jumped over the lazy dogs") words correct (%)*

Items correct (*n*)	All female offenders (66)	Aboriginal male offenders (127)	Non-Abor. male offenders (414)	Non-Abor. 15-16 yr old offenders (186)	Non-Abor. 15-16 yr old HS students (73)
0-3	1.5	16.5	2.2	1.6	0.0
4-7	15.2	33.9	23.2	24.2	4.1
8-9	83.3	49.6	74.6	74.2	95.8
Mean	8.35	6.59	7.97	7.94	8.78
SD	1.26	2.77	1.56	1.51	0.77

Table 5: *Young offenders' (%) reading ages and words correctly read*

Years (*n*)	All females (81)	Aboriginal males (185)	Non-Aboriginal males (586)
8 or less	14.8	33.5	16.0
9	4.9	7.6	4.4
10	21.0	15.1	11.1
11 or more	59.3	43.8	68.4
Mean words correct	13.73	10.34	14.26
SD	4.47	6.69	5.16
Words correct=0 (%)	0.0	17.8	2.0

Table 6: *Young offenders (%) by non-verbal IQ*

IQ range (*n*)	All females (82)	Aboriginal males (188)	Non-Aboriginal males (587)
80 or more	64.6	52.7	69.5
70-79	29.3	37.8	24.7
69 or less	6.1	9.6	5.8
Mean	88.06	83.71	92.02
SD	16.00	14.70	18.69

Table 7: *Correlations (*r*) between literacy, numeracy, sensory problems and non-verbal intellectual functioning measures for young offenders*

	Reading	Arith	Non-verbal IQ	Time telling	Vision problems	Hearing problems
Spelling	.77*	.43*	.25*	.45*	-.07	.04
Reading	-	.44*	.27*	.39*	-.01	.05
Arithmetic		-	.42*	.48*	-.02	.05
Non-verbal IQ			-	.28*	-.06	.07
Time telling				-	-.05	.04
Vision problems					-	.13*

Note: Due to pairwise deletion for missing data, correlations with Spelling are based on n = 604-607. All other correlations are based on n = 848-862. Age range is 13-18 years. The vision and hearing problems are both scored in a negative direction (yes=1, no=2). The time telling scores here have been reflected from the original scoring so that, consistent with the intellectual and basic skill measures, they are scored in a positive direction.
* $p < .001$

(CPM) is regarded as being culturally reduced - it does not depend on culture specific knowledge acquired through formal learning to the same extent as do reading and arithmetic. With this in mind, it can be seen that those variables that are most influenced by the environment (literacy and numeracy) had larger between-group differences than did the less environmentally influenced variable (non-verbal reasoning). These results are consistent with an environmental explanation for the performance differences between Aboriginal and non-Aboriginal youths. This conclusion is further supported by results for the male young offenders of partial correlations between Aboriginality and each basic skill measure. As age could be statistically controlled for, no age restriction was imposed on subject selection. After controlling for age and non-verbal IQ (both of which influence basic skills performance), the partial correlations between Aboriginality and spelling (pr = .27, df=569, p< .001), arithmetic (pr = .33, df = 802, p< .001), reading (pr = .25, df = 797, p<.001), and time telling (pr = .23, df = 805, p< .001) were all significant. The same associations were examined using logistic regressions. In separate analyses of spelling, arithmetic, reading, and time telling, Aboriginality remained a significant predictor (p<.001 in all cases) of each basic skill after controlling for age and non-verbal IQ. In other words, over and above any variation that might be attributed to differences in non-verbal reasoning abilities and age, Aboriginality remained significantly associated with literacy and numeracy levels. This is particularly evident in the analogue time telling results. Except in cases of moderate to severe mental retardation (IQ less than 55) or specific neurological deficit, virtually all youths with appropriate training can be expected to be able to learn to accurately tell analogue time. There were few more Aboriginal than non-Aboriginal males in the below borderline IQ range (see Table 6), yet 22.5% of the Aboriginal males could not tell analogue time compared to only 4.1% of the non-Aboriginal youths. Differences in environmental conditions seem to be the only plausible explanation for such a large discrepancy in performance levels. The lower performance of Aboriginal youths observed here is paralleled in the findings of a nationwide survey of literacy among primary school children, which included a special sample of Indigenous students (Management Committee for the National School English Literacy Survey, 1997).

All the offender subgroups had significantly more ADHD related problems ($p \leq .001$) than did the students. This is consistent with the well-established finding (e.g., Fergusson, Horwood, & Lloyd, 1991) that ADHD signs are closely associated with conduct problems. The ADHD signs scale was separately correlated (controlling for age) with reading,

spelling, arithmetic and analogue time telling for female offenders, Aboriginal male offenders, non-Aboriginal male offenders and the 15-16-year old students (no reading measure was available for the last group). Only two of the 15 resulting correlations, namely reading and spelling with ADHD signs for the non-Aboriginal male offenders (pr = .15, n = 585, $p < .001$ and pr = .10, n = 414, p = .05 respectively) were found to be significant (note that the ADHD index is scored in a negative direction). While differences between the offender and student groups on basic educational skills were paralleled by differences in ADHD signs, ADHD signs did not consistently explain the variation in performance across most measures within each group. ADHD signs might have more influence on higher levels of educational performance than those measured here.

Table 8: *Partial correlations (controlling for age) of basic skills measures and non-verbal IQ with 6-month post-release recidivism status*

	pr	*n*	*p*
Spelling	.03	203	*ns*
Reading	.04	444	*ns*
Arithmetic	.00	445	*ns*
Time telling	.05	446	*ns*
Non-verbal IQ	-.01	445	*ns*

The relationships of basic skills and non-verbal intellectual functioning with recidivism are examined in Table 8. (As the IQ scores are already age standardised, the zero-order and partial correlations [controlling for age] between non-verbal IQ and recidivism were exactly the same.) None of the correlations are significant. As with many other measures that distinguish between current offender status, these measures fail to be significant predictors of continued offending within the offender group.

Discussion

The nature of the offending and educational performance relationship

Australian young offenders have poorer literacy, numeracy and non-verbal reasoning skills than do various student groups. A possible explanation for the offenders' lower

academic achievement is that they might have more sensory defects than the general population. This assumes that sensory defects interfere with learning. Glueck and Glueck (1950) failed to find any significant difference in the incidences of vision and hearing defects among delinquents and non-delinquents. In contrast, Kaseno (1985) reported a very high incidence of visual-perceptual problems (95%) among more than 1,000 delinquents examined, though only a minority had refractive error problems. The remainder were described as having problems such as "near-point visual stress", poor eye tracking and/or poor eye aiming ability. Intervention for these deficits consisted of corrective glasses for refractive problems, therapeutic glasses to relieve visual stress and vision training. It was claimed that after the vision remediation program there were average increases of 5 points in IQ scores, a 3.1 grade level increase in reading ability and a dramatic decline in recidivism from 50-60% to about 10%. While these figures are impressive, the methodological details are so poorly described by Kaseno that it is difficult to evaluate the validity of his study. One is inclined to be cautious about how representative were the subjects given the claim that 95% had visual perceptual problems. The dramatic decline in recidivism might be more a reflection of the type of youth willing to participate in such a program rather than of the program's effectiveness. Similar visual therapy programs used elsewhere have also reported high incidences of visual defects among delinquents and positive outcomes in response to treatment (Jensen, 1996), though most of these programs have not as yet been adequately evaluated. Earlier controlled studies examining the efficacy of various perceptual training programs failed to find support for their ability to improve the performance of children with reading disabilities (Gittleman, 1985).

Regarding the youths assessed in the current study, no significant relationships were observed between self-reports of either vision or hearing problems and any of the measures of literacy, numeracy or non-verbal reasoning (see Table 7). While sensory deficits might hamper the educational performances of some individuals, these data suggest that such deficits account for little of the total variation in achievement within the delinquent group.

Maughan, Pickles, Hagell, Rutter and Yule (1996) in their longitudinal investigation suggested that it was not reading retardation as such that predisposed youths to become delinquent but rather its association with poor school attendance. Poor school experiences were common among the young offenders assessed here: 82.2% of the young offenders had been expelled or suspended from school (compared to 11.0% of the 15-16 year old

students), 81.2% were not enrolled in school or college at the time of their admission to secure care, 40.0% of those who had left school did so before finishing their compulsory schooling (i.e., before their 15th birthday) and 71.5% reported regularly truanting once a week or more while at school (compared to 20.5% of the students). The items about truancy and school suspension/expulsion were summed to form a school problems index. No significant (i.e., $p < .01$) correlations were obtained between this index and the numeracy, literacy or non-verbal IQ measures within any of the offender or student groups. Although school problem behaviours distinguished between groups, they failed to account for differences in basic educational or intellectual performance within any of the groups. Cottle, Lee and Heilbrun (2001), in their meta-analysis of recidivism predictors in young offenders, also failed to find a significant relationship between school attendance and recidivism, though only two studies that measured school attendance were included in the analysis. These results are, however, counter-intuitive and invite further and more detailed investigation.

Maguin and Loeber's (1996) very comprehensive meta-analysis and review of the relationship between academic performance and delinquency found that much of the relationship between educational success and delinquency was mediated by the common factors of IQ and attention deficit problems. The influences of these on delinquency and educational performance were independent of socioeconomic status. In the current study the offenders had significantly higher rates of ADHD signs than did the students, though this factor explained little of the variation within each group. However, non-verbal reasoning was significantly related to all the literacy and numeracy measures (see Table 6). Consistent with Maguin and Loeber's finding, the young offenders' poorer educational achievements seem, at least in part, to be due to their lower intellectual functioning. The degree to which this is the case can be checked by comparing the SPM's age norms with those of the reading test. The young offenders' mean SPM raw score equivalent (41.1) corresponds to a standard score (IQ) of 100 in the age range of 10:9 - 11:2 years. The young offenders' mean reading raw score (13.4) falls within the reading age range of 10:10 – 11:2 years – which is very similar to the mean reading age of 11:3 years for a sample of 15-17-year-old male young offenders in England reported by Snowling, Adams, Bowyer-Crane and Tobin (2000). Thus, the average intellectual development and reading achievement of the young offenders both correspond to those of average 11:0 year olds. The actual correspondence might not be quite as close as these data suggest because the

tests were not normed with the same subjects. Due to sampling errors it is possible that the 11-year olds in the SPM Australian standardisation study were not exactly the same as those in the CWRT standardisation study. Nevertheless, one could expect that they would be fairly similar. If so, then the average reading ability of the young offenders is not very much out of step with their intellectual ability. Although some young offenders' reading ages will be anomalous with the average intellectual ability of this group, these results suggest that the rate of such anomalies will be little different to that in the general population. Similarly, Snowling et al. found that, in relation to the incidence of dyslexia among young offenders, when a stringent cut-off score was applied to remove those of low verbal ability from their sample, the incidence of dyslexia was no more than the typically reported population incidence.

Given that intellectual functioning tends to set an upper limit on achievement levels, expected gains from remedial reading programs, if applied to all young offenders, are likely to be limited. This is not to say that some young offenders would not benefit from remedial assistance, but it needs to be recognised that when achievement is gauged against mental age rather than chronological age, significant underachievement is not as widespread as first thought and remedial assistance in basic educational skills will probably help only a minority. This minority is most prominent among the male Aboriginal youths and might signal one of the factors influencing their overrepresentation in the juvenile justice system.

Whether literacy has a causal relationship with delinquency is a question that requires continued research, though evidence collected so far would seem to indicate that any direct relationship is a weak one. This relates to the initiation and maintenance of delinquency into mid-adolescence. However, poor literacy skill might reduce the chances of desistence in later adolescence and early adulthood when at risk youths become eligible to enter the workforce. Poor literacy skill could be an impediment to obtaining employment. Maughn, Gray and Rutter (1985) found poorer employment outcomes among reading retarded youths - particularly for youths who had a combination of both reading handicap and antisocial behaviour. But Nash (1996) in his review concluded that unemployment is not a clear cause of delinquency. There is even evidence for a positive relationship between youth employment and some types of offending - such as those that are related to alcohol and drug use (Ploeger, 1997) - and evidence that working while in school is associated with an increase in offending risk among adolescent males who already have a number of

other high risk indicators (Wright, Cullen, & Williams, 1997). In contrast, Cone and Glenwick (2001) reported better behavioural and academic outcomes among emotionally and behaviourally disturbed youths with part-time jobs compared to those without jobs, though as offending was not measured it is unknown whether reductions in criminal activity occurred. It is possible that the relationship between employment and crime changes with age, with employment becoming more closely associated with reduced offending at later ages (Ouimet & Le Blanc, 1996). This is likely to be why employment stability is often included in measures of adult criminal lifestyles (e.g., Walters et al., 1991) and offending risk (e.g., Bonta & Andrews, 1993).

The relationship in Australia between unemployment levels and crime levels over the period 1903-1993 is not a close one (Sullivan, 1997). Unemployment and crime are statistically related in that offenders are more likely to be unemployed than are non-offenders, though much of the relationship seems to be due to common factors. However, a recent longitudinal study by Fergusson, Lynskey and Horwood (1997) found that once common factors are controlled for there still remains a significant, albeit attenuated, relationship between unemployment and delinquency. This suggests a causal link between exposure to unemployment after leaving school and increased offending risk. Thus, one path for the association of basic educational skills with offending risk could be via the common link with employment status.

An alternative to the direct causal model

While there is overwhelming evidence that educational performance tends to be lower among offenders, there is no strong evidence that poor literacy and numeracy are direct and major causes of crime and no evidence here that they are useful in predicting continued offending. However, rather than considering literacy and numeracy deficits as causes, it might be more appropriate to consider them as personal competencies that help to moderate the influence of more immediate risk factors. In other words, good basic literacy and numeracy might act as protective factors that ameliorate other adversities. This is analogous to the biological immune system. Appropriate diet, exercise, rest and so on help to maintain a healthy immune system. Inadequacies in these factors do not usually cause disease, but they do reduce the body's ability to resist infection or cope with illness. Similarly, personal competencies could be regarded as maintainers of a healthy psychological immune system. The more competencies there are, the more

psychologically resistant an individual becomes. This alters how the determinants of delinquency can be viewed. Besides asking why some individuals become delinquent, it is just as illuminating to ask why many individuals, particularly those with a number of background risk factors, do not become delinquent.

Stattin, Romelsjö and Stenbacka (1997) demonstrated that among high-risk subjects, those with more personal competencies had lower offending rates. Similarly, Thornbury, Huizinga and Loeber (1995) reported that an accumulation of protective factors progressively reduced the risk of offending. No single factor had a strong effect. Only when a number were present did their influence become significant. It is proposed here that basic educational and reasoning abilities are better regarded as personal competencies that help to protect an individual from delinquency. Deficits in these areas do not cause youths to offend, but they do lower resistance to other criminogenic factors. Furthermore, they are variables that need to be considered when planning interventions for young offenders. The responsivity principle (Andrews, 1995) in offender assessment suggests that interventions will be more effective when the factors that influence each youth's learning style and abilities are taken into account.

Intervention

In 1983, after examining the literature about educational remediation with young offenders, Rutter and Giller concluded that as an intervention to reduce delinquency its effects had not as yet been evaluated. Unfortunately little has changed. Relatively few intervention studies were available for analysis in Maguin and Loeber's more recent review (1996) and most used multiple interventions. None assessed the effect of remedial education alone. Positive effects of reduced offending and/or improvement in educational achievement were observed in some of the studies, particularly those that included components of moral or legal education. Perhaps the increased reflectiveness (less impulsiveness) that these components nurtured facilitated changes in other areas. This is, however, purely speculative. Not all the outcomes of the intervention studies reviewed by Maguin and Loeber were consistent and their interpretation is made more difficult by the mixture of different interventions used. More research will be needed before any definitive conclusions can be made. However, in an extensive review of vocational and academic programs in adult corrections, Gerber and Fritsch (1995) concluded that participation in such programs did have various positive effects, including a reduction in

recidivism. A similar conclusion (though guarded due to methodological problems with many evaluation studies) regarding vocational education and employment programs for adult offenders was made by Bouffard, MacKenzie, & Hickman (2000). While findings with adult offenders cannot automatically be assumed to apply to young offenders, their conclusion nevertheless offers encouragement to proponents of such programs in juvenile corrections, though how and when such programs are best offered are problems in themselves.

Environmental change early in the child's life can have a strong influence on cognitive development and scholastic achievement. Dumaret (1985) found that children adopted into high status families had significantly higher IQ scores and educational attainment levels compared to siblings who remained in disadvantaged socioeconomic environments, were institutionalised or were placed in foster care. This supports the argument for early and intensive intervention for children who can be identified as being at high risk. The strongest gains are made when interventions commence at younger ages. This should not necessarily discourage intervention at later ages, but it does mean that expectations regarding the outcomes of later interventions, such as those with adolescent offenders, need to be more modest. The results here point to environmental factors as being important in the underachievement of a significant minority of Aboriginal youths, suggesting that early intervention programs might be particularly relevant for that group.

A study by Cohen (1973) using a behaviour management model found an increase in academic achievement (including reading) and an initial decline in recidivism. After 3 years, however, the recidivism rate returned to the level expected for youths who had attended the centre before the introduction of the program. Whether it was the behaviour management or the increase in academic performance that influenced recidivism is unknown, but it appears that returning to criminogenic environments after release gradually eroded program gains. This highlights the need to influence factors in the youths' post-release environment. With regard to literacy, as problems are often cross-generational, there might well be grounds for expanding remedial interventions to include, where possible, the youths' parents or caregivers. Intergenerational family literacy programs could benefit both parents and children (Grabsch & Toomey, 1997). Greater adult competence, increased ability to support and encourage their children, modelling of desired behaviour and demonstrated commitment to the value of literacy by parents could assist youths to increase their literacy skill levels.

Experimental research has suggested that remedial literacy teaching which emphasises phonetic decoding is particularly successful (e.g., Gittleman & Feingold, 1983). However, important as instructional methods are, a major problem is often trying to engage or motivate the youths to commit themselves to improving their literacy skills in the first place. This is a major challenge for educationalists in youth corrections.

While the above discussion has focussed on individual differences and interventions, it is acknowledged that, particularly in relation to Aboriginal youths, poor achievement is part of a broader problem that is likely to be influenced by societal forces such as access to resources, equality, racism and cultural, economic and social alienation. However, a consideration of these forces is beyond the scope of this investigation except to note that, despite attacks by some on so-called "deficit thinking" (e.g., Valencia, 1997), intervening with individuals neither reduces the need nor prevents the seeking of remedies for these broader issues.

Conclusion

It is unlikely that any single intervention will greatly influence recidivism. Rather, it is the accumulation of improvements in functioning over a broad range of areas that will lead to a significant reduction in risk. If this view is correct, it suggests that remedial educational programs in basic educational skills will not have a huge effect on offending rates. However, such programs should not be ignored. In isolation they might have little influence and might be appropriate for only a minority of delinquent youths, but together with other interventions they could make a difference.

Many detained youths have not mastered basic literacy and numeracy skills. This finding is consistent with the results of overseas studies and is likely to be similar in other Australian states. It supports the need for effective remedial programs in this area. This is particularly relevant for a significant proportion of male Aboriginal detainees who, as a group, are both overrepresented in the secure care population and have the highest incidence of literacy and numeracy deficits.

Chapter 8

Assessing recidivism risk among young offenders

There are few aspects of Western criminal justice systems that do not to some extent rely on prediction. Examples of decision making that can be influenced by risk predictions include the following:

whether to caution or formally charge is influenced not only by the nature of the offence but also by a decision about the likelihood of continued offending;

whether to remand in custody or grant bail is influenced by the risk of continued offending and/or the likelihood that the person charged will appear in court when summonsed;

what type of penalty should be imposed, including length of sentence, in most cases is influenced by the need for community protection - which is underpinned by a judgement about the likelihood of re-offending;

what level of supervision or security should be provided is influenced by the likelihood of either re-offending, absconding/escape or adhering to imposed conditions;

what rehabilitative programs might be offered or ordered will depend not just on an offender's needs but also the probability that the offender will respond positively to the programs;

whether and under what circumstances parole/early release will be granted can be influenced by community protection considerations (re-offending risk) and the likelihood of being able to adhere to the release conditions.

Most criminal justice systems at various points allow for some degree of discretion in decision making. Even though there have recently been moves in some jurisdictions toward increasing the use of mandatory fixed non-parole sentences, zero-tolerance policing and increases in "3 strikes" types of legislation (recently "1 strike" in the Northern Territory), there is not a universal or inflexible application of retribution ("just deserts") as the sole criterion in decision making. Discretionary decisions will often be influenced by estimates of the likelihood of particular outcomes in matters such as responsiveness to intervention, compliance with conditions or continuation of offending.

In principle, psychology can play a role in assisting predictive decisions. After all, a major aim of understanding the behaviour of individuals is to identify regularities or patterns that will allow those behaviours to be predicted under various conditions.

Clinical and actuarial assessments of risk

There are fundamentally two ways that decisions regarding the likelihood of behavioural outcomes can be made, namely clinical and actuarial methods. The clinical method is based largely on personal judgement. Although theory or the results of special investigations (tests) might inform the decision-maker, the main basis for decision making is personal judgement based on training and experience. It is assumed that the clinician has dealt with a number of similar cases in the past. From a detailed knowledge of past outcomes, the clinician makes a judgement about the degree of similarity with those past cases and offers an opinion about the likely outcome of the present case. Rules of thumb developed from past experience (possibly including collective professional experience passed on through training and interaction with colleagues) might be used to guide decisions. A degree of flexibility is maintained and the clinician can take into consideration whatever information might be available, including the many nuances of individual differences that are often difficult to fully quantify. This method is widely used and can be effective when what is being assessed and predicted is something that is relatively stable, is manifested in a limited number of easily identifiable forms and has a simple etiology. An example from medicine is the common cold. It is caused by a particular group of viruses, is generally manifested by nasal and/or bronchial congestion leading to coughs, sneezing and a runny or stuffy nose and will usually last between a few days and a week. A diagnosis and prognosis are easy to make with a high degree of accuracy. Experience in relation to something such as the common cold is readily accumulated because its symptoms are limited and consistent, it occurs with high frequency and is short in duration so that its full course and outcome are often observed.

Diagnostic and prognostic accuracy are, however, likely to be eroded when the clinician's experience is limited and/or the behaviour or disorder considered has a multifactorial etiology, variable course or varied manifestations. Limits to experience could occur if the disorder does not occur very often, if it is concentrated in populations that the clinician has had little exposure to, or the outcome is delayed so that the clinician seldom observes the full course of the disorder. In cases where the etiology is complex or poorly understood and where the course and manifestations are varied, the disorder might appear to be chaotic or inconsistent and require the consideration of much information before a prognosis can be made. Due to differences in views about etiology, what factors are deemed relevant, how they should be weighted, what is observed and recorded and the

limits of how much an individual can absorb and synthesise, the clinical method will suffer reduced prognostic accuracy and greater variability will occur in the assessments made by different persons.

The actuarial method is quantitative and relies on using known correlates of the outcome to estimate the probability of similar outcomes in the future. Perhaps its best known application is in the area of assessing insurance risk. Home insurance premiums can be influenced by the area of residence, motor insurance by the age of the driver, and life insurance by whether the applicant is a smoker. In each case quantitative data about known risk factors and their association with past outcomes are used to estimate the probability of future outcomes. Insurance premiums are then adjusted to reflect that risk. Where continuous measures are used, cut-off points are determined to maximise correct identification (hits) and minimise incorrect identification (misses). The advantages of such methods are that they are standardised and quantifiable, have an empirical basis and have clearly defined criteria and decision making rules. The content, method and application of actuarial measures can be critically reviewed and refined much more easily than can clinical prediction because of the clarity of the procedures and the consistency of their application.

Detractors might say that, by being restricted to a limited number of predetermined items, actuarial measures fail to take into account the full richness of human behaviour and the uniqueness of each individual and their circumstances. There might be some truth in this if assessors had the time to delve fully into each of their clients' lives, were able to absorb and integrate all the obtained information in a coherent way and then knew how to sift it in order to extract what was genuinely relevant to the question at hand. Seldom, if ever, is this the case. Assessment time is always limited, most particularly in a screening assessment. Human information processing capacity has its limits, making it necessary to reduce the scope and complexity of data to a point where its consideration becomes manageable, often employing cognitive techniques, akin to multivariate analysis, which reduce data - due to their common relations (either real or imagined) - to a more limited number of factors or dimensions. These, however, can vary from person to person, there being individual differences in cognitive complexity and schema employed (Linville, 1994). Selecting what is relevant out of all that has been gathered and interpreting it is the final task. One might be guided in this either by experience, by a formal theory which helps to explain the observed data, by knowledge of empirically proven relationships

among the variables or by a combination of two or all three of these methods. No one of these heuristic guides is perfect. As is best demonstrated in the physical sciences, theory can be a very powerful tool to not only interpret but to also predict future events, though some physical systems are so complex and dynamic (e.g., weather) that accurate long-term predictions still remain elusive, despite recent increased understanding of meteorological phenomena such as the Southern Oscillation and the El Niño effect. Short-term weather predictions can be made simply on the basis of experience. While having some accuracy, these will usually not match those of professional meteorological forecasters who, among other things, will take into account similar past conditions in order to calculate the probable outcomes of present conditions. This is an actuarial method. Its imperfection is attested to by popular cynicism about weather forecasts. Yet, despite the jokes and grumbling when the forecasters get it wrong, it is still very much better than chance and more accurate than the predictions that most lay people make on the basis of experience alone.

An argument can be made that, except where actuarial predictive instruments achieve 100% accuracy (which is seldom, if ever), because any instrument can sample only a limited number of variables, unforseen conditions might arise that have a significant influence on the predicted risk. Because these are rare events, these will not normally be included in the actuarial instrument. However, a clinician might become aware of these conditions and be able to amend the prediction and thereby achieve greater accuracy. For example, a youth is assessed to be at high risk of robbery with violence, but at the time of his last robbery he suffered an injury. He is now able to only walk slowly and will not be able to run for another year (being able to run is an important prerequisite for most of his crimes as this is how he leaves the scene and avoids apprehension). Would, at least for the next year, the youth's recidivism risk not be reduced? A discretionary override allows the clinician an input into the decision making process and might increase the predictive accuracy over relying on the instrument alone. This has been done in the case of some actuarial instruments such as the Level of Service Inventory – Revised (LSI-R; Andrews & Bonta, 1995). However, what evidence that is available seems to suggest that in practice discretionary overrides often do not increase either predictive accuracy (Goldberg, 1968; Sawyer, 1966) or consistency (Barton, 1997), possibly because clinicians make too many exceptions rather than restricting the use of overrides to a small number of cases (though see Cumberland and Boyle [1997] for a study where allowing for professional override by

correctional officers improved predictive accuracy). This suggests that if professional overrides are allowed in actuarial assessments, guidelines or certain criteria need to be established to prevent their overuse.

Sheldrick (1999) dismissed actuarial measures, arguing that they estimate probabilities about populations rather than individuals and because of perceived shortcomings with static historical factors, though neither of these points is a fatal criticism of such instruments. She advocated using a clinical method that is informed by the research literature about risk and protective factors. While this is arguably better than relying just on personal experience, intuition or folklore, she offered no empirical evidence to show that her supported method was more accurate than actuarial methods. In a less dismissive consideration of actuarial instruments, Grubin (1999) argued that neither clinical nor actuarial assessments are adequate and that a combination of the two methods would be more effective. However, as with Sheldrick, no empirical evidence regarding improved predictive validity was offered to support this argument. This raises the question of whether the actuarial method applied to human behaviour is superior to clinical judgement. Dawes, Faust, and Meehl (1989) concluded from the overwhelming weight of evidence of about 100 comparative predictive studies that it is. This conclusion has been reinforced by a subsequent meta-analysis of 136 studies (Grove & Meehl, 1996) and by Hanson and Bussière's (1998) meta-analysis of sexual offender recidivism studies. This is not to say that clinical observations cannot be part of the data considered when making a prediction (such information is often very valuable), but the prediction itself is more accurately made using the actuarial method.

The potential role of theory

Dawes et al. (1989) point out that there are circumstances when clinical judgement might be superior to actuarial prediction. Among these are prediction mediated by theory. This, however, requires access to, and accurate measurement of, the major causal determinants of the phenomenon under consideration. The information is then interpreted and a prediction made using a well-corroborated theory. However, in many areas of the behavioural sciences there are competing theories, often with equivocal or only partial support, major causal influences have often not been confidently identified and measurement accuracy is a perennial problem. Unfortunately criminological psychology is not immune to these shortcomings. While many correlates of offending have been

identified, a large proportion of these can only be treated as risk markers. The wisdom that correlation is not causation applies. More often than not it is unclear whether these markers are either causes or results of criminality or whether they covary due to their common relationships with other variables. Even if causally related, it is often still unclear whether the relationships are direct or mediated/moderated by other variables and whether the relationships are unidirectional or reciprocal. To give an example from developmental criminological psychology, it could be asked: (a) do poor parenting practices cause conduct problems in children? (b) does having children with conduct problems lead to a deterioration in parenting practices? (c) is there a reciprocal relationship - a vicious spiral - between conduct problems and poor parenting practices? (d) is the relationship moderated by other variables such as intelligence? (e) are parenting practices and conduct problems causally unrelated, covarying because of their common relationships with other variables such as economic deprivation/stress or ADHD in both the parent and child? A definitive answer that reduces the relationship between parenting practices and conduct problems to just one of the above alternatives is not yet available and is unlikely to emerge. It is more probable that the relationship is complex and multifactorial - the likelihood being that a number of the alternatives listed are each partial explanations for the observed relationship. The point here is that no verified all encompassing theory exits. Parts of the puzzle are known but much of it is yet to be assembled.

Explanatory theory is being developed but effective practical applications based on theory are still limited. Despite calls by some (e.g., Farrington & Tarling, 1985a; D.M. Gottfredson, 1987) for theoretically based (or at least guided) applications, the current state of knowledge places a practitioner in the difficult position of having to ask "which theory". Apart from providing internal conceptual consistency it seems that the main benefit of theory driven tools is that their application provides a field-test of the theories they are based on. While this is empirical grist for the theoretician's mill, it will not guarantee the production of a useful tool. If one approaches the development of a measure as a practical rather than as a theoretical exercise, it might be more effective to ask what works rather than to ponder which theory should guide its development. While particularly sophisticated applications might be difficult without theory, early developments in many areas are often based on trial-and-error (i.e., practical experience), accidental discovery and sometimes a recognition of underlying principles without these being sufficiently refined, quantified or codified to a point where one would describe them

as constituting a formal theory - a bit like knowing the general direction of the target without knowing precisely where the bullseye is. With time data accumulate and are analysed. Underlying principles are proposed and are linked together in an explanatory model that permits generalisations and predictions. In other words, a theory subsequently evolves which then helps to guide further technical applications. To take an example, gunpowder was used to launch rockets and cannonballs long before either the chemistry of oxidising reactions was understood or Newtonian physics was developed. But, without a deeper and more systematic understanding of gravity, mechanics and combustion chemistry, today's space missions to Mars would be impossible. I do not believe that criminological psychology is on the threshold of the equivalent of launching an interplanetary mission. We might be a little further than the first Chinese skyrockets, and development is certainly accelerating, but it is difficult to identify any single sufficiently refined and validated theory that could be relied upon to make consistently accurate clinical judgements about offending risk. At present, the construction of actuarial recidivism risk instruments will have to largely rely on demonstrated empirical relationships.

Contents and construction of actuarial risk instruments

Many factors in a variety of domains are likely to impinge on offending risk. This is perhaps most evident if one takes a biopsychosocial perspective. A variety of biochemical (e.g., levels of serotonin and testosterone), genetic, neurophysiological (e.g., low resting pulse, reduced frontal lobe metabolic activity, increased theta wave activity), nutritional (e.g., inadequate micronutrient intake) and other biological factors (see Ellis & Walsh, 1997; Gesch, Hammond, Hampson, Eves, & Crowder, 2002; Harris, 1999; Martens, 2002; Moir & Jessel, 1995; Raine, 2002; Rutter, Silberg, O'Conner, & Simonoff, 1999; Schoenthaler, 1991) are possibly - and in some cases quite likely to be - related to criminality. However, their use as reliable markers or as targets for treatment is, in most cases, yet to be clearly demonstrated. Broad social factors such as civil conflict, prevailing community values, economic exploitation, political inequality, racism, tolerance of violence and other antisocial behaviours in the media, mass entertainment and advertising, the availability of alcohol and other psychoactive substances, urban decay and so on can influence offending at an aggregate level. These and other similar factors will influence overall or baseline offending rates and many are suitable targets for intervention, but are of

limited value in identifying individuals who might be at increased risk. They are distal causes with a diffuse influence. Irrespective of what social conditions or offending baselines are current, some individuals, despite their exposure to broad criminogenic influences resist offending while others, including some less exposed to these same environmental adversities, nevertheless go on to offend. Factors that differentiate offenders from non-offenders or persisters from desisters need to include individual psychological and interpersonal (microsocial) factors. There are clearly limits, however, as to how much can be predicted, in part because of yet another set of factors that are diverse and often difficult to foresee. These are situational variables such as immediate opportunity (e.g., money left unattended).

Andrews (1995) has argued that that there exists a psychology of criminal conduct that has been overshadowed for some time by sociological theories. Added to this was despondency in some quarters that stemmed in part from Martinson's (1974) conclusion that no particular interventions seemed to be able to reliably reduce the re-offending risk of criminals. However, general personality and social psychology of crime is being revived and further developed. The main evidence for this is that many personal variables, not just immutable demographic variables such as age and sex (wryly referred to by Bonta [1994] as "tombstone" variables), have been found to be significantly related to offending/re-offending risk - sufficiently so that a number of useful predictive instruments have been developed. Furthermore, various psychosocial interventions that focus on individuals and their immediate social environment have been found to significantly reduce offending rates (Cooke & Philip, 2001).

Almost all actuarial recidivism risk measures use historical information. The Salient Factor Score (SFS 81) was devised by the US Parole Commission and is used in parole prognosis. It has demonstrated predictive validity (Hoffman & Beck, 1985) and is an example of an actuarial measure based on just a few items that are almost entirely of a static nature, dealing mainly with historical information about prior offending. Despite Hoge's (1999) assertion that dependence on historical factors leads to relatively low levels of predictive validity, Glover, Nicholson, Hemmati and Quinsey (2002) found that a number of instruments that rely either mainly or exclusively on static factors have good predictive validities with adult prisoners. Furthermore, Cottle, Lee and Heilbrun (2001) report that historical offence variables are among the best predictors of recidivism risk among young offenders. The argument for using dynamic risk predictors is largely based

on the desirability of using prediction devices that can reflect changes in risk due to various interventions and changes in life circumstances. The Level of Supervision Inventory Revised (LSI-R; Andrews & Bonta, 1995), while not exclusively reliant on dynamic factors, in an example of an instrument that includes a large number of such variables in the assessment and risk index. Most of the items tap factors that have been empirically found to discriminate between recidivists and nonrecidivists. Nevertheless, a study by Cumberland and Boyle (1997) of an Australian adaptation of the original Level of Service Inventory (Andrews, 1982), from which the LSI-R was developed, found that criminal history was the strongest component. While this does not undermine the desirability of using dynamic risk factors, it suggests that chronic offending is not easily changed and that for optimal predictive accuracy historical factors should not be ignored. Thus, actuarial instruments can contain a wide range of items that measure both historical and dynamic risk factors. The critical point is that the items must have demonstrated empirical relationships with the predicted outcome.

Different actuarial measures use different information sources and different data collection methods. Some rely on file data alone (e.g., the Lifestyle Criminality Screening Form; Walters, White, & Denny, 1991). Others use an interview with the offender together with a review of file data (e.g. the LSI-R) (Andrews & Bonta, 1995) while some rely on offender self-report using a questionnaire (e.g., the Self-Appraisal Questionnaire; Loza & Loza-Fanous, 2000). Although questions can be raised about the accuracy of self-reports, Motiuk, Motiuk, & Bonta (1992) and Kroner and Loza (2001) found support for the predictive validity of two different self-report measures with adult offenders. While no single method can be held up as a gold standard in actuarial risk assessments, perhaps using a combination of different methods, as suggested by Bonta (2002), might be a way of improving predictive validity. However, what methods are used in any particular situation will be largely dictated by practical considerations such as the time available for each assessment, the professional background and training of the staff involved and the existence, accessibility and comprehensiveness of various information sources.

The relationships between individual variables and recidivism tend to be weak. This was evident in the earliest studies of parole outcome prediction (see Warner, 1923; Borden, 1928). Although no single variable in the first of these studies by Warner was powerful enough to be useful as a reliable predictor, Hart (1923) suggested that by combining statistically significant items it could be possible to produce a useful and

reliable measure of recidivism risk. The first validated instrument was the parole prediction procedure reported by Ernest Burgess in 1928 and put into use in 1933 in Illinois (Lejins, 1962). It consisted of 21 items that had been found to distinguish between parole violators and non-violators. Each variable was scored as a dichotomy, given the same weight and then summed. This simple method of scale construction has come to be known as the Burgess method. Since then a number of theoretically more powerful techniques have been proposed or used to analyse predictive relationships and to construct risk measures. These include multiple linear regression, logistic regression, clustering methods, mutidimensional contingency table analysis, automatic interaction detector analysis and an iterative classification tree procedure (S. Gottfredson, 1987; Steadman et al., 2000; Tarling & Perry, 1985). Despite the undoubted mathematical sophistication of these techniques, when prediction instruments constructed using such methods are further tested, their predictive strengths usually fall to levels that are no better (sometimes less) than instruments based on the Burgess method (Challinger, 1974; Farrington & Tarling, 1985b; Gagliardi, Lovell, Peterson, & Jemelka, 2004; D. Gottfredson, 1987; D. Gottfredson, & Snyder, 2002; Silver, Smith, & Banks, 2000). It seems that the more sophisticated methods are more prone to capitalise on chance relationships in construction samples and are thus more prone to "shrinkage" of predictive strength when applied to validation samples. At present there is no convincing evidence that any single construction method has consistently superior predictive validity. However, in their comparative study Silver et al. found that the performance of different analytic methods depended to some degree on the purpose of the prediction device. They suggested that if the purpose were to categorise cases into a series of risk classes, then linear-based approaches such as the Burgess method or logistic regression would be preferred.

It has been suggested by Silver and Chow-Martin (2002) that the use of multiple methods might help to increase predictive validity. Although they found that combined scores derived from multiple classification trees (variables entered in different orders) were superior to scores derived from single classification trees, there was no comparison with unrelated methods such as the Burgess method. While holding some promise, the multiple model approach is yet to be tested against other methods outside the classification tree model.

Irrespective of what construction method is used, it is important to validate any proposed instrument on an independent sample. As mentioned earlier, this is necessary to

confirm that the construction has not been unduly reliant on chance relationships in the data. A common procedure to test instrument validity is to form two separate samples from a group of assessed subjects. Allocation of subjects to the samples is done at random. One sample is used for construction and the other for validation. Forming two samples by random allocation means that they will be very similar – a similarity that is to some degree artificial. If the samples are very large, then the variation between them will be trivial. Such conditions will minimise predictive shrinkage but do not mirror real-world practice and are likely to inflate predictive validity estimates. Every instrument is constructed at one time and is applied at later times. Construction and validation samples that are formed and tested at different times, although unlikely to be as similar as two contemporary samples, will more accurately reflect the conditions under which an instrument is used and will allow a more realistic test of predictive validity. To further determine the degree to which results can be generalised, predictive validity should also be tested among demographic subgroups – a point highlighted by the ethnic group differences found in Långström's (2004) study of sexual and violent recidivism risk.

Current actuarial instruments

In relation to recidivism risk prediction among adults, there has recently been a proliferation of actuarial instruments. Examples include: the Violence Risk Appraisal Guide (Harris, Rice, & Quinsey, 1993), the HCR-20 (Webster, Douglas, Eaves, & Hart, 1997), the Manitoba Risk-Needs Scale (an adaptation of Wisconsin's offender classification system [Baird, 1981]) (Bonta, LaPrairie, & Wallace-Capretta, 1997), the Lifestyle Criminality Screening Form (Walters, Ravella, & Baltrusaitis, 1990), Hare's (1991) Psychopathy Checklist – Revised and its screening version (PCL:SV) (Hart, Cox, & Hare, 1995), the Violent Offender Treatment Program Risk Assessment Scale (Ward & Dockerill, 1999), the Level of Service Inventory – Revised (Andrews & Bonta, 1995, 1999), the Self-Appraisal Questionnaire (Loza, Dhaliwal, Kroner, & Loza-Fanous, 2000) and the Sex Offender Risk Appraisal Guide (Quinsey, Rice, & Harris, 1995). The question of whether actuarial instruments are valid with adult offenders has now been largely overtaken by questions of which instruments work best. To this end a number of comparative studies have been undertaken (e.g. Barbaree, Seto, Langton, & Peacock, 2001; Douglas, Ogloff, Grant, & Nicholls, 1999; Doyle, Dolan, & McGovern, 2002; Gendreau, Goggin, & Smith, 2002; Glover, Nicholson, Hemmati, & Quinsey, 2002; Grann, Belfrage,

& Tengström, 2000; Hanson & Thornton, 2000; Kroner & Loza, 2001; Kroner & Mills, 2001; Loza & Loza-Fanous, 2001). Less work (to judge from differences in the volume of published articles) seems to have been done in developing risk instruments for use with young offenders. Furthermore, the outcomes of studies of their predictive validities are more mixed than are those with actuarial instruments developed for adults. Le Blanc (1998) also noted that, although a number of risk assessment instruments have been developed for use with juvenile offenders, few have been empirically validated.

Wiebush, Baird, Krisberg and Onek (1995) described a number of classification and risk instruments developed in different jurisdictions in the United States for use with young offenders. Unfortunately, predictive validity data reported by Wiebush et al. are sparse and it is not clear whether any of the instruments have been adequately evaluated. Other instruments such as the First Offender Risk Assessment Index (Rissler, Sutphen, & Shields, 2000), while found to have some degree of predictive validity, have not had their predictive validities reported in a form (such as explained variance or ROC AUC statistics) that allow ready comparison with other instruments.

The Wisconsin Juvenile Probation and Aftercare Risk Instrument (WJPARI; Baird, 1985) and other instruments modelled on it (e.g., Indiana's Risk Assessment Instrument) have in a number of studies not been found to be accurate measures of recidivism risk when evaluated in different jurisdictions (see Ashford & LeCroy, 1988; Lemmon & Calhoon, 1998; Wright, Clear, & Dickson, 1984). Each item in the WJPARI that measures a dynamic risk factor requires the assessor to give a single score by making a judgement based on synthesising a considerable amount of information. Ashford and LeCroy (1988) suggested that difficulty doing this reliably might be one explanation for the instrument's poor predictive validity. In a further study, Ashford and LeCroy (1990) reported that of three prediction instruments tested in a sample of young offenders, only the locally developed instrument had predictive validity. These findings underscore the need not only for initial validation but also for re-validation when instruments are used in other jurisdictions. This is a common problem. Hubbard, Travis, and Latessa (2001) noted that, despite the widespread use of standardised risk-needs assessment instruments in both adult and juvenile community corrections in the USA, few agencies have validated their instruments on local populations. A similar picture emerges regarding young offender risk-needs assessment instruments in various Canadian provinces (Hannah-Moffat & Maurutto, 2003).

Smith and Aloisi (1999) reported adequate predictive validity for a predictive instrument for young offenders that was developed using an expert consensus-based method. Retrospective analysis suggested that an empirically derived risk scale might have better predictive validity, but the instrument has not been assessed on a separate validation sample. The need for appropriate initial validation is highlighted by the results of a study by Krysik and LeCroy (2002). The original predictive instrument evaluated by the authors, while having a degree of predictive validity, was found to be less accurate than probation officers' ratings of risk. The actuarial instrument had not been validated on a sample that was independent of the construction sample. This is similar to experiences with the Gluecks' social prediction table (Glueck & Glueck, 1950). Although the predictive validity of the measure was optimised on a construction sample, it was not validated on a different sample. Later studies, such as that by Loftus (1974) with Australian delinquents, failed to support the measure's predictive validity.

Cottle, Lee, and Heilbrun (2001) were able to locate only six studies published between 1983 and 2000 regarding the predictive validities of recidivism risk instruments for young offenders where the results were in a form that could be used in a meta-analysis. The results, with an overall weighted mean effect size (*Z*r) of .12, were generally disappointing. More recently Benda, Corwyn, and Toombs (2001) reported that the risk tool used by the Arkansas Division of Youth Services failed to predict recidivism.

Schwalbe, Fraser, Day, and Mayfield Arnold (in press) recently found the 9-item North Carolina Assessment of Risk to be a valid predictor of recidivism among young offenders in their total sample, though when demographic subgroups were analysed predictive validity was confirmed only for African American males. The authors also described results from unpublished studies of four other brief risk assessment instruments developed in other USA state jurisdictions. While results for each instrument indicated a degree of congruence between subsequent recidivism rates and the initial classifications of offenders into low, medium and high risk groups, the results were not reported in a form that readily allowed the comparison of their predictive accuracy with other instruments.

An experimental risk assessment device constructed by Visher, Lattimore, and Linster (1991) used a survival model. This allowed the probability of recidivism to be adjusted by the time that each youth survived (i.e., did not reoffend) after release to the community. The agreement between expected and observed failures forecast over three years was described by the authors as "clearly not very good" (p. 347), though better performance

was observed during the first 36 weeks of the post-release period. The model does not appear to have been adopted for practical application.

A recent addition to standardised young offender risk-needs assessment instruments is the ASSET (Youth Justice Board, 2003). Described earlier (see Chapter 1), the ASSET is now widely used in England and Wales. It is broad and detailed in its content and has been found to have good predictive validity (Baker, et al., 2003). However, the comprehensiveness of the ASSET is achieved at the cost of increased administration time, which makes it unsuitable for use as an initial screening measure.

Hoge (2002) described three measures that he considered had promise as structured assessments of young offenders' needs and risks. These were the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1999), the Psychopathy Checklist: Youth Version (PCL-YV; Forth, Kosson, & Hare, 2003) and the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002). However, Hoge noted that practical actuarial data were not yet available for any of these instruments and that information about their predictive validities is limited. Of the above, the two best known forensic assessments instruments are the PCL-YV and the YLS/CMI (also called the Ministry Risk/Need Assessment Form). Since Hoge's paper appeared the PCL-YV has been commercially published. The values of predictive validities from a number of studies presented in the test manual are similar in magnitude to those of the PCL-R. One of its limitations, however, is its focus on measuring a static personality factor (psychopathy). It provides little information about dynamic risk factors that could be targets for intervention. Regarding the YLS/CMI, Hoge and Andrews (1995b) reported initial data supporting its predictive validity with young offenders while Jung and Rawana (1999) supported its concurrent discriminatory validity and confirmed its validity in predicting recidivism, though no variance explained or ROC AUC statistics were reported. The latter researchers also confirmed its validity with both Native Canadian and female young offenders. Recently Flores, Travis and Latessa (2003) reported significant predictive correlations between YLS/CMI total scores and various outcome measures, including rearrest, with a large sample of youths in Ohio, USA. However, the authors noted that the risk/need categorisations did not hold for all sites and populations studied and that local renorming was desirable. The YLS/CMI has been used as a survey instrument with young offenders in Victoria (Dunne & Xantidis, 2001), though no longitudinal data were collected. Work has been done on an Australian adaptation of the YLS/CMI (Pope, 2002; Thompson, 2001)

for use with young offenders in New South Wales. Preliminary analyses suggest that the adapted version has predictive validity with male young offenders but not with females (A.P. Thompson, personal communication, August 21, 2002), though the relatively small number of females means that the last result might not be reliable. The correlation between the total score and recidivism was .28 (Thompson & Putniņš, 2003). This might be an underestimate as variation in the follow up periods for different subjects is likely to have reduced the strength of associations. However, the correlation between the total score and recidivism did not exceed the correlation of the offending history component alone with recidivism (r=.32), which suggests that the total score is not the optimum combination of YLS/CMI variables for predicting recidivism among Australian young offenders.

Although there is some empirical support for both the PCL:YV and the YLS/CMI as predictive instruments, the evidence is not entirely consistent. While a recent study by Catchpole and Gretton (2003) supported the predictive validity of both instruments, Marczyk, Heilbrun, Lander and DeMatteo (2003) failed to obtain significant predictive relationships for either instrument's total score with recidivism in a sample of young offenders. Furthermore, a practical impediment to using either instrument is the time-consuming nature of both assessments. In addition to interviewing the subject, both assessments normally require the collection and review of collateral information such as file records or parent interviews. In relation to the YLS/CMI, Gavazzi et al. (2003) have pointed out that, while the structured interview is expected to take 30-45 minutes, when time for other data gathering procedures is added, the entire assessment can take some hours. While this is acceptable when conducting detailed client assessments, it is difficult to use either instrument on a routine basis as a screening assessment in settings such as secure care without considerable staff resources. While having more staff might be desirable, the reality is that human resource issues are perennial problems in this service area. The already mentioned ASSET has a similar drawback. Although comprehensive and valid, the full assessment will often take some hours to complete, making it unsuitable to use as a screening tool.

From the above discussion it can be seen that the results of prediction efforts with young offenders have been mixed and that few well-validated actuarial instruments are currently available for use with this population. Much still remains to be done in the field of recidivism prediction with young offenders.

Current study

Self-report studies show that most youths, particularly males, have committed an act which can be construed as being criminal, even if many of these acts are not dealt with by the formal justice system (Rutter & Giller, 1983). Offending among youths is so widespread that Moffitt (1997) regards delinquency by adolescents as normative. For the majority such behaviour is transitory, with few youths going on to commit serious crimes or to become habitual offenders. However, diminishingly small proportions of youths continue to offend for increasing periods of time (Cain, 1996). Some youths are more likely to persist in their offending and a number of them will eventually be detained in secure care. In secure care staff deal with these youths' current and expected future behaviour. Interventions are intended to not only change, prevent or improve something that is immediate but to also assist the person's post-release functioning. Facilitating the maintenance of appropriate behaviours is the main rehabilitative goal. The most important of these behaviours relates directly to why the youths have been incarcerated. They have committed criminal offences that are serious enough for the courts to decree that they should be held in secure care. Had they not offended, irrespective of what other problems they might have, they would not have been incarcerated. Therefore, a major challenge for staff in secure care is to help these youths reduce their offending risk.

Although it is reasonable to assume that youths in secure care will, on average, be at greater risk of offending than most youths who have never been in secure care, it could still be expected that there will be variation among them in their levels of risk. The risk principle discussed in the first chapter of this work suggests that the most effective use of correctional resources requires the provision of more intensive services to those at highest risk of offending. Thus, assessing recidivism risk provides important information that should be considered when planning and implementing interventions for individual young offenders.

The SECAPS contains a variety of items that deal with each youth's background, needs and functioning. A number of these could be expected to relate to reoffending risk. The question is whether a combination of background information (including offending history) and SECAPS assessment data can produce a valid and reliable risk assessment tool. An important use for such an instrument, if one can be developed, could be to guide the most intensive provision of services toward those who are at highest risk of

reoffending. The converse is that subjects who are at low risk of reoffending might be better off being released as early as possible and having a minimum of interventions. Identifying both potentially persistent offenders as well as those who are likely to soon desist are the predictive tasks that will be examined here by using SECAPS assessment data to construct an actuarial recidivism risk index.

Method

Subjects and measure

The subjects were all youths placed in secure care in South Australia during 1994-1996 who were assessed with the SECAPS (*n*=458). This group was used as the construction sample for the risk index. All youths in secure care who were assessed with SECAPS between January and June 1998 (*n*=152) comprised the validation sample.

Procedure

Offending histories of all youths who had SECAPS assessments during 1994-1996 were obtained from the South Australian Office of Crime Statistics. These histories consist of all offences (including the dates when the offences were committed) found proven in South Australian courts (both youth and adult) from the beginning of 1986 through to the end of 1997. Thus, the prior offending histories of all criminal matters dealt with by the courts in South Australia were available together with a minimum 12-month post-assessment offending history. Breaches of bonds and bail estreatments were not included. Data from other jurisdictions were not available with the exception of one youth who, from press reports, was known to have been convicted of a murder committed in another Australian state during the follow-up period. In addition, secure care and child protection notification outcome histories (available for South Australia only) were extracted from Family and Youth Services client electronic records. Recidivism status was determined on the basis of offences committed (not just adjudicated) after release from secure care.

For subjects in the validation sample, prior offending histories (including offences finalised by Family Conferences) were obtained for all the youths together with their post-release offending histories up to April, 2001. Matters relating to breaches of bails or bonds were excluded.

Some youths, due to re-admission to secure care after more than a year since their previous SECAPS assessment (though also shorter periods in a few cases), had been reassessed. Of the 458 youths assessed, 140 had a second SECAPS assessment record. These were analysed separately.

As some youths continued to be incarcerated for all or a large part of the follow-up period or had died, the actual number who could be counted during the first 12 months was slightly less than the initial 458 assessed. The numbers beyond the first 12-month follow-up gradually reduced as the time available for follow-up expired. Those assessed early in 1994 had the longest follow-up period (almost 4 years, i.e. to the end of 1997) while those assessed at the end of 1996 had no more than 12 months if they were released almost immediately after the assessment. This was reduced if their release was delayed.

Regarding individual item subject numbers, some minor fluctuation occurred due to missing data. A few items, such as *Alcohol quantity typically used*, were introduced in a later revision of the SECAPS assessment, which is why some items had substantially lower subject numbers.

Results and Discussion

Construction sample and recidivism rates

Of the 458 youths initially assessed, five were not released more than 6 months before the end of the follow-up period and two died shortly after their release from secure care. Their records were excluded from further analysis, leaving 451 youths. Three subjects refused to answer any of the items and one subject answered only the first few items before refusing to cooperate further. One youth died during the study follow up period almost three years after being released from secure care. Some youths were re-admitted to secure care and underwent a second SECAPS assessment (n=140). Of these, 36 were not released more than 6 months before the end of the follow up period, leaving 104 youths in the second assessment group whose records were included in the recidivism analysis. One youth answered only the first few items before refusing to cooperate further.

Of the first assessment respondents (n=451), 92% were males and 27% described themselves as Aboriginal. Ages for the total group ranged from 11 to 19 years (mean age=15.9 years), with most subjects (83%) falling within the 14-17-year age range. Among the second assessment respondents (n=104), 95% were males and 32% described

themselves as Aboriginal. Ages for this group ranged from 13 to 19 years (mean age=16.3 years), with most subjects (89%) falling within the 15-18-year age range. All subjects who were 18 years or older were incarcerated for offences committed before they turned 18.

Recidivism rates are one of the most basic measures of any justice and correctional system. They provide a reference against which to gauge changes in the criminal behaviour of released youths. Knowing the expected rate of recidivism is particularly important. Without this information it would be difficult, for example, to tell whether a particular program intended to reduce recidivism was effective. If the recidivism rate for program participants was, for argument's sake, known to be 30% at 6 months after release, neither success nor failure could be inferred from this alone. Some could argue that such a program was a success because it helped 70% of youths to not reoffend (examples of this naive type of reasoning are current). Others could argue that the program was a failure because it did not prevent a sizeable proportion (30%) from reoffending. However, without knowing the expected recidivism rate, the direct effect on offending - whether it increased, decreased or remained unchanged - cannot be known. Similarly, when assessing risk it is important to do so against the known or expected recidivism rate. It is not always sufficient to say that youth A is at higher risk than youth B. Relative likelihood can have some uses but knowing the absolute likelihood is more informative.

Tables 1 and 2 present the cumulative recidivism rates (any new proven offences after release from secure care following the SECAPS assessments) in consecutive 3-month time blocks. The results for those with second SECAPS assessments are less reliable - the numbers are smaller and reduce more rapidly. Subjects whose follow up time expires within a particular block are not counted in subsequent blocks. As can be seen, reoffending during the first 12 months is quite high. At the end of the follow-up period recidivism rates are likely to approximate 100%. Of the few who did not have locally recorded offences, some could be expected to have either: (a) reoffended but not been caught; (b) reoffended interstate and not been recorded here; (c) died or been in some way physically incapacitated and unable to reoffend. This is consistent with high recidivism rates elsewhere in Australia among youths who have penetrated more deeply into the juvenile justice (e.g., see Lynch, Buckman & Krenske, 2003).

These results indicate that most youths who remain in secure care long enough to have a SECAPS assessment are, in the long term, at extremely high risk of reoffending. This is an important finding. However, it fails to distinguish between degrees of risk. While

almost all the youths reoffended, some did so sooner than did others. This might be simply due to random fluctuation, though it is more likely that criminogenic factors were stronger among the early recidivists. Cain (1996) observed in an analysis of a very large NSW young offender data set that persistent offending generates increasingly shorter times to the next offence. Thus, while not all instances of recidivism will be captured in a time-limited follow-up period, more persistent offenders can be expected to reoffend sooner. Cain also noted that when recidivism occurs, the next offence is most likely to occur within three to six months of the initial matter. To distinguish degrees of risk here it is necessary to shorten the follow-up period so that there are more substantial proportions of non-recidivists. For this purpose 6 months from the time of release was selected as the period for which risk of reoffending would be assessed.

Table 1: *Recidivism rates by time from release after first SECAPS assessments*

Months	% not reoffend	% reoffend	Total subjects
3	48.8	51.2	451
6	32.4	67.6	451
9	26.4	73.6	451
12	20.5	79.5	448
15	17.6	82.4	443
18	14.3	85.7	407
21	11.5	88.5	373
24	9.4	90.6	340
27	8.5	91.5	316
30	7.5	92.5	281
33	6.3	93.7	253
36	5.4	94.6	222
39	5.0	95.0	179
42	3.9	96.1	155
45	3.0	97.0	99
48	5.9	94.1	34

Table 2: *Recidivism rates by time from release after second SECAPS assessments*

Months	% not reoffend	% reoffend	Total subjects
3	51.9	48.1	104
6	39.4	60.6	104
9	32.7	67.3	104
12	28.0	72.0	93
15	25.3	74.7	79
18	22.9	77.1	70
21	25.0	75.0	60
24	25.5	74.5	55
27	22.0	78.0	41
30	16.7	83.3	30
33	18.2	81.8	22
36	20.0	80.0	15
39	16.7	83.3	12
42	0.0	100.0	5
45	0.0	100.0	2
48	0.0	100.0	1

Construction of a recidivism risk index

In Table 3 it is seen that almost all of the relationships with recidivism are weak and most are not statistically significant. The first step in identifying candidate variables for a recidivism risk index is to select those variables that have a significant relationship with recidivism following the first assessment. As the first assessment group is much larger than the second assessment group, greater weight needs to be given to results for that group. The second step is to examine the results for the selected variables following the second assessment to determine whether they are consistent with the first assessment

Table 3: *Zero-order correlations between predictor variables and recidivism status 6 months after release following assessment*

Predictor variables	*r*	*p*	*n*
Age			
1st assess	-.16	.001	451
2nd assess	-.23	.02	104
Gender (m=1, f=2)			
1st assess	-.05	-	451
2nd assess	-.00	-	104
Aboriginality (Ab=1, other=2)			
1st assess	.02	-	451
2nd assess	.08	-	104
Confirmed prior child abuse (no=1, yes=2)			
1st assess	.07	-	451
2nd assess	.16	.09	104
Proven child neglect (no=1, yes=2)			
1st assess	.06	-	451
2nd assess	-.05	-	104
Days in secure care during previous 1.5 years			
1st assess	.18	.000	451
2nd assess	.14	-	104
Eyesight problems (yes=1, no=2)			
1st assess	-.06	-	448
2nd assess	.09	-	104
Hearing problems (yes=1, no=2)			
1st assess	-.03	-	448
2nd assess	-.02	-	104
Mother alive (1) vs. deceased or not known (2)			
1st assess	.01	-	448
2nd assess	-.05	-	104

Table 3. (cont)	*r*	*p*	*n*
Father alive (1) vs. deceased or not known (2)			
1st assess	.01	-	448
2nd assess	-.03	-	104
Parents alive and cohabiting (1) vs. separated (2)			
1st assess	.03	-	353
2nd assess	-.01	-	81
If parent(s) deceased/status not known, parents cohabited (1) or were separated (2) when both last known to be alive			
1st assess	-.07	-	86
2nd assess	.30	-	21
Close natural family member in trouble with law (yes=1, no/dk=2)			
1st assess	-.09	.05	448
2nd assess	-.04	-	104
Close natural family member has substance use problem (yes=1, no/dk=2)			
1st assess	.04	-	447
2nd assess	-.08	-	104
Was living with parent (1), relative (2) or other (3)			
1st assess	-.04	-	448
2nd assess	-.05	-	104
Reading task (words correct)			
1st assess	-.03	-	444
2nd assess	-.08	-	102
Reading age			
1st assess	-.02	-	444
2nd assess	-.05	-	102
Writing task score (words correct)			
1st assess	-.03	-	203
2nd assess	-.07	-	78

Table 3. (cont)	*r*	*p*	*n*
Numeracy score			
1st assess	-.02	-	445
2nd assess	-.11	-	103
Analogue time telling			
1st assess	-.03	-	446
2nd assess	-.01	-	103
CPM score converted to SPM standard score			
1st assess	-.01	-	445
2nd assess (if missing, 1st assess value used)	-.04	-	104
IQ range (≥80=1; 70-79=2; ≤69=3)			
1st assess	-.01	-	445
2nd assess (if missing, 1st assess value used)	.03	-	104
Alcohol use frequency			
1st assess	.08	.10	447
2nd assess	.23	.02	103
Marijuana use frequency			
1st assess	.01	-	447
2nd assess	-.02	-	103
Hallucinogen use frequency			
1st assess	.02	-	446
2nd assess	.05	-	103
Sedative/hypnotic use frequency			
1st assess	.04	-	446
2nd assess	.11	-	103
Narcotics use frequency			
1st assess	-.02	-	446
2nd assess	.10	-	103
Stimulant use frequency			
1st assess	.05	-	445
2nd assess	-.04	-	103

Table 3. (cont)	*r*	*p*	*n*
Inhalant use frequency			
1st assess	.10	.04	446
2nd assess	.21	.03	103
Substance use (sum of all substance frequencies)			
1st assess	.07	-	445
2nd assess	.14	-	103
Alcohol + Inhalant use frequency			
1st assess	.12	.01	446
2nd assess	.28	.004	103
Substance use (other than alcohol and inhalants)			
1st assess	.04	-	445
2nd assess	.04	-	103
Used substance at time of last offence (yes=1, no=2)			
1st assess	-.04	-	444
2nd assess	-.02	-	103
Alcohol quantity typically used			
1st assess	-.11	.09	246
2nd assess	.20	.08	81
Marijuana quantity typically used			
1st assess	-.05	-	233
2nd assess	-.04	-	82
Feels has problem with substance use (yes=1, no=2)			
1st assess	.03	-	446
2nd assess	-.09	-	103
Current mood rating (depressed mood has lower score)			
1st assess	.04	-	446
2nd assess	-.00	-	103
Feelings of hopelessness			
1st assess	-.05	-	446
2nd assess	-.16	-	103

Table 3. (cont)	*r*	*p*	*n*
Any previous deliberate self-injury (no=1, yes=2)			
1st assess	-.06	-	447
2nd assess	.01	-	103
Recent thoughts about suicide (no=1, yes=2)			
1st assess	-.02	-	446
2nd assess	.04	-	103
Any previous suicide attempts (no=1, yes=2)			
1st assess	-.05	-	447
2nd assess	-.01	-	103
Number of close friends			
1st assess	-.07	-	447
2nd assess	-.07	-	103
How well gets on with others (agree=1, disagree=2)			
1st assess	-.08	.10	445
2nd assess	-.02	-	103
Most friends are offenders (yes=1, no=2)			
1st assess	-.07	-	447
2nd assess	-.19	.06	103
Has a bad temper (yes=1, no=2)			
1st assess	-.02	-	447
2nd assess	-.17	.08	103
Frequency of getting into fights			
1st assess	.03	-	447
2nd assess	.05	-	103
Has tattoos (yes=1, no=2)			
1st assess	.10	.03	447
2nd assess	.10	-	103
Has ever been suspended/expelled from school (yes=1, no=2)			
1st assess	-.05	-	447
2nd assess	.03	-	103

Table 3. (cont)	*r*	*p*	*n*
Was attending school prior to incarceration (yes=1, no=2)			
1st assess	-.01	-	205
2nd assess	-.01	-	80
Truanted regularly from school (yes=1, no=2)			
1st assess	.04	-	447
2nd assess	-.18	.08	103
Hard to concentrate (yes=1, no=2)			
1st assess	-.10	.04	446
2nd assess	-.20	.05	103
Often acts on impulse (yes=1, no=2)			
1st assess	-.06	-	447
2nd assess	-.09	-	103
Hard to sit still (yes=1, no=2)			
1st assess	-.11	.02	447
2nd assess	-.06	-	103
Boredom major problem (yes=1, no=2)			
1st assess	-.07	-	447
2nd assess	-.22	.03	103
Cooperative with assessment (lower score more cooperative)			
1st assess	.07	-	447
2nd assess	-.03	-	102
Restless/distractible during assessment			
1st assess	.06	-	447
2nd assess	.11	-	103
ADHD signs (more signs lower score)			
1st assess	-.13	.008	446
2nd assess	-.19	.05	103

Table 3. (cont)	*r*	*p*	*n*
Depression scale (stronger signs lower score)			
1st assess	.05	-	442
2nd assess	-.03	-	103
Self-destructiveness index (stronger signs higher score)			
1st assess	-.06	-	446
2nd assess	.02	-	103
Conduct problems index (stronger signs lower score)			
1st assess	-.02	-	447
2nd assess	-.15	-	103
Age at 1st proven offence (self-report)			
1st assess	-.18	.000	444
2nd assess	-.04	-	104
Age at first proven offence (official records)			
1st assess	-.23	.000	451
2nd assess	-.16	.10	104
No of proven offences committed prior to the SECAPS assessment			
1st assess	.28	.000	451
2nd assess	.08	-	104

Note: *p* is two-tailed. Only probability levels of 0.1 or less are shown

results. As discussed earlier in this chapter, a number of risk measures have not been found to be valid when tested with other samples. To confirm that any significant relationships in the first assessment group are not unique to that group can only be conclusively determined by repeated evaluation of the instrument with other groups. Although the second assessment group is not entirely independent in that the subjects are a subgroup of the first assessment group, the second SECAPS assessments were done at later times and can provide some support for the consistency or generalisability of the first assessment results, though obviously less so than with an completely independent sample. While being a subject subset of the first assessment group might tend to increase similarity

in the results, it is because of this expected similarity that any divergent results should be questioned. Because the second assessment data set is much smaller than the first and is not as representative, and because most of the correlations are quite low, the requirement for statistical significance in the second assessment data is waived. Consistency here means that the correlations have to at least be in the same direction as in the first assessment data set. If results for individual items are inconsistent between the two data sets then the generalisability of the results beyond the construction sample is open to question. Such items should not be considered further for inclusion in the risk index. The third step is to consider whether the relationships that are significant are meaningfully interpretable. This point is best illustrated by an example. If an item measuring antisocial attitudes, such as "It is OK to steal", was found to have a significant negative relationship with recidivism (i.e., those who agreed with the statement were less likely to offend), one would be reluctant to include it in a recidivism risk index. It is not just a case of going against expectation. A result that is contrary to expectation can sometimes, on reflection, be interpreted in a coherent manner. However, a contrary result that cannot be interpreted in a way that makes sense should be questioned. While the result might be valid, there is also a strong suspicion that error has been made in the measurement, the group is not representative or the result is random. While the use of inferential statistics helps reduce the risk of accepting random variation as significant, it cannot entirely eliminate this possibility, particularly in a large data set. Without extensive replication, one could not feel confident that a result that cannot be meaningfully interpreted is reliable and valid. Defending the use of instruments that included such items would be problematic.

The variables that had significant relationships with recidivism following the first SECAPS assessment were:

current age; days in secure care; close natural family member in trouble with the law; alcohol use frequency; inhalant use frequency; combined alcohol and inhalant use frequency; alcohol quantity typically consumed; has tattoos; hard to concentrate; hard to sit still; ADHD signs; age at first offence (self-reported); age at first offence (official records); number of proven offences committed prior to the SECAPS assessment. Although alcohol use frequency was not significantly associated with recidivism using a two-tailed test, as there was a strong expectation that it would be positively associated with recidivism, the use of a one-tail test was appropriate. Hence its inclusion among the above variables.

Days in secure care was restricted to the last 1½ years because electronic records for earlier periods were not available for many of the assessments. Although this variable was significantly related to recidivism after both first and second assessments in the construction sample, when the records of young offenders in the validation sample were checked (validation sample subjects were assessed a year or more after those in the construction sample), 9% of the offenders were found to have missing data. This was regarded as an unacceptably high proportion and the variable was, therefore, not included in the final index.

A more detailed analysis of the relationship between various substance use items and recidivism is made in another chapter of this work (see "Young offenders and substance use"). Alcohol and inhalant use combined had stronger statistically positive relationships with recidivism at both assessments than did either item singly and was retained as a variable for the risk index. As inhalant use and alcohol use are in the combined measure, neither substance was included as a separate item.

The quantity of alcohol typically consumed had been expected to be positively related to recidivism. However, this held only in the second assessment. In the first assessment the relationship was in the opposite direction. Due to this contrary result and the inconsistency between assessments, it was not considered further in the construction of a risk index.

Having a close natural family member being in trouble with the law was significantly associated with recidivism at the first assessment but not at the second assessment. The magnitude of the relationship in the second assessment (r=-.04, ns) was too weak to be regarded as providing consistent support for this item's relationship with recidivism. It was, therefore, not included in the final recidivism risk index.

The item about tattoos has been analysed in greater detail in another chapter of this work (see "Young offenders and tattoos"). The zero-order correlations for the total first and second assessment samples are in the opposite direction to what had been expected, which makes one reluctant to include this item in a risk index. Risk index items need to not only have significant relationships with the predicted outcome but also need to accord with either common sense or theory. This item was not included in the risk index.

The self-report items that relate to concentration, impulsiveness, restlessness and boredom were summed to form an ADHD signs scale. All the items were positively related to recidivism at both first and second assessments and four of the eight correlations

were statistically significant. While neither of the impulsiveness item's correlations with recidivism were statistically significant, this item correlated significantly with every other scale item in the ADHD signs scale and increased the scale's internal consistency (alpha) in both the first and second assessment analyses. Assessors' ratings of whether youths were observed to be restless or distractible during the assessment were, although not statistically significant, also positively related to recidivism. This item is conceptually related to the types of behaviours tapped by the ADHD signs scale. However, only two of the eight correlations with the ADHD signs items were significant. When added to the ADHD signs scale it lowered the internal consistency in both the first and second assessment data. It was, therefore excluded from the ADHD signs scale and from the risk index. The ADHD signs scale is retained for the risk index. As the items "hard to concentrate" and "hard to sit still" are part of the ADHD signs index, they were not included as individual items.

Age at first offence was measured by two items: a self-report and official records. The self-report item, although significantly correlated with recidivism after the first assessment, had no appreciable relationship with recidivism after the second assessment. The item derived from official records had stronger correlations at both first and second assessments and was retained for the risk index.

Current age was significantly and negatively related to recidivism. Similar associations between age and recidivism have been found among young offenders placed on either community-based orders or custodial sentences both in Victoria (Victorian Government Department of Human Services, 2001) and in Ohio, USA (Flores et al., 2003). This is contrary to the often observed increase with age in participation in offending among adolescents. For example, South Australian Youth Court statistics (Office of Crime Statistics, 2001) for the year 2000 indicate a consistent increase with age in final court appearances where at least one matter is proven. For males from ages 10 to 17 years the number of appearances rises from 3 to 700. The rates for females increase from none at age 10 years to 103 at age 17 years. This could lead to an expectation that age will be positively correlated with recidivism risk. However, these court statistics relate only to offences committed, not to reoffences. Thus, while the chances of being an offender increase with age, it is not necessarily the case that reoffending rates follow a similar pattern. Blumstein, Cohen and Farrington (1988) found that arrest frequencies were

relatively stable across age for active offenders, which suggests that the age-crime curve for participation does not hold when considering youths who are already offenders.

In South Australia a child less than 10 years of age cannot be held to be criminally responsible. Official responses to an under-10-year-old are exclusively welfare oriented. Once children reach the age of criminal responsibility, the concern for offender welfare remains, though justice issues are given increasing prominence. The stronger emphasis on offender welfare is the main feature that distinguishes the judicial treatment of young offenders compared to adult offenders (Seymor, 1988). It would be reasonable to expect that welfare issues will be a stronger concern when dealing with very young offenders and that justice issues will assume greater importance as youths approach legal adulthood. If this is the case, then one would expect that the relatively few very young offenders who are incarcerated will be particularly troublesome. In other words, because of greater judicial leniency toward very young offenders, in order to be incarcerated they have to be in some way more serious or recalcitrant than older offenders. This suggested judicial processing bias would account for age being negatively related to offending risk among incarcerated youths. As the age-recidivism relationship observed here held at both the first and second assessments, is consistent with results reported elsewhere and can be meaningfully interpreted, current age was retained as a predictor variable.

The items remaining for inclusion in a recidivism risk index were:

- Number of proven offences committed prior to the SECAPS assessment
- Combined frequency of recent alcohol and inhalant use
- Current age
- Age at first proven offence (official records)
- ADHD signs index (self-reported difficulties with restlessness, concentration, impulsiveness and boredom)

It was considered that a combination of the above variables would provide the most robust and reliable risk assessment tool. More detailed results of the relationships of each of these variables to recidivism are presented in Tables 4, 5, 6, 7 and 8.

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Table 4: *Alcohol-inhalant use index (ALCIN) scores by recidivism status at 6 months follow-up*

	6 months post-release after 1st SECAPS			6 months post-release after 2nd SECAPS		
ALCIN scores	% not reoffend	% reoffend	*n*	% not reoffend	% reoffend	*n*
1.0	37.0	63.0	92	54.2	45.8	24
1.5	35.2	64.8	122	52.6	47.4	19
2.0	36.8	63.2	114	43.5	56.5	23
2.5	16.7	83.3	48	22.2	77.8	18
3.0	26.4	73.6	53	25.0	75.0	16
3.5	20.0	80.0	10	0.0	100.0	2
4.0	20.0	80.0	5	-	-	0
4.5	0.0	100.0	2	-	-	0
5.0	-	-	0	0.0	100.0	1
Total	32.3	67.7	446	39.8	60.2	103

Note: ALCIN is the sum of the frequencies of alcohol use and inhalant use during the last 4 weeks before placement in secure care. A score of 1.0 indicates that neither substance was used. A score of 5.0 indicates daily use of both substances.

Table 5: *Age at SECAPS assessment by recidivism 6 months after release*

	6 months post-release after 1st SECAPS			6 months post-release after 2nd SECAPS		
Age	% not reoffend	% reoffend	*n*	% not reoffend	% reoffend	*n*
11	0.0	100.0	1	-	-	-
12	0.0	100.0	6	-	-	-
13	20.0	80.0	25	0.0	100.0	2
14	25.9	74.1	54	0.0	100.0	7
15	30.3	69.7	66	50.0	50.0	16
16	28.0	72.0	100	32.0	68.0	25
17	37.4	62.6	155	40.0	60.0	40
18	43.9	56.1	41	58.3	41.7	12
19	100.0	0.0	3	100.0	0.0	2
Total	32.4	67.6	451	39.4	60.6	104

Table 6: *Age at time of first proven offence by recidivism status 6 months after release*

	6 months post-release after 1st SECAPS			6 months post-release after 2nd SECAPS		
Age	% not reoffend	% reoffend	*n*	% not reoffend	% reoffend	*n*
10	0.0	100.0	8	50.0	50.0	2
11	26.3	73.7	19	40.0	60.0	10
12	20.9	79.1	67	30.8	69.2	26
13	28.1	71.9	89	22.7	77.3	22
14	28.6	71.4	105	48.4	51.6	31
15	33.0	67.0	88	58.3	41.7	12
16	52.8	47.2	53	100.0	0.0	1
17	71.4	28.6	21	-	-	-
18	0.0	100.0	1	-	-	-
Total	32.4	67.6	451	39.4	60.6	104

Table 7: *ADHD signs index by recidivism status 6 months after release*

	6 months post-release after 1st SECAPS			6 months post-release after 2nd SECAPS		
ADHD	% not reoffend	% reoffend	*n*	% not reoffend	% reoffend	*n*
4	17.7	82.3	96	37.5	62.5	32
5	35.7	64.3	112	19.0	81.0	21
6	38.2	61.8	110	43.5	56.5	23
7	32.0	68.0	75	46.7	53.3	15
8	41.5	58.5	53	66.7	33.3	12
Total	32.5	67.5	446	39.8	60.2	103

Table 8: *Number of proven offences committed prior to the SECAPS by recidivism status 6 months after release*

	6 months post-release after 1st SECAPS			6 months post-release after 2nd SECAPS		
Prior Offences	% not reoffend	% reoffend	*n*	% not reoffend	% reoffend	*n*
0-5	54.7	45.3	53	-	-	-
6-10	37.9	62.1	66	66.7	33.3	3
11-20	41.4	58.6	116	50.0	50.0	10
21-40	23.0	77.0	165	35.7	64.3	42
41-60	15.4	84.6	39	40.0	60.0	30
61+	0.0	100.0	12	36.8	63.2	19
Total	32.4	67.6	451	39.4	60.6	104

The young offender recidivism prediction index is calculated as follows:

Risk Index (RI) = (Alcohol + Inhalant use frequencies)/2 + Number of prior offences – ADHD signs index – Current age – Age at 1st offence + 43.

A constant (43) is added to make all Risk Index scores positive and to set the lowest possible score to 0. The items that make up the ADHD signs index are scored in a negative direction, which is why they are subtracted rather than added to the Risk Index. As the number of previous offences had a large range of values (0-103), without adjustment this item would have swamped the variance of the other variables in the index. Accordingly, the numbers of offences were recoded into a more limited number of categories. These were: 0 (0-5 offences); 1 (6-10 offences); 2 (11-20 offences); 3 (21-40 offences); 4 (41-60 offences); 5 (61 or more offences). Little predictive information is lost

due to this recoding. The correlations between subsequent 6-month recidivism status and prior offending were .28 and .08 at the first and second assessments. The same correlations with the recoded prior offending variable were .26 and .07 respectively. Risk Index scores have a possible score range of 0-28. A user's guide to calculating the recidivism Risk Index is provided in Appendix 7.

Table 9: *Correlations between the RISK index and recidivism status 6-months post-release after first and second SECAPS assessments*

Group	*r*	*p (1-tailed)*	*n*
First assessments			
All	.34	.000	445
Males	.32	.000	407
Females	.53	.000	38
Aboriginal	.41	.000	118
Non-Aboriginal	.33	.000	327
age ≥ 16 yrs	.34	.000	295
age ≤ 15 yrs	.30	.000	150
Second assessments			
All	.32	.001	103
Aboriginal	.43	.007	32
Non-Aboriginal	.28	.008	71
age ≥ 16 yrs	.30	.004	78
age ≤ 15 yrs	.36	.041	25

The Risk Index is computed by summing items, as is done in the Burgess method. Unlike the Burgess method, the items have not been dichotomised, thereby retaining more information. The items have not been standardised to make them equal with regard to either absolute score ranges or standard deviations. However, no item varies more than about twice that of any other item on these parameters. The computational method is sufficiently simple to allow assessors to calculate the Risk Index by hand if necessary.

The Risk Index correlated significantly with recidivism in both the first and second assessment subject groups. The correlations in various sex, Aboriginality and age subgroups were within the range of .28 - .53 and all were statistically significant.

A statistic now often used in studies where predicted outcomes are dichotomous variables is the Receiver Operating Characteristic (ROC) Area Under the Curve (AUC). Unlike a number of other statistical procedures (including correlations), the ROC AUC statistic is not influenced by differences in the base rates of the variables investigated. In the case of recidivism risk, this allows better comparison of the predictive accuracy of instruments tested on populations with different recidivism rates. ROC AUC values range from 0 (100% negative predictive accuracy) to 1 (100% positive predictive accuracy). A value of .5 indicates that the predictive accuracy is the same as the base rate. Increasingly higher values above .5 indicate progressive improvement over the base rate. The Risk Index's ROC AUC for 6-month post-release recidivism after the first SECAPS assessments was .70 (95% Confidence Interval = .65-.75) and .68 (95% Confidence Interval = .57-.78) after the second assessments.

The above correlations and ROC curve areas compare very favourably with similar statistics for adult offender populations using the Hare Psychopathy Checklist – Revised (PCL-R) and the LSI-R. Hemphill, Hare, & Wong (1998) in their review reported an average correlation between the PCL-R and general recidivism of .27.

In their meta-analysis Gendreau, Little and Goggin (1996) identified the LSI-R as the most useful actuarial measure for the prediction of adult offender recidivism, placing it ahead of the Salient Factor Scale (SFS), Wisconsin, a collection of "other" risk scales, MMPI scales and the Hare PCL-R. Gendreau et al. (2002), drawing on a number of previous studies, reported average phi coefficients between the LSI-R and general recidivism for adult male and female offenders of .33 and .45 respectively. The strengths of these relationships are very similar to those obtained here with the Risk Index. It is interesting to note that the same relative increase in predictive validity for females compared to males is observed with both instruments. Farrington and Painter (2004) also found that their risk scores (based largely on family background variables), although valid for both genders, more accurately predicted offending among girls than boys. The reason for this, however, is unclear. The youth version of the LSI-R, the YLS/CMI (Hoge & Andrews, 1999) has been reported to have a correlation of .30 with new criminal

convictions (Hoge & Andrews, 1995). Again, the Risk Index developed here compares favourably with this figure.

Although the Risk Index was developed using the observed associations between variables with general recidivism status at 6 months post-release, it is of interest to see whether the index has predictive validity for other periods of time and different types of offences. Table 10 presents correlations between the Risk Index and three categories of offence types for four different follow-up periods ranging from 3 to 12 months. General recidivism includes all offences, violent recidivism includes offences that are of a hostile nature directed at another person and non-violent recidivism includes all offences remaining after violent offences have been removed from the pool of general offences. Further details about which specific offences are classified as violent can be found in Appendix 6. All subjects in the 3 and 6 month follow up blocks were released from secure care 6 months or more before the end of the follow up period. All subjects in the 9 and 12 month blocks were released a minimum of 12 months before the end of the follow up period.

Inspection of Table 10 reveals that the Risk Index appears to have predictive validity for recidivism for different categories of offences throughout the first 12 months following release from secure care. The correlations with general recidivism and with non-violent recidivism are very similar. This was expected as non-violent offences account for most of the committed offences in the general offence category. Although almost all of the correlations between the Risk Index and violent recidivism are statistically significant, they are generally weaker than those for general recidivism.

Validation of the recidivism Risk Index

The Risk Index validation sample comprised all youths assessed with the SECAPS in secure care between January and July (inclusive) 1998. Six-month post-release offending status was the predicted outcome (breaches of bail or bonds were not counted). Offences recorded at Family Conferences were included in Offender history. Records of offending were followed up through to April, 2001, thereby ensuring that almost all matters pertaining to offences committed within 6 months of release had been processed and finalised by the courts. Only South Australian Family Conference and Court outcomes were available. Two subjects had incomplete SECAPS assessment data and one subject

Table 10: *Correlations between the RISK index and recidivism status 6-months post-release after first and second SECAPS assessments*

	Follow-up period			
Recidivism group	3 months	6 months	9 months	12 months
First assessment				
General	.28	.34	.37	.34
Violent	.13	.19	.20	.22
Non-violent	.28	.32	.37	.33
n	445	445	437	437
Second assessment				
General	.24	.32	.29	.22
Violent	.28	.20	.25	.22
Non-violent	.16	.30	.29	.22
n	103	103	78	78

Note: All first assessment correlations are significant at $p<.000$ except for violent recidivism at 3 months ($p=.003$). All second assessment correlations are significant ($p<.05$) except for non-violent recidivism at 3 months ($p=.06$).

was not released from secure care for more than two years after the assessment. These subjects were excluded from further analysis. Of the remaining 149 youths, 27.5% were Aborigines and 94.6% were males. Ages ranged from 11 to 19 years (mean age = 16.0 years). Most of the offenders (81.2%) were in the 15 to 18 years age range. Most of the SECAPS assessments carried out during the study period were first assessments (79%), though a number were second (17%), third (3%) and fourth (1%) assessments. The predicted outcome was recidivism status at the end of 6-months after release from secure care. Records showed that 63.8% of the youths were convicted or proved to have committed a new offence within this period. The RISK index (calculated using the

algorithm from the development sample) correlated significantly with recidivism (r=.36, p<.000). The ROC AUC value was .71 (95% Confidence Interval = .62 - .79).

The construction method used here is a rational-empirical approach. Could a more sophisticated analytic method produce a more accurate Risk Index? To explore this, a backward stepwise logistic regression was carried out on data from the first assessment sample. Variables initially entered were those that had significant correlations with recidivism at the first assessment (second assessment results were ignored) and whose relationship with recidivism could be meaningfully interpreted. The variables satisfying these conditions were all those selected for inclusion in the original Risk Index with the addition of an item that asked whether any natural parents or siblings had ever been in trouble with the law. At the first step of the regression, neither age at first offence nor whether other family members had been in trouble with the law were significantly associated with recidivism. These two items were removed. The remaining variables were re-entered and final logit coefficients (B) were calculated (see Table 11). Applying these to the retained variables, the probabilities of recidivism at 6 months post-release were estimated. As expected, there was a slight improvement in the predictive accuracy of the revised index compared to the original index when applied to the construction sample (AUC .73 vs. .70), but no improvement in the second assessment (AUC .68 vs. .68) and validation (AUC .70 vs. .71) samples. Thus, in other than the construction sample, the two analytic methods give equivalent results. The original Risk Index can be easily calculated by hand whereas the calculation of the index derived from the logistic regression requires a computer – which might be inconvenient in some applied settings. The method used in the construction of the original index is less likely to inflate predictive accuracy in the construction sample, thereby allowing greater confidence in the use of results from that sample as normative data. For these reasons the original Risk Index is preferred and further results and discussion will consider only the original Risk Index.

Table 11: *Logistic regression results (1st SECAPS assessment sample)*

	B	*SE*	*df*	*p*	*Exp(B)*
Age	-.361	.082	1	.000	.697
ALCIN	.208	.082	1	.011	1.232
ADHD	-.186	.085	1	.028	.830
Prior offences	.573	.095	1	.000	1.774

Constant	5.615

Use of the Risk Index

Table 12 presents the observed recidivism rates of young offenders according to different Risk Index scores (scores are truncated to whole integers). Data for both first and second SECAPS assessments (construction sample) are combined so that the total is the number of assessments, not the number of youths assessed. It can be seen that there is an orderly increase in the rate of recidivism as the Risk Index scores increase. The same orderly progression can be seen in the results from the validation sample (see Table 13). The most reliable estimate of reoffending likelihood for any particular Risk Index score is obtained from a combination of all the post-assessment outcomes from both the construction and the validation samples. Those data are presented in Figure 1 (the same data in tabular form are presented in Appendix 7).

Table 12: *RISK scores by proven reoffending status at 6 months after release following SECAPS assessment (construction sample)*

RISK Score	Not reoffend	Reoffend	Total	% reoffend
2-3	6	0	6	0.0
4-5	13	4	17	23.5
6-7	20	20	40	50.0
8-9	43	43	86	50.0
10-11	38	80	118	67.8
12-13	28	74	102	72.5
14-15	24	64	88	72.7
16-17	12	52	64	81.3
18-19	1	18	19	94.7
20-21	0	7	7	100.0
22-23	-	0	-	
24-25	0	1	1	100.0

Total	185	363	548	66.2

The overall recidivism rate at 6 months is 66%. Those with Risk Index scores of 18 or greater can be regarded as being at extremely high risk of reoffending. Only one assessment out of 35 with such a score did not have a new proven offence recorded within 6 months (97% recidivism). At the other end of the continuum, only 5 assessments out of 33 that had Risk Index scores of 5 or less were associated with reoffending in the same time period (15% recidivism) and could be, therefore, considered to have a relatively low recidivism risk during the first 6 months post-release. The majority of youths fell between these extremes. Although some further grading of risk within this subgroup could occur, those with Risk Index scores between 6 and 17 could simply be described as being at High risk. Their recidivism rate ranged between 48-81% with a subgroup average of 67%.

Table 13: *RISK scores by proven reoffending status at 6 months after release following SECAPS assessment (validation sample)*

RISK Score	Not reoffend	Reoffend	Total	% reoffend
2-3	1	1	2	50.0
4-5	8	0	8	0.0
6-7	10	8	18	44.4
8-9	10	15	25	60.0
10-11	13	25	38	65.8
12-13	8	18	26	69.2
14-15	3	15	18	83.3
16-17	1	5	6	83.3
18-19	0	5	5	100.0
20-21	0	3	3	100.0
Total	54	95	149	63.8

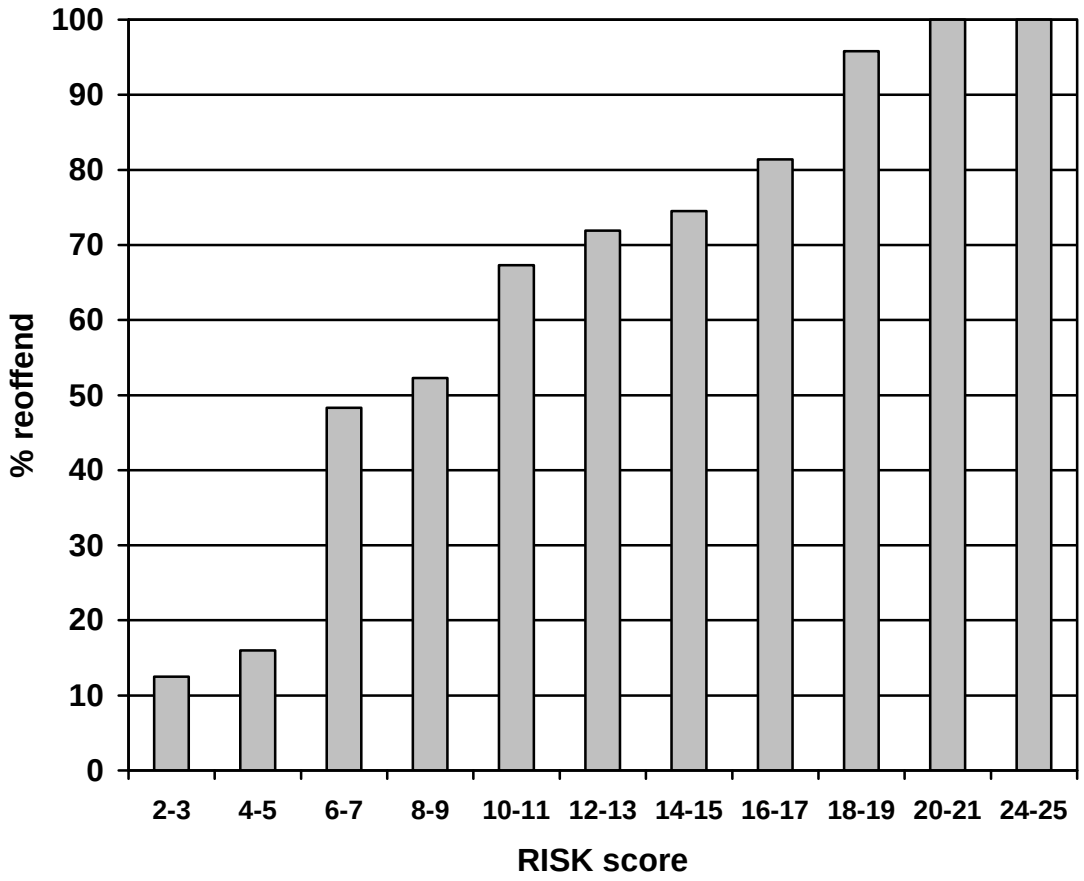

Figure 1: RISK scores by proven reoffending status at 6 months after release following SECAPS assessments (construction and validation sample assessments combined, *n*=697)

While it is not possible to say whether any individual will definitely offend or not, using the SECAPS Risk Index it is possible to assign an objectively derived level of risk, at least with incarcerated youths in South Australia. The index is likely to be valid with incarcerated youths in other Australian jurisdictions, though that still awaits empirical confirmation. It is not suggested here that decisions regarding supervision, program eligibility, early release and so on should be based solely on Risk Index scores. Nevertheless, these scores might prove to be useful information to take into account in such decisions, particularly as no other recidivism risk assessment tool for young offenders

has been locally validated. In those cases where recidivism risk is elevated, the two dynamic risk factors in the Risk Index (i.e., ADHD signs and alcohol/inhalant use) could be considered as potential targets for intervention. Youths whose ADHD signs are elevated might be further assessed to determine whether they meet the criteria for a diagnosis of ADHD and, if confirmed, be offered treatment. Such information, together with a suggested level of supervision (based on matching the level of service provision to the assessed risk) could be included when describing a youth's recidivism risk. As Monahan and Steadman (1996) have pointed out, communicating the likelihood of an event is only useful if it influences decisions made by the recipients. Usefulness will, therefore, be enhanced if, along with estimated risk, guides to appropriate action are also included.

Items that did not predict recidivism status

Bonta (2002) has stated "There are two general classes of behaviours that are important to corrections: (a) rule violation (in a very general sense) and (b) psychological instability" (p.260). The content of the SECAPS reflects this. In addition, a number of responsivity measures are also included. Items that relate to psychological instability or distress (e.g., mood and suicidal ideation) and responsivity (e.g, reading and sensory problems) did not have significant associations with recidivism, nor was there a strong expectation that they would. However, it was a little surprising that a number of variables related to rule violation were not significantly associated with recidivism, particularly as many of the items were originally selected, in part, because they had been previously found to discriminate between young offenders and non-offenders. Detailed discussion of some of these items (e.g., use of certain substances, tattoos, truancy) has occurred in previous chapters. There are a number of possible sources of error that might have weakened some of the relationships. However, an important factor is likely to be the relative homogeneity of the sample with regard to delinquency status. Given enough time almost all the youths will reoffend. These were mostly high risk youths, almost all with existing offending histories. Thus, a number of the SECAPS items, while likely to discriminate between delinquents and non-delinquents, fail to predict well within a target group of known serious offenders.

Contrary to expectations, family structure was not significantly related to recidivism. Previous research has found that family structure is related to the risk of delinquent

behaviour (Matsueda & Heimer, 1987) and tends to distinguish between court adjudicated recidivists and non-recidivists (Putniņš, 1984). However, the population dealt with here, as is reflected in their incarceration status, is likely to be more extreme in its offending behaviour than a random sample of youths who appear before the courts. Although Tollett and Benda (1999) found a very modest relationship between re-incarceration of young offenders and living in a one- versus two-parent home, that might reflect an influence of family structure on sentencing outcomes rather than on recidivism. Perhaps it is not family structure that directly relates to offending but family conflict. This is not a novel suggestion. Early last century Hart (1923) observed "…that the destructive factor in early environment is the demoralising atmosphere of a quarrelling, discordant home and the bad example of anti-social parents and brothers rather than the mere absence of one parent from the home…" (p.408). Family structure serves as a proxy variable for family conflict in general populations, including general young offender populations. However, when more chronic or serious offenders are examined, it is possibly a poor proxy and a more direct measure of family conflict needs to be used. Juby and Farrington (2001) found that intact families characterised by high levels of conflict had the same rate of delinquency among male children as did disrupted families. This supports the point that conflict rather than structure is the critical variable, which is in accord with earlier findings (West & Farrington, 1973) that family separations caused by death or illness are not particularly criminogenic, whereas those where parents deserted or divorced were. The same researchers later found that family separation did not predict chronic versus non-chronic offending (Farrington & West, 1993). Thus, although this variable distinguishes between offenders and non-offenders, it does not discriminate well within offender populations, again suggesting that a more direct measure of family harmony and parental commitment needs to be used with more serious young offenders.

The same might be the case with anger. Reporting having a bad temper was significantly related to recidivism only after the second SECAPS assessment. A more detailed examination revealed that this held only for Aboriginal youths 16 or older (r=-.66, p=.003, n=18). Due to its inconsistency between subgroups in the second assessment and absence of any relationship in the first assessment group, this item was not included in the risk index.

After failing to find any significant associations between recidivism and anger inventory scores among incarcerated adult male offenders, Loza and Loza-Fanous (1999a,

1999b) questioned the usefulness of assessing anger for the prediction of either violent or nonviolent recidivism. This was supported by Mills and Kroner's (2003) report of an absence of significant relationships between anger and post-release recidivism in a sample of violent offenders. Simourd and Mamuza (2000), using a measure of interpersonal hostile interpretations with incarcerated violent offenders, found their measure to be largely independent of offence conviction and misconduct variables. Self-reports of whether feelings of anger were experienced immediately before committing a crime have failed to distinguish between either subsequent recidivists and non-recidivists or between violent and non-violent offenders among incarcerated adult males (Serin & Mailloux, 2001). While death of the victim is the most extreme possible outcome of aggressive behaviour, excessive anger has not been found to characterise juvenile sexual homicide offenders (Myers & Monaco, 2000). There appears to be little difference between the predictors of general recidivism and violent recidivism. Sexual offence recidivism is an exception in that it is better predicted by measures of sexual deviancy, though the predictors of general recidivism still influence recidivism risk even in these rather more specific cases (Hanson & Bussière, 1998). Capaldi and Patterson (1996) also found that there was little difference in the backgrounds of violent young offenders and frequent but non-violent young offenders. Similarly, a detailed investigation by Piquero (2000) considered whether it was possible to distinguish frequent violent offenders from frequent non-violent offenders. It was concluded that they are indistinguishable and that increased violent offending was largely a function of increased general offending frequency. In other words, the more one offends the more likely it is that violent offending will occur. Consistent with this, the risk factors for aggression and violence in children and adolescents that Borum (2000) has summarised are largely the same as those for general offending. Anger does not figure prominently among them. Other researchers (Pulkkinen, 1996; Vitaro, Bredgen, & Tremblay, 2002; Vitaro, Gendreau, Tremblay, & Oligny, 1998) have failed to find significant predictive relationships between reactive aggression (aggression that is in response to provocation and involves anger) and either delinquency in adolescence or antisocial behaviour in early adulthood. These same researchers, however, found significant relationships between proactive aggression (also known as instrumental or predatory aggression – which is deliberate, goal directed and does not necessarily require anger) and future delinquency and antisocial behaviour. Although reactive and proactive aggression are highly correlated, each has different relationships

with other variables. However, if reactive (i.e., anger driven) aggression has little or no relationship to future delinquency, this does not necessarily mean that anger management programs are ineffective as criminogenic needs focussed interventions with offenders. In attempting to improve emotional self-regulation, most such programs seek, among other things, to reduce impulsivity, enhance consideration of long-term versus short-term consequences of actions and, either implicitly or explicitly, explore the morality of inflicting harm on others. These are all elements that extend beyond anger management and have application to reducing general offending. Furthermore, while reactive aggression might not be a good predictor of future offending, this does not rule out the possibility that among recidivist offenders there is a subgroup among who anger has a causal role in some of their offences. Anger management could, therefore, still be a valid criminogenic needs intervention. This is to some extent supported by findings from Dowden and Andrew's (1999) meta-analysis of what works in young offender treatment. Although anger was not listed as a separate criminogenic need, it was incorporated in the category of "anger/antisocial feelings". Interventions that targeted this category of need were found to significantly reduce reoffending. A later meta-analysis (Latimer, Dowden, & Morton-Bourgon, 2003) examined anger management as a separate category and identified it as the most encouraging treatment intervention for the reduction of recidivism among young offenders.

There is, of course, an important caveat to be made regarding the relationships between the variables measured here and recidivism. Strictly speaking, what is reported are the results of the relationships between subjects' answers to particular questions. While it is likely that often there are relationships between item responses and the underlying constructs that the items are intended to measure, this cannot be assumed in all cases. The lack of a significant statistical association might not always mean that the underlying construct has no relationship to recidivism risk. It could be that the item is a poor measure of the construct. The results obtained here, together with practical experience gained from using the SECAPS, have been used to address this issue by revising some of the content of the assessment. Details of the changes made are discussed in the last chapter. No changes have been made to any items in the Risk Index. However, the results here also raise the more general question of what errors could weaken or distort the associations between the SECAPS variables and recidivism. These are discussed below.

Possible sources of error

1. Deliberate distortion of responses by subjects during the SECAPS assessment. While attempts are made to maximise each subject's truthfulness, it is inevitable that some subjects will dissimulate. There are limits to what can be done to encourage offenders' openness in responding. The extent of dissimulation is difficult to quantify. Furthermore, dissimulation can be selective and in individual cases might occur in response to only a few items. In such cases validity or lie scales would less likely detect faking. The reliability and validity of information collected could be enhanced by using multiple sources such as file reviews, other youth worker and social worker observations, interviews with parents or caregivers and so on. This is not practicable in a brief routine screening assessment. However, the possibility of using multiple information sources should be considered if either the SECAPS assessment moved beyond being a screening assessment or if a second assessment tier was added in cases where particular youths are identified as requiring more detailed assessment and follow-up.
2. Incorrect initial recording on the SECAPS record sheets by subjects or assessors. Such errors can and do occur. Sometimes missing responses or inconsistencies are detected when entering the data into the SECAPS database. When this occurs the person entering the data will contact the assessor for clarification. This can sometimes require the assessor to see the youth again in order to confirm the correct response. Items that involve computing a result (e.g., reading score, numeracy score, Coloured Progressive Matrices score) are usually checked again and corrected if necessary when entering scores into the database. While not quantified, it is presumed that initial recording mistakes are a minor source of error.
3. Incorrect keying of responses into the SECAPS database program. Errors can and do occur at this stage. Some control of appropriate data entry has been built into the program. Values that can be accepted in most fields are restricted to the highest and lowest theoretically possible values, thereby preventing the entry of values that cannot be real. In a number of cases where an item is a supplementary question, data entry is barred unless the previous item was answered in a way that logically allows the

supplementary question. For example, a value for the quantity of alcohol typically consumed cannot be entered unless an earlier item indicated that the frequency of consumption during the last month was greater than zero. This prevents illogical sentences being generated in the report and helps to reduce incorrect data entry. Furthermore, data entry has always been restricted to just a few select staff. This is for three reasons. First, to ensure that those who enter the data are experienced and completely familiar with the program. Second, to provide some degree of quality control regarding detecting recording errors and the appropriateness of comments and recommendations made by the assessor. For example, if a youth reports recent suicidal ideation and a recent suicide attempt but no mention is made of these in the Additional Comments and Observations section, then the person entering the data will contact the assessor and seek further information and a recommendation. If the assessor is not immediately available, the person entering the data will add a footnote indicating that there is a need for some further action to be taken. To fulfil this role means that those who carry out the data entry need to be experienced assessors who are alert to the implications of various subject responses. Third, restrictions on who uses the SECAPS software help prevent either accidental or deliberate deletion of data or other inappropriate changes. As a further aid, the SECAPS database is password protected to prevent unauthorised use. The above ensures that data entry is done only by experienced and diligent staff. While not eliminating data entry errors it helps to minimise them. Sometimes an inconsistency is noticed when reading a report or when comparing different reports for the same youth. As all original assessment records are retained, if there is any doubt about the accuracy of the data entry, the original recording sheets are checked. If necessary, corrections are then made to the database. Double entry of data could be used to further reduce entry errors. The second entry verifies the accuracy of the first entry and data are not accepted unless there is complete concordance between the two series of entries. While this would improve accuracy, the extent of data entry errors is not felt to be sufficient to justify the additional time (let alone staff boredom) of double data entry.

4. SECAPS software errors. The software has been developed, refined and tested over a number of years. It is highly unlikely that this is a source of data error.
5. Unrecorded death of subject during follow-up. Antisocial lifestyles are often associated with various health risks, including premature death (Shepherd &

follow-up period) it is likely to be a relatively minor source of error. This error was reduced further when analysing the data here by taking into account reports of 3 known deaths. In the validation sample, offending records indicated that at least 4 subjects died after release from secure care. This is a minimum number as deaths are not always recorded in offender histories. However, none of these deaths occurred during the 6-month post-release period.

6. Subjects left the state, that is, they moved to another jurisdiction during the follow-up period or came from another jurisdiction before offending in South Australia. One subject during the follow-up period was reported in the press as having committed a homicide in another state. With that one exception, no records of offending outside South Australia were available. From practical experience it is known that some youths assessed in secure care have offending records in other jurisdictions. Thus, the offending records used here, in some instances, are likely to be incomplete. The extent of this is not clearly known. I am not aware of any studies in Australia that have examined the migratory or offending patterns across different jurisdictions of a secure care young offender cohort. However, it is presumed that most of the youths assessed committed all or most of their offences in South Australia. Access to the police national offender database would have helped compile more comprehensive offender histories. During the early stages of this research I was advised that it was unlikely that access to the national database would be granted. This was not, therefore, pursued further. Departmental file information sometimes mentions previous offending in other jurisdictions, though if recorded (which is rare), it is not recorded in any systematic way. This makes it difficult to locate and even if is recorded it often lacks detail. Furthermore, in practice it is unlikely that assessors doing brief screening assessments will have the time and immediate access required to examine the relevant client files. Although not as accurate as official records, asking youths about previous offences in other jurisdictions is one way of gathering information about previous offending history. However, without access to official records it is difficult to monitor offences committed in other jurisdictions during the post-assessment follow-up. The only indication of what the prior incidence of offending in other jurisdictions might be comes from an ongoing study that I am carrying out of a variation of the SECAPS called the Community Adolescent Psychosocial Screening (CAPS; Putniņš, 2002c). This assessment is used primarily to screen youths placed on community service orders

(i.e., work orders), though small numbers of youths involved in other community based youth justice programs are also being screened. One item asks whether the youth has had any prior proven offences dealt with in other jurisdictions. At the time of writing 188 assessments of youths on community service orders had been carried out. In 2.1% of these assessments respondents acknowledged committing offences that were dealt with in other jurisdictions. As this is based mainly on self-report it might be an underestimate. Furthermore, a community based sample of youths might be expected to generally have lower offending rates than a sample drawn from youths in secure care. However, the limited information at hand suggests that the lack of records about offending in other jurisdictions is unlikely to seriously distort the predictive validity statistics at the group level among the youths studied here, though it will distort the accuracy of the risk assessments of a few individual youths.

7. Subjects changed names. On some occasions this might be a formal name change by deed poll, though more commonly the use of different names, particularly surnames, is informal. Experience suggests that this most often happens with youths from blended families or where the natural parents have retained different surnames. Some youths change their surnames as a result of changes in their relationships with parents and step-parents. As a result, the correct matching of subjects' assessment and offender records might sometimes not be complete. The extent of this is unknown. The chances of correct matching are improved by recording other surnames used (where known) in the SECAPS records. The problem of matching records would be greatly reduced if a national identity card or personal identity number was available.
8. Some subjects might later be incapacitated in some way so that their ability to offend was severely curtailed, for example suffering a serious injury. This has little to do with changes to a presumed latent psychosocial variable of criminal propensity. It is an unforseen restriction of opportunity, though the result is that it will reduce the accuracy of predictions made on the basis of the latent psychosocial variable. In principle this could be controlled for by obtaining detailed post-release social and medical histories of all the subjects. In practice, however, the resources required to do that would not be available to most researchers. Desistance from offending due to serious injury has been little researched. While perhaps not a major source of error, it could have a significant effect on predictive accuracy, possibly more so than the effect of subject

deaths because serious injuries (particularly in motor vehicle accidents) are likely to be more common.

9. Offenders are not apprehended for all their offences nor do all legitimate apprehensions (i.e., where the person apprehended is genuinely guilty) result in the charges being proved.
10. Some subjects will have been apprehended and charged for offences committed during the follow-up period that were finalised only after the follow-up period. Sometimes there are delays in apprehension but more commonly there are delays in processing through the courts. The omission of some offences due to processing or apprehension delays can be reduced by examining court records over longer periods. In most cases the offending records of the subjects studied here were examined for more than a year beyond the youths' release from secure care, thereby ensuring that most (though not necessarily all) new offences committed during the 6-month post-release period will have been recorded.
11. Police, court and Family and Youth Services records contain a variety of clerical recording errors and deliberate distortions by subjects when giving their particulars such that matching of SECAPS results and offending outcomes is impeded and in some cases prevented. The extent of this is difficult to quantify.
12. Some subjects might be apprehended and convicted for offences that they are innocent of.
13. Inconsistencies between different assessors in how the SECAPS is administered such as explanation of items, follow-up questions to clarify responses and so on. Some variation among assessors is inevitable, particularly as a number of assessors are youth workers without formal training in assessment. Inconsistency is minimised by using standardised written questions with, in most cases, a limited number of defined response categories.
14. Post-assessment interventions are not uniformly administered to all subjects, including the amount of time spent in detention. These might significantly alter risk levels and thereby alter the strength of predictive relationships.
15. Inherent instability in subjects' responses - particularly with subjects who are often characterised by impulsiveness, restlessness, poor concentration, lowered cognitive functioning, poor literacy, conduct problems (which at times can include surliness and unco-operativeness). For example, a youth who has just been disciplined by staff or

denied early release might respond differently on some items if assessed immediately after the event compared to how they might have responded at another time. Some minor control of this is possible by assessors exercising discretion about when it is best to assess a youth. However, this is not always possible due to time constraints imposed by other work-related duties. Assessors are not always informed of what emotional or motivational state each youth is in immediately prior to the assessment.

16. There is no single best outcome measure of offending or related antisocial behaviour (compare number of new offences, number of convictions, number of detentions, scaling of offence seriousness [which might require the consideration of aggravating and mitigating circumstances - though this can be very difficult to do], parole violations, disciplinary infringements during custody etc).
17. Errors of a computational nature made in the analysis or incorrect statistical procedures applied. Computational errors in the data analysis are unlikely to be a major source of error as most of the reported statistics reported here were recalculated a number of times and were always recalculated if a result appeared to be unusual.
18. Almost all measures of psychological and social variables are prone to some degree of measurement error. As discussed at the end of chapter 4, the main psychometric weakness of measures from the SECAPS is lowered reliability. This is exacerbated by the use of single items or scales with relatively few items. Lowered reliability will tend to attenuate the strength of associations - in this case between the SECAPS measures and recidivism. Being a time-limited screening assessment places practical constraints on the length of the SECAPS and, thus, on the number of items available to measure any particular psychological or social characteristic. Nevertheless, improvement of the item content might be possible. This is considered in detail in the next chapter.

The possible errors discussed above are not unique to either this study or this jurisdiction. Some are either relatively minor or, with appropriate procedures, can be minimised. However, one of the most serious sources of error is also difficult to control, namely that the outcome being predicted is imperfectly measured. At the latent variable level the concern is to measure and predict offending behaviour. At the manifest level this is measured by matters that have been processed and proved in the judicial system. There is little need to labour the obvious point that official offending records have only a very approximate relationship with the latent level variable. Even if a recidivism risk prediction

instrument had a perfect relationship with the latent variable it will never have a perfect relationship with offending at the manifest level. Because of error in the outcome measure due to the discrepancy between officially recorded offences and all crimes committed, it is likely that the predictive strength of most risk measures are underestimates of their predictive validities in relation to all offending (i.e., not just adjudicated offences).

Conclusion

Despite various sources of error that could weaken predictive accuracy, the results obtained with the SECAPS index of recidivism risk compare well with the predictive validities reported elsewhere for other risk instruments. The SECAPS Risk Index is robust in that it holds up well across different gender, age, and ethnic groups. Its validity was further confirmed in a sample that was independent from the construction sample, with no shrinkage in the magnitude of predictive validity. The predictive accuracy of the SECAPS Risk Index appears to be good enough to justify its use to assess the recidivism risk status of young offenders admitted to secure care in South Australia, and possibly in other jurisdictions that have similar juvenile justice systems. By refining the content of the SECAPS it is hoped that in the future additional validated dynamic risk items will be added to the Risk Index to improve its predictive validity.

Chapter 9
Revision of the SECAPS and conclusion

As stated in the introduction to this work, one of the aims here was to try to improve the SECAPS. This chapter describes and provides rationales for the most recently implemented changes to the SECAPS. Revision of the SECAPS was informed by practical experience and the research results presented earlier in this work. Some of the changes were foreshadowed in earlier chapters. The full content of the revised SECAPS forms is presented in Appendix 8. An assessors' interpretive guide for the revised SECAPS is presented in Appendix 9. Since December 2003 the revised version has been in routine use in South Australian detention centres and has fully replaced the previous version. Brief descriptions of other assessment instruments that are variations of the SECAPS are also provided later in the chapter. The concluding remarks reflect on a commonality in the results of a number of the studies reported here and revisit the question of the usefulness of the SECAPS.

The revised SECAPS

Self-report

While it is desirable in clinical work with adolescents to seek information from other sources such as parents and teachers, if just one source can be used, information gained from the adolescent is more likely to uncover adjustment problems (Cantwell, Lewinsohn, Rohde, & Seeley, 1997). A moderate correspondence between youth and parent reports of child psychiatric and behavioural problems has been found (Edelbrock, Costello, Dulcan, Conover, & Kala, 1986). This tends to increase with the child's age and is higher for externalising problems. However, there are problem behaviours such as illicit substance use that, because they are not readily observed, parents might not be fully aware of (see O'Donnell et al., 1998). Similarly, other studies have shown that maternal reports of the suicidality of their adolescent children are considerably lower than those provided directly by the youths themselves (Klimes-Dougan, 1998), suggesting that even close informants are not always accurate regarding internalising problems. While the use of other information sources is likely to give a more complete and balanced picture of each youth, the time and staff constraints that the SECAPS program works within make this

impractical. The use of youths' self-reports as the main information source is, therefore, retained.

Literacy & numeracy

No changes have been made to the literacy items. However, the Concise Word Reading Tests (Andrews, 1974) - form C of which is used as the SECAPS reading task - were normed in the late 1960s. There is a need to confirm the current validity of those norms. A study to calibrate the Concise Word Reading Tests' Form C with other standardised reading tests would be useful.

Both the first two numeracy items are subtractions. The next two numeracy items are both additions. Occasionally a youth will perform a subtraction at the third item when an addition is required. This is either response perseveration or carelessness reading the item rather than a lack of numerical ability. As these items are tests of numerical skill rather than of comprehension, if a youth answers $1.80 to the third numeracy item (a correct subtraction but a misunderstanding of the item), assessors have been asked to invite the youth to read the item again. On most occasions youths recognise their misunderstanding and perform an addition. As there have been, albeit rare, occasions when assessors have forgotten to repeat the item when a subtraction has been performed, a written instruction has been added immediately below the third numeracy item reminding assessors to repeat the item if the first answer given is $1.80. It might be asked whether any incorrect subtraction should warrant inviting the youth to make another attempt. This would both complicate the administration of this item and would require a discretionary (subjective) judgement by the assessor about whether the result was due to subtraction rather than a grossly incorrect addition. To avoid these problems, and taking into account that all responses other than $1.80 (correct subtraction but wrong process) or $3.20 (correct addition) can only be due to errors in the application of basic arithmetic processes (which is what these items are intended to measure), all other incorrect responses are recorded as errors and no second attempts are offered.

Recreation & leisure activities

There is evidence that suggests that youths who participate in structured adult supervised leisure activities are at lower offending risk (Agnew & Petersen, 1989; Mahoney & Stattin, 2000). While such participation might reflect a prosocial orientation, it could also strengthen such an orientation. Thus, it could be both a predictor of offending risk and a target for intervention, which is why leisure and recreation is included as a risk

and needs category in The Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 1995). This is an area not enquired about in the SECAPS version examined here but is included in the revised SECAPS. Its potential as a risk-needs' factor is supported by a local study of 39 bail program youths. Using a modified form of the YLS/CMI, a significant correlation (r =.44) was obtained between the Substance use and the Leisure/recreation scales (Putniņš, 1999b), thereby confirming a relationship between at least one aspect of deviant behaviour and a lack of structured recreational activities. The new SECAPS item about leisure activities inquires about three areas, viz.: (a) any club or team sporting activities; (b) any other regular supervised activities; (c) weekly frequency of all organised leisure activities.

Delinquent peers

The item about friendships with other delinquents, contrary to expectation, failed to be significantly related to recidivism. In its current form the item is a dichotomous variable that asks whether a majority of a youth's friends are offenders. One problem could be reliability. Although using more related items would increase reliability, this would be at the expense of adding to the total length of the assessment, which is undesirable as it could undermine staff and youth compliance with the assessment. It might be suggested that the absolute number of offender friends is a more relevant measure than is the ratio of delinquent to non-delinquent friends. However, a recent study by Haynie (2002) indicates that the delinquent to non-delinquent friend ratio is more strongly related to subsequent delinquency than is the absolute number of delinquent friends, which argues against abandoning an item format that asks about the relative proportions delinquent to non-delinquent friends. A potential problem with the current item is restricting the response to a dichotomous outcome. This might lead to a loss of information which in turn could reduce the strength of statistical associations (Labovitz, 1972). The revised SECAPS assessment retains the item about friendships with offenders in a ratio form but offers five response alternatives, viz. None; A few; Half; Most; All. While there is an expectation that this measure will be related to recidivism risk, only further empirical investigation will be able to confirm this.

Substance use

Although alcohol and inhalant use frequencies were related to recidivism, other substances were predictive only among the female young offenders. Self-reports about substance use during a one-month period are likely to tap a dynamic rather than a static

risk factor, which is one of the reasons why this relatively short period was selected. But as the substance use frequencies were generally poor predictors of recidivism, it is possible that such measures are prone to short-term fluctuations and are unstable. Describing variables as dynamic indicates that they are capable of change. However, within the category of dynamic variables some measures are more stable than others. Hanson and Harris (2000) drew a distinction between stable and acute dynamic variables. Stable variables tend to change little over months or even years whereas acute variables can change rapidly within days or hours. Comparing the predictive validities of static, stable, and acute variables it was found that, while all had some degree of predictive validity, the strongest predictors were the stable dynamic variables. Although Hanson and Harris studied adult sex offenders, their findings invite applying the acute-stable distinction to the SECAPS frequency of substance use items. Perhaps substance use frequencies in the current SECAPS are closer to the acute rather than stable end of the dynamic variable spectrum. For this reason, as a supplement to the existing items, a new item has been added to the revised SECAPS. It asks about what substances, if any, each youth has regularly used (i.e., once a week or more often) during the last 6 months. This provides an indication of medium-term patterns of substance use which, although still dynamic, could be expected to be more stable compared to use during a single month, though its predictive strength in relation to recidivism is yet to be established.

The items about the quantities of alcohol and marijuana typically used are no longer asked only of youths who reported some use of these substances during the month before being placed in secure care; these are now asked of all youths. Results reported earlier indicated considerable variability in the patterns of substance use over time by individual youths. Thus, many who denied any last month use of these substances nevertheless used them in the past and will likely use them in the future. Information about the quantities typically used might be useful, irrespective of what the recent frequencies of use are. For example, someone who in the past has usually "binged" when using alcohol might be at greater risk of future substance misuse, even if they have not used alcohol very recently. As these items are now asked of all youths, the response options have been supplemented by a "never use" category.

The item about whether a substance was used at the time of committing the most recent offence has been broadened to ask each youth whether they are often under the influence (even if only a little) of substances when they offend. For individuals, in this

form the general relationship between offending and substance use can be better judged than from reports about a single incident.

Criminal thinking

Alongside various personality, background and behavioural differences, offenders often differ from non-offenders with regard to values, attitudes and thinking. Collectively these are described as sociocognitive factors. Among these are cognitive neutralisation strategies. Sykes and Matza (1957) proposed that the moral value systems of delinquents and non-delinquents are basically the same. They maintained that what is regarded as right or wrong is little different between the two groups. Differences occur, however, in how delinquents and non-delinquents apply these values. Delinquents are thought to more often bypass the application of particular moral values by using reasoning that justifies making exceptions or reducing their relevance. For example, one of the reasons why most people regard larceny as wrong is that it causes suffering to the victims. Needlessly causing suffering to others is wrong. Both delinquents and non-delinquents generally agree about this. In order to circumvent this value (i.e., to neutralise it), young offenders will often offer various excuses. An example is provided in the following comments recorded by a youth worker at the conclusion of a particular SECAPS assessment:

> *"…[name] seems to have little remorse. He said that it is not his fault and that he only steals from rich people who shouldn't have so much anyway and who can afford it and who are insured…".*

Such reasoning denies that any real harm was done, thereby neutralising the relevance of the otherwise agreed moral value that causing needless suffering is wrong. The preceding rationalisation contains elements of other neutralisations and cognitive distortions. Feeling that it was "not his fault" externalises blame, casts himself as the victim and minimises his personal responsibility. By asserting that "rich people shouldn't have so much" he seeks to deny their legitimacy to be regarded as victims. An unwarranted assumption is made that all his victims are adequately insured and will, therefore, not suffer any long-term material loss. These are criminal rationalisations or "cop-outs".

The concept of neutralisation by offenders has moved beyond theory. The frequency of endorsing neutralisations has been empirically found to differentiate offenders from non-offenders and recidivists from non-recidivists (e.g., Shields & Whitehall, 1994). Neutralisation strategies used by offenders can be a focus for intervention, as is done, for example, in the EQUIP program (Gibbs, Potter, & Goldstein, 1995) and less directly in the

Victim Awareness Program for young offenders (Putniņš, 2002d). The frequency of endorsement of neutralisation strategies can be measured and used as an indicator of offending risk or as a measure of change of offending risk. Ball (1973) developed a neutralisation scale that has been used and modified by various researchers. The version developed by McCarthy and Stewart (1998) in research with adult offenders in Queensland was further modified and shortened by Ron Parker and me to make it suitable for use with youths. The resulting scale consists of six situations (vignettes). Each situation describes an illegal or antisocial act and is followed by a number of possible excuses for the behaviour. An example is: "You are hanging around a shop. You take some things without paying for them". Possible excuses or neutralisations include: "People should not blame you this time if the owner is rich and won't miss it".

The modified Neutralisation scale was administered to 20 youths in secure care at Magill Training Centre and to a similarly aged group of 16 high school students in the community in metropolitan Adelaide (Putniņš, 2000b). The young offenders endorsed more neutralisations in every situation. The differences between the two groups were highly significant and the mean total scores of the two groups were separated by more than one standard deviation. This research is recounted here to support, using local data, the potential relevance of considering criminal cognitions in assessments of young offenders. Though this relatively brief scale might have application in measuring cognitive changes associated with offending and recidivism risk, it is still considered to be too long to add to the SECAPS without significantly increasing the total administration time.

The above stimulated an attempt to produce a brief measure that could tap cognitions relevant to offending. A checklist of various explanations or motives for offending was prepared. While including items that could be regarded as neutralisations or cognitive distortions, the list was not confined to these. To confirm the relevance of the items for young offenders and to determine whether the wording of the items was appropriate, the checklist was completed by 52 youths from both secure care centres in Adelaide. Participation by the youths was voluntary and each youth was assured confidentiality. Both males (n=46) and females (n=6) participated. The age range for the males was 12 to 19 years, with 76% being 16 to 18 years old. The girls' ages were not recorded. Individual items (apart from the "Other" response category) were endorsed in a range from 12% to 64% (see Table 1). This suggests that every item had relevance for a notable

proportion of the young offenders surveyed. The number of items selected by individual youths ranged from one to 15, with a mean of 6.9.

Table 1: *Responses to the statement "I offend <u>mainly</u> because…"*

Item	% endorse
1. I'm bored and there is little else to do	37%
2. I don't think straight when I'm drunk or under the influence of substances	64%
3. I get angry	44%
4. I go along with what my friends do	42%
5. I usually get away with it	50%
6. It gives me a buzz / thrill / rush	48%
7. So that I can get alcohol or drugs	48%
8. I don't really care much about what happens to other people	19%
9. I need food and/or shelter	17%
10. I need clothes	17%
11. I need money to have a good time	52%
12. To get revenge	31%
13. It's not fair that others have so much and I have so little	14%
14. It's the easiest way to get what I want	35%
15. To get respect from others	14%
16. I have poor self-control	19%
17. So many others are doing the same	14%
18. Some people deserve to be victims	15%
19. I need transport	50%
20. Other people provoke me	25%
21. I get what I want and nobody else really suffers when I offend	12%
22. Other reasons - please describe: ……	0%

Affirmative responses to particular items could be interpreted as indicating that a youth's offending is influenced by stimulation seeking, poor self-control (often exacerbated by substance use), threat or other environmental stress, deviant peer group,

egocentricity, moral immaturity, lack of empathy, survival needs, or poor problem solving skill. This is not an exhaustive list and the interpretation of an individual's responses would need to take into account other aspects of their background. Individuals' motives might be a good starting point for staff to consider the thoughts and values associated with offending and what might be done to reduce the offending risk of individual youths. As youths are in secure care because they have offended, as part of rehabilitation efforts, it seems relevant to seek not only the opinions of others about why they offend but to also ask the youths

directly. The reasons initially given will not always be accurate, but at least the question is raised and can then be explored further. It is possible that some motives for offending might be more closely associated with greater continued offending risk, as might the endorsement of a large rather than a small number of reasons. However, both hypotheses await empirical evaluation.

The item list and results from the survey were distributed to senior staff in both secure care centres to seek their opinions about the potential usefulness of such items in the revised SECAPS. The feedback was favourable and included suggestions for minor wording changes. As a result items 2 and 20 respectively were changed to "I'm often drunk or under the influence of drugs" and "Other people push my buttons".

Offending history

Age at first recorded offence in the SECAPS was based on self-report. It has been replaced with information from official records unless the youth has committed earlier offences in another jurisdiction. If the latter, and if details about the offences committed in other jurisdictions are not on file, then the youth's self-report is used as the best estimate of age at first offence.

Further items about offending history have been added. These include the number of finalised proven offences dealt with in the local jurisdiction (from official records), the number of finalised proven offences in other jurisdictions (from official records if available, otherwise by asking the youth) and the number of matters pending (from official records). These items are of obvious relevance for the assessment of recidivism risk – the total number of prior offences being a component of the recidivism Risk Index.

Recidivism risk

A data field has been added to the SECAPS database for the recording of each youth's risk index score. Unlike other items that automatically generate a descriptive statement

when the SECAPS report is produced, how the Risk Index information is presented in the report, including modifying the risk estimate by professional override, is at the discretion of each assessor. Inclusion of the Risk Index results was made discretionary as there was initial uncertainty about how non-psychologist staff would react to the inclusion of statistically based recidivism risk estimates in the reports. However, no concerns have been raised and this information has been included in all SECAPS reports produced since the introduction of the Risk Index. Comments about recidivism risk, including estimates based on the SECAPS recidivism Risk Index, are made at the end of the report in the Additional Comments and Observations section.

The recidivism Risk Index was developed using offending records that included a minimum of 12 months (usually longer) follow-up after release from secure care. Thus, any matters that might have been pending at the time of the assessment had usually been finalised by the time the offending records were reviewed and each youth's count of prior offences (i.e., committed prior to the assessment) was calculated. However, when calculating the recidivism Risk Index at the time of the assessment rather than at a later date, a problem can arise if there are matters pending. These are matters that are awaiting finalisation. If proved they would become part of a youth's offending history and could, therefore, affect the risk assessment. Often, they will make little difference to the risk level. For example, if a youth has 22 prior finalised offences and there are 10 matters pending, the prior offence score will remain the same (in this case a score of 3, which represents 21-40 offences) irrespective of whether all or none of the pending matters are subsequently proven. In some cases the matters pending, if all proved, could alter the risk score by one or two points. This will seldom make a large difference to the risk probability. However, if desired, two risk scores can be computed, one with the matters pending counted as prior offences and the other without prior offences counted. Both can be reported with a suggestion that the reoffending risk is likely to be within the range of the two values. Alternatively, the risk score without matters pending can be calculated and reported with a note to the effect that the estimated risk level might increase if a number of current pending matters are subsequently found proven.

Although, by definition, matters pending have not been finalised, it is often possible to get a reasonable idea of the likely outcome. Very often pleas have been made. If guilty pleas have been entered then it is reasonable to add these to the prior offence total. If pleas have not yet been entered, a youth might indicate to the assessor an intention to plead

guilty to some or all of the matters. The number can be recorded and added to the prior offence count. Even if some matters remain in dispute, by recording matters that have been or will be pleaded guilty to, the variation in the number of possible prior offences is reduced - often to a point where the outcomes of any disputed matters will not alter the risk score.

Siblings, current care order, truancy

The item about the number of siblings has been deleted. Although elsewhere a relationship between family size and offender status has been found, no significant relationships with recidivism were found among the adjudicated incarcerated delinquents studied here. Furthermore, assessors seldom, if ever, referred to this information in their comments and recommendations. For similar reasons the items about whether a youth is currently under a care order and the frequency of school truancy where also deleted.

Quality of domestic relationships

While the SECAPS has items about some antisocial family characteristics (viz. family criminality and substance use) and an item that is suggestive of past parental discord (viz. whether natural parents are still living together), there are no items that reflect the quality of current relationships and level of conflict. A meta-analysis by Simourd and Andrews (1994) indicated that poor child-parent relationships were a significant correlate of delinquency for both genders. Similarly, a meta-analysis of factors related to recidivism among young offenders (Cottle et al., 2001) found that family problems, such as poor relationships within the family, were significant predictors of recidivism. Consequently, new items added to the SECAPS include self-ratings of how well each youth gets on with their natural parents and step-parents and an item about whether there are many arguments at home.

Self-injury and suicide

The items about self-injury and recency of self-injury have been deleted. It is known that some youths recorded suicide attempts at this item despite suicide attempts being asked about in a separate item. Descriptions of the nature of the self-injuries (which were not always provided as not all assessors regularly asked follow-up questions) indicated that most were of a fairly trivial nature. Few assessors recommended further action as a result of disclosures about deliberate self-injury in the absence of recent suicidal ideation or recent suicide attempts.

The item about recent thoughts about suicide has been revised so that it asks about the previous week only. Although "recent" was originally intended to refer to the last week or so and was usually understood as such by most youths, remarks recorded in a few assessments indicted that some youths were using much longer periods. In one case it was noted that a youth, who gave an affirmative response to this item, recollected that he had thought about suicide two years previously.

ADHD

Some youths, in the course of a SECAPS assessment, have queried what the word "impulse" means in the item that asks whether they often do things on impulse. To make the meaning clearer the words "a sudden urge" have been added in parentheses immediately following the word "impulse".

To supplement the ADHD signs items, an item enquiring whether the respondent is aware of ever having been diagnosed as having ADHD has been added. Of the first 229 young offenders who have responded to this item in the revised SECAPS and related assessments (described later in this chapter) 31% indicated that they had previously been diagnosed as having ADHD – a result that supports its relevance in this population.

Family structure

The item about whether the parents were living together when last known to be alive (where one or both parents are deceased or status is unknown) has been deleted. A number of assessors were confused by the meaning of this item, it was seldom (if ever) referred to in the Additional Comments section and was not significantly related to recidivism.

Ethnic background

In recognition of the fact that the native Australian population is composed of both Aborigines and Torres Strait Islanders, the collective denotation Indigenous is now in widespread use. To reflect this broader concept in the SECAPS, the ethnic background category *Aboriginal* has been changed to *Indigenous*. Whether a youth is specifically of Aboriginal or Torres Strait Islander background can be indicated in the open-ended Background description field that immediately follows the three response category (viz. Indigenous, East Asian, Other) background item.

Tattoos

The items about tattoos and tattoo removal have been deleted. These items were not found to be significantly related to post-release recidivism and have seldom featured in the intervention recommendations made by assessors. Although more detailed investigation of

the relationship between tattoo types and delinquency is desirable, this would require adding a number of more specific items. Given the time constraints for the SECAPS, the lack of empirical support for the current tattoo items as recidivism predictors and the need to remove some current items to allow new items in other areas to be added, the tattoo items could not be retained.

Mood rating

The mood rating item has generally been easily understood by youths. However, when the SECAPS assessment was trialed some years ago in Queensland, feedback suggested that a few Indigenous youths had difficulty comprehending the task. To make the task clearer, face symbols consisting of a circle within which there are two dots and a line (eyes and mouth) have been added to the side of the mood thermometer to provide additional visual cues about the meaning of the rating scale. Three faces with happy, neutral and sad expressions (☺ 😐 ☹) have been placed to the side at the top, middle and bottom of the scale respectively. These act as visual anchors - a technique that is similar to that used in the Faces Pain Scale for the evaluation of pain among pediatric patients (Bieri, Reeve, Champion, Addicoat, & Ziegler, 1990).

Additional comments and observations

The instruction on the SECAPS form about the Additional comments and observations section has been supplemented with a request to ask open-ended questions about each youth's aims or future goals, including whether there is anything that they would like to work towards or achieve while in secure care. If the goals are judged to be realistic and appropriate, then recommendations could be made regarding providing assistance, such as access to relevant programs, to help achieve those goals. If a youth has no goals then this could be a focus for further intervention. With nothing long term to strive for, youths are at risk of doing little more than focussing on gratifying immediate hedonistic wants without considering long-term consequences. Aimlessness could further alienate youths from the social mainstream and exacerbate mental health problems such as depression and suicidality.

School

The wording of the item about suspension/expulsion from school has been revised to include the now widely used term "excluded".

Age of leaving school has been deleted and replaced with highest year of school completed. The new item is a better indicator of one aspect of acquired knowledge. It might also be an indicator of a youth's suitability for particular jobs and training programs.

Close friends, how well get on with others

The items about how well one gets on with most others and the number of close friends have been deleted. Results from these items were seldom referred to in the assessors' comments at the end of SECAPS reports. Moreover, they added little unique variance to the depression scale. Alphas for the 5-item (current mood, hopelessness, recent suicidal ideation, number of close friends, how well one gets on with others) and 3-item (last two items deleted) scales at the first assessment were .48 (*n*=889) and .45 (*n*=891) respectively. At the second assessment the respective 5-item and 3-item scale alphas were .57 (*n*=206) and .61 (*n*=206). Thus, no reduction in internal consistency in the depression scale occurs when the items about numbers of close friends getting on well with others are removed.

SECAPS database

The database program (including the report production and statistics functions) has been revised to accommodate the changes to the SECAPS content described above. In addition, the statistical report now includes histograms for most items. SECAPS reports can also now be directly saved as rich text files (.rtf) or as Microsoft Word documents (.doc). The program has recently been networked. For network users, as the data tables are now shared online, regular updating of each user's database using the program's import and export functions is no longer necessary.

Variants of the SECAPS

The SECAPS assessment program was extended to youths in community residential care units in Adelaide in 1999. The content of the assessment is the same as the SECAPS except for minor rewording to the introduction of some items (e.g., "before you were placed in secure care" is replaced with "before you were placed in community residential care") and renaming the assessment the Residential Adolescent Psychosocial Screening (RAPS; Putniņš, 1999c). All youths placed in community residential care units operated by Family and Youth Services in South Australia are now assessed with the RAPS in the same manner as are youths in secure care with the SECAPS. The same database program

is used to record assessment information and produce narrative reports. As the same government agency is responsible for community residential care and juvenile detention centres (known as "Youth training centres" in South Australia), the same assessment information for any youth is available in the two settings. Many youths in community residential care have offending records and many have had placements in secure care. Because the RAPS and the SECAPS are for all practical purposes identical, a recently completed SECAPS report is accepted in lieu of a RAPS report and vice versa for youths who move between the two settings. The changes to the SECAPS assessment previously outlined have also been made to the RAPS. However, the recidivism Risk Index will not be used with youths in community residential care before a larger number of RAPS assessments has been gathered and the Index has been re-validated (or perhaps modified) with youths placed in community residential care.

A further extension of the screening program occurred in 2002 with the development and introduction of the Community Adolescent Psychosocial Screening (CAPS; Putniņš, 2002c). A number of community based justice programs are available for young offenders, participation in which affords an opportunity to help young offenders reduce their offending risk. In order to consider recidivism risk, criminogenic needs and responsivity (i.e., individual learning styles and readiness to change) an assessment first needs to be carried out. The staff situation is very similar to that with the SECAPS assessment in that few have tertiary qualifications and none are qualified psychologists. This, together with the limitations imposed by existing demands on worker time, means that any preliminary assessment has to be relatively simple and brief. The CAPS assessment is a slightly abbreviated version of the latest version of the SECAPS. It has been shortened by removing the items about mood and self-harming, the Coloured Progressive Matrices (Raven, 1976) and the reasons for offending item. Three items have been added, namely a worker assessment of the suitability of the youth's current accommodation (rated as suitable, marginal or unsuitable), whether the youth is currently unemployed, employed part-time or employed full-time, and the worker's estimate of the risk of the youth reoffending within the next three months. Recidivism risk is indicated by the worker selecting one of the following risk bands: 0-19%; 20-39%; 40-59%; 60-79%; 80-100%. This is a guided professional risk assessment based on information recorded in the CAPS and any other information that each assessor is aware of and considers relevant. The CAPS has been integrated into the SECAPS database. CAPS narrative reports

(similar to SECAPS and RAPS reports) are able to be produced and assessment information can be electronically stored. To reflect this expansion the database has been renamed the Adolescent Psychosocial Screening (APS) program. Due to most of the CAPS items also being in the SECAPS and RAPS assessments, if a youth has very recently undertaken one of the latter assessments, the numeracy and literacy scores from those assessments can be used in the CAPS assessment without having to readminister these items. This reduces administration time and, more importantly, lessens the frustration of a few youths who occasionally complain about having recently done the same items elsewhere.

It is intended to develop a CAPS actuarial risk assessment index, similar to that developed for the SECAPS. Due to possible differences between youths in secure care and community based programs (while there is a high overlap the populations are not identical), it cannot be assumed that the SECAPS Risk Index will be equally valid in both settings. Even if the SECAPS Risk Index is valid, the scores associated with various levels of risk might be different, thus requiring recalibration. Some items that did not significantly predict recidivism among youths in secure care might have predictive validity among youths in community based programs (youths in these programs are likely to be a more heterogenous group) and could be included in a CAPS recidivism Risk Index. At the time of writing almost 200 CAPS assessments have been completed. Once subject numbers exceed 200 and enough time has elapsed, the post-assessment offending records of all the assessed youths will be checked to determine each youth's recidivism status and a preliminary CAPS recidivism Risk Index will be constructed. Further validation will be undertaken using an independent sample of youths. This will also afford an opportunity to examine the predictive validity of the risk estimates (currently based on professional judgement) that are made and recorded by the CAPS assessors. Should the professional judgements prove to be superior in predictive validity, and no increase in validity occurs by combining the two (i.e., professional judgement plus actuarial index), then there would be little point in continuing to use an actuarial index. Although such an outcome is not expected, it is a question that must be empirically tested.

As the CAPS contains a number of new and revised items that have been included in the revised SECAPS, the CAPS provided an opportunity to trial and make minor improvements to these items before incorporating them into the SECAPS.

Conclusion

A common thread can be discerned in the results of a number of the research studies reported here. This is the association of ADHD signs with substance use, suicidal behaviours and offending. Not only was the ADHD signs scale concurrently associated with these behaviours, in each case significant prospective associations were also found. This suggests the possibility of causal links between ADHD signs and these behaviours, which in turn lends support to Gottfredson and Hirschi's (1990) proposition, as outlined in their General Theory of Crime, that poor self-control has an important role in crime and other antisocial behaviours. Although Gottfredson and Hirschi did not include suicide in their discussion, results here and elsewhere point to impulsivity as a risk factor in at least some suicide attempts. The overlap between self-control and the core ADHD symptoms of poor concentration, restlessness, and impulsiveness (the last in particular) is obvious. Because of the significant concurrent and prospective relationships between ADHD signs and recidivism, substance use, and suicidal behaviours, it is suggested that the presence of ADHD should be a routine consideration in assessments of young offenders.

Although the prevalences of ADHD reported in various North American studies vary considerably, incarcerated young offenders have been consistently found to have higher rates (11%-76%) than the general population (Davis, Bean, Schumacher, & Stringer, 1991; Halikas, Meller, Morse, & Lyttle, 1990; Teplin et al., 2002; Timmons-Mitchell et al., 1997). High rates (44%-50%) of conduct disorder among ADHD adolescents have also been reported (Barkley, 1998). Although a high comorbidity between ADHD and conduct disorder has been found among Australian children and youths (Sawyer et al., 2000), little information about the incidence of ADHD among incarcerated youths in Australia is available. The SECAPS items that relate to ADHD symptoms were all endorsed by the young offenders studied here at rates that well exceeded those among local high school students. Similarly, Kosky, Sawyer and Gowland (1990) reported higher endorsements of items about troubles with concentrating and sitting still among youths in a South Australian remand centre compared to a community sample of secondary school students. Unpublished preliminary results from the CAPS assessment with South Australian young offenders on community service orders indicate that close to a third acknowledge having at some time been diagnosed as having ADHD. This is very similar to the 35% prevalence of a prior diagnosis of ADHD found in a sample in NSW of wards of the state who had had involvement with the juvenile justice system (Community Services Commission, 1996).

The only Australian study that has reported an incidence of ADHD among incarcerated youths is by Bickel and Campbell (2002) in Tasmania. They recorded a prevalence of 46%, though this was based solely on a self-report measure. While there are strong indications that the rate of ADHD among incarcerated youths in Australia is likely to be much higher than in the general population, too little work has been done to date to give a firm figure. This highlights the need for epidemiological studies of the incidence of ADHD among young offenders in Australia, particularly among the most serious offenders who are largely represented by youths in secure care. Issues of underdiagnosis or overdiagnosis of the disorder and associated treatment issues, particularly the level of psychostimulant prescribing, cannot be resolved without a clearer picture of the prevalence of ADHD among young offenders. My impression from both available research and clinical experience is that, at least in South Australia, ADHD is likely to be underdiagnosed among young offenders and that relatively few youths in either secure care or community residential care (both high risk populations) are prescribed psychostimulant medication. This is supported by the results from an unpublished survey that I undertook in March, 2000 of what prescribed psychiatric medications youths in government-run community residential care units in South Australia were taking. Of a total of 49 residents, only one was taking psychostimulant medication. Issues about the appropriate identification and management of ADHD among young offenders will be considerably advanced with more precise local epidemiological data. This is a pressing matter in light of the relationships between ADHD signs and various undesirable outcomes - particularly as ADHD is a disorder that often responds well to treatment.

To return to a major issue raised in the introductory chapter, what can be said about the utility of the SECAPS? The SECAPS is an assessment tool intended to aid the screening of relevant risks, needs and responsivity factors among young offenders, to collect data to aid policy and program planning decisions, and to serve as a database for the exploration of the associations between various factors related to delinquency. The selection of the content of the SECAPS was guided not only by considerations of local assessment needs but also by the research literature about problems frequently encountered by delinquents.

The utility of the SECAPS is supported here by results that indicate that particular items have predictive validity for the assessment of both offending recidivism and suicide attempts, both of which are highly pertinent to work with incarcerated young offenders. A

validated recidivism risk index has been constructed that is now in routine use in youth detention centres in South Australia.

Descriptive SECAPS data for a relatively large sample of South Australian young offenders are available by age, sex and ethnic subgroups together with some comparative data for a community sample of high school students. Although not presented here, unpublished descriptive SECAPS data with smaller samples have been gathered by government agencies responsible for incarcerated young offenders in the Australian Capital Territory, New South Wales, and Tasmania (some of the Tasmanian data is reported in Bickell and Campbell, 2002). The statistical profiles obtained in these other jurisdictions are very similar to that for South Australian offenders.

Item test-retest stabilities and the internal consistencies of various scales formed with the SECAPS items have been presented and are generally acceptable for research purposes. Although most of these scales are not currently used in routine assessments, their content and related research are guides to what is relevant to consider when assessing broader dimensions such as depression or ADHD with individual youths. Detailed analyses of patterns of substance use, tattoos, suicidal behaviours, recidivism, intellectual functioning and basic skills have been undertaken. By fostering a better understanding of the behaviours of these youths, these results can assist to make more informed decisions about their service needs. In particular the probable causal influence of increased ADHD symptoms on suicide risk, offending recidivism, and substance use is highlighted in results presented here. It is suggested that ADHD should be considered in assessments of young offenders and a call is made for more detailed investigations of the incidence and treatment of ADHD among young offenders in secure care.

The results of the various investigations provided information that helped inform further refinement of the SECAPS. This is part of a continuing feedback process. The content changes are intended to be of immediate practical assistance in the assessments of individual youths. As assessment data for the new and revised items become available these will add further to information about the characteristics of this group. This in turn will assist managers and planners, provide new data to explore regarding the relationships of items with offending and suicide risk and will possibly lead to further refinement of the assessment content, hopefully including a broadening of the recidivism risk index content.

The SECAPS assessment has served as a stimulus and a model for the development of related assessments now used for youths in community residential care and young offenders attending community based programs.

While not confirming any particular aspect of the assessment's technical validity, that the SECAPS assessment has been routinely used for more than ten years with, at the time of writing, more than 2,000 assessments completed attests to the screening tool's perceived usefulness among staff and managers. As the number of assessments in the SECAPS database has grown considerably, a future task will be to update the SECAPS normative data for the various demographic subgroups. In addition, the predictive validities of the new SECAPS items need to be evaluated. The expanded database will soon allow a more detailed examination of what risk factors might be specific to some of the smaller subgroups (e.g., females). This could lead to modified Risk Index score algorithms for particular subgroups.

In addition to the more obvious technical features required of risk assessment tools (e.g., demonstrated predictive validity, local validation, empirically grounded and so on), McIvor, Kemshall, and Levy (2002) have suggested certain "desirable features of risk assessment tools:

User-friendly

Resource lean

'Easy' to train staff appropriately

Process of use is transparent and accountable" (p.51).

These features are present in the SECAPS and have played an important role in facilitating its use and acceptance. No matter how good are the psychometric properties of an instrument, this will count for little if the instrument is not used. This is a highly relevant issue, as is illustrated in recent observations about young offender risk-needs assessment procedures in Queensland secure care institutions. A review reported that "prescribed assessment tools were being used at…a very low rate; staff experienced difficulties with… social and criminogenic needs assessments in particular" (Queensland Department of Families, 2002, p. 5). Successful implementations of risk-needs assessment tools largely depend on the presence or absence of the desirable features suggested by McIvor et al.

The main drawback to the SECAPS is its brevity. Topics are not covered in as much detail as might sometimes be desired. However, its brevity is also a feature that has enhanced its use and ensured that most eligible youths entering secure care in South

Australia have received a very basic psychosocial assessment. The instrument's intended function as a screening tool rather than as a full assessment needs to be kept in mind.

It was noted at the outset of this work that usefulness cannot be definitively demonstrated by any particular measure or observation. Rather, it is something that is incrementally supported by a variety of outcomes and practical experiences. Collectively, the rationale for and manner of development and refinement of the SECAPS, the instrument's acceptance and use in applied settings over a long period, extensive statistical data, predictive validity in key areas, practical features such as rapid report production, and meaningful research results suggest that the SECAPS is a useful assessment tool with young offenders.

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Appendix 1: *SECAPS administration procedure and instructions (from Putniņš, 1998a)*

Administration

The SECA Psychosocial Screening is an individually administered assessment that can be used with all youths coming into secure care irrespective of their background. Completion of all the assessment tasks normally takes about 30 minutes. The setting should be a quiet room with a table and seating for both the assessor and the client. Due to resource constraints initially the SECA Psychosocial Screening was mainly administered to residents who were likely to remain in secure care for two weeks or longer (i.e., youths on detention orders or longer term remands). Experience had shown that in the case of very short stay youths (i.e., those staying just a few days), by the time the assessment was carried out, the report produced and distributed to staff, was read, considered and some action proposed, the youth was about to leave the centre, often to not return. There can, however, sometimes be good reasons for assessing individual short stay youths, for example, as a starting point for a more detailed court ordered assessment. Over time, due to the increased acceptance and perceived usefulness of the SECAPS program, staff began assessing shorter stay youths. Now most youths whose stays are likely to be longer than just a few days are assessed. Assessments are not normally carried out within the first 24 hours. This is both in order to allow the residents time to orientate to their new surroundings (mood tends to improve during the first 24 hours)[1] and to minimise the effect of any substances that they might have used immediately prior to their admission.

The initial client details (subject's full name, date of birth, gender and ethnic background as well as whether the youth is under a current order [item 4]) should, as far as possible, be completed from official records before seeing the youth, though the client should be asked to confirm these details. The item that classifies ethnic background (top of the first SECAPS form page) includes the category "East Asian". This category covers people who are native to Asian countries east of Bangladesh and India (Bangladesh and India are next to each other and neither is included in the category of East Asian). These countries are Vietnam, Korea, China, Burma, Laos, Malaysia, Cambodia, Singapore,

[1] This has been confirmed in a survey of 45 youths admitted to secure care in South Australia (see Putniņš, A.L. [1999]. *The experiences of youths in secure care: preliminary descriptive statistics*. Technical paper. Adelaide: Family & Youth Services, Department of Human Services).

Indonesia, Philippines, Thailand, Japan, and Brunei. The groups in this category most likely to be encountered in secure care are Vietnamese, Cambodians, and Chinese.

Immediately below the item that classifies subjects into Aboriginal, East Asian, and non-Aboriginal is a line labelled "Background". This is optional but allows a more detailed or precise description about ethnic background to be entered into the SECAPS report. For example, if a subject is recorded as East Asian, the assessor might like to more precisely describe the youth's background as, for example, Vietnamese. This can be done by adding this information on the line labelled Background. This should be done in addition to, not instead of, the 3-category ethnic background item. Similarly, if a youth is classified as non-Aboriginal, then without any additional information that is how he/she will be described in the report. However, the assessor might feel that it is relevant to also record that the youth is of mixed Italian and Polish background. Then, in addition to recording the youth as being non-Aboriginal, the background line would contain the description *Italian-Polish*. This would appear in the report in place of the more general non-Aboriginal description (though recording the youth as non-Aboriginal is still required for statistical purposes).

The assessing officer's name (item 2) should include the worker's surname. If the youth is known by two surnames then both surnames should be given separated by a diagonal slash (/). Obviously if the youth does not understand spoken English the SECAPS assessment should only be proceeded with if a competent interpreter is available. All the items can be administered orally with the exception of the literacy tasks, which are omitted if the youth does not understand spoken English.

The assessor should introduce the SECAPS assessment to the client in such a way as to maximise cooperation and minimise anxiety. Introductory remarks could be as follows:

> *I've got some questions that we ask all youths who are staying more than a few days in the centre. Now these are routine questions and we ask everyone the same questions. They're to help us find out a little about your background - how you're feeling and how you see yourself. It'll help us get a bit of an idea about some of the things that have been happening to you recently and to let us know how you're going with things like reading and so on. I don't want to take up much of your time. This won't take more than half an hour - probably less. So how about we get started so that we can get through it as quickly as possible.*

The style of introduction should not be stilted or formal. The language used is colloquial. While it is not elegant English expression it is understandable and intended to put the youth at ease. If there is no immediate objection, the assessor should commence the screening assessment by confirming the youth's full name, date of birth, ethnicity, gender and ability to understand spoken English. These are fairly non-threatening questions which are likely to be answered with little anxiety being aroused and will thereby help to reduce inhibitions to answering subsequent questions. If, even after further discussion, the youth is resistant to participating in the screening assessment, the session should be terminated and the assessor should go to item 20 *(...how cooperative was the youth with the assessment*) and mark the box labelled *Not at all cooperative*. If a report is produced, the statement "*[Subject's name] was not at all cooperative with the assessment"* will appear at the end.

Items 5 to 13 are given verbally and are recorded by the assessor. Item 5 asks when the youth was first charged or arrested for an offence. This is normally a self-report item, though official records (if available) can be used.

If problems with sight (item 6a) or hearing (item 7a) are recorded, then descriptions of the problems should be written at item 6b and/or 7b. The descriptions should be kept brief - only 100 characters have been allocated to each description in the database program. If it is necessary to elaborate further, this should be done in the *Additional Comments and Observations* section at the end of the report.

Item 8 enquires about whether the youth's parents are both alive.

Item 9 enquires as to whether the parents are still living together (9a - to be answered only if both parents are still alive) or were living together when both were alive (9b - to be answered only if either or both parents are not known to be alive).

Item 10 asks "How many natural brothers and sisters do you have? (include half-siblings but ***not*** step, foster or adopted siblings)". Numbers of brothers and sisters are recorded separately. Note that this item records only natural siblings. This means siblings that the youth has a direct blood relationship with by virtue of having at least one parent in common. Remember that they do not need to be in the one household. This is particularly relevant given the high percentage of broken family backgrounds among these youths. So, for example, some sibling might be with the mother, some might be with the father and some might be in foster placements. In such a situation it is insufficient to just record how many siblings are at home with the youth and his/her mother. Even if the youth is unsure

of the precise number because, for example, one of his/her parents has not been heard from for 10 years and might have had more children by another partner, record the number of siblings that the youth knows about. The category "Don't know" would only rarely be used in cases such as if the youth was adopted at a young age and thus had no knowledge about his/her natural family.

Items 11 and 12 enquire about criminality and substance abuse among other immediate natural family members. It should be emphasised that this enquires only about *natural* family members (ie, blood relatives), not step or adoptive family members. Any relevant information about the last categories of family relations can, if desired, be later recorded under *Additional Comments and Observations*.

Item 13 enquires about the youth's principal residence during the month preceding placement in secure care. It should be noted that the response category "Community residential placement" includes any supervised group placement provided by either a government or non-government welfare agency.

Item 14 requires the administration of a brief reading test. A list of 20 words is given to the subject who is then asked to read the words row by row. The instruction could be something like:

> *I'd like to see how you're going with reading. I've got a short list of words here (give list to subject) that I'd like you to read out aloud for me. Start with the first word here (point to the word at the beginning of the first row) and read the words going across the page line by line. If you come to a word that you don't know how to read you can have a guess or say "Pass" and go on to the next word. Okay? Give it a go.*

The assessor should be mindful of any vision defects indicated earlier by the subject and whether these might interfere with the reading task. If there is any doubt, ask the subject whether they can clearly see the words and, if necessary, read the letters in the first word. The reading test used is Form C of the Australian normed *Concise Word Reading Tests* (Andrews, 1965, 1974)[2]. As the subject reads the words, the assessor notes the responses on the record sheet. A simple cross or tick will suffice to indicate whether the words were read correctly or not.

[2] The tests can be purchased from Robert J. Andrews & Associates, 6 Lindsay Parade, Paradise Point, Gold Coast, QLD 4216, Australia (tel. [07] 557 71453, fax. [07] 557 75766). Other reading tests can be used, but the Concise Word Reading Tests are attractive due to their brevity.

It can be discouraging for a subject who is making an effort to read the words but is reading them incorrectly to see the examiner recording crosses on the record sheet. For this reason it is preferable that the examiner sits back from the table (casually) with the record sheet on a clip-board, or similar, tilted toward him/herself so that the subject cannot see what is being recorded. If there is nothing suitable to put the record sheet on other than the table, lean forward and partially cover the recording sheet with the non-writing hand (as though to lean on or steady the paper while writing) so that the subject's view of that portion of the record sheet being used is obscured. Record ticks and crosses using gentle force. Some subjects can discriminate the two by sound. Whether the recording of a cross is heard or seen, for some individuals either can be equally discouraging.

Do not coach the subject or offer any practical assistance other than some words of encouragement if necessary. Such will not usually be needed for competent readers. If a subject makes errors in the first few words and looks despondent, say something like: "Some of these words are pretty hard but stay with it and see how many you can read". Do not give the subject the correct pronunciation of any words, even if they ask for it after having said "pass". Such feedback to the subject would constitute coaching which, although it might not affect the current assessment, could influence their performance if reassessed using the same reading task at a later date.

Barring speech defects, subjects are expected to read clearly and fluently in order for a word to be passed. Allowance is made for the speech characteristics of the subject's linguistic subgroup. For example, "genuine" has two possible pronunciations in Australia. The "i" is commonly pronounced as in "*i*n", but some pronounce it as in "*i*ron". Both are acceptable for the purposes of this test if the latter pronunciation is judged to be consistent with the subject's linguistic subgroup. By contrast, pronouncing the "g" as in "get" is not acceptable under any circumstances. If a subject falters once in the reading of a word but then quickly recovers and reads it correctly, the word is passed. If, however, the word is not read fluently but is unnaturally drawn out, e.g. gen--u--ine, the word is failed. Similarly, a prolonged pause before the reading of the word (even if finally read correctly) or repeated attempts before correct pronunciation is achieved are scored as failures. If the subject attains a raw score of 10 or less (i.e. numbers of words read correctly out of the 20 presented), the subject might require some assistance with reading the items in the *General Background Questionnaire* (GBQ) which is presented at item 21. If the number read correctly is substantially less than 10, it might be necessary to administer the entire GBQ

orally. The reading age is obtained by looking at the back of the recording sheet and then using the section for Form C. The number of words read correctly is located in the first column under *Score*. Read across to the next column. This will give a reading age in years and months. Disregard the months when recording the subject's reading age. Do not round the months up or down, simply ignore them.

A further literacy task is given at item 15. Give the youth a pen or pencil and the General Background Questionnaire face down, that is, use the back of the last page of the GBQ for the youth to write on. Tell the subject that you would like to check their writing and ask them to write down the short sentence that you will dictate. Proceed to dictate the following: *"One quick brown fox jumped over the lazy dogs"*. The more familiar form of this sentence - which is sometimes used in typing tuition because it contains all the letters of the alphabet - begins with "*The*" instead of "*One*". This substitution was done in order to maximise the number of different words offered, given that there are only nine words in the sentence and that "*the*" would otherwise appear twice. As this is a writing/spelling task and not a memory test, the sentence can be repeated as many times as the subject requires to write all the words. Because all the letters of the alphabet are represented, this also provides the assessor with an opportunity to see whether any letter reversals occur. When scoring spelling errors, do not include consideration of the incorrect use of upper or lower case. While not condoning the incorrect use of case, such incorrect use will more likely result in a loss of elegance rather than of comprehensibility. This is why, in the assessment of survival writing here, the correct letter, irrespective of case, is the main focus.

Item 16 is a numeracy test. Give the sheet with the six numeracy problems to the subject. Ask the youth to read them to himself and to give the answers after working them out in his head. If a deficit in reading has already been noted, it might be necessary to read the items out aloud to the subject while keeping the sheet in front of them so that they can see the numerical amounts involved in the problems.

Item 17 is a time-telling test. The subject is given a sheet with two digital clock faces and two analogue watch faces. Ask the subject to tell the time from each clock-watch face in the order they are numbered (1-4).

Item 18 is the General Background Questionnaire (GBQ). This is a separate questionnaire which in itself contains 25 items. Reading skill permitting, it is given in written form to the subject for completion. If necessary, assist the subject with reading or, if the subject's reading skill is very poor, read all the items to the subject. The phrasing of

the questions is fairly simple and answers generally are indicated by a tick or a cross. Encourage the subject, if necessary, to answer all the questions. When the subject has finished, always check that all items have been answered. If, however, a subject refuses to answer an item and is not responsive to gentle persuasion, do not try to force the issue. To do so might jeopardise the subject's cooperation with the remainder of the screening assessment or the quality of answers to subsequent items. Unanswered items are simply deleted from the final report. It is not acceptable for a subject to tick more than one answer box per item or to place a mark midway between two answer boxes on the grounds that their answer lies between the two. In either case, explain that only one response per item is permitted and that it must be one of the response categories provided. Something like the following could be said:

> *"I know that it's sometimes hard to choose just one answer but try to choose the one that's closest to describing you. Choose just one. If you like, you can write a short note next to your answer if you want to explain it further".*

Depending on the content of any explanatory notes that the subject might make, these can be incorporated into the *Additional Comments and Observations* section at the end of the assessment. If the subject at anytime spontaneously offers elaborations or further information that is felt to be useful for the assessment, note these and mention the information in the final section of the report. While the subject is completing the GBQ, the assessor can use the time to score the reading and writing tasks and review the data gathered thus far in order to see whether any follow-up questions are needed.

The next item of the screening assessment is item 19, which consists of a brief non-verbal intelligence test (*Coloured Progressive Matrices* [*CPM*]). This can be introduced to the subject as follows:

> *"During this assessment I've been asking you different questions about your background and checking how you're going with things like reading, time-telling and maths. Now I'd like to get you to do some puzzles for me. This will help to get a better idea about some of your strengths and weaknesses".*

If there is no protest then proceed to administer the test. If the subject objects or questions the purpose of the test, some further explanation about wanting to find out "what sort of things" the subject is "good at" can be made. It can be pointed out that such information could be useful for identifying the types of educational, training or work programs that

might best suit the subject. It is best to avoid describing the task as an "intelligence test" as this can provoke unnecessary anxiety in some subjects.

The *CPM* record is placed immediately in front of the subject who is also provided with a pen or pencil. The question booklet is placed just above the record sheet and is opened to the first page. Say:

> *"Look at this" (point to the upper figure) "You see, its a pattern with a piece cut out of it. Now look below - there are six pieces numbered 1, 2, 3, 4, 5, 6 (point to each as you give the numbers). These are all the same shape and size as the missing piece, but only one of them will complete the pattern. Number 1 (point) has thick black lines across it, number 2 (point) is a blank, number 3 (point) has checks, number 6 (point) has a piece missing at the end, number 5 (point) has a cross. As you can see, number 4 (point) is the only piece that will complete the pattern up here (point to missing area in upper figure). Now this is the first puzzle in Set A (point to the heading at the top of the page), so I would like you to write the answer, that's number 4, opposite A1 under Set A (point to relevant space on the record form) on the answer sheet".*

If the subject appears to understand and correctly completes this task (otherwise further explanation will be needed), turn to the next page (i.e. A2) and invite the subject to complete the item by writing the answer in the space opposite A2 on the answer sheet.

Assuming this is completed correctly (otherwise further explanation and practice with item A3 might be required), say:

> *"Now you can go ahead and answer the rest of the puzzles in the book. The first items are fairly easy but they get a little harder as you work your way through the book. If you come to an item where you're not certain about the answer, you're allowed to make a guess. Just be careful not to accidentally turn over two pages of the booklet at once, otherwise you'll end up putting the answers in the wrong spaces on the answer sheet and that'll make it hard to score. Okay? Go ahead".*

If the subject appears to be rushing through the test or seems to be making haphazard responses, tell him/her that they have plenty of time, there is no need to rush, you would like them to think about choosing the right answer or that by hurrying too much they might miss the correct answer.

With the *CPM*, as with the General Background Questionnaire, do not intrusively lean forward into the subject's personal space or stare at the subject while they are responding.

These can cause unease in some subjects. However, while completing the *CPM* glance occasionally at the page number and the position of the subject's last response on the answer sheet in order to confirm that the subject has not by oversight missed an item. Despite the warning to not turn over two pages at a time, this does occur occasionally and needs to be identified and rectified immediately in order to get a complete and scorable data set.

After the assessment session has finished the *CPM* should be scored by referring to the scoring key provided. Place a line through any incorrect responses. Add the number of correct responses (the maximum possible is 36) and enter this number on the response sheet next to *Score*. Record this same number at item 19a (*CPM raw score*) on the SECAPS form. The remaining boxes (b.,c.,d.) on the SECAPS form will be completed by a psychologist.

While the youth is completing the *CPM*, the assessor should review the youth's responses to the General Background Questionnaire and note any responses (e.g., recent thoughts about suicide, very low mood rating, acknowledged problem with drugs and alcohol) that might require immediate follow-up questions. These should be asked after completion of the *CPM* and before the youth leaves. Record important information by making brief marginal notes next to the relevant items and add these, if relevant, to the Additional Comments and Observations section (item 22). This section affords an opportunity for the assessor to elaborate, interpret, summarise, add information, raise further questions and make suggestions or recommendations for further action. Although there is no limit to what can be entered or how much can be written in this section, as this is only a screening assessment it is expected that entries under Additional Comments and Observations will normally be brief - usually no more than a couple of paragraphs in length.

At the end of the assessment it can often be useful to finish with a look to the future by asking what the youth plans to do after his/her release from secure care. This is an unstandardised question. However, it can help the youth to leave the assessment looking beyond incarceration rather than dwelling on the past, which is the focus of most of the preceding SECAPS questions. A youth's answer might help suggest programs, training or some other assistance that could help the youth achieve his/her goals (if the goals are realistic and socially acceptable). Even if there are no plans, or the plans are unrealistic, this it is still potentially valuable information that might suggest a need for further

exploration and perhaps guidance for the youth. The youth's response together with any suggestions or interpretive comments can be recorded in the Additional Comments and Observations section.

Appendix 2: *SECAPS forms*

SECA PSYCHOSOCIAL SCREENING ASSESSMENT

Surname | Given names

Date of Birth ..... /..... /.....

Male ☐ Female ☐

Aboriginal ☐ East Asian ☐ Non-Aboriginal ☐

Background: . . . . . .

---

1. a. Today's date ..... /..... /.....

   b. Training Centre

2. Assessing Officer (name)

3. Youth's age (years)

4. Is the youth currently under a Care Order in this State? YES ☐ NO ☐ DON'T KNOW ☐

5. How old were you when you were first charged or arrested by the police for an offence?

   Years ☐

6. a. Do you have any problems with your eyesight? YES ☐ NO ☐

   b. If YES, describe: .....

   .....

7. a. Do you have any problems with your hearing? YES ☐ NO ☐

   If YES, describe: .....

   .....

8. a. Is your natural father still alive?

YES ☐
NO ☐
DON'T KNOW ☐

b. Is your natural mother still alive?

YES ☐
NO ☐
DON'T KNOW ☐

9. a. (If YES to both) Are they still living together?

YES ☐
NO ☐
DON'T KNOW ☐

b. (If NO or DON'T KNOW to either) Were they living together when they were both alive or were last known to both be alive?

YES ☐
NO ☐
DON'T KNOW ☐

10. How many natural brothers and sisters do you have? (include half-siblings but ***not*** step, foster or adopted siblings)

Brothers	Sisters	Don't know
☐	☐	☐

11. Has anyone in your immediate natural family (mother, father, brothers, sisters) been in trouble with the law (not counting traffic offences)?

YES ☐
NO ☐
DON'T KNOW ☐

12. Has anyone in your immediate natural family (mother, father, brothers,

sisters) had a problem with alcohol or drugs?

YES ☐

NO ☐

DON'T KNOW ☐

13. Before coming into secure care, where were you living for most of the previous month?

☐ 1. With parents (either natural, step or adoptive)

☐ 2. With other relatives

☐ 3. With foster parents

☐ 4. INC placement

☐ 5. Community residential placement

☐ 6. In own accommodation (alone or sharing)

☐ 7. On the streets

☐ 8. Other (specify): living .....

14. Reading test

☐ a. Number of words read correctly
(If 10 or less, subject might require assistance with reading)

☐ b. Reading age (years only - disregard months)

15. Writing task (use back of General Background Questionnaire)
"*One quick brown fox jumped over the lazy dog*s"

Words Correct ☐

16. Numeracy test
(tick if answer correct, otherwise write answer)

☐	☐	☐	☐	☐	☐	☐
$1.05	$6.65	$3.20	$3.15	90c	$4.70	Total Correct

17. Time telling test
(tick if answer correct - otherwise write answer)

☐	☐	☐	☐
4.15	6.08	1.35	9.22

18. Give *General Background Questionnaire*

19. Give Coloured Progressive Matrices

☐ a. CPM raw score

☐ b. SPM conversion

☐ c. SPM standard score

☐ d. Above Borderline (≥ 80)
☐ Borderline (70-79)
☐ Retarded (≤ 69)

20. Please indicate, in your opinion, how cooperative was the youth with the assessment.

Very cooperative	Fairly cooperative	Minimally cooperative	Not at all cooperative
☐	☐	☐	☐

21. Please indicate how restless/distractible you considered the youth to be.

Not at all	Somewhat	Very
☐	☐	☐

22. Additional comments and observations regarding the subject, including any elaborations regarding responses to specific items. If time permits, ask the youth about his/her future plans or goals.

.....

.....

.....

..... (continued over page)

GENERAL BACKGROUND QUESTIONNAIRE

1. During the ***last month before you were placed in secure care,*** how often did you use each of the following?

	None during last month	Once or twice in last month	Once or twice a week	Several times a week	Daily or almost daily
1. Alcohol (beer, wine, spirits)	☐	☐	☐	☐	☐
2. Marijuana (grass, hash)	☐	☐	☐	☐	☐
3. Acid, LSD, Magic mushrooms, Datura or other hallucinogens	☐	☐	☐	☐	☐
4. Sedatives or sleeping tablets such as Mogadon, Serepax, Valium, Rohypnol etc. (without Dr's prescription)	☐	☐	☐	☐	☐
5. Heroin, morphine or other narcotics (without doctor's prescription)	☐	☐	☐	☐	☐
6. Cocaine, speed, ecstasy, pep pills or other stimulants (without doctor's prescription)	☐	☐	☐	☐	☐
7. Sniffed glue, petrol, thinners, butane gas or similar	☐	☐	☐	☐	☐
8. Other (describe)	☐	☐	☐	☐	☐

2. Have you ever taken drugs by injecting ("shooting up")?

YES ☐ NO ☐

3. If you used alcohol at all during the last month before you were placed in secure care, how many drinks did you normally have on the days when you used alcohol?

1-2	3-4	5-6	7-9	10 or more
☐	☐	☐	☐	☐

4. If you used marijuana at all during the last month before you were placed in secure care, how many smokes (joints, cones, bongs etc) did you normally have on the days when you used marijuana?

1-2	3-5	6-10	11-19	20 or more
☐	☐	☐	☐	☐

5. a. Had you been drinking or used any other substance or drug at the time you committed your last offence?

YES ☐ ☐ NO

b. If "YES", please list what you used:

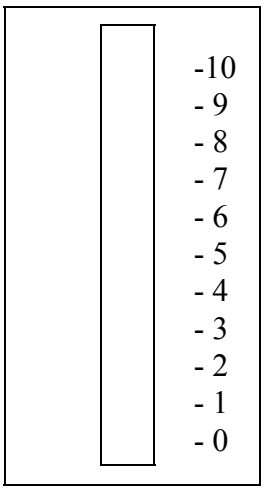
. . . . . .

. . . .

6. Do you feel that you have a problem with drugs or alcohol?

YES ☐ NO ☐

7. a. Using this feeling "thermometer", show with a line how you are feeling at present.



Best feeling possible (very happy, cheerful)

Worst feeling possible (extremely unhappy, very depressed)

b. I have been feeling like this for:

☐	☐	☐	☐
A few days	A few weeks	A few months	More than half a year

8. How much do you agree with this statement:

"I feel that I have nothing to look forward to - my future is hopeless."

☐	☐	☐	☐
Agree completely	Agree a fair bit	Agree a little	Don't agree at all

9. a. Have you ever deliberately injured yourself by cutting, burning or some other means?

NO ☐ YES ☐

b. If "YES", when was the last time?

☐	☐	☐	☐
Last few days	Last few weeks	Last few months	More than half a year ago

10. Have you recently had thoughts about killing yourself?

NO ☐ YES ☐

11. a. Have you ever tried to kill yourself?

NO ☐ YES ☐

b. If "YES", when was the last time?

☐ Last few days ☐ Last few weeks ☐ Last few months ☐ More than half a year ago

12. I have:

Many close friends ☐ A few close friends ☐ No close friends ☐

13. I get on well with most people.

AGREE ☐ DISAGREE ☐

14. Most of my friends/mates have been in trouble with the law.

YES ☐ NO ☐

15. I have a bad temper.

YES ☐ NO ☐

16. I get into fights:

Never (or almost never) ☐

A couple of times a year ☐

Once a month or more often ☐

17. a. Do you have any tattoos?

YES ☐ NO ☐

b. If "YES", would you like to have them removed?

YES ☐ NO ☐

18. In the past I have been suspended or expelled from school.

YES ☐ NO ☐

19. I truanted/wagged school a lot (about once a week or more).

YES ☐ NO ☐

20. a. Were you still attending school or college before you were placed in secure care?

YES ☐ NO ☐

b. If "NO", how old were you when you left school or college?

Years ☐

21. a Have you ever had a regular paid job working 10 hours a week or more?

YES ☐ NO ☐

b. If "YES", what is the longest time that you have been in one such job?

Months ☐

22. I often find it hard to concentrate on one thing for more than a few minutes.

YES ☐ NO ☐

23. I often do things on impulse without stopping to think.

YES ☐ NO ☐

24. I find it hard to sit still for long.

YES ☐ NO ☐

25. Being bored is one of my biggest problems.

YES ☐ NO ☐

Appendix 3: *SECAPS numeracy items*

1. A carton of milk cost *95¢* and was paid for with a *$2* coin. How much change was there?

2. A hamburger cost *$3.35* and was paid for with a *$10* note. How much change was there?

3. A newspaper cost *70¢* and a magazine cost *$2.50*. How much did they cost altogether?

4. A sandwich cost *$1.85* and a cake cost *$1.30*. How much did they cost altogether?

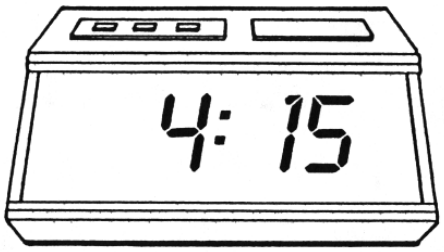
5. If eggs cost *15¢* each, what would be the cost of *6* eggs?

6. If one kilo of meat cost *$9.40*, how much would *half* a kilo cost?

Appendix 4: *SECAPS time telling items*

What time is each clock and watch showing?

1.



2.



3.



4.



Appendix 5: *SECAPS item responses by age, Aboriginality and sex*

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Current Care Order status in SA (%)[1]									
Yes	25.0	13.8	14.7	4.6	18.9	15.8	12.0	-	13.1
No	68.8	82.8	76.0	85.2	75.7	77.6	81.1	-	79.6
Don't know	6.3	3.4	9.3	10.2	5.4	6.6	7.0	-	7.3
(*n*)	(48)	(29)	(75)	(108)	(37)	(152)	(359)	-	(808)
Reported problems with eyesight (%)									
Yes	31.3	23.7	14.7	13.8	21.6	20.4	20.1	15.7	19.3
No	68.8	76.3	85.3	86.2	78.4	79.6	79.9	84.3	80.7
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)
Reported problems with hearing (%)									
Yes	14.6	10.5	9.3	12.2	8.1	4.6	6.7	14.3	8.5
No	85.4	89.5	90.7	87.8	91.9	95.4	93.3	85.7	91.5
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)
Father still alive (%)									
Yes	83.3	76.3	77.3	83.7	75.7	77.6	79.9	72.9	79.1
No	12.5	7.9	14.7	13.0	13.5	6.6	7.0	14.3	9.5
Don't know	4.2	15.8	8.0	3.3	10.8	15.8	13.1	12.9	11.3
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)
Mother still alive (%)									
Yes	97.9	100.0	96.0	95.1	100.0	96.7	92.5	94.3	94.9
No	2.1	0.0	4.0	4.9	0.0	0.7	3.9	1.4	2.9
Don't know	0.0	0.0	0.0	0.0	0.0	2.6	3.6	4.3	2.2
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)

[1]As care and protection orders apply only to minors, subjects 18 years and older are not counted at this item.

Appendix 5 (cont.)

	Females		Aboriginal males		Non-Aboriginal males				
Age (years)	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	All
Parents living together now (both known to be alive) (%)									
Yes	15.4	17.2	26.8	13.0	17.9	26.1	30.2	36.5	25.3
No	84.6	82.8	73.2	87.0	82.1	73.9	69.8	61.5	74.5
Don't know	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.1
(*n*)	(39)	(29)	(56)	(100)	(28)	(115)	(268)	(52)	(687)
Living together when known to be alive? (now deceased / unknown) (%)									
Yes	33.3	0.0	38.9	45.5	44.4	16.7	21.1	27.8	25.6
No	55.6	88.9	61.1	45.5	55.6	72.2	72.2	61.1	66.8
Don't know	11.1	11.1	0.0	9.1	0.0	11.1	6.7	11.1	7.6
(*n*)	(7)	(9)	(18)	(22)	(9)	(36)	(90)	(18)	(211)
Number of natural siblings (%)									
0	0.0	12.5	4.2	0.0	0.0	0.0	6.6	9.1	4.0
1-2	31.3	12.5	20.8	20.0	22.2	27.5	46.1	36.4	32.4
3-4	43.8	50.0	37.5	43.3	66.6	47.5	27.6	40.9	39.1
5 or more	25.0	25.0	37.5	36.7	11.1	22.5	17.1	13.6	23.1
Don't know	0.0	0.0	0.0	0.0	0.0	2.5	2.6	0.0	1.3
(*n*)	(16)	(8)	(24)	(30)	(9)	(40)	(76)	(22)	(225)
Parents/siblings have been in trouble with the law (%)									
Yes	70.8	68.4	78.7	65.0	67.6	61.2	50.8	51.4	59.4
No	25.0	28.9	17.3	26.0	29.7	33.6	39.9	42.9	33.6
Don't know	4.2	2.6	4.0	8.9	2.7	5.3	9.2	5.7	7.0
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Natural parents/siblings have a drug/alcohol use problem (%)									
Yes	56.3	47.4	53.3	43.1	48.6	44.1	39.8	30.0	42.9
No	39.6	50.0	42.7	52.0	51.4	52.0	55.5	65.7	52.9
Don't know	4.2	2.6	4.0	4.9	0.0	3.9	4.8	4.3	4.2
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(357)	(70)	(900)
Where living before secure care (%)									
With parents	41.7	36.8	57.3	44.7	59.5	59.9	43.3	42.9	47.7
With other relatives	18.8	18.4	24.0	26.0	8.1	5.9	8.7	8.6	12.8
With foster parents	6.3	0.0	1.3	1.6	0.0	0.7	0.6	0.0	1.0
Intensive Neighbourhood Care	2.1	0.0	6.7	2.4	5.4	3.3	1.7	0.0	2.4
Community Residential Care	8.3	7.9	4.0	0.8	16.2	14.5	6.4	0.0	6.9
In own accommodation	12.5	28.9	4.0	14.6	0.0	5.3	21.8	35.7	16.5
On the streets	4.2	2.6	0.0	0.8	5.4	3.3	4.7	1.4	3.2
Other	6.3	5.2	2.7	8.9	5.4	7.2	12.8	11.4	9.4
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(358)	(70)	(901)
Reading ages (%)									
8 years or less	17.0	13.2	52.8	24.8	27.0	19.2	13.8	14.3	20.1
9	6.4	2.6	8.3	7.4	5.4	7.9	3.1	2.9	5.2
10	14.9	26.3	13.9	15.7	16.2	10.6	11.9	7.1	12.9
11	40.4	34.2	9.7	40.5	32.4	33.1	37.6	42.9	35.2
12 years or more	21.3	23.7	15.3	11.6	18.9	29.1	33.6	32.9	26.6
(*n*)	(47)	(38)	(72)	(121)	(37)	(151)	(354)	(70)	(890)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
No. of arithmetic items correct (%)									
0	8.5	13.2	16.4	12.4	2.7	3.9	1.7	0.0	5.5
1-2	29.8	18.4	38.3	28.9	27.0	14.5	13.2	12.9	19.3
3-4	38.3	23.7	31.5	35.5	29.7	25.0	27.0	22.9	28.4
5-6	23.4	44.7	13.7	23.1	40.5	56.6	58.1	64.3	46.8
(*n*)	(47)	(38)	(73)	(121)	(37)	(152)	(356)	(70)	(894)
Total arithmetic score									
Mean	3.2	3.6	2.4	3.0	3.7	4.3	4.4	4.6	3.9
SD	1.9	2.0	1.7	1.9	1.9	1.7	1.6	1.6	1.9
(*n*)	(47)	(38)	(73)	(121)	(37)	(152)	(356)	(70)	(894)
No. of words correctly spelt (%)									
0-3	2.7	3.1	28.0	10.6	6.3	3.8	0.4	5.4	5.4
4-7	13.5	15.6	38.0	34.1	31.3	24.5	22.4	19.6	24.9
8-9	83.8	81.3	34.0	55.3	62.5	71.7	77.2	75.0	69.7
(*n*)	(37)	(32)	(50)	(85)	(32)	(106)	(246)	(56)	(644)
Total words correctly spelt									
Mean	8.2	8.3	5.6	7.0	7.5	7.9	8.1	7.9	7.7
SD	1.5	1.7	3.0	2.5	1.9	1.7	1.3	2.1	2.0
(*n*)	(37)	(32)	(50)	(85)	(32)	(106)	(246)	(56)	(644)
Analogue time items correct (%)									
0	14.8	8.7	34.1	17.3	9.1	3.3	3.0	0.0	8.3
1	0.0	4.3	2.3	4.0	13.6	12.0	7.2	0.0	6.5
2	85.2	87.0	63.6	78.7	77.3	84.8	89.9	100.0	85.2
(*n*)	(47)	(38)	(73)	(121)	(37)	(152)	(356)	(70)	(894)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Alcohol use during the last month before placed in secure care (%)									
None	20.8	21.1	60.0	27.6	48.6	27.6	19.0	22.9	26.8
1-2 month up to 1-2 a week	52.1	55.3	37.3	57.7	35.1	54.6	56.6	50.0	53.1
Several times a week up to daily	27.1	23.7	2.7	14.6	16.2	17.8	24.4	27.1	20.1
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(357)	(70)	(900)
Typical no. of drinks consumed on a day when alcohol is used (%)									
1-4	24.1	19.2	31.3	16.9	26.7	20.0	17.6	16.7	19.1
5-9	17.2	38.5	50.0	18.6	46.7	34.7	25.9	23.8	27.9
10 or more	58.6	42.3	18.8	64.4	26.7	45.3	56.5	59.5	53.0
(*n*)	(29)	(26)	(16)	(59)	(15)	(75)	(193)	(42)	(455)
Marijuana use during the last month before placed in secure (%)									
None	16.7	15.8	26.7	15.4	35.1	17.1	16.8	25.7	18.9
1-2 month up to 1-2 a week	29.2	34.2	28.0	17.9	35.1	24.3	26.8	24.3	25.8
Several times a week up to daily	54.2	50.0	45.3	66.7	29.7	58.6	56.6	50.0	55.3
(*n*)	(48)	(38)	(75)	(123)	(37)	(152)	(357)	(70)	(900)
Typical no. of times marijuana is smoked on a day when it is used (%)									
1-5	18.8	39.3	55.6	31.4	47.4	34.8	26.9	43.6	33.1
6-19	56.3	46.4	22.2	38.6	36.8	40.4	44.8	28.2	40.9
20 or more	25.0	14.3	22.2	30.0	15.8	24.7	28.4	28.2	26.1
(*n*)	(32)	(28)	(36)	(70)	(19)	(89)	(201)	(39)	(514)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Hallucinogen use during the last month before placed in secure care (%)									
None	68.8	71.1	90.5	86.2	83.8	76.3	66.9	81.4	75.2
1-2 month up to 1-2 a week	20.8	18.4	8.1	10.6	10.8	22.4	29.7	15.7	21.2
Several times a week up to daily	10.5	10.5	1.4	3.3	5.4	1.3	3.4	2.9	3.6
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(357)	(70)	(899)
Sedative/hypnotic use during the month before placed in secure care (%)									
None	64.6	65.8	90.5	69.9	86.5	82.9	76.5	78.6	77.3
1-2 month up to 1-2 a week	25.0	21.1	9.5	22.8	13.5	15.1	17.1	18.6	17.4
Several times a week up to daily	10.5	13.2	0.0	7.3	0.0	2.0	6.4	2.9	5.2
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(357)	(70)	(899)
Narcotic use during the last month before placed in secure (%)									
None	83.3	84.2	98.6	91.1	94.6	93.4	87.7	88.6	90.0
1-2 month up to 1-2 a week	14.6	10.5	1.4	6.5	0.0	5.9	7.8	8.6	7.0
Several times a week up to daily	2.1	5.3	0.0	2.4	5.4	0.7	4.5	2.9	3.0
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(357)	(70)	(899)
Stimulant use during the last month before placed in secure care (%)									
None	68.8	65.8	97.3	87.8	91.9	84.2	72.2	65.7	78.3
1-2 month up to 1-2 a week	27.1	23.7	2.7	6.5	8.1	11.8	20.2	22.9	15.7
Several times a week up to daily	4.2	10.5	0.0	5.7	0.0	3.9	7.6	11.4	6.0
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(356)	(70)	(898)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Inhalant use during the last month before placed in secure care (%)									
None	64.6	81.6	86.5	95.9	89.2	84.2	92.7	97.1	89.4
1-2 a month up to 1-2 a week	20.8	7.9	12.2	1.6	10.8	9.9	6.2	2.9	7.4
Several times a week up to daily	14.6	10.5	1.4	2.4	0.0	5.9	1.1	0.0	3.1
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(356)	(70)	(898)
Use of other substances during the month before placed in secure care (%)									
None	100.0	100.0	100.0	99.2	100.0	99.3	97.7	100.0	98.9
1-2 a month up to 1-2 a week	0.0	0.0	0.0	0.0	0.0	0.7	1.7	0.0	0.8
Several times a week up to daily	0.0	0.0	0.0	0.8	0.0	0.0	0.6	0.0	0.3
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(356)	(70)	(898)
Used substances intravenously (%)									
Yes	25.0	37.5	0.0	13.3	12.5	15.0	35.5	50.0	25.0
No	75.0	62.5	100.0	86.7	87.5	85.0	64.5	50.0	75.0
(*n*)	(16)	(8)	(24)	(30)	(8)	(40)	(76)	(22)	(224)
Used substances when committed last offence (%)									
Yes	61.7	67.6	37.3	64.8	27.8	56.6	64.3	68.6	59.7
No	38.3	32.4	62.7	35.2	72.2	43.4	35.7	31.4	40.3
(*n*)	(47)	(37)	(75)	(122)	(36)	(152)	(356)	(70)	(895)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Number of substances used at time of committing last offence (%)									
1	58.6	52.0	71.4	49.4	80.0	70.9	53.7	58.3	57.9
2	24.1	44.0	25.0	43.0	20.0	26.7	31.3	20.8	31.0
3	13.8	4.0	3.6	6.3	0.0	2.3	12.3	14.6	9.0
4-5	3.4	0.0	0.0	1.3	0.0	0.0	2.6	6.3	2.1
(*n*)	(29)	(25)	(28)	(79)	(10)	(86)	(227)	(48)	(532)
Substances used at the time of committing last offence (%)									
Alcohol	48.3	56.0	32.1	75.9	50.0	43.0	67.4	81.3	62.2
Marijuana	58.6	36.0	82.1	54.4	50.0	65.1	48.9	41.7	53.4
Hallucinogens	6.9	4.0	0.0	3.8	0.0	3.5	11.9	8.3	7.5
Sedatives/hypnotics	24.1	32.0	10.7	16.5	0.0	3.5	16.7	16.7	15.0
Narcotics	6.9	8.0	0.0	6.3	10.0	1.2	4.8	2.1	4.3
Stimulants	10.3	4.0	0.0	2.5	10.0	7.0	12.3	18.8	9.4
Inhalants	10.3	12.0	7.1	0.0	0.0	8.1	1.3	0.0	3.4
Other substances	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.4
(*n*)	(29)	(25)	(28)	(79)	(10)	(86)	(227)	(48)	(532)
Feels self to have a problem with substance use (%)									
Yes	25.0	34.2	14.7	25.4	10.8	19.1	27.2	25.7	23.9
No	75.0	65.8	85.3	74.6	89.2	80.9	72.8	74.3	76.1
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(356)	(70)	(898)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Current self-rated mood (0-10 scale)									
Mean	5.4	4.7	5.0	5.2	5.2	4.7	4.2	4.0	4.6
SD	2.8	2.9	2.8	2.7	2.7	2.5	2.4	2.4	2.6
(*n*)	(48)	(37)	(75)	(123)	(37)	(151)	(357)	(70)	(898)
Mood duration if mood ≤ 2 (%)									
Few days	50.0	14.3	52.9	65.0	71.4	61.3	55.2	47.6	55.0
Few weeks	25.0	14.3	41.2	25.0	28.6	29.0	26.4	33.3	28.5
Few months	12.5	14.3	0.0	0.0	0.0	3.2	11.5	4.8	7.0
6 months or more	12.5	57.1	5.9	10.0	0.0	6.5	6.9	14.3	9.5
(*n*)	(8)	(7)	(17)	(20)	(7)	(31)	(87)	(21)	(200)
Feels future is hopeless (%)									
Agree completely	12.5	8.1	9.3	2.5	2.8	3.9	7.0	8.6	6.4
Agree a fair bit	16.7	8.1	5.3	10.0	8.3	8.6	10.1	11.4	9.7
Agree a little	27.1	27.0	25.3	22.5	30.6	22.4	22.2	18.6	23.0
Does not agree at all	43.8	56.8	60.0	65.0	58.3	65.1	60.7	61.4	60.9
(*n*)	(48)	(37)	(75)	(120)	(37)	(152)	(356)	(70)	(894)
Has deliberately injured self (%)									
Yes	52.1	47.4	25.3	28.7	43.2	42.1	32.2	31.4	35.2
No	47.9	52.6	74.7	71.3	56.8	57.9	67.8	68.6	64.8
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Recency of last self-injury (%)									
Last few days	36.0	25.0	10.5	14.3	12.5	14.1	11.4	9.1	14.9
Last few weeks	12.0	20.0	5.3	22.9	18.8	14.1	9.6	9.1	13.0
Last few months	20.0	25.0	31.6	14.3	31.3	31.3	32.5	18.2	27.6
6 months or longer	32.0	30.0	52.6	48.6	37.5	40.6	46.5	63.6	44.4
(*n*)	(25)	(20)	(19)	(35)	(16)	(64)	(114)	(22)	(315)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Recent thoughts about suicide (%)									
Yes	52.1	56.8	28.0	24.8	18.9	25.7	22.4	21.4	26.0
No	47.9	43.2	72.0	75.2	81.1	74.3	77.6	78.6	74.0
(*n*)	(48)	(37)	(75)	(121)	(37)	(152)	(357)	(70)	(897)
Has previously attempted suicide (%)									
Yes	47.9	55.3	28.0	27.0	16.2	23.7	24.9	27.1	27.1
No	52.1	44.7	72.0	73.0	83.8	76.3	75.1	72.9	72.9
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(359)	(70)	(899)
Recency of last suicide attempt (%)									
Last few days	8.7	23.5	5.0	15.2	0.0	16.7	10.1	10.5	11.9
Last few weeks	8.7	11.8	15.0	15.2	16.7	19.4	9.0	0.0	11.5
Last few months	52.2	17.6	35.0	18.2	16.7	27.8	25.8	21.1	27.2
6 months or longer	30.4	47.1	45.0	51.5	66.7	36.1	55.1	68.4	49.4
(*n*)	(23)	(17)	(20)	(33)	(6)	(36)	(89)	(19)	(243)
Number of close friends (%)									
Many	47.9	50.0	61.3	62.3	62.2	54.6	43.1	41.4	50.4
A few	43.8	44.7	32.0	35.2	35.1	38.2	51.5	55.7	44.4
None	8.3	5.3	6.7	2.5	2.7	7.2	5.3	2.9	5.2
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Get on well with most people (%)									
Agree	87.5	94.7	94.7	94.3	100.0	92.7	91.3	97.1	93.0
Disagree	12.5	5.3	5.3	5.7	0.0	7.3	8.7	2.9	7.0
(*n*)	(48)	(38)	(75)	(122)	(36)	(150)	(357)	(70)	(896)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Has had steady girl/boyfriend for longer than 3 months (%)[2]									
Yes	75.0	78.3	68.2	86.8	50.0	76.1	82.3	91.4	79.5
No	25.0	21.7	31.8	13.2	50.0	23.9	17.7	8.6	20.5
(*n*)	(28)	(23)	(44)	(76)	(22)	(92)	(237)	(35)	(557)
Most friends have been in trouble with the law (%)									
Yes	68.8	73.7	84.0	79.5	78.4	70.4	66.1	57.1	70.4
No	31.3	26.3	16.0	20.5	21.6	29.6	33.9	42.9	29.6
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Has a bad temper (%)									
Yes	75.0	57.9	58.7	52.5	62.2	65.1	47.3	52.9	54.9
No	25.0	42.1	41.3	47.5	37.8	34.9	52.7	47.1	45.1
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Gets into fights (%)									
Never or hardly ever	14.6	34.2	26.7	21.3	18.9	22.4	29.4	24.3	25.5
Couple of times a year	54.2	47.4	34.7	51.6	29.7	46.7	45.4	52.9	46.1
Once a month or more often	31.3	18.4	38.7	27.0	51.4	30.9	25.2	22.9	28.5
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Has tattoos (%)									
Yes	20.8	42.1	8.0	18.9	0.0	8.6	20.5	35.7	18.5
No	79.2	57.9	92.0	81.1	100.0	91.4	79.5	64.3	81.5
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(356)	(70)	(899)

[2] This item is no longer included in the current SECAPS.

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Would like tattoos removed (%)									
Yes	37.5	33.3	20.0	37.5	-	66.7	31.3	33.3	34.5
No	62.5	66.7	80.0	62.5	-	33.3	68.8	66.7	65.5
(*n*)	(8)	(12)	(5)	(16)	-	(6)	(48)	(24)	(119)
Has been suspended/expelled from school (%)									
Yes	70.8	71.1	77.3	75.4	91.9	87.5	86.6	78.6	82.5
No	29.2	28.9	22.7	24.6	8.1	12.5	13.4	21.4	17.5
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Truanted regularly (%)									
Yes	85.4	71.1	72.0	67.2	67.6	75.0	68.1	81.4	71.5
No	14.6	28.9	28.0	32.8	32.4	25.0	31.9	18.6	28.5
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)
Was still attending school/college before placed in secure care (%)									
Yes	23.7	3.1	45.3	11.5	75.0	36.4	7.6	1.8	19.4
No	76.3	96.9	54.7	88.5	25.0	63.6	92.4	98.2	80.6
(*n*)	(38)	(32)	(53)	(87)	(32)	(107)	(250)	(56)	(655)
Age when left school (if no longer attending) (%)									
13 or less	51.7	9.7	34.5	14.3	100.0	20.6	6.6	5.5	15.0
14	31.0	12.9	37.9	19.5	0.0	42.6	24.0	18.2	25.3
15	17.2	41.9	27.6	45.5	0.0	36.8	43.2	32.7	38.6
16 or more	-	35.5	-	20.8	-	-	26.2	43.6	21.1
(*n*)	(29)	(31)	(29)	(77)	(8)	(68)	(229)	(55)	(526)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Longest time in a regular paid job working 10 hours or more a week (%)									
never had a job	86.7	75.0	91.3	66.7	88.9	72.2	46.4	23.8	62.1
less than 6 months	13.3	12.5	8.6	13.3	0.0	22.2	21.7	23.8	17.5
6 months or more	0.0	12.5	0.0	20.0	11.1	5.6	31.9	52.4	20.4
(*n*)	(15)	(8)	(23)	(30)	(9)	(36)	(69)	(21)	(211)
Finds it hard to concentrate (%)									
Yes	56.3	31.6	49.3	44.3	40.5	36.8	36.7	37.1	39.8
No	43.8	68.4	50.7	55.7	59.5	63.2	63.3	62.9	60.2
(*n*)	(48)	(38)	(73)	(122)	(37)	(152)	(357)	(70)	(897)
Often does things on impulse (%)									
Yes	75.0	63.2	45.3	66.1	70.3	70.4	68.3	58.6	65.9
No	25.0	36.8	54.7	33.9	29.7	29.6	31.7	41.4	34.1
(*n*)	(48)	(38)	(75)	(121)	(37)	(152)	(357)	(70)	(898)
Hard to sit still for long (%)									
Yes	56.3	39.5	50.7	57.0	62.2	52.6	46.8	51.4	50.7
No	43.8	60.5	49.3	43.0	37.8	47.4	53.2	48.6	49.3
(*n*)	(48)	(38)	(75)	(121)	(37)	(152)	(357)	(70)	(899)
Boredom one of biggest problems (%)									
Yes	79.2	57.9	68.0	74.6	75.7	80.3	71.1	70.0	72.9
No	20.8	42.1	32.0	25.4	24.3	19.7	28.9	30.0	27.1
(*n*)	(48)	(38)	(75)	(122)	(37)	(152)	(357)	(70)	(899)

Appendix 5 (cont.)

Age (years)	Females		Aboriginal males		Non-Aboriginal males				All
	12-15	16-19	11-15	16-19	11-13	14-15	16-17	18-20	
Subjects by non-verbal IQ ranges (%)									
Above borderline (IQ ≥ 80)	72.9	52.6	50.7	53.3	63.9	68.4	72.1	62.9	65.3
Borderline (IQ=70-79)	18.8	44.7	34.7	41.8	22.2	20.4	24.5	35.7	28.3
Below borderline (IQ ≤ 69)	8.3	2.6	14.7	4.9	13.9	11.2	3.4	1.4	6.4
Non-verbal IQ means and SDs									
Mean	89.5	85.4	83.8	83.8	88.1	93.5	92.1	88.6	89.7
SD	16.0	15.4	16.0	14.1	16.9	20.2	18.3	17.3	17.9
(*n*)	(48)	(38)	(75)	(122)	(36)	(152)	(355)	(70)	(896)
Subject cooperativeness (%)									
Very	79.2	81.6	70.3	84.6	70.3	78.3	78.2	88.6	79.1
Fairly	16.7	18.4	21.6	10.6	24.3	18.4	17.6	11.4	16.9
Minimally	4.2	0.0	8.1	4.9	5.4	3.3	3.9	0.0	3.9
Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(358)	(70)	(900)
Degree of observed restlessness/ distractibility (%)									
Not at all	77.1	81.6	66.2	78.9	59.5	67.8	76.3	84.3	74.6
Somewhat	20.8	15.8	32.4	17.9	18.9	25.7	20.4	14.3	21.2
Very	2.1	2.6	1.4	3.3	21.6	6.6	3.4	1.4	4.2
(*n*)	(48)	(38)	(74)	(123)	(37)	(152)	(358)	(70)	(900)

Appendix 6: *Offence code descriptions (simplified)*

Codes below are those used by the South Australian Courts Administration Authority and the Office of Crime Statistics to classify offences. Codes with an asterisk (*) are offences that the author has included in the category of "violent crimes" (these include various threats of harm and offences that can cause a fear of direct harm but exclude sexual offences). Assaults account for 70.4% of all the offences in the violent offence category, with robbery with violence and robbery with an offensive weapon accounting for a further 14.8%. The number of recorded offences for the initial 458 subjects for whom offending histories (both pre- and post-SECAPS assessment) were obtained totalled 20,031. The incidences of various offences are given as percentages of all recorded offences. Where no offences were recorded in a category, no percentage figure is given.

Code	%	Description
Offences against the person including acts endangering life		
1111*	0.1	Murder (excluding by causing suicide)
1112*	-	Procure suicide by fraud or duress
112*	0.0	Attempted murder
113*	-	Conspiracy to murder
114*	0.0	Manslaughter (including manslaughter by driving)
115	-	Driving causing death
119*	-	Homicide nec
121*	0.2	Assault causing grievous bodily harm
122*	0.9	Assault causing actual bodily harm
128*	0.1	Assault intent to commit an offence
129*	5.5	Other assault
1361	0.2	Rape
1362	0.0	Attempted rape
1363	0.1	Indecent assault
1371	0.2	Unlawful sexual interference
1372	0.0	Attempted unlawful sexual interference
1373	-	Incest

139	-	Other sexual offences
1391	0.0	Indecent behaviour/exposure
1392	0.0	Gross indecency with a child
1393	0.0	Incite or procure an act of gross indecency with a child
1394	-	Be party to an act of gross indecency with a child
1395	-	Persistent sexual abuse of a child
1399	0.0	Other sexual offences nec
191*	0.0	Kidnapping and abduction
192*	-	Ill-treatment of children
193*	-	Hijacking
198	-	Defamation and libel
1991*	0.3	Threaten to kill or endanger life (including bomb threats)
1992*	0.2	Threaten to injure person
1993*	0.0	Possess object to kill or injure with intent
1994*	0.5	Act likely to endanger life or cause harm nec
1995*	-	Stalking
1999*	-	Offences against the person nec

2 Robbery and extortion

2111*	0.1	Robbery with firearm
2112*	0.4	Robbery with offensive weapon (not firearm)
2121*	1.0	Unarmed robbery with violence
2122	1.3	Unarmed robbery with no violence
22*	0.1	Extortion and blackmail

Burglary, break & enter (B&E), fraud, forgery, false pretences and larceny

31	13.3	Burglary and B&E
32	0.9	Fraud and misappropriation
33	4.6	Receiving and unlawful possession
35	9.9	Larceny or illegal use of vehicle
39	12.6	Larceny not of vehicle

4 Damage property and environmental

411	0.3	Arson or damage by explosives - CLC
412	-	Arson or damage by explosives - other laws

419	6.9	Damage property - excluding arson or explosives
4197	0.0	Kill or injure animals
42	-	Environmental offences

5 Offences against good order

51	-	Offences against govt security and operations
52	7.3	Offences against a court or court order
53	5.0	Offences against police, conspiracy
54	0.3	Offences against justice procedures and enforce. of order
55	1.9	Unlawful possession, use and/or handling of weapons
57	-	Pornography and censorship
591	1.1	Liquor licensing
592	0.0	Betting and gaming offences
593	2.5	Trespassing
594	-	Consorting
595	0.0	Prostitution
596	-	Drunkenness
597	-	Defamation and libel
5991	0.1	Found with intent to commit crime
5992	1.3	Indecent or offensive language
5993	1.8	Disorderly behaviour
5994	0.1	Offensive behaviour
5995	0.3	Loitering
5996	0.1	Urinating, defecating
5997	1.7	Graffiti and related offences
5999	0.0	Offences against good order nec

6 Drug offences

61	3.2	Possess and/or use drugs
64	-	Import/export or possess for import/export drugs
65	0.1	Sell/trade or process for sale/trade drugs
66	0.3	Produce or manufacture drugs
691	0.0	Fraudulent prescription offences
692	3.2	Possess implements for drug use
699	0.0	Other drug offences

7 Driving, motor vehicle (MV), traffic and related offences

711	0.7	Driving offences involving alcohol or drug
72	0.8	Dangerous, reckless, or negligent driving
73	2.4	Driving licence offences
74	3.3	Traffic offences
75	0.0	MV registration offences
79	-	Parking and other MV offences

8 Other offences

81	-	Company legislation offences
82	-	Banking, financial institutions and insurance offences
831	-	Tax and stamp duty - excluding excise
832	-	Posts, telegraphs and telecommunications
8321	-	Indecent/offensive communication by telephone & postal service
8322	-	Listening devices
8323	-	Hoax telecommunication messages
8329	-	Other
833	-	Customs, excise, imports & exports (excluding drugs / protected flora/fauna)
834	-	Immigration, passports, etc
835	0.0	Electoral
836	-	Air navigation, airports, and aircraft operations
837	-	Health, mental health, quarantine, food standards etc
838	-	Bankruptcy
839	-	Copyright and patents
841	-	Social security, social welfare legislation
842	-	Births, deaths, marriages, including Family Law
843	0.1	Education (including truancy)
844	2.0	Railways, and other transport - excluding Div. 7 & Group 836
845	-	Navigation act offences, coastal, inland water-ways, ports, harbours
846	-	Energy - electricity, gas and other energy
847	-	Agriculture and stock, pasture protection, guano, etc
848	-	Fisheries
849	0.0	Fires, bushfire control

852	0.0	Licensing and regulatory bodies
853	0.0	Dangerous drugs, poisons & other substances - excluding Div. 6
854	-	Secret commissions, trade practices etc
855	-	Workers' conditions, compensation, conciliation and arbitration
856	-	Explosives and inflammable liquids - excluding sub-division 55
857	-	Scaffolding, cranes, lifts, industrial safety
858	-	Rivers and water supply
859	-	Local government organisation - excluding by-law breaches
86	-	Dog and cat control offences
8891	0.0	Animal cruelty
8897	-	Offences relating to Aboriginal lands / heritage
8898	0.2	Breach of by-laws
8899	-	Offences nec
8911	0.0	Escape from custody (prisoner)
8919	-	Security breach (excl. escape from custody)
892	-	Contraband/drug related
893	-	Prison officials, offences against
894	-	Involving other prisoners
895	-	Involving the prisoner - pretend illness, etc
896	-	Involving property
897	-	Conduct - behaviour, dress, etc
899	-	Offences in custody nec

Total 100%

Note: nec = not elsewhere coded

Appendix 7: *SECAPS recidivism Risk Index calculation guide*

Calculating the recidivism Risk Index

Risk Index (RI) = (Alcohol + Inhalant use frequencies)/2 + Number of prior offences – ADHD signs index – Current age – Age at 1st offence + 43.

Risk Index (RI) components

- Last month alcohol use frequency (1 = no use …..5 = daily use)
- Last month inhalant use frequency (1 = no use …..5 = daily use)

Number of prior offences recoded:

0 = 0-5 offences 1 = 6-10 offences 2 = 11-20 offences

3 = 21-40 offences 4 = 41-60 offences 5 = 61 or more offences

- ADHD signs index = sum of concentration, restlessness, impulsiveness, boredom problem items (each item is scored YES = 1, NO = 2)

Current age (years, disregard months)

- Age at 1st offence (years, disregard months)

Constant value = 43

Record values here

Alcohol =……. Inhalants =……. Number of prior offences = …….

ADHD signs index = …… Current age = ……. Age at 1st offence = ……

Calculations

Step1: Add Alcohol and Inhalants and divide the sum by 2.

Alcohol […..] + Inhalants […..] = ….. ÷2 = …..

Step 2: Add the above sum, the number of prior offences (recoded) and 43.

step 1 sum […..] + prior offences […..] + [43] = …..

Step 3: Add the ADHD signs index, current age and age at 1st offence.

ADHD signs index […..] + current age […..] + age at 1st offence […..] = …..

Step 4: From the step 2 sum subtract the step 3 sum.

Risk Index = step 2 sum […..] – step 3 sum […..] = ….. (**RI**)

Step 5: See Table 1 below for the likelihood of reoffending that corresponds with the obtained **RI** (ignore any decimal value that the **RI** has).

% likelihood of reoffending within 6 months after release = ….. %

Table 1: *Recidivism Risk Index scores by proven reoffending status at 6 months after release following SECAPS assessment*

RISK Score	Total assessments	% reoffend	Suggested risk description
2-3	8	12.5	Low
4-5	25	16.0	Low
6-7	58	48.3	Moderately high
8-9	111	52.3	Moderately high
10-11	156	67.1	High
12-13	128	71.9	High
14-15	106	74.5	High
16-17	70	81.4	Very high
18-19	24	95.8	Very high
20-21	10	100.0	Very high
22-23	0	-	Very high
24-25	1	100.0	Very high
Total	697	65.7	

Note: The risk levels reported here refer only to the likelihood of committing a new offence. They do not estimate the likely seriousness of any new offence.

Appendix 8: *Revised SECAPS forms*

SECA PSYCHOSOCIAL SCREENING ASSESSMENT

Surname | Given names

Date of Birth ..... /..... /.....

Male | Female

Indigenous | East Asian | Non-Indigenous

Background: . . . . . .

---

1. a. Today's date ..... /..... /.....

   b. Training Centre

2. Assessing Officer (name)

3. Youth's age (years)

4. Offences in this state.

   Total of proven and finalised offences (court / Family Conference) in this state (from JIS).

   Total of any matters pending (from JIS or court sheets)

5. Prior proven offences dealt with by courts / Family conferences in other states / territories / countries (from records if available, otherwise ask youth). Record details in "Additional Comments …" section at end of report.

   Total offences other jurisdictions

6. Sum of items 4a and 5 Total proven finalised offences all jurisdictions

7. Age at first proven offence dealt with by either court or Family Conference (from records unless youth mentions offences committed in another state / territory / country).

   Years

8. a. Do you have any problems with your eyesight? YES ☐

NO ☐

b. If YES, describe: .....

.....

9. a. Do you have any problems with your hearing? YES ☐

NO ☐

If YES, describe: .....

.....

10. a. Is your natural father still alive? YES ☐

NO ☐

DON'T KNOW ☐

b. Is your natural mother still alive? YES ☐

NO ☐

DON'T KNOW ☐

11. (If both parents are still alive) Are they still living together? YES ☐

NO ☐

DON'T KNOW ☐

12. How do you usually get on with your parents?

Mother	Father	Step-mother	Step-father
☐ Very well	☐ Very well	☐ Very well	☐ Very well
☐ Fairly well	☐ Fairly well	☐ Fairly well	☐ Fairly well
☐ Not too well	☐ Not too well	☐ Not too well	☐ Not too well
☐ Badly	☐ Badly	☐ Badly	☐ Badly
☐ *Not apply*	☐ *Not apply*	☐ *Not apply*	☐ *Not apply*

13. Are there lots of fights and arguments at home?

YES	NO	Not apply
☐	☐	☐

14. Has anyone in your immediate natural family (mother, father, brothers, sisters) been in trouble with the law (not counting minor traffic offences)?

YES	☐
NO	☐
DON'T KNOW	☐

15. Has anyone in your immediate natural family (mother, father, brothers, sisters) had a problem with alcohol or drugs?

YES	☐
NO	☐
DON'T KNOW	☐

16. Before coming into secure care, where were you living for most of the previous month?

☐ 1. With parents (either natural, step or adoptive)

☐ 2. With other relatives

☐ 3. With foster parents

☐ 4. INC placement

☐ 5. Community residential placement

☐ 6. In own accommodation (alone or sharing)

☐ 7. On the streets

☐ 8. Other (specify): living .....

17. a. In the community do you regularly play or train in any sports for a team or a club?

YES ☐ NO ☐

If YES, please describe (include how often): ……..

b. In the community do you take part in other regular organised recreational / leisure activities (e.g., youth group, gym training, music lessons, etc)?

YES ☐ NO ☐

If YES, please describe (include how often): ……..

c. From the responses to 17.a and 17.b above, please indicate the usual frequency of participation in all supervised recreational activities:

☐ participation on average twice a week or more often

☐ participation in activities on average 1/week

☐ no regular organised activities

18. Reading test

☐ a. Number of words read correctly
(If 10 or less, subject might require assistance with reading)

☐ b. Reading age (years only - disregard months)

19. Writing task (use back of General Background Questionnaire) Words Correct ☐
"*One quick brown fox jumped over the lazy dog*s"

20. Numeracy test
(tick if answer correct, otherwise write answer)

☐	☐	☐	☐	☐	☐	☐
$1.05	$6.65	$3.20 (1.80 – repeat)	$3.15	90c	$4.70	Total Correct

21. Time telling test
(tick if answer correct - otherwise write answer)

☐	☐	☐	☐
4.15	6.08	1.35	9.22

22. Give *General Background Questionnaire*

23. Give Coloured Progressive Matrices

☐ a. CPM raw score

☐ b. SPM conversion

☐ c. SPM standard score

☐ d. Above Borderline (≥ 80)
☐ Borderline (70-79)
☐ Retarded (≤ 69)

24. Please indicate, in your opinion, how cooperative was the youth with the assessment.

Very cooperative	Fairly cooperative	Minimally cooperative	Not at all cooperative
☐	☐	☐	☐

25. Please indicate how restless / distractible you considered the youth to be.

Not at all	Somewhat	Very
☐	☐	☐

26. Additional comments and observations regarding the youth, including any elaborations regarding responses to specific items. Ask about his/her future plans or goals ("What are you planning to do when you leave here? [e.g., living arrangements, work, training, education, personal relationships, etc] and/or "What do want to do or achieve while you are here?")

.....

.....

.....

.....

.....

.....

.....…... (Continue over page)

GENERAL BACKGROUND QUESTIONNAIRE

1. During the ***last month before you were placed in secure care,*** how often did you use each of the following?

	None during last month	Once or twice in last month	Once or twice a week	Several times a week	Daily or almost daily
1.1 Alcohol (beer, wine, spirits)	☐	☐	☐	☐	☐
1.2 Marijuana (grass, hash)	☐	☐	☐	☐	☐
1.3 Acid, LSD, Magic mushrooms, Datura or other hallucinogens	☐	☐	☐	☐	☐
1.4 Sedatives or sleeping tablets such as Mogadon, Serepax, Valium, Rohypnol etc. (without Dr's prescription)	☐	☐	☐	☐	☐
Heroin, morphine or other narcotics (without doctor's prescription)	☐	☐	☐	☐	☐
1.6 Cocaine, speed, ecstasy, pep pills or other stimulants (without doctor's prescription)	☐	☐	☐	☐	☐
1.7 Sniffed glue, petrol, thinners, butane gas or similar	☐	☐	☐	☐	☐
1.8 Other (describe)	☐	☐	☐	☐	☐

.....….....

Which of the above substances have you used fairly regularly (ie, once a week or more often) during the ***last half year***? (Write "***None"*** if no substances were regularly used).

……..……

……..……

3. Have you ever taken drugs by injecting ("shooting up")?

YES ☐ NO ☐

4. How many drinks do you normally have on the days when you use alcohol?

Never use	1-2	3-4	5-6	7-9	10 or more
☐	☐	☐	☐	☐	☐

5. How many smokes (joints, cones, bongs etc) do you normally have on the days when you use marijuana?

Never use	1-2	3-5	6-10	11-19	20 or more
☐	☐	☐	☐	☐	☐

a. If you have been involved in offending, are you often under the influence of alcohol or drugs when you offend (even if only a little)?

YES ☐ ☐ NO

b. If "YES", please list what substances you have most often used when you have offended:

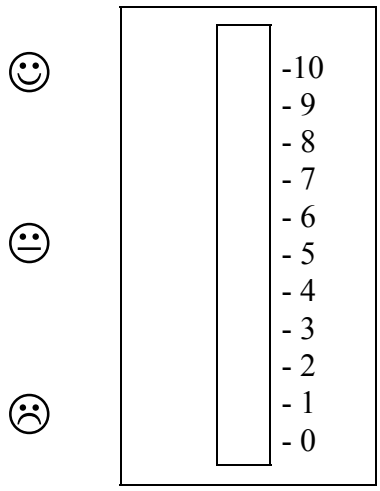
. . . . . .

. . . .

7. Do you feel that you have a problem with drugs or alcohol?

YES ☐ NO ☐

8. a. Using this feeling "thermometer", show with a line how you are feeling at present.



Best feeling possible (very happy, cheerful)

Worst feeling possible (extremely unhappy, very depressed)

c. I have been feeling like this for:

A few days	A few weeks	A few months	More than half a year
☐	☐	☐	☐

9. How much do you agree with this statement:

"I feel that I have nothing to look forward to - my future is hopeless."

Agree completely	Agree a fair bit	Agree a little	Don't agree at all
☐	☐	☐	☐

10. During the **last week**, have you had thoughts about killing yourself?

NO ☐ YES ☐

11. a. Have you ever tried to kill yourself?

NO ☐ YES ☐

b. If "YES", when was the last time?

Last few days	Last few weeks	Last few months	More than half a year ago
☐	☐	☐	☐

12. How many of your friends have been in trouble with the law?

None ☐ A few ☐ Half ☐ Most ☐ All ☐

13. I have a bad temper.

YES ☐ NO ☐

14. I get into fights:

Never (or almost never) ☐

A couple of times a year ☐

Once a month or more often ☐

15. In the past I have been suspended / expelled / excluded from school.

YES ☐ NO ☐

16. a. Were you still attending school or TAFE college before you were placed in secure care?

YES ☐ NO ☐

b. What is the highest year of school that you have completed?

Year ☐

17. a. Have you ever had a regular paid job working 10 hours a week or more?

YES ☐ NO ☐

b. If "YES", what is the longest time that you have been in one such job?

☐ Months

18. I often find it hard to concentrate on one thing for more than a few minutes.

YES ☐ NO ☐

19. I often do things on impulse (a sudden urge) without stopping to think.

YES ☐ NO ☐

20. I find it hard to sit still for long.

YES ☐ NO ☐

21. Being bored is one of my biggest problems.

YES ☐ NO ☐

22. Have you ever been diagnosed as having Attention Deficit Hyperactivity Disorder (also known as ADHD or ADD)?

YES ☐ NO or Don't know ☐

23. I offend **mainly** because: (mark only the reasons that apply to you)

- ☐ I'm bored and there is little else to do
- ☐ I'm often drunk or under the influence of drugs
- ☐ I get angry
- ☐ I go along with what my friends do
- ☐ I usually get away with it
- ☐ It gives me a buzz / thrill / rush
- ☐ So that I can get alcohol or drugs
- ☐ I don't really care much about what happens to other people
- ☐ I need food and/or shelter
- ☐ I need clothes
- ☐ I need money to have a good time
- ☐ To get revenge
- ☐ It's not fair that others have so much and I have so little
- ☐ It's the easiest way to get what I want
- ☐ To get respect from others
- ☐ I have poor self-control
- ☐ So many others are doing the same
- ☐ Some people deserve to be victims
- ☐ I need transport
- ☐ Other people push my buttons
- ☐ I get what I want and nobody else really suffers when I offend
- ☐ Other reasons - please describe: . . . . . .

Appendix 9: *Assessors' interpretive guide for the revised SECAPS*

Item Selection and Interpretation

Items were included in the SECAPS assessment because they either:

- are known from the research literature to be associated with increased offending risk;
- are relevant to the youth's immediate safety and well-being;
- point to functional limitations which staff need to be aware of in order to have realistic expectations about the youth;
- identify longer term needs that might require psychosocial or educational remediation.

Three important factors that need to be considered when planning interventions with individual young offenders are needs, risk and responsivity (Andrews, 1995).

Needs

There is accumulating evidence that some interventions can help to reduce the risk of offending. An important step in effective intervention is the consideration of individual needs. These are things that are required for an individual's successful functioning. This is a broad concept and encompasses many different areas of adjustment. Everyone has a variety of personal needs. Services in areas such as education, health, disability, housing and so on have been created for those who require assistance to meet them. However, it should be remembered that, irrespective of what other problems they might have, the only reason why offenders are involved with the criminal justice system is that they have offended. A primary aim of that system is, therefore, to prevent (or, more realistically, to reduce) offending. The needs that are of greatest importance and relevance when considering offenders are those that influence offending risk. These are termed "criminogenic needs" and should be the main targets of assessment and intervention. Other welfare concerns ("general needs") should not obscure this, particularly as other agencies already exist to service more general welfare needs. This is an important point because general needs are often confused with criminogenic needs. Interventions that focus on general needs are less likely to reduce offending risk than are interventions that focus on criminogenic needs, i.e. those needs that are more directly related to offending.

Risk

Not all youths are at equal risk of reoffending. Most youths stop offending after their first few offences. It would seem, therefore, to be inefficient to intervene with these youths when most will cease offending naturally. There is, however, a small percentage of youths who go on to offend with increasing frequency. This smaller percentage of chronic offenders requires more intensive services. There is evidence with both adult and young offenders that providing intensive services to low risk offenders either has little effect or leads to higher offending rates (perhaps due to enmeshing them more deeply in the justice system), whereas high risk offenders benefit from more intensive interventions. Assessing offending risk is, therefore, an important preliminary step before planning and implementing interventions for individual youths.

Responsivity

Another factor that needs to be taken into account when considering interventions for offenders is individual responsiveness. Because we are not all the same, consideration needs to be given to whether a particular program matches not only the needs but also the abilities and learning styles of each individual. For example, there is little point in putting a youth in a program that requires reading if the youth is illiterate, that requires abstract reasoning if the youth is intellectually very dull, that requires sitting still and paying attention if the youth suffers ADHD, that requires punctuality if the youth cannot tell time, that requires motivation if the youth does not consider that he has a problem and so on. Therefore, needs assessments should include measures that indicate the youth's capacity (e.g. motivation, ability to concentrate, literacy etc) to respond to various tasks, deficits in which might need to be attended to before particular programs can be offered. Alternatively, if these deficits cannot be immediately remedied, programs might require modification to better suit some individuals.

The above model is one that is now widely accepted in forensic psychology and other professional disciplines that provide services to young offenders and is useful to keep in mind when carrying out SECAPS and related assessments.

When developing the SECAPS we were mindful that all items and tasks needed to be brief so as to allow a wide coverage of different areas without the total screening taking much more than 30 minutes. Many youths are restless, have poor concentration or are just plain surly. A longer screening procedure would have a lower successful completion rate (at present less than

1% of youths decline to do the screening). Furthermore, a longer screening procedure would jeopardise staff cooperation, particularly if they do SECAPS assessments in addition to their other duties. A longer assessment might be put off to a later time and could, through repeated delays, sometimes not be done at all.

SECAPS items – what do they mean?

Note: The letters *GBQ* before an item number indicates that it is from the *General Background Questionnaire*.

Because the SECAPS is only a screening assessment, no single area of adjustment or functioning is assessed in depth. The following are suggestions regarding how responses to items in particular areas might be interpreted. However, while responses to certain items might suggest needs, strengths or targets for intervention, further information generally would need to be gathered before firm conclusions can be drawn about any individual youth.

Offending history

(number of previous offences and age of first offence) Items 4a, 4b, 5, 6, 7

The more prior offences, the greater is the risk of continued offending. Similarly, the younger the age of first offence, the greater is the risk of continued offending.

- **Sight and hearing**

Items 8a, 8b, 9a, 9b

These items are not risk indicators. However, it can be useful to know whether a youth has problems with either sight or hearing as this might affect their performance on various tasks. For example, a youth who does not always respond when spoken to might not be being rude or difficult, he might simply be hard of hearing.

- **Family**

(Parents still alive? Parents together? Get on with parents/step-parents? Conflict at home? Offending by parents or siblings? Parent or sibling substance use problems?) Items 10a, 10b, 11, 12, 13, 14, 15

Broken family background can be a risk indicator if it reflects conflict in the parental relationship. However, even stronger risk indicators are questions that directly ask about the levels of conflict among family members. Having a close and good relationship with at least one parent might help to protect a youth from the negative effects of other conflictual relationships within a family. Other family members being either offenders or having problems with substance might indicate increased risk of offending. In some cases either the family conflict or the antisocial behaviour of other family members could become a target for intervention (either change the family's behaviour or separate the youth from the family). Otherwise, increased support and supervision for the youth might be required to counter the family's criminogenic influence.

Residence

(where living before being placed in secure care) Item 16

This is a background item that provides some information about a youth's circumstances. There is no simple interpretation of its relevance. In some instances it might suggest risk or need, for example, if a youth has been living "on the streets". In other instances it might suggest resources, such as responsible adults (a responsivity factor), present in the residence that could be utilised for interventions, supervision or monitoring.

- **Leisure / recreation**

(types and frequency of activities) Item 17a, 17b, 17c

A youth who has no appropriate leisure activities will be more easily tempted to resort to antisocial activities to meet his/her needs for stimulation and social interaction. Adult supervised and structured activities can have positive socialising effects. This is both a risk and a need factor. If there are no or few suitable recreational activities then, to reduce the risk of offending, leisure pursuits could be a target for intervention.

Literacy, numeracy & time telling

(basic survival skills) Items 18, 19, 20, 21

These are responsivity rather than criminogenic risk factors. They do not directly affect offending risk. However, the types of activities and interventions that are appropriate to involve the youth in will to some extent be influenced by each youth's basic skill levels. For example, if the youth is illiterate it would not be appropriate to involve the youth in a job or a program

where reading and writing are required. In some circumstances it could be appropriate to offer remedial assistance in the area of basic skills in order to increase their access to other programs and interventions.

- **Substance use**

(range of substances and frequency of use during both the last month and the previous 6 months; intravenous substance use; quantities of alcohol and marijuana typically consumed; relationship of substance use to offending; self-reported substance use problems) GBQ items 1 (1.1 - 1.8), 2, 3, 4, 5, 6a, 6b, 7

Substance use can reflect a socially deviant lifestyle. In some circumstances it can also encourage offending by either bringing the youth into contact with offenders, creating an economic need that leads to crime or by directly increasing offending risk due to the disinhibiting properties of some substances (alcohol and inhalants are the best recidivism predictors). Substance use can be both a criminogenic need and a risk. Acknowledging having a problem with substance use suggests that a youth might be responsive to offers of intervention.

Mood and suicide

(current mood and time experienced; feelings of hopelessness; recent thoughts about suicide; previous suicide attempts) GBQ items 8a, 8b, 9, 10, 11a, 11b

Staff have a duty of care toward the residents in secure care. The items about mood, feelings of hopelessness and suicide are all relevant to alerting to the possibility of depression and/or increased risk of attempting suicide. These are not criminogenic needs or risks, though they could in some cases be responsivity factors. A youth who feels depressed or suicidal might be difficult to engage in other interventions and might need to have these problems alleviated first. Completed suicide in secure care is a very rare event, partly due to reduced opportunity and close supervision. Suicide attempts are more common and many youths are at continued risk of making suicide attempts after their release. Factors that indicate increased risk of suicide attempts include low mood (particularly low mood that has been experienced for more than a few weeks or longer), suicidal ideation, previous suicide attempts, increased substance use, having a bad temper and increased ADHD signs. The last two factors combined can be described as impulsive aggression which, when present, indicates a risk of reacting in extreme ways (including toward oneself) with little forethought. If a youth is thought to be at increased risk, immediate actions to be taken can include increased monitoring and increased social

support. Further professional assessment might be required, which in some cases might include consideration of medication. Poor anger control and ADHD (if present) can also be targets for intervention to help reduce self-harming risk.

- **Delinquent peers**

(are they offenders?) GBQ item 12

The more offender associates a youth has, generally the greater is the risk of offending for the youth. This can be both a risk indicator and a criminogenic need. It can, therefore, be a target for intervention.

- **Anger / aggression**

(anger control problems?) GBQ items 13, 14

Developing greater self-control can help to reduce both anger and offending. Youths who have high scores on either of these items could be considered for an anger management program.

- **Education**

(school related behaviour problems; still at school?; highest level of schooling completed) GBQ items 15, 16a, 16b

Poor behaviour at school might indicate a risk for poor behaviour in other settings. Being out of school, particularly if below the legal school leaving age, could be a risk for offending due to a lack of structured activity and positive socialising experiences. Highest level of schooling completed might provide some information about the youth's achievements, abilities and employability.

Employment

(has had work?; is currently employed?) GBQ items 17a, 17b

In the case of youths no longer attending school, employment experience might be a need area. Poor employment experiences (which are suggested where the longest period of continuous employment is very short) might also indicate problems with work skills, interpersonal skills, motivation and so on. Being both out of work and out of school might increase offending risk.

Restlessness and attention problems

(ADHD type problems) Item 25 & GBQ items 18, 19, 20, 21, 22

These are risk factors that suggest that the youth tends to be stimulus seeking and has poor self-control. As a need this might, in severe cases, require further assessment and possibly medical intervention. A diagnosis of ADHD cannot be made using these items alone, but the pattern of responses could raise the question of whether the youth might have ADHD. Youths who are high on this factor will generally not be very reliable and will find it hard to remain on-task. They will, therefore, require closer supervision and frequent feedback and encouragement. Tasks might have to be broken down into smaller, shorter and more achievable sub-tasks. Youths who display increased ADHD signs are at higher risk of substance use and of re-offending. This is a need, a risk and a responsivity factor.

Reasons for offending

GBQ item 23

This item is a checklist of different reasons that youths give to explain or justify their offending. These items reflect a variety of motives or justifications, including being stimulus seeking, having poor self-control (often exacerbated by substance use), responding to threat or other environmental stress, deviant peer group, egocentricity, moral immaturity, lack of empathy, survival needs, poor problem solving, antisocial values, seeing self as victim and so on. Individuals' motives might be a good starting point for staff to consider the thoughts and values associated with offending and what might be done to reduce the offending risk of individual youths. As youths are in secure care because they have offended, as part of rehabilitation efforts, it seems relevant to seek not only the opinions of others about why they offend but to also ask the youths directly. The reasons initially given will not always be accurate, but at least the question is raised and can then be explored further.

- **Assessment behaviour**

(Cooperative?) GBQ item 23

The degree to which the youth was cooperative with the assessment might indicate whether the accuracy of the information that the youth provided the assessor should be questioned. It might also be an indicator of possible future compliance problems in supervision or programs.

- **Recidivism risk assessment**

(statistical estimate of 6-month reoffending risk)

This is an estimate based on an analysis of almost 700 SECAPS assessment records and associated offending histories. Higher risk youths are likely to need additional services, support and supervision to help them avoid reoffending. Low risk youths require less intervention and ideally should be moved through the justice system as quickly as possible to reduce their becoming contaminated by contact with other offenders and becoming enmeshed in the system.

- **Additional info, aims, recommendations**

GBQ item 26

This is an opportunity for the assessor to record any other information that they think is relevant, expand on answers to particular items, record the youth's future plans and aims and make recommendations if some further action is required. This section is intended to be relatively brief. In relation to goals, if the youth has no future aims then this can be a target for intervention (aimlessness tends to encourage short-term thinking and hedonistic behaviour). Those who have realistic and socially acceptable aims might be provided with help to achieve them.