Parental Influences on Children's Callous-Unemotional Traits

A thesis submitted in partial fulfilment

of the requirements for the Degree of

Master of Arts in Psychology

By

Sarah E. Head

University of Canterbury 2008

Acknowledgments

I wish to offer sincere appreciation for the support and guidance of my supervisor, Dr Julia Rucklidge. I would also like to thank Dr Nina McLoughlin for all her help and her willingness to have me involved with her research. Thanks are also due to the participants that took the time to take part in this study.

Finally I wish to thank my family and friends for all their support, and especially Ree for all your love and patience.

Table of Contents

List of Tables

List of Abbreviations

APQ	Alabama Parenting Questionnaire
APSD	Antisocial Process Screening Device
APSD-CU	Antisocial Process Screening Device – Callous-Unemotional Subscale
BSI	Brief Symptom Inventory
BSI-GSI	Brief Symptom Inventory – Global Severity Index
CP	Corporal Punishment Subscale (Alabama Parenting Questionnaire)
CU	Callous-Unemotional
ICU	Inventory of Callous-Unemotional Traits
ID	Inconsistent Discipline (Alabama Parenting Questionnaire)
IRI	Interpersonal Reactivity Index
Mon	Monitoring and Supervision (Alabama Parenting Questionnaire)
Other	Other Discipline (Alabama Parenting Questionnaire)
PI	Parental Involvement (Alabama Parenting Questionnaire)
PP	Positive Parenting (Alabama Parenting Questionnaire)

Abstract

Research into offending behaviour has, in recent years, turned to investigating the pathways that may lead a person to offend. One of the major developments in this area is the recognition that the presence of high levels of callous-unemotional traits may delineate a particular subgroup of children that are at particular risk of becoming career offenders. The present study examined the relationships between children's levels of callous-unemotional traits and a number of parental variables. 125 children (at initial assessment) from low decile schools and their caregivers took part in this study. The results indicated that several aspects of parenting (frequency and consistency of discipline, monitoring/supervision, involvement with children, positive parenting, and parental empathy) showed associations with callous-unemotional traits. These results both supported existing literature in this area, and highlighted important areas that need to be considered when planning and implementing interventions for antisocial youth.

1. Introduction

1.1 Antisocial Behaviour and Offending

One of the greatest challenges that New Zealand society faces today is that of crime and violent offending. With recorded offence rates per capita in 2000 being more than double those in 1970 (Statistics New Zealand, 2001), new prisons being built to house offenders, and media reports of serious violent offences a daily occurrence, the question is raised of what can be done to curb this trend. To effectively begin to deal with these issues, it is necessary to understand how and why antisocial and offending behaviour begins.

Antisocial behaviour can be viewed as behaviour that does not conform to the expectations of authority figures (such as police or teachers), violates societal norms, or disregards the rights of others (Frick, 1998). It can range from mild (such as defying parents' wishes) through to severe (such as homicide and rape), and can be exhibited by people at any age. The consequences of antisocial behaviour can be vast and impact on many people. The perpetrators may suffer from impaired social, academic and emotional adjustment and quality of life (Frick, 1998). Their families may also pay a price, from being victims themselves through to being "tarred with the same brush". The victims of offences may suffer from physical injury, psychological distress, financial hardship, or may even pay with their lives (Frick & Loney, 2002). The families and friends of the victim also suffer, and for some, it is a lifelong process. Police involvement, court appearances and prison sentences all involve financial cost, often paid for by the taxpayers (Frick & Loney, 2002). Due to the

immense costs involved for all when people offend and act in antisocial ways, understanding what drives this behaviour becomes paramount. Only then can effective intervention be made, and prevention programs be put in place.

Research into offending by adults is not a new area – for decades social scientists have examined the frequency, severity and types of antisocial behaviour displayed by individuals. The origins and causes of antisocial behaviour have interested researchers and the public immensely – as the vast amount of available literature on the subject attests to. More recently, there has been an increased interest in the development of antisocial behaviour from a young age. More and more, researchers are examining children for clues to what makes them turn to offending and what prevents them from offending. Andrews and Bonta (2003) make reference to a new subdiscipline that has grown from this, called developmental criminology. This subdiscipline of criminology focuses on the pathways that antisocial individuals follow. The end result of carefully examining how an individual develops into an offender is that hopefully interventions may be put in place early enough to prevent the person following this trajectory. While there are many risk factors that may predispose an individual towards offending behaviour – psychopathology, antisocial acquaintances, gender, history of trauma, to name but a few – this current research attempts only to examine a discrete number of risk factors.

1.2 Pathways to Offending

Many years ago, a debate raged over whether the behaviours that a person expressed were a result of biological or environmental factors, otherwise known as

the nature versus nurture debate (see Rutter, 1997 for review). Now it is commonly understood that it is a combination of both factors that predispose individuals to act in certain ways. Like with any behaviour, offending also follows this philosophy. It is a delicate interplay between biological factors (such as genetics and temperament) and environmental factors (such as peer associations and parenting) that may lead a person to exhibit antisocial and offending behaviour from a young age (Andrews & Bonta, 2003).

Children who display antisocial behaviour may follow two separate trajectories, childhood- and adolescent-onset. The childhood-onset pathway describes a pattern whereby the child begins to exhibit antisocial behaviours from a very young age (Frick, 1998). This may start out initially with argumentativeness and oppositional behaviours, and progress to more severe and aggressive behaviours in adolescence. As the severity of the offending increases, so too does the variety of the offending (Loeber, 1982). Individuals whose antisocial behaviours begin in childhood are also at higher risk for alienation from their peers, cognitive and neuropsychological disturbances, academic failure, and family dysfunction (Frick, 1998).

A developmental model has been proposed that provides some explanation as to why those that display antisocial behaviours in childhood are more likely to persist with offending and become career criminals (Patterson, DeBaryshe & Ramsey, 1989). In this socio-interactional model, a series of stages progress in a roughly linear way to produce a cumulative effect on the child's antisocial behaviour. Each stage relies on an interaction between the child and his or her environment. For any given behaviour

at any stage there is a reaction from other people – be it parents, peers, authorities, teachers, or the public – to the child's behaviour, which in turn provokes a reaction from the child. This once again elicits a reaction from other people, and a pattern is formed of each party reacting against the other. For each exchange, the behaviour becomes more ingrained in the child and puts them at higher risk of continuing to offend (Patterson et al., 1989).

The first stage involves parenting that promotes coercive behaviours from the child. Parents may be inconsistent or overly punitive in their discipline, leading to coercion amongst family members (Patterson et al., 1989). As conflict increases, the behaviours by both parent and child may escalate to violence. Simultaneously parents may neglect to praise their child for prosocial behaviours and attend only to the antisocial behaviour, which results in the child associating bad behaviour with receiving attention. When the child begins school, he/she brings a set of behaviours that, while getting attention at home, are likely to result in aversive reactions from people outside of the home environment. This may in turn lead to peer rejection and academic failure, the two key elements of the second stage (Patterson et al., 1989). Following rejection from potentially prosocial peers at school, the child may begin to associate with more like-minded individuals, and join a more delinquent peer group. Poor parental supervision at this stage may make membership to a deviant peer group more accessible for the child. Delinquent and illegal acts may increase during this time, as the child starts to become reinforced by his or her peers for engaging in such behaviour (Patterson et al., 1989). Commonly, by this stage in the child's life, the patterns of antisocial behaviour he or she engages in have been continuing for most of

his or her development, leading to increased risk of that person persisting into a life of crime.

In contrast to childhood-onset, some children begin to exhibit antisocial behaviours in adolescence, without a prior history of behaving in this way. This adolescent-onset trajectory predicts a pattern of less severe and aggressive acts when compared with those that have a child-onset history of antisocial behaviour. Perhaps most importantly, those that develop antisocial behaviours in adolescence are far less likely to continue to behave in the same way in adulthood, and it is for this reason that this pathway is sometimes referred to as adolescent-limited (Frick, 1998).

Antisocial children who follow the childhood-onset trajectory are therefore more at risk of showing long-term patterns of severe and aggressive offending behaviour which continue into adulthood. This group can then be divided further into those who display psychopathic traits and those who do not, the former being the group that is at most risk.

1.3 Psychopathy and Callous-Unemotional Traits

Psychopathy has been described as a blend of interpersonal, behavioural and affective traits that can be applied to a particular group of people that engage in antisocial behaviour. Characteristics of psychopathy include increased narcissism, superficial charm, impulsivity, callousness and lack of empathy and guilt (Hare, 1996; Hare, 1999). Antisocial adults with psychopathic traits have been shown to offend more often and commit a greater variety of offences than their non-psychopathic

counterparts (Hare & McPherson, 1984). They are also more resilient to rehabilitation (Hart, Kropp & Hare, 1988) and commit more serious offences (Serin, 1991). Additionally, antisocial individuals with psychopathic traits tended to use more premeditated and instrumental types of offending, as opposed to those without psychopathic traits whose offending was more often associated with emotional arousal (Frick, 1998).

There is evidence to suggest that psychopathic traits are stable across the lifespan, although offending behaviour itself tends to decrease after age 40 (Hare, McPherson & Forth, 1988). Because of this stability it is also reasonable to presume that psychopathic traits, like most traits, begin early in life. As the presence of psychopathy appears to predict future offending (Hart, Kropp & Hare, 1988) as well as being stable throughout life, it may provide, along with the childhood-onset trajectory of antisocial behaviour, a useful tool for identifying children who are at high risk for offending behaviour and criminal careers (Marsee, Silverthorn, & Frick, 2005).

Recent research into extending the concept of psychopathy to children has highlighted two dimensions that appear to be closely related to dimensions found in adult populations (Frick, O'Brien, Wootton, & McBurnett, 1994). The Impulsivity/Conduct Problems (I/CP) dimension involves antisocial behaviours, poor impulse control and problems with impulsivity. These factors are often witnessed in those children who may have diagnoses of Conduct Disorder, Attention Deficit Hyperactivity Disorder or Oppositional Defiant Disorder – diagnoses which may occur in conjunction with offending behaviour. The Callous/Unemotional (CU)

dimension describes lack of empathy and concern, lack of guilt and superficial charm. This latter dimension taps into the psychological underpinnings of psychopathy that are often evident in adult populations (Hare, 1996). To date, a great wealth of research into the origins of offending have focused on the actual criminal acts, both in terms of frequency and severity, undertaken by children as markers for future criminality. While it is reasonable to expect that the risk of future criminality is well predicted by a history of criminality, the psychological aspects of the offending can also provide valuable information – and particularly the influence of psychopathic personality traits that may be evidenced in some children. Bearing in mind that personality traits begin early in development and are often enduring, the identification of psychopathic traits and CU traits in children becomes important in predicting offending behaviour.

To date, studies into the presence of callous-unemotional traits in children have revealed several important findings. Frick and colleagues investigated the type of antisocial behaviour displayed by children with high and low levels of CU traits who also had conduct problems (Frick, Cornell, Barry, Bodin, & Dane, 2003). They used a nonreferred community sample of children, and took self-report, parent and teacher ratings of delinquent behaviour as well as CU traits. Frick et al. found that those children who had high levels of CU traits engaged in more severe offending than those who had conduct problems but low CU traits. This was measured by assessing both the number and variety of antisocial behaviours, which were both higher for the high CU group. They also investigated the type of aggression used by both groups of children and found that children high in CU traits used more proactive aggression than those low in CU traits, who tended to display more reactive aggression. This is in keeping with research into psychopathy amongst adult

offenders, which suggests more instrumental and premeditated patterns of aggression (Frick, 1998). The study by Frick et al. (2003) showed that offending by those children high in CU traits was more likely to continue into adulthood – i.e. it was more stable over time. Similar results were found in recent studies that examined the stability of psychopathic features over a 6 year period during the transition from adolescence to adulthood (Loney, Taylor, Butler & Iacono, 2007) and the stability of interpersonal callousness over a 9 year period from childhood to adolescence (Obradovic, Pardini, Long & Loeber, 2007).

Other studies have shown many of the same findings as reported above, as well as additional information. Marsee, Silverthorn, and Frick (2005) found rates of both overt and relational aggression were higher for those displaying high levels of psychopathic traits. Additionally, higher psychopathic traits were more strongly associated with overt aggression in males, and relational aggression in females. Interestingly, the callous-unemotional dimension did not provide any more predictive utility than when all three dimensions of psychopathy (CU, narcissism and impulsivity) were used. This finding is in contrast to most studies of psychopathic traits in children, and the authors suggest that methodological differences may account for this result (Marsee et al., 2005). Another study examining aggression in adolescent psychiatric inpatients found that those scoring higher on measures of psychopathy exhibited higher frequencies of both reactive and instrumental aggression (Stafford & Cornell, 2003).

A reward-dominant response style and fearlessness was also found to be higher in antisocial behaving children high in CU traits than in antisocial behaving

children low in CU traits (O'Brien & Frick, 1996; Barry, Frick, DeShazo, McCoy, Ellis & Loney, 2000). These factors may indicate underlying deficits in behavioural inhibition, an important construct in the development of empathy. Additionally, the same children were found to show lower levels of anxiety as well as being less distressed by their behaviour (Barry et al., 2000).

Children high in CU traits were also found to have higher levels of delinquent peer associations than those low in CU traits (Kimonis, Frick & Barry, 2004). The authors of this study suggest that the association between delinquent peers and CU traits may have been mediated by parental influences, such as involvement and supervision, at earlier follow-ups (1 and 2 years after initial assessment). However, this effect was not so evident at later follow-ups, although the level of CU traits continued to have predictive utility.

Many of the above studies replicate the same patterns found in antisocial adults who score high on psychopathy. It appears that it is not only the presence of antisocial behaviour and impulsivity that delineates those most at risk of repeat offending, but also high levels of CU traits. Callous-unemotional traits, therefore, may also be used as a reliable indicator of psychopathy in children who display antisocial behaviour – providing a measurable construct that can help identify children at high risk of career offending.

1.4 The Development of Callous-Unemotional Traits

CU traits can be viewed broadly as a pattern of low empathy, guilt and concern, combined with a propensity towards superficial charm. The origins of these traits appear to lie with the under-development of appropriate behavioural controls (Frick, 1998). Low behavioural inhibition, or self-control, is a temperamental characteristic defined physiologically by deficits in autonomic nervous system arousal and behaviourally by the failure to inhibit antisocial actions. Behavioural elements of this temperamental style include poor responsiveness to signs of punishment, and low fearfulness to new or threatening situations (Kagan & Snidman, 1991). Temperament plays a fundamental role in children's internalisation of parental and societal values (Kochanska, 1994), and therefore a temperament that is marked by deficits in responsiveness and autonomic arousal suggests that development of empathy and concern for others may be hindered.

Andrews and Bonta (2003) suggest that it order for inhibition to be effectively learnt by a child, two conditions must be met – they must receive some kind of punishment for antisocial acts, and they must have some increase in autonomic nervous system arousal. When these two conditions are met, the child learns behavioural inhibition through passive avoidance learning. Passive avoidance learning (not doing something in order to avoid being punished) occurs when fear inhibits the child from performing an antisocial act due to having previously been punished for it. Following this, after failing to perform the act, the fear diminishes and the inhibition is reinforced (Andrews & Bonta, 2003). If the child has lowered ANS arousal, which some authors have suggested is common among people with psychopathic traits

(Frick, 1998; Barry et al., 2000), passive avoidance learning may be hindered and the child fails to adequately master self-control. It also follows that if the child is not given the opportunity to learn passive avoidance, such as when parents fail to punish the child for antisocial acts or are unaware of the acts, he or she may also develop inadequate self-control.

Several studies have highlighted the durability of temperamental factors and the impact they may have on a person's long-term outcome. Caspi (2000) examined participants from the Dunedin Multidisciplinary Study, comparing their temperaments at age 3 to their personalities and life outcomes at ages 18 and 21. Based on testing undertaken when the participants were 3 years old, they were divided roughly into three groups based on temperament: well-adjusted, inhibited and undercontrolled. Around 10% of the children were defined as undercontrolled and had temperaments marked by emotional lability, distractibility, restlessness and impulsivity (Caspi, 2000). As they became older, this group was found to experience more externalizing behaviour problems between the ages of 5 and 15 than children defined as either well-adjusted or inhibited. Those children that fell into the undercontrolled group were found to be more likely in adulthood to score low on measures of self-control and harm avoidance, and high on measures of aggression. Additionally, they were more likely to be diagnosed with antisocial personality disorder and substance use disorders as adults (Caspi, 2000). When measures of illegal behaviour and criminal activity were collated, adults who were in the undercontrolled group tended to engage in criminal acts more frequently and a wider variety of criminal acts than those who fell into the other two groups. The results from Caspi's (2000) study seem to indicate that

early temperamental styles have some impact on later personality and outcomes in adults, including criminality.

Henry, Caspi, Moffitt, and Silva (1996) examined the role of temperament and offending using participants also from the Dunedin Multidisciplinary Study. They selected a subset of participants that at age 3 were described temperamentally as having a lack of control (similar to the undercontrolled group described above). These children displayed impulsivity, negative reactions to stressful events, and a propensity to "give up" during problem solving. Over 450 subjects were assessed at age 18 for criminal offending, based on conviction records obtained from the New Zealand police. The participants were then divided into three groups: those with no convictions, those with non-violent convictions only, and those with violent convictions. Henry et al. (1996) found that while several variables such as single-parent upbringing were common to all groups, those that were high on the lack of control variable as toddlers were more likely to have been convicted of a violent crime. Few differences were found between the non-conviction group and the non-violent conviction group. It appeared that while a number of variables predicted criminal outcomes, lack of control in particular seemed to predict violent offending (Henry et al., 1996). Thus, according to this study, early temperamental style may have a direct influence on types of offending in adulthood.

Temperament may play another important role in the development of particular traits. Kochanska (1994, 1997; Kochanska, Aksan & Joy, 2007) has suggested that a child's temperament acts as a moderator between parenting and socialisation. Successful socialisation of rules and expectations is thought to be a key

part of a child's development of conscience – an internalised monitor of one's own actions in the absence of external controls. Essentially, an individual's conscience is displayed through the expression of empathy and guilt. If that conscience is underdeveloped, the individual may lack the necessary empathy to prevent them causing harm to others and sufficient guilt over their actions to decrease the likelihood that it would occur again. Hare's (1996, 1999) extensive research has repeatedly identified lack of empathy and guilt as being central to the concept of psychopathy, and so it logically follows that the basis of this may lie in early socialisation practices.

In his work, Kochanska (1994, 1997; Kochanska, Aksan & Joy, 2007) describes the way by which parenting practices interact with a child's temperament in terms of socialisation. He suggests that in order for parents to effectively socialise their children, their style of discipline must match their child's temperament. For children that are particularly fearful, a gentle approach to discipline appears to work best – if the child's anxiety is too high while being corrected it is suggested that this fear prevents effective internalisation of behaviour. On the other hand, if a child is rather fearless, the optimum arousal of anxiety may not be instigated with gentle discipline. However, overly punitive discipline tended to result in an active rejection of parental efforts, and a general failure to adequately internalise rules of conduct (Kochanska, 1994, 1997; Kochanska, Aksan & Joy, 2007). Instead, it is suggested that a more effective method for promoting socialisation and conscience development in fearless children is for parents to focus on positive interactions rather than using punishment for negative interactions.

In addition to the effect that lowered ANS arousal found in those displaying psychopathic traits has on the development of adequate self-control, the low physiological reactivity to anxiety or stress may also have direct effects on the development of empathy. If a child experiences little or no distress when faced with the threat of punishment or harm, it may impair their ability to respond appropriately to signs of distress in others – ie, to empathise with that person (Frick & Dickens, 2006).

1.5 Family Dysfunction & Socialisation

While temperament is an important factor in the internalisation of societal values, another factor involved in children's development of antisocial behaviours is the role of parental influences, particularly in terms of family dysfunction (Frick & Loney, 2002). Three major elements of family dysfunction have been extensively researched and linked with the development of antisocial behaviour in children. The first element is parental psychopathology, the second involves the quality of marriage, and the third element is the type of socialisation practices used by parents (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998).

Parental psychopathology - and in particular antisocial or criminal behaviour expressed by the parent - has been found to be linked with antisocial behaviour in children (Frick, 1998), as has marital conflict and divorce (Amato & Keith, 1991). However, both of these may mediate parent-child interactions and parenting styles, and thus could be seen as non-specific risk factors for general dysfunction in children, rather than specific to the development of antisocial behaviour (Frick, 1998). For

instance, parents going through a divorce may be experiencing increased stress and irritability, which may in turn influence how they interact with their children especially in terms of harsher and more explosive punishment. Additionally, if parents are preoccupied with stressors in their own lives, they may be less likely to monitor their child's whereabouts and activities he or she is involved with. Both of these scenarios may result in a child engaging in antisocial behaviour in addition to other outcomes, such as psychopathology.

Another parental influence that has been robustly linked with antisocial behaviour in children is ineffective socialisation practices (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998). Because, as mentioned earlier, adequate socialisation is imperative for the development of empathy and guilt, and because parents are the main providers of socialisation at an early age, inadequacies in parental practices may have an effect on a child's development of antisocial behaviour. In their meta-analysis, Loeber and Stouthamer-Loeber (1986, cited in Frick, 1998) identified two key elements of socialisation – parental supervision and involvement in their child's day to day life. The failure to provide adequate parental practices in these areas puts children at higher risk of developing antisocial behaviours, or may exacerbate existing problem behaviours.

Parental discipline is another facet of parenting style that has been linked to antisocial behaviour in children. Discipline can be viewed as a direct attempt to socialise children (Frick, 1998). By disciplining children when they transgress social rules of conduct, children begin to associate inappropriate behaviours with punishment and consequent fear of punishment. This in turn teaches them to inhibit

their behaviour and learn self-control, in addition to learning general rules of acceptable conduct which is then internalised. Research has found that parents of antisocial children tend to use more harsh forms of discipline, and to be less consistent in their use of discipline (Shelton, Frick & Wootton, 1996). Inconsistencies in discipline may lead children to fail to associate discipline with a particular behaviour, while overly harsh discipline can lead a child to focus purely on the punishment and to fail to internalise the message behind it. Both of these outcomes may lead to a failure to be adequately socialised to societal and parental values, which in turn leads to low self-control (Shelton, Frick & Wootton, 1996). While studies have shown that harsh and/or inconsistent discipline is associated with increased antisocial behaviour, some researchers have found that children high on measures of psychopathy may be less influenced by this (Wootton, Frick, Shelton & Silverthorn, 1997; Edens, Skopp & Cahill, 2008) – in that ineffective parenting plays a less moderating role in antisocial behaviour that is exhibited by those children high in CU traits. While this provides additional evidence for the proposed discrimination between two groups of children that show antisocial behaviour (those high in CU traits and those low in CU traits), it also indicates that this information needs to be considered when family-based interventions are proposed.

1.6 Gender Differences

While there has been increasing research into the causes and correlates of antisocial behaviour originating in childhood, less research has been undertaken to examine if gender differences exist in this area. The majority of studies that have been undertaken have used mainly male participants, and whether or not the same results

gathered from these studies can be applied to females warrants consideration. Some research has been conducted examining gender differences with regards to offending trajectories and found that males were much more likely than females to follow the child-onset trajectory (Frick, 1998). Around half of males studied fell into this category, while the other half followed the adolescent-limited pathway. Females, meanwhile, almost overwhelmingly fell into the latter category (Frick & Dickens, 2006). Some might suggest that this may be due to differences in the way that antisocial behaviours are expressed between the sexes – eg, overt aggression in males versus relational aggression in females. However, there is some evidence that females with severe behavioural problems share more in common with child-onset males in terms of temperament and long term outcome (Frick & Dickens, 2006). Silverthorn and Frick (1999) proposed that the antisocial behaviour in these females were a result of the same mechanisms that predicted this behaviour in early-onset males, such as CU traits and impulsivity. However, they suggested that the onset was delayed for females until they reached puberty. Further, they suggested that both overt aggression more commonly seen in males and relational aggression more commonly seen in females, share many of the same risk factors such as high CU traits.

Frick et al. (2003) examined the utility of measuring CU traits to predict future conduct problems, aggression and delinquency in a sample of non-referred children. In addition to finding that CU traits combined with conduct problems predicted further antisocial behaviours, they also noted that CU traits alone could predict higher rates of self-reported delinquency. That is, in the absence of conduct problems, children with higher levels of CU traits engaged in delinquent acts more often than those children with conduct problems and low levels of CU traits. Further, this finding

was stronger for females in the sample than males (Frick et al., 2003). This study appears to provide support for Silverthorn and Frick's (1999) theory of a delayed-onset trajectory for antisocial behaviour in females. It also suggests that the measurement of CU traits in children may be a useful predictor of future offending in the absence of current conduct problems, and particularly for females.

While there has been some research into gender differences in CU traits, aggression and delinquency in children, it should be noted that most studies lacked large numbers of females. It is necessary to continue to examine differences between the sexes using large samples of females in order to uncover more conclusive results.

1.7 Summary

It can be seen that there is a combination of factors that may put children at risk of antisocial and offending behaviour. Children whose antisocial behaviours start early in life are more at risk of following a chronic and severe trajectory of offending behaviour into adulthood (Frick, 1998). However, not all of these children go on to become career criminals. Studies have shown that the presence of psychopathic traits can delineate a particular subgroup of children with conduct problems that are most at risk. Callous-unemotional traits in particular appear to be a reliable predictor of this group (Frick, O'Brien, Wootton, & McBurnett 1994; Frick, Cornell, Barry, Bodin, & Dane, 2003). These traits, like many personality traits, are partly determined by temperament and also by environment. Temperamental aspects of children that may lead to them being high in CU traits include low behavioural inhibition and poor responsiveness to cues of punishment (Kagan & Snidman, 1991). Environmental

factors involved include parental supervision, discipline and involvement, which may influence socialisation of the child to parental and societal values. Because this socialisation is needed for the development of empathy and guilt, failure to adequately socialise a child may put him or her at more risk of becoming a chronic offender (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998).

The Current Study

1.8 Rationale

Callous-unemotional traits have been found to be reliably associated with antisocial and offending behaviour, both in adults and children (Frick, 1998). However, the focus thus far has been on the presence of these traits in the person displaying the behaviour. CU traits have their origins partly in temperamental styles marked by low behavioural inhibition, which in turn plays a role in the early development of empathy (Kagan & Snidman, 1991). As with all traits though, environment also plays a role, particularly early learning environments. One area that has not been fully examined is the impact that parental influences may have on their children's CU traits. The aim of the current study is to determine to what extent parental factors may influence antisocial behaviour, through the development of CU traits in children.

Only one study, by Loney, Huntenburg et al. (2007), has attempted to address parental CU traits in relation to their child's CU traits. Although the study only examined maternal CU traits, results suggested that there may be associations between parent and child CU traits. A primary goal of this current study is to expand

on this work by Loney et al. (2007) and to provide further information about gender differences in children's CU traits. As temperament is a product of both genetics and environment, it is hypothesised that there will be a positive correlation between CU traits in children and CU traits in their caregivers. Identifying any links in this area is important in terms of understanding fully what leads a child to be high in these traits, and thus be more at risk of becoming a chronic offender.

Parental influences on offending behaviour also extend to socialisation practices in childhood, specifically in terms of supervision, discipline and involvement (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998). All three of these facets will be examined, with the hypotheses that children high in CU traits will receive less supervision, harsher forms of punishment, and their caregivers will be less involved in their day to day lives. Once again, gender differences in children's CU traits will be examined as this is a factor that requires further research. Additionally, because psychopathology in caregivers is associated with increased risk of antisocial behaviour in children (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998), relationships between the level of psychopathology in caregivers and the level of CU traits in their children will be investigated.

The results from this research may be helpful for education and intervention around child and youth offending, and will contribute to the growing body of literature on the role of callous-unemotional traits and psychopathy.

1.9 Hypotheses

Hypothesis 1: Parent or caregivers' own level of CU traits will be positively correlated with their child's level of CU traits.

Hypothesis 2: Children's level of CU traits will be negatively correlated with the level of parental supervision and involvement they receive from their caregivers.

Hypothesis 3: Children's level of CU traits will be positively correlated with the frequency and severity of punishment they may receive from their caregivers.

Hypothesis 4: Greater levels of psychopathology in the caregivers will be positively correlated with higher levels of CU traits in their children.

Within each of these hypotheses, gender differences in the children's level of CU traits will be examined.

2. Method

The current study was part of a larger 3 year study being performed by Dr. Nina McLoughlin - *'A study of the risk and protective factors for offending behaviour in New Zealand children'* - which is being conducted at the University of Canterbury. The current study utilised the same participant pool and a number of the same questionnaires as used in Dr. McLoughlin's research.

2.1 Participants

A total of 41 schools from the Christchurch area, categorised as decile 1-3, were invited to participate in the 3 year research project mentioned above. From this number, a total of eight schools agreed to participate. All children from these schools, aged between 10 and 11, were then contacted. At Time 1 (initial testing), 125 from a possible 140 children from the eight schools took part in the study. One of the eight schools provided a single participant, meaning the majority of the children came from the remaining seven schools. One primary caregiver per child also participated in the study, and provided information about themselves and their child.

Time 1 (year 1 of the project) has been completed, and Time 2 (year 2 of the project) is ongoing. Data from both phases were utilised in this study.

A history questionnaire was used at Time 1 to gather demographic information, background information about the child (including medical, developmental and psychiatric history), and information about the caregiver (such as marital status, highest educational qualification). Of the children, 50.3% were NZ

European/Pakeha, 32.5% were Maori, 10.3% Pacific Island, and 6.8% other, with a mean age (at Time 1) of 10.79 years (*SD*: 0.50 years).

2.2 Measures

A number of questionnaires were used to assess callous-unemotional traits, parenting and psychopathology. Children completed two questionnaires about themselves (self-report) as well as one questionnaire about parenting practices in their family. Caregivers completed one questionnaire about parenting practices, two questionnaires about their children's behaviour, and two questionnaires about themselves.

2.3 Questionnaires

Questionnaires completed by children:

Child self-report questionnaires

2.3.1 Antisocial Process Screening Device

The Antisocial Process Screening Device (APSD – Frick & Hare, 2001) is a 20 item screening questionnaire designed to measure elements of psychopathy in adolescents across 3 dimensions - callous-unemotional traits, narcissism and impulsivity. The questionnaire is based on Hare's Psychopathy Checklist-Revised (PCL-R, 1991) which assesses psychopathic traits in adults. Three versions of the APSD have been created: self report, parent- and teacher-rated. The individual rates each of the 20 items on a three point scale: Not at all True 0, Sometimes True 1, Definitely True 2. Items include such questions as "You lie easily and skilfully" and

"You use or "con" other people to get what you want". Five items load on to the impulsivity dimension, six on the callous-unemotional dimension, and seven on the narcissism dimension. A further two questions do not load on to a particular dimension, but contribute to the overall score. Total scores range from 0 to 40, with higher scores indicating higher levels of psychopathic traits.

Studies have indicated that the APSD is a reliable and valid screening device for assessing psychopathic traits in community samples and clinic-referred youth (Frick, Cornell, Barry, Bodin & Dane, 2003; Barry, Frick, DeShazo, McCoy, Ellis & Loney, 2000). The APSD has been shown to reliably discriminate adolescents who display more severe and aggressive antisocial behaviours (Frick et al, 2003). Additionally there is evidence supporting the three factor structure of the APSD (Vitacco, Rogers & Neumann, 2003; Frick, Bodin & Barry, 2000).

2.3.2 Inventory of Callous-Unemotional Traits

The Inventory of Callous-Unemotional Traits (ICU – Frick, 2003) is a 24 item questionnaire that is based on the callous-unemotional dimension of the APSD, designed to gather more detailed information about that construct. Six questions were formed around each of four items of the APSD that most consistently loaded on the CU scale ("I care about how well I do at school or work", "I feel bad or guilty when I do something wrong", "I am concerned about the feelings of others", and "I hide my feelings from others"). Individuals rate each of the 24 items on a four-point Likert scale ranging from 0 (not at all true) through to 3 (definitely true). Scores range from 0 to 72, with higher scores representing higher levels of callous-unemotional traits. As with the APSD there are child-report, teacher-report and parent-report versions of the ICU available.

The ICU is a relatively new measure of psychopathy, and as such, data on the psychometric properties of this questionnaire are limited. Evidence has been shown to support the reliability and validity of this instrument in a community sample of adolescents (Essau, Sasagawa, & Frick, 2006a) as well as with referred youth (Kimonis, Frick, Skeem, Marsee, Cruise, Munoz, Aucoin & Morris, 2008). In addition, both studies found support for a three-factor structure of the ICU (unemotional, callousness, and uncaring).

Questionnaire regarding parenting practices

2.3.3 Alabama Parenting Questionnaire

The Alabama Parenting Questionnaire (APQ – Frick, 1991) is a 42 item questionnaire assessing five different areas of parenting that are most associated with conduct problems. Ten items measure parental involvement (eg- "You have a friendly talk with your mom"), six items measure the use of positive parenting techniques (eg- "Your parents praise you for behaving well"), ten items measure parental monitoring and supervision (eg- "You go out without a set time to be home"), three items measure use of corporal punishment (eg- "Your parents slap you when you have done something wrong"), and six items measure consistency of discipline (eg- "The punishment your parents give depends on their mood"). A further seven items examine other types of discipline (eg- "Your parents give you extra chores as a punishment"). An individual rates each of the 42 items on a 5-point Likert scale ranging from 1 (never) through to 5 (always) depending on how frequently the behaviour typically occurs in the home.

Factor analysis supports the five factor structure of the APQ: parental involvement, positive parenting, monitoring and supervision, discipline method and

consistency of discipline (Essau, Sasagawa & Frick, 2006b). Research also suggests that the APQ can reliably discriminate families with children who displayed disruptive behaviour (Shelton, Frick & Wootten, 1996) and those with high levels of CU traits (Frick, Kimonis, Dandreaux & Farell, 2003). All of the dimensions of the APQ display adequate internal consistency, with the exception of the corporal punishment scale (Shelton et al., 1996; Pardini, Lochman & Powell, 2007). This is suggested to be due to the low number of items comprising this scale.

Questionnaires completed by caregivers:

Caregiver self-report questionnaires

2.3.4 Interpersonal Reactivity Index

The Interpersonal Reactivity Index (IRI – Davis, 1980) is a 28 item questionnaire that assesses empathy in an individual. The IRI is divided into four scales measuring different components encompassing the more global construct of empathy – Empathic Concern, Perspective Taking, Fantasy, and Personal Distress. Seven items are used for each scale, and include such questions as "Being in a tense emotional situation scares me" and "When I see someone being taken advantage of, I feel kind of protective towards them". Individuals rate each item on a 5 point Likert scale ranging from "Does not describe me very well" through to "Describes me very well". Scores on each of the four scales range from 0 to 28, with higher scores indicating higher levels of each empathic dimension.

Davis (1980) reported good internal consistency (ranging from 0.71-0.77) and good test-retest reliability (Ranging from 0.62-0.71).

2.3.5 Brief Symptom Inventory

The Brief Symptom Inventory (BSI – Derogatis, 1982) is a 53 item self-report questionnaire that assesses psychopathology. Individuals rate how much each problem described has distressed them in the last 7 days on a 5 point Likert scale ranging from 1 (Not at All) to 5 (Extremely). The BSI is divided into 9 symptom dimensions – Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. Scores on each of these scales may be used individually, or may be summed together to produce a global score of general psychopathology. For the purposes of this study, only the global t-scores (Global Severity Index - GSI) were used, with higher scores indicating higher average intensity ratings for each item.

Test-retest measures ranged from .68 to .91, and internal consistency reliability ranged from .71 to .85 (Derogatis & Melisaratos, 1983). The same authors also report evidence of good construct and convergent validity.

Questionnaires regarding child behaviour

Each caregiver completed parent-versions of the Inventory of Callous-Unemotional Traits and the Antisocial Process Screening Device, which are described above.

Questionnaire regarding parenting practices

Each caregiver completed the parent-version of the Alabama Parenting Questionnaire, described above.

2.4 Procedure

Each child and their caregiver participated in the study at the University of Canterbury. Prior to their arrival, they were posted a letter informing them of the day and time of the assessment, in addition to information about the study. Upon arrival, informed consent to participate was obtained from the child and the child's caregiver. The participants were informed that their participation was voluntary and that their results would be kept confidential. The caregiver then completed a history questionnaire, which specified demographic, developmental, medical and psychological background information.

The child completed the APQ, the ICU and the APSD. If he or she appeared to have difficulty reading the questionnaires they were read aloud to them by the examiner. The caregiver completed the parent versions of the APQ, the ICU and the APSD, in addition to the IRI and the BSI.

Following the completion of all questionnaires the child and their caregiver were thanked for their time and each received a gift voucher ($50 for each child and $20 for each caregiver).

These procedures were approved by the University of Canterbury Human Ethics Committee.

3. Results

Data were analysed with the Statistical Package for Social Science (SPSS), version 15.0. Pearson product-moment correlations, using *p* values of .01 and .05 to indicate significance, were conducted to determine if relationships existed between total scores of the Inventory of Callous-Unemotional Traits (ICU) and variables taken from the Alabama Parenting Questionnaire (APQ – Parental Involvement, Parental Monitoring, Monitoring and Supervision, Inconsistent Discipline, Corporal Punishment and Other Discipline), the Interpersonal Reactivity Index (IRI – Perspective Taking, Fantasy, Empathy and Personal Distress), the Brief Symptom Inventory (BSI – Global Severity Index) and the Antisocial Process Screening Device (APSD – Callous Unemotional and Total scores).

Standard linear regression analyses, again using *p* values of .01 and .05 to indicate significance, were conducted to examine which variables from the APQ and the IRI accounted for the most variance in children's ICU scores. Finally, one-way between-groups multivariate analyses of variance (MANOVA), with Bonferroni adjusted alpha levels used as the tests of significance, were conducted to examine sex differences in ICU and APQ scores.

Both self-report and other-report data were utilised in the analyses. As data were gathered at both Time 1 and Time 2, analyses were conducted with scores reported by both child and caregiver on the ICU, APSD and APQ at both times. Both the IRI and the BSI were completed by caregivers only, at Time 1 and Time 2.

As this study took place during Time 2 data gathering, not all participants from Time 1 are represented at Time 2 (as they had yet to be assessed). This accounts for the lower number of child and caregiver participants shown in the Time 2 data. In addition, as some questionnaires were disregarded owing to being inaccurately completed, some inconsistencies were found between the numbers of caregivers and children responding on particular questionnaires.

3.1 Preliminary Analyses

All data were examined for errors and missing items. If a participant had omitted or incorrectly filled out more items than allowed for in any given questionnaire, that participant's answers on that particular questionnaire were disregarded (eg – if more than 13 questions were omitted from the Brief Symptom Inventory, that participant's answers to all questions on that questionnaire were disregarded during data analysis).

During preliminary stages of data analysis, Kolmogorov-Smirnov statistics for many of the variables were found to be significant, indicating violation of the assumption of normality. Histograms produced for each variable showed that many of them were positively skewed, which is not uncommon when measuring constructs such as psychopathic traits in community samples, and it was this skewness that accounted for many of the variables not being normally distributed.

3.2 Descriptive Statistics

Means and standard deviations of each major variable, reported at Time 1 and Time 2 by both the child and their caregiver, are presented in Tables 1-3 below:

Table 1. *Means and standard deviations of scores on the Inventory of Callous-Unemotional Traits, the Antisocial Process Screening Device, and the Brief Symptom Inventory*

	Child Report						**Caregiver Report**						**Norms[1]**	
	Time 1			**Time 2**			**Time 1**			**Time 2**				
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	M	SD
ICU Raw Score Total	121	22.0	9.1	64	22.6	9.3	120	20.8	10.5	73	21.6	11.0	22.5	6.5
APSD Total (raw score)	124	9.9	5.7	63	11.5	6.3	120	11.9	6.7	73	11.7	7.6	10.5	2.7
APSD-CU Score (raw score)	124	3.5	2.2	63	2.9	1.7	120	3.6	2.5	73	2.7	2.1	2.7	2.5
BSI – Global Severity Index T-Score	-	-	-	-	-	-	118	41.9	10.0	70	52.1	12.3	52.0	-

Note: ICU = Inventory of Callous-Unemotional Traits, APSD = Antisocial Process Screening Device, CU = Callous-Unemotional Subscale of APSD, BSI = Brief Symptom Inventory.

[1]Normative data = ICU Raw Score Total norms taken from non-referred adolescent self-reported means and standard deviations found in Essau, Sasagawa and Frick (2006a) ; APSD Total and CU scores taken from parent reported means and standard deviations of non-referred youth found in Frick, Kimonis, Dandreaux and Farell (2003).

Paired sample t-tests were conducted on the scores from the Inventory of Callous-Unemotional Traits to examine if any changes were evident in these scores

from Time 1 to Time 2. There were no significant changes found between child-rated ICU scores between times, or between caregiver-rated ICU scores between times. This indicated that reports of callous-unemotional traits, made by both children and their caregivers, did not change over time. Paired sample t-tests also revealed that there were no significant differences found between the means of the ICU scores (both child- and caregiver-rated) from this study and the normative means.

Table 2. *Means and standard deviations of scores on the Alabama Parenting Questionnaire*

	Child Report						**Caregiver Report**						**Norms**[2]	
	Time 1			**Time 2**			**Time 1**			**Time 2**				
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	M	SD
Parental Involvement	125	36.4	7.5	75	34.7	6.9	119	38.2	5.0	71	38.3	5.2	17.0	4.4
Positive Parenting	125	24.7	4.4	75	22.9	4.5	119	25.5	3.2	71	24.9	3.0	17.5	4.4
Parental Monitoring	125	18.9	6.7	75	18.9	6.2	119	14.8	5.0	71	15.5	5.6	14.4	5.4
Inconsistent Discipline	125	12.9	4.6	75	13.8	3.9	119	14.0	4.2	71	13.9	4.2	9.38	9.4
Corporal Punishment	125	4.3	2.1	75	3.8	1.5	119	4.3	1.5	71	3.8	1.2	4.36	2.5
Other Discipline	125	17.6	4.9	75	17.5	4.2	119	19.6	3.9	71	18.7	3.3	-	-

[2]Normative data taken from non-referred child reported means and standard deviations found in Essau, Sasagawa and Frick (2006b). Means and standard deviations were unavailable for the Other Discipline subscale.

Table 3. *Means and standard deviations of scores on the Interpersonal Reactivity Index*

	Caregiver Report					
	Time 1			Time 2		
	N	M	SD	N	M	SD
Perspective Taking	108	22.0	5.1	71	24.9	5.8
Fantasy	108	20.1	4.8	71	18.8	6.2
Empathic Concern	108	22.8	4.4	71	27.3	5.1
Personal Distress	108	18.1	4.3	71	15.8	5.1

A series of paired-sample t-tests were conducted on subscale scores from the Alabama Parenting Questionnaire and the Interpersonal Reactivity Index to examine if any changes were evident in these scores from Time 1 to Time 2. Child reporting showed statistically significant changes between Time 1 and Time 2 reporting on three subscales of the APQ (N=75). Scores on the Positive Parenting subscale showed a significant decrease from Time 1 (M = 24.7, SD = 4.4) to Time 2 (M = 22.9, SD = 4.5), t (74) = 2.01, p< .05, indicating children were reporting receiving less positive parenting techniques from their parents at Time 2. Scores on the Inconsistent Discipline subscale showed a significant increase from Time 1 (M = 12.9, SD = 4.6) to Time 2 (M = 13.8, SD = 1.5), t (74) = -2.06, p< .05, indicating children were reporting receiving more inconsistent discipline at Time 2. Finally, scores on the Corporal Punishment subscale showed a significant decrease from Time 1 (M = 4.3, SD = 2.1) to Time 2 (M = 3.8, SD = 1.5), t (74) = 2.37, p< .05, indicating children were reporting receiving less corporal punishment at Time 2. Caregiver reporting showed statistically significant changes between Time 1 and Time 2 reporting on two subscales of the APQ (N=71). Scores on the Positive Parenting subscale showed a significant decrease from Time 1 (M = 25.5, SD = 3.2) to Time 2 (M = 24.9, SD = 3.0), t (70) = 2.46, p< .05, indicating caregivers were reporting using less positive parenting techniques at Time 2. Scores on the Other Discipline subscale also showed a significant decrease from Time 1 (M = 19.6, SD = 3.9) to Time 2 (M = 18.7, SD = 3.3), t (70) = 2.17, p< .05, indicating caregivers were reporting less frequent use of discipline at Time 2.

Caregiver-rated scores on all of the subscales comprising the Interpersonal Reactivity Index showed significant changes between Time 1 and Time 2 (N=60).

Scores on the Perspective Taking subscale showed a significant increase from Time 1 (M = 22.0, SD = 5.1) to Time 2 (M = 24.9, SD = 5.8), t (59) = -2.62, p< .05, indicating caregivers were reporting employing more perspective taking approaches at Time 2. Scores on the Empathic Concern subscale also showed a significant increase from Time 1 (M = 22.8, SD = 4.4) to Time 2 (M = 27.3, SD = 5.1), t (59) = -4.81, p< .05, indicating caregivers were reporting higher levels of concern and sympathy for others at Time 2. Scores on the Fantasy subscale showed a significant decrease from Time 1 (M = 20.1, SD = 4.8) to Time 2 (M = 18.8, SD = 6.2), t (59) = 2.29, p< .05, indicating caregivers were reporting fewer tendencies to put themselves in the place of fictional characters at Time 2. Scores on the Personal Distress subscale also showed a significant decrease from Time 1 (M = 18.1, SD = 4.3) to Time 2 (M = 15.8, SD = 5.1), t (59) = 3.82, p< .05, indicating caregivers were reporting less personal anxiety in interpersonal situations at Time 2.

3.3 Correlational Analyses

The relationships between callous-unemotional traits in children (as measured by the Inventory of Callous-Unemotional Traits – ICU) and several parental influences (as measured by the Alabama Parenting Questionnaire – APQ, the Interpersonal Reactivity Index – IRI, and the Brief Symptom Inventory – BSI), were investigated using Pearson product-moment correlation coefficients. Each relationship will be examined in turn.

3.3.1 Callous-Unemotional Traits and Parenting Practices

Several aspects of parenting reported by caregivers showed relationships with caregiver-reported ICU scores in their children at Time 1, as shown in Table 4.

Table 4. *Correlations between caregiver-rated ICU scores and caregiver-rated subscales of the APQ at Time 1*

	Time 1 Caregiver-Rated ICU Scores	
Time 1 Caregiver-Rated APQ Scores	Parental Involvement	-.156
	Positive Parenting	-.227*
	Parental Monitoring	.339**
	Inconsistent Discipline	.336**
	Corporal Punishment	.019
	Other Discipline	.254**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, APQ = Alabama Parenting Questionnaire

A moderate positive correlation was found between Parental Monitoring and ICU scores ($r = .339$, $p < .01$), indicating that caregivers reporting poorer supervision and monitoring were more likely to report higher levels of callous-unemotional traits in their children. A moderate positive correlation was also found between Inconsistent Discipline and ICU scores ($r = .336$, $p < .01$), showing that caregivers who reported that they used more inconsistent means of discipline were more likely to report higher levels of callous-unemotional traits in their children. A small positive correlation was found between Other Discipline and ICU scores ($r = .254$, $p < .01$), indicating caregivers who reported engaging in more frequent use of non-corporal punishment (such as time-out) also reported higher levels of callous-unemotional traits in their children. A small negative correlation was found between Positive Parenting and ICU

scores (r = -.227, p < .05), showing that caregivers who reported using less positive parenting techniques (such as verbal praise) also reported higher levels of callous-unemotional traits in their children.

At Time 2 (as shown in Table 5), moderate to strong negative correlations were found between Positive Parenting and ICU scores (r = -.327, p < .01), and between Parental Involvement and ICU scores (r = -.502, p < .01), indicating that caregivers who reported less positive parenting and less involvement also reported higher levels of callous-unemotional traits in their children. Moderate positive correlations were found between Other Discipline and ICU scores (r = .316, p < .01), and between Inconsistent Discipline and ICU scores (r = .362, p < .01), indicating that caregivers who reported more use of discipline other than corporal punishment and more inconsistent use of discipline, also reported higher levels of callous-unemotional traits in their children. A small positive correlation was found for Parental Monitoring (r = .262, p < .05), indicating that caregivers who reported poorer supervision and monitoring of their children also reported higher levels of callous-unemotional traits in those children.

Table 5. *Correlations between caregiver-rated ICU scores and caregiver-rated subscales of the APQ at Time 2*

	Time 2 Caregiver-Rated ICU Scores	
Time 2 Caregiver-Rated APQ Scores	Parental Involvement	-.502**
	Positive Parenting	-.327**
	Parental Monitoring	.262**
	Inconsistent Discipline	.362**
	Corporal Punishment	.176
	Other Discipline	.316**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, APQ = Alabama Parenting Questionnaire

Fewer correlations were found when exploring the relationships between caregiver-reported ICU scores in their children and child-reported aspects of parenting at Time 1, as shown in Table 6.

Table 6. *Correlations between caregiver-rated ICU scores and child-rated subscales of the APQ at Time 1*

	Time 1 Caregiver-Rated ICU Scores	
Time 1 Child-Rated APQ Scores	Parental Involvement	-.004
	Positive Parenting	-.069
	Parental Monitoring	.325**
	Inconsistent Discipline	.253**
	Corporal Punishment	.180
	Other Discipline	.219*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, APQ = Alabama Parenting Questionnaire

A moderate positive correlation was found between Parental Monitoring and ICU scores ($r = .325$, $p < 01$), indicating that children who reported receiving poorer

supervision and monitoring from their caregivers were rated as having higher levels of callous-unemotional traits by their caregivers. A small positive correlation was found between Other Discipline and ICU scores (r = .219, p < .05) and between Inconsistent Discipline and ICU scores (r = .253, p < .01). This indicates that children who reported receiving more frequent use of discipline other than corporal punishment and more inconsistent use of that discipline, were more likely to be reported as having higher levels of callous-unemotional traits by their caregivers.

At Time 2 only one subscale of the child-reported APQ was moderately correlated with caregiver-rated ICU scores (Inconsistent Discipline, r = .303, p < .05), indicating that children who reported receiving more inconsistent discipline at Time 2 were more likely to be rated as having higher levels of callous-unemotional traits by their caregivers.

There were no significant relationships found between Corporal Punishment and caregiver-rated ICU scores across time and reporter, indicating that reports of corporal punishment at either time by both child and caregiver were not significantly related to caregiver-reported levels of callous-unemotional traits in their children.

In contrast to the relationships found between caregiver-rated ICU scores of their children and caregiver-reported aspects of parenting, no significant correlations were found between child self-rated ICU scores and caregiver-reported aspects of parenting at either Time 1 or Time 2. However, some relationships were found when examining child reports of parenting, but only at Time 2 (as shown in Table 7).

Table 7. *Correlations between child self-rated ICU scores and child-rated subscales of the APQ at Time 2*

	Time 2 Child Self-Rated ICU Scores	
Time 2 Child-Rated APQ Scores	Parental Involvement	-.255*
	Positive Parenting	-.381**
	Parental Monitoring	.465**
	Inconsistent Discipline	.462**
	Corporal Punishment	-.083
	Other Discipline	.128

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, APQ = Alabama Parenting Questionnaire

A small negative correlation was found between Parental Involvement and ICU scores at Time 2 (r = -.255, p < .05), while a moderate negative correlation was found between Positive Parenting and ICU scores (r = -.381, p < .01). This indicates that children who reported receiving less positive parenting and less involvement from their caregivers were more likely to self-report higher levels of callous-unemotional traits. Both Parental Monitoring and Inconsistent Discipline showed moderate positive correlations with child self-rated ICU scores at Time 2 (r = .465, p < .01 and r = .462, p < .01 respectively). These results indicate that children who reported less monitoring and supervision as well as more inconsistent discipline were more likely to self-report higher levels of callous-unemotional traits.

Neither Corporal Punishment nor Other Discipline showed any significant relationship with child self-rated ICU scores at Time 2.

3.3.2 Callous-Unemotional Traits and Parental Empathy

As shown in Tables 8 and 9, the subscale of Empathic Concern showed a small negative relationship with caregiver-rated ICU scores at both Time 1 and Time 2 (r = -.237, p < .05 and r = -.242, p < .05 respectively), indicating caregivers who rated themselves lower in empathy were more likely to report higher levels of callous-unemotional traits in their children. Perspective Taking showed a moderate negative correlation with caregiver-rated ICU scores at Time 2 but was not significant at Time 1 (r = -.383, p < .01). This indicated that, at Time 2, caregivers who reported lower levels of perspective taking were also more likely to report higher levels of callous-unemotional traits in their children. Neither Fantasy nor Personal Distress showed significant correlations with caregiver-rated ICU scores at either time. None of the subscales showed a significant correlation with child self-rated ICU scores at either time, indicating no relationship between caregiver reports of empathy in themselves and children's reports of callous-unemotional traits in themselves.

Table 8. *Correlations between caregiver-rated ICU scores and caregiver-rated subscales of the IRI at Time 1*

	Time 1 Caregiver-Rated ICU Scores	
Time 1 Caregiver-Rated IRI Scores	Perspective Taking	-.050
	Fantasy	-.004
	Empathic Concern	-.237*
	Personal Distress	.064

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, IRI = Interpersonal Reactivity Index

Table 9. *Correlations between caregiver-rated ICU scores and caregiver-rated subscales of the IRI at Time 2*

	Time 2 Caregiver-Rated ICU Scores	
Time 2 Caregiver-Rated IRI Scores	Perspective Taking	-.383**
	Fantasy	-.211
	Empathic Concern	-.242*
	Personal Distress	.016

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: ICU = Inventory of Callous-Unemotional Traits, IRI = Interpersonal Reactivity Index

3.3.3 Callous-Unemotional Traits and Parental Psychopathology

There were no significant correlations found between the caregiver-rated Global Severity Index (GSI) score from the Brief Symptom Inventory (BSI) and ICU scores (rated by both child and caregiver) at either Time 1 or Time 2. This indicates that there were no relationships found between parental psychopathology and children's callous-unemotional traits in this study.

3.3.4 Comparisons between Time 1 variables and Time 2 ICU scores

Pearson product-moment correlation coefficients were conducted to determine if any relationships existed between the different Time 1 variables (taken from the Alabama Parenting Questionnaire, the Interpersonal Reactivity Index and the Brief Symptom Inventory) and scores from the Inventory of Callous-Unemotional Traits taken at Time 2.

As reported by caregivers, only one significant relationship emerged between parenting subscale scores (taken from the APQ) at Time 1 and Time 2 caregiver-reported ICU scores. A moderate negative correlation was found between caregiver-reported Parental Involvement at Time 1 and ICU scores at Time 2 (r = -.329, p < .01), indicating caregivers who reported less involvement with their children at Time 1 were more likely to report higher levels of callous-unemotional traits in those children at Time 2.

Child-reported Inconsistent Discipline and Other Discipline at Time 1 showed small positive correlations with child-rated ICU scores at Time 2 (r = .261, p < .05 and r = .251, p < .05 respectively), indicating children who reported higher levels of discipline other than corporal punishment and more inconsistent discipline at Time 1 also self-reported higher levels of callous-unemotional traits at Time 2. Child-reported Parental Monitoring at Time 1 showed a moderate positive correlation with child-rated ICU scores at Time 2 (r = .452, p < .01), indicating children who reported poorer monitoring and supervision at Time 1 also self-reported higher levels of callous-unemotional traits at Time 2.

Time 1 caregiver-reported Empathic Concern scores from the Interpersonal Reactivity Index showed moderate negative correlations with both child-rated and caregiver-rated ICU scores at Time 2 (r = -.426, p < .01 and r = -.304, p < .05 respectively), indicating that lower empathy scores at Time 1 were associated with higher reported callous-unemotional traits at Time 2.

Time 1 ICU scores were also examined in relation to Time 2 ICU scores between raters. A small positive correlation was found between caregiver-rated ICU scores at Time 1 and child self-rated ICU scores at Time 2 ($r = .256$, $p < .05$), indicating that caregivers who rated their child as higher in callous-unemotional traits at Time 1 were more likely to have children who rated themselves as being higher in callous-unemotional traits at Time 2. However, there was no significant correlation found between child self-rated ICU scores at Time 1 and caregiver rated ICU scores at Time 2. Paired-sample t-tests reported earlier showed that there were no significant differences found between child-rated ICU scores between times, or between caregiver-rated ICU scores between times.

3.3.5 Comparisons of Reports of Parenting Practices

Scores from the subscales comprising the Alabama Parenting Questionnaire were compared between Time 1 and Time 2 for each reporter (child and caregiver), as shown in tables 10 and 11. Results show moderate to strong correlations between reporting at Time 1 and reporting at Time 2, indicating consistent reporting across time by both caregivers and children.

Table 10. *Correlations between caregiver-rated Alabama Parenting Questionnaire scores at Time 1 and Time 2*

		Time 1 Caregiver Report					
		PI	**PP**	**Mon**	**ID**	**CP**	**Other**
Time 2 Caregiver Report	**PI**	.751**					
	PP		.592**				
	Mon			.701**			
	ID				.698**		
	CP					.482**	
	Other						.500**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: PI = Parental Involvement, PP = Positive Parenting, Mon = Poor Monitoring and Supervision, ID = Inconsistent Discipline, CP = Corporal Punishment, Other = Other Discipline

Table 11. *Correlations between child-rated Alabama Parenting Questionnaire scores at Time 1 and Time 2*

		Time 1 Child Report					
		PI	**PP**	**Mon**	**ID**	**CP**	**Other**
Time 2 Child Report	**PI**	.387**					
	PP		.412**				
	Mon			.619**			
	ID				.359**		
	CP					.449**	
	Other						.521**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: PI = Parental Involvement, PP = Positive Parenting, Mon = Poor Monitoring and Supervision, ID = Inconsistent Discipline, CP = Corporal Punishment, Other = Other Discipline

Additionally, scores reported on the Alabama Parenting Questionnaire at each time were compared between child-report and caregiver-report, as shown in Tables 12 and 13. Results show small to moderate correlations between reporters at Time 1 on all subscales of the APQ except for Positive Parenting, indicating some consistency between children and caregivers in reports of parenting practices. However, this

consistency is much lower at Time 2, with only two subscales showing significant inter-rater consistency (Poor Monitoring/Supervision and Corporal Punishment).

Table 12. *Correlations between caregiver- and child-rated Alabama Parenting Questionnaire scores at Time 1*

		Time 1 Caregiver Report					
		PI	**PP**	**Mon**	**ID**	**CP**	**Other**
Time 1 Child Report	**PI**	.198*					
	PP		-.014				
	Mon			.397**			
	ID				.228*		
	CP					.225*	
	Other						.196*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: PI = Parental Involvement, PP = Positive Parenting, Mon = Poor Monitoring and Supervision, ID = Inconsistent Discipline, CP = Corporal Punishment, Other = Other Discipline

Table 13. *Correlations between caregiver- and child-rated Alabama Parenting Questionnaire scores at Time 2*

		Time 2 Caregiver Report					
		PI	**PP**	**Mon**	**ID**	**CP**	**Other**
Time 2 Child Report	**PI**	.173					
	PP		.002				
	Mon			.305*			
	ID				.085		
	CP					.314*	
	Other						.177

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Note: PI = Parental Involvement, PP = Positive Parenting, Mon = Poor Monitoring and Supervision, ID = Inconsistent Discipline, CP = Corporal Punishment, Other = Other Discipline

3.3.6 Comparisons of Reports of Psychopathy

Pearson product-moment correlation coefficients were conducted to determine if relationships existed between scores on the Inventory of Callous-Unemotional Traits and scores on the Antisocial Process Screening Device. Both of these instruments measure psychopathic and callous-unemotional traits, and therefore correlational analyses were run to check for inter-measurement reliability (that is, individuals were reporting consistent levels of callous-unemotional traits between measures). Strong correlations were found between total scores on both measures, as well as between total scores on the ICU and the callous-unemotional subscale of the APSD (*r* values ranged from .584-.873, $p<.01$), indicating good consistency of reporting between measures.

3.4 Regression Analyses

To further examine the relationships between ICU scores and scores from the Alabama Parenting Questionnaire and the Interpersonal Reactivity Index, standard linear regression analyses were conducted using ICU scores as the dependent variable. Again, as scores encompassing the dependent and independent variables were reported by both children and their caregivers at Time 1 and Time 2 each of these will be considered in turn. The data from all participants that completed the ICU, the APQ and the IRI at each time were entered into the regression analyses.

3.4.1 Parenting Practices

A regression analysis was conducted using Time 1 caregiver-rated ICU scores as the dependent variable and Time 1 caregiver-rated APQ subscale scores (Parental Involvement, Positive Parenting, Monitoring and Supervision, Inconsistent Discipline, Corporal Punishment, and Other Discipline) as the predictor variables. As there was no theoretical basis for assuming that one parenting aspect had more predictive utility than another, all predictor variables were entered simultaneously into the regression equation using the enter method. R^2 for the regression was significantly different from zero, F (6, 112) = 5.53, $p < .001$. The analysis showed that three of the Time 1 caregiver-rated APQ subscales were significant, as shown in Table 14. Of the three variables, Positive Parenting made the largest unique contribution (β = -.225), and accounted for 3.0% of the variance in Time 1 caregiver-rated ICU scores.

Table 14. *Standard regression analysis for Time 1 caregiver-rated APQ scores predicting Time 1 caregiver-rated ICU scores*

	Beta	*t*	*p*	Squared Semi-Partial Correlation
Positive Parenting	-.225	-2.072	.041	.030
Parental Monitoring	.191	1.995	.048	.028
Inconsistent Discipline	.210	1.988	.049	.027

Note: APQ = Alabama Parenting Questionnaire

A regression analysis was conducted using Time 1 caregiver-rated ICU scores as the dependent variable and Time 1 child-rated APQ subscale scores as the predictor variables (again using the enter method with all predictor variables entered into the equation simultaneously). R^2 for the regression was significantly different from zero,

F (6, 112) = 3.51, $p < .01$. Only one of the Time 1 child-rated APQ subscales reached significance (Parental Monitoring β = .280, t = 2.552, $p < .05$) and accounted for 5.0% of the variance in Time 1 caregiver-rated ICU scores.

Analyses of all Time 2 parenting variables revealed the only relationships to reach significance were two caregiver-rated APQ subscale scores using caregiver-rated ICU scores as the dependent variable and caregiver-rated APQ subscale scores as predictor variables (with all predictor variables entered into the equation simultaneously using the enter method). R^2 for the regression was significantly different from zero, F (6, 64) = 7.92, $p < .001$. The two variables to reach significance were Parental Involvement (β = -.444, t = -.3596, $p < .01$), and Other Discipline (β = .293, t = 2.876, $p < .01$). Parental Involvement explained 11.6% of the variance in Time 2 caregiver-rated ICU scores, while Other Discipline explained 7.4% of the variance.

A regression analysis using Time 2 child self-rated ICU scores as the dependent variable and Time 1 child-rated APQ subscale scores as predictor variables (again using the enter method with all predictor variables entered into the equation simultaneously) showed that R^2 for the regression was significantly different from zero, F (6, 57) = 5.47, $p < .001$. Three variables reached significance, as shown in Table 15. These were Time 1 child-rated Parental Monitoring, Corporal Punishment and Other Discipline scores, using Time 2 child self-rated ICU scores as the dependent variable. Of the three variables, Parental Monitoring made the largest unique contribution (β = .533) and accounted for 17.6% of the variance in Time 2 child self-rated ICU scores.

Table 15. *Standard regression analysis for Time 1 child-rated APQ scores predicting Time 2 child self-rated ICU scores*

	Beta	*t*	*p*	Squared Semi-Partial Correlation
Parental Monitoring	.533	3.984	.000	.176
Corporal Punishment	-.295	-2.672	.010	.080
Other Discipline	.382	3.026	.004	.102

3.4.2 Parental Empathy

A regression analysis was conducted using Time 2 caregiver-rated ICU scores as the dependent variable and Time 1 and Time 2 caregiver-rated scores from the four subscales comprising the Interpersonal Reactivity Index as predictor variables (Perspective Taking, Fantasy, Empathic Concern, and Personal Distress). Again, as there was no theoretical basis for assuming one subscale score had more predictive utility than another, all predictor variables were entered into the equation simultaneously using the enter method. R^2 for the regression was significantly different from zero, F (8, 51) = 2.51, $p < .05$. The only two variables to reach significance were caregiver-rated Empathic Concern scores at Time 1 (β = -.407, t = -2.887, $p < .01$) and caregiver-rated Perspective Taking scores at Time 2 (β = -.394, t = -2.247, $p < .05$). Empathic Concern scores at Time 1 accounted for 11.8% of the variance in Time 2 caregiver-rated ICU scores, while Time 2 Perspective Taking scores explained 7.1% of the variance.

3.5 Multivariate Analysis of Variance

One-way between-groups multivariate analyses of variance (MANOVA) were performed to investigate sex differences in ICU and APQ scores.

3.5.1 Callous-Unemotional Traits

Child self-rated and caregiver-rated scores on the Inventory of Callous-Unemotional Traits at both Time 1 and Time 2 were used as the dependent variables in this analysis, with sex as the independent variable. There was a statistically significant difference between males and females on the combined dependent variables: $F(4, 49) = 3.656$, $p = .011$; Wilks' Lambda = .770; partial eta squared = .230. When the results for the dependent variables were considered separately, the only variable to reach a significant difference using a Bonferroni adjusted alpha level of .013 was Time 2 child self-rated ICU ($F(1, 52) = 10.23$, $p = .002$, partial eta squared = .164), as shown in Table 16. An examination of the mean scores at Time 2 indicated that males self-reported higher ICU scores ($M = 25.55$, $SD = 9.76$) than females ($M = 17.74$, $SD = 7.50$).

Table 16. *Sex differences in ICU scores at Time 1 and Time 2*

	Male (*n* = 31)		Female (*n* = 23)		F values and significance (*df* = 4,49)		
Variable	Mean	SD	Mean	SD	F ratio	*p* value	Partial Eta Squared
Time 1 caregiver-reported ICU score (raw)	23.30	11.59	18.83	8.98	2.36	.133	.043
Time 1 child-reported ICU score (raw)	20.48	8.79	22.00	8.33	.410	.525	.008
Time 2 caregiver-reported ICU score (raw)	25.00	11.55	18.57	9.10	4.88	.032	.086
Time 2 child-reported ICU score (raw)	25.55	9.76	17.74	7.50	10.23	.002	.164

Note: ICU = Inventory of Callous-Unemotional Traits

3.5.2 Parenting Practices

Child-rated and caregiver-rated APQ scores at both Time 1 and Time 2 were used as the dependent variables in this analysis, with sex as the independent variable. When the results for the dependent variables were considered separately, the only difference to reach statistical significance using a Bonferroni adjusted alpha level of .008 was Time 1 child-reported Positive Parenting ($F(1, 123) = 12.364$, $p = .001$, partial eta squared = .091). An examination of the mean scores indicated that females

reported receiving higher levels of positive parenting techniques (M = 26.33, SD = 3.06) than males reported (M = 23.63, SD = 4.77).

4. DISCUSSION

In recent years, some researchers examining criminal behaviour have begun to focus on the pathways that may lead an individual to offend. A new subdiscipline, which Andrews and Bonta (2003) refer to as developmental criminology, has emerged from this and is concerned with the early prediction of offending behaviour. One of the developments to come out of this new area is research into psychopathic traits, or more specifically callous-unemotional traits, in children. It has been shown that the presence of high levels of callous-unemotional traits in children may aid in the prediction of who may follow an offending pathway. The aim of this study was to extend the current literature on callous-unemotional traits in children by examining relationships between these traits and various aspects of parenting. Parental involvement, use of punishment, monitoring and supervision, parental psychopathology and parental empathy were all examined in relationship to callous-unemotional traits in children in this study. Overall, the predicted hypotheses of this study were supported for the most part, and thus provide additional support for previous studies. As several relationships were examined in this study, each will be discussed in turn.

4.1 Callous-Unemotional Traits and Parental Empathy

The first hypothesis proposed by this study was that children's levels of callous-unemotional traits would be negatively correlated with empathy levels in their caregivers, meaning that caregivers who rated themselves low on empathy would

have children who were rated high in callous-unemotional traits (and thus low in empathy). The rationale behind this hypothesis was based on research that suggests that while callous-unemotional traits, like all traits, have their origins partly in temperamental styles marked by low behavioural inhibition (Kagan & Snidman, 1991), temperament itself is a product of both genetics and environment. Therefore, a parent's own level of empathy may have an influence on their child's empathy levels, transmitted through both genetics and early learning environments that the parent provides. In this study, the hypothesis that caregiver's empathy levels would be related to their child's empathy levels was generally supported. At both Time 1 (ie – when children were 10-11 years old) and Time 2 (ie – when children were 11-12 years old), caregivers who rated themselves low in empathy were more likely to rate their children high in callous-unemotional traits. Additionally, caregivers who rated themselves low in empathy at Time 1 were more likely to report higher levels of CU traits in their children at Time 2, as well as having children who rated themselves higher in CU traits at Time 2.

Regression analyses were carried out to further examine the role that parental empathy has in the development of callous-unemotional traits in children. The best predictor of children's levels of callous-unemotional traits at Time 2 (as rated by caregivers) was the caregiver's own tendencies to experience feelings of sympathy and concern for others (Empathic Concern) at Time 1. Although it accounted for a significant amount of variance (11.8%), a large percent of variance continued to be unaccounted for, indicating that parental empathy is only one factor of many playing a role in the development of callous-unemotional traits in children.

The results from this study are similar to those found by Loney, Huntenburg et al. (2007), whose research suggested a relationship between child and maternal CU traits (or more broadly, between child and maternal empathy). However, the authors found that the relationship in that study was almost fully mediated by parenting dysfunction (described as poor monitoring and supervision, harsh and inconsistent discipline, and uninvolved parenting). Because callous-unemotional traits are a product of genes and the environment, Loney, Huntenburg et al. (2007) suggested that the process by which CU traits are transmitted from parent to child may have more to do with ineffective parenting and socialisation than with any genetic predisposition. This suggestion is also consistent with a study conducted by Frick, Kimonis, Dandreaux and Farell (2003), who found that dysfunctional parenting practices were predictive of increases in callous-unemotional traits over a four year period. The results from the current study, like the results from Loney, Huntenburg et al.'s (2007) study, may be interpreted in different ways. Firstly, there is the possibility that a shared genetic vulnerability, such as low behavioural inhibition, may account for both lower empathy levels and parental dysfunction. It is also possible that children high in callous-unemotional traits elicit low empathy and dysfunctional parenting techniques from their caregivers. Further research examining shared genetic contributions to the intergenerational transmission of callous-unemotional traits and parenting dysfunction may help to clarify this issue.

4.2 Callous-Unemotional Traits and Parental Monitoring/Supervision

The second hypothesis of the current study postulated that children's levels of CU traits would be negatively correlated with levels of parental monitoring and

supervision that they received. This hypothesis was supported by the results. When children's callous-unemotional traits were rated by their caregivers, poor parental monitoring and supervision were significantly correlated with higher levels of CU traits. This indicated that, generally, children who received less monitoring and less supervision were more likely to be rated high in CU traits by their caregivers. While child self-rated CU traits were significantly correlated with child-reported monitoring and supervision at Time 1 and Time 2, there were no significant correlations found between child self-rated CU traits and caregiver-reported monitoring and supervision at either time. When exploring the relationships between Time 1 and Time 2 reporting, children who reported poor supervision and monitoring at Time 1 were more likely to report higher levels of CU traits at Time 2.

Regression analyses conducted to further examine the relationship between parental monitoring/supervision and children's callous-unemotional traits showed that this aspect of parenting (when compared to five other aspects of parenting) accounted for a significant amount of variance, albeit small, in levels of CU traits. While monitoring and supervision rated by children and caregivers at Time 1 accounted for small amounts of variance in caregiver-rated ICU scores at Time 1 (5% and 2.8% respectively), child reported monitoring/supervision at Time 1 explained almost one fifth of the variance in child self-reported levels of callous-unemotional traits at Time 2. Loeber and Stouthamer-Loeber (1986, cited in Frick, 1998) identified parental supervision as being one of two key elements of socialisation (the other being parental involvement), a process that is critical to an individual's development of conscience and empathy. In this study, reports of less monitoring and supervision tended to be associated with higher levels of callous-unemotional traits, suggesting that

supervision may have an impact on the development of empathy in children. Previous studies have shown that children with higher levels of CU traits were found to have higher levels of delinquent peer associations (Kimonis, Frick & Barry, 2004), an association that may be mediated by levels of monitoring and supervision. If children receive less monitoring from their caregivers, membership to deviant peer groups may be more accessible. Spending more unsupervised time with delinquent cohorts may in turn lead to increases in antisocial behaviours, as children become reinforced by their peers for engaging in these acts (Patterson et al., 1989). The finding from this study that less monitoring and supervision predicts variance in callous-unemotional traits provides strong support for existing literature on this issue, and highlights the need to consider this aspect of parenting when planning interventions for antisocial youth.

4.3 Callous-Unemotional Traits and Parental Involvement

The second hypothesis of this study also postulated that children's levels of callous-unemotional traits would be negatively correlated with how involved their caregivers were in their day to day lives. This hypothesis was partially supported. At Time 2, caregivers who reported less involvement with their children were more likely to rate those children as being higher in CU traits. Also at Time 2, children who reported less involvement with their caregivers were more likely to rate themselves higher in CU traits. Furthermore, a comparison of Time 1 and Time 2 reporting revealed that caregivers who reported less involvement with their children at Time 1 were more likely to report higher levels of callous-unemotional traits in their children at Time 2. Regression analyses undertaken revealed that the only instance in which less parental involvement predicted higher callous-unemotional traits in children was

when caregiver reports of involvement at Time 2 were used to predict caregiver-rated ICU scores at Time 2, which accounted for just over one tenth of the variability in levels of CU traits.

Several authors have identified parental monitoring/supervision and parental involvement as being two aspects of parenting that are most consistently associated with disruptive behaviour in children (Loeber & Stouthamer-Loeber, 1986, cited in Frick, 1998; Frick et al., 1992), and the results from the current study replicate those findings. Both of these areas of parenting are integral to socialisation, the process by which children learn rules and expectations from their parents (Kochanska, 1997). If caregivers are not involved in the day to day activities of their children and provide poor monitoring and supervision, socialisation of societal norms is hindered and children may fail to adequately develop moral conscience, or empathy. It stands to reason, then, that one would find associations between these two aspects of parenting and levels of callous-unemotional traits in children – associations that were found in this study. However, only monitoring/supervision provided some utility in predicting levels of CU traits over time. Parental involvement, while being able to predict a small amount of variance at a static point in time, failed to predict changes in CU traits over time. As the area of developmental criminology is concerned with the pathways that lead individuals to offend, attention should be focused on those factors that provide the most utility in predicting antisocial behaviour in the future. The results from the current study suggest that parental involvement is perhaps not as useful in this capacity as other parenting variables.

4.4 Callous-Unemotional Traits and Parental Discipline/Positive Parenting

Hypothesis 3 of the current study proposed that children's callous-unemotional traits would be positively correlated with the frequency and severity of discipline they received from their caregivers. This hypothesis was partially supported. It should be noted that in this study the term "discipline" refers to milder forms of punishment, such as the use of time out or taking away of privileges. A small relationship was found between child-reported frequency of discipline at Time 1 and child self-rated level of CU traits at Time 2, indicating that those who reported more frequent use of discipline at Time 1 were more likely to rate themselves higher in CU traits at Time 2. However, there appeared to be no significant relationships found between child self-rated callous-unemotional traits and frequency of discipline they received when comparing Time 1 and Time 2 independently. That is, children who reported receiving more frequent discipline at Time 1 were not more likely to rate themselves higher in callous-unemotional traits at the same time. Caregivers who reported more frequent use of discipline at Time 1 were more likely to rate their children as having higher levels of CU traits at Time 1. Similarly, caregivers who reported more frequent use of discipline at Time 2 were more likely to rate their children as having higher levels of CU traits at Time 2. Children who reported receiving more frequent use of discipline at Time 1 were more likely to be rated higher in callous-unemotional traits by their caregivers at Time 1. These results suggest that children who received more frequent use of discipline were more likely to be rated higher in callous-unemotional traits.

Regression analyses were conducted to further examine the relationship between frequency of discipline and callous-unemotional traits. It was found that frequency of discipline reported by caregivers at Time 2 accounted for a small percentage of the variance in caregiver-rated CU levels at the same time. More importantly, child reports of discipline predicted around one tenth of the change in child reported levels of callous-unemotional traits at Time 2 (when all child reported parenting variables at Time 1 were considered).

Across all reporters and times, no significant relationships were found between CU traits and frequency of corporal punishment, which was used as a measure of harsh punishment. This particular result was unsurprising; given only three items of the Alabama Parenting Questionnaire address corporal punishment, leading to low internal consistency of that scale (Shelton, Frick & Wootten, 1996). Additionally, recent law changes in New Zealand prohibiting the use of corporal punishment for the purposes of correction may have resulted in individual's reluctance to report this. However, regression analyses revealed that child reports of corporal punishment at Time 1 contributed a small significant percentage of the variance in child ratings of callous-unemotional traits at Time 2.

While not specified in the hypotheses, two other aspects of parenting were found to show relationships with callous-unemotional traits in children – the first of these being the inconsistent use of discipline. Reports from both caregiver and child of inconsistent discipline at Time 1 and Time 2 showed small to moderate correlations with caregiver-rated CU traits in children, indicating that those who reported higher levels of inconsistent discipline in the home were more likely to report higher levels

of CU traits in the children. When investigating child self-rated CU traits, the same was true of child-reported inconsistent discipline, but not of caregiver-reported inconsistent discipline. Again, when comparing Time 1 and Time 2 reporting, children who reported higher levels of inconsistent discipline at Time 1 were more likely to rate themselves higher in CU traits at Time 2.

The use of discipline is an aspect of parenting that has been repeatedly linked to antisocial behaviour in children. Research has found that caregivers of antisocial children are more likely to use harsher forms of punishment, more frequently and with less consistency (Vuchinich, Bank & Patterson, 1992; Shelton, Frick & Wootton, 1996). The result of ineffective discipline is that children fail to be adequately socialised to parental values, leading to lower self-control and lower empathy levels. The results from the current study are similar to that found by Shelton et al. (1996), in that higher levels of callous-unemotional traits were associated with more frequent and less consistent use of discipline. However, the presence of harsher forms of punishment (measured by frequency of corporal punishment) was not a significant finding.

As mentioned before in the discussion about the relationships found between parental empathy and callous-unemotional traits, the associations between parental discipline and callous-unemotional traits may not be uni-directional. A study by Vuchinich, Bank and Patterson (1992) found a reciprocal effect between inconsistent and harsh discipline and increased antisocial behaviour in adolescent boys. While discipline influenced antisocial behaviour, the antisocial behaviour of the adolescents also influenced parental discipline. A similar reciprocal relationship was found by

Pardini, Fite and Burke (2008) when investigating relationships between conduct problems and parenting practices (which included punishment, monitoring and involvement). These studies have important treatment implications in that any intervention aimed at reducing antisocial behaviour must also address any factors that may maintain it, such as harsh and inconsistent parental discipline. The current study adds support to the existing literature that highlights the relationships between parenting practices and antisocial behaviour, relationships that must be recognising when planning interventions.

The use of positive parenting techniques, while not being specifically hypothesised to show a relationship with callous-unemotional traits, was another parenting dimension that was found to bear significant results. Both child-rated CU traits/child-rated positive parenting and caregiver-rated CU traits/caregiver-rated positive parenting showed negative correlations at both Time 1 and Time 2. This indicates that those reporting higher levels of callous-unemotional traits were less likely to report the use of positive parenting techniques.

In Kochanska's work on socialisation and parenting practices (1994, 1997), he suggests that punishment for children who are low in anxiety and relatively fearless may not be as an effective method of behaviour control as the use of positive parenting techniques. Fearlessness has been shown to be associated with callous-unemotional traits (O'Brien & Frick, 1996; Barry et al., 2000), in that those with higher levels of CU traits are more likely to also have higher levels of fearlessness. The current study has shown that caregivers of children with high levels of callous-unemotional traits are more likely to use frequent discipline and less likely to use

positive parenting techniques – a combination that may in fact put a child at increased risk of antisocial behaviour.

4.5 Callous-Unemotional Traits and Parental Psychopathology

Hypothesis 4 of this study proposed that there would be a relationship between levels of psychopathology in caregivers and levels of callous-unemotional traits in their children. This hypothesis was not supported, and is contrary to research that suggests that increased psychopathology in caregivers is associated with increased risk of antisocial behaviour in children (Loeber & Stouthamer-Loeber 1986, cited in Frick, 1998). However, the method of obtaining information regarding parental psychopathology in this study was the use of a subscale of the Brief Symptom Inventory that measures the average intensity of each item endorsed, and any results from this measure should be interpreted with caution. Therefore, it is possible that the scores derived from this subscale minimised any variance shown on the nine individual symptom dimensions that comprise the BSI.

4.6 Sex differences in Callous-Unemotional Traits and Parenting Practices

An examination of levels of callous-unemotional traits in children showed that males scored significantly higher than females when all reporters (child and caregiver) and all times (Time 1 and Time 2) were combined, indicating that overall there was a significant sex difference in reported levels of callous-unemotional traits . When each reporter and each time were considered separately, only child self-rated CU traits showed a significant sex difference and only at Time 2.

When all caregiver- and child-reported parenting aspects were examined for sex differences at both times, the only significant result to emerge was Time 1 child-reported Positive Parenting. The results showed that females reported receiving more frequent use of positive parenting techniques than did males.

Few studies to date have expressly examined sex differences in children's levels of callous-unemotional traits. Although research suggests that generally females are more likely to follow an adolescent-limited pathway of offending (Frick, 1998; Frick & Dickens, 2006), Silverthorn and Frick (1999) hypothesised that females displaying more severe antisocial behaviour may share more in common with child-onset males. They suggested that although the onset of antisocial behaviour in females may occur later in childhood or adolescence, the behaviour itself may be a result of the same mechanisms, such as callous-unemotional traits, that predicts this behaviour in early-onset males. It is therefore important to examine sex differences in callous-unemotional traits, as this study has done, for high levels of CU traits in females may be useful in predicting those who at high risk of offending.

4.7 Limitations and Future Research

Results from this study should be interpreted with a number of limitations in mind. Firstly, the sample was gathered from low decile schools in the Christchurch area, which may limit the extent to which the results could be generalised to other settings and populations. Additionally, the sample size was not large (particularly at Time 2) which also affects how the results may be generalised. To combat this for

future research, more studies with large numbers of participants need to be carried out in order to increase the ability of the findings to be generalised.

Another limitation of this study is that only a discrete number of risk factors were examined in relation to children's callous-unemotional traits. While some of these risk factors shown significant relationships with CU traits, the comparative weighting of each of these when considering all the possible variables that may lead a child to display elevated levels of CU traits was unable to be determined. Therefore, it is important that the results be interpreted with the knowledge that the risk factors included in this study have been examined in relative isolation to other risk factors.

As much of this research involved correlational analyses, it was largely only associations could be surmised from the results, not the direction of those associations. It remains unclear whether parental influences cause high levels of callous-unemotional traits, or whether high levels of callous-unemotional traits produce particular styles of parenting. Past research suggests that it is most likely a reciprocal effect between the two, however this study was unable to clarify this further.

Measurement error must also be taken into account when examining the results of this study. Ratings of callous-unemotional traits and parenting variables were made through the use of questionnaires. Many of these questionnaires have items that can be judged at face value, thus making them vulnerable to socially desirable responding. In the majority of cases, children and caregivers completed these forms in the same room as each other, which may have influenced some of the

responding. The possibility exists that different results may have been found if different measurement methods were employed (such as observation by an independent party).

Another factor that may have had some bearing on the results of this study is the sex of the caregiver that provided ratings of themselves and their children. 83.3% of the caregivers that took part in this study were female. The small percentage of male caregivers that participated meant that examining sex differences in caregiver reporting was not feasible. However, it is quite plausible that male caregivers may have responded differently to female caregivers on many of the measures completed. Future studies could address this point by recruiting large samples of both male and female caregivers.

A final limitation of this study, and a limitation common to many of the studies investigating psychopathic traits in children, is the lack of long-term outcome data. While the current study was part of a longer longitudinal study, the sample of children is only being followed for 3 years. It remains unclear whether the children who rated high in callous-unemotional traits at ten years old would become chronic offenders and display psychopathic tendencies as an adult. More longitudinal studies need to be conducted in order to follow children with high levels of callous-unemotional traits through to adulthood. Being that this is a relatively new area of research, it is unsurprising that currently there are few studies that span more than five years follow-up. What is needed is long-term data spanning 20 years or more, such as that gathered from the Dunedin Multidisciplinary Study. Only then will researchers

begin to fully understand the long-term outcomes for children that display psychopathic traits.

4.8 Conclusion

While the current study provides support for much of the current literature on callous-unemotional traits in children, the limitations highlighted above indicate that there is more research needed to be undertaken in order to fully understand the role that these traits play in the development of antisocial behaviour. Several aspects of parenting (such as frequency and consistency of discipline, monitoring/supervision, involvement with children, positive parenting, and parental empathy) have shown associations with callous-unemotional traits. As psychopathic traits, and in particular CU traits, can delineate subgroups of children at high risk for future offending, it becomes imperative to identify the factors behind the development of these traits. This study both provides support for the contention that parenting practices are related to levels of callous-unemotional traits, and draws attention to the influence that a caregiver's level of empathy may have on the development of empathy in their children. However, many of the aspects examined in this study only showed limited utility in the prediction of callous-unemotional traits, which suggests the development of these traits may be influenced more by risk factors other than those examined here. Importantly though, the current study illustrates that there are some parental influences on CU traits in children, which are critical to keep in mind when planning interventions for antisocial youth.

References

Amato, P.R., & Keith, B. (1991). Parental divorce and the well-being of children: A meta-analysis. *Psychological Bulletin, 110*, 26-46.

Andrews, D.A., & Bonta, J. (2003). *The Psychology of Criminal Conduct (3rd Ed.)* Anderson: Cincinnati.

Barry, C. T., Frick, P. J., DeShazo, T. M., McCoy, M. G., Ellis, M., & Loney, B. R. (2000). The importance of callous-unemotional traits for extending the concept of psychopathy to children. *Journal of Abnormal Psychology, 109*, 335-340.

Caspi, A. (2000). The child is the father of the man: Personality continuities from childhood to adulthood. *Journal of Personality and Social Psychology, 78(1),* 158-172.

Davis, M. H. (1980). A multi-dimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.

Derogatis, L. *R.* (1993). *Brief Symptom Inventory: Administration, scoring, and procedures manual—3rd Edition*. Minneapolis, MN: National Computer Systems.

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine, 13*, 595-605.

Edens, J.F., Skopp, N.A., & Cahill, M.A. (2008). Psychopathic features moderate the relationship between harsh and inconsistent parental discipline and adolescent antisocial behaviour. *Journal of Clinical Child and Adolescent Psychology, 37(2),* 472-476.

Essau, C. A., Sasagawa, S., & Frick, P. J. (2006a). Callous–unemotional traits in a community sample of adolescents. *Assessment, 13,* 454-469.

Essau, C. A., Sasagawa, S., & Frick, P.J. (2006b). Psychometric properties of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies,15(5),* 597-616.

Frick, P.J. (1998). *Conduct Disorders and Severe Antisocial Behavior.* Plenum Press: New York.

Frick, P. J. (1991). *The Alabama Parenting Questionnaire*. Unpublished rating scale, University of Alabama.

Frick, P. J. (2003). *The Inventory of Callous-Unemotional Traits*. Unpublished rating scale, University of New Orleans.

Frick, P.J., Bodin, S.D., & Barry, C.T. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further

development of the Psychopathy Screening Device. *Psychological Assessment, 12(4),* 382-393.

Frick, P. J., Cornell, A. H., Barry, C. T., Bodin, S. D., & Dane, H. A. (2003). Callous-unemotional traits and conduct problems in the prediction of conduct problem severity, aggression, and self-report of delinquency. *Journal of Abnormal Child Psychology, 31, 457–470.*

Frick, P.J. & Dickens, C. (2006). Current perspectives on conduct disorder. *Current Psychiatry Reports, 8,* 59-72.

Frick, P. J., & Hare, R. D. (2001). *The Antisocial Process Screening Device.* Toronto, Ontario, Canada: Multi-Health Systems.

Frick, P.J., Kimonis, E.R., Dandreaux, D.M., & Farell, J.M. (2003). The four year stability of psychopathic traits in non-referred youth. *Behavioral Sciences & the Law, 21,* 713-736.

Frick, P.J., Lahey, B.B., Loeber, R., Stouthamer-Loeber, M., Christ, M.A.G., & Hanson, K. (1992). Familial risk factors to oppositional defiant disorder and conduct disorder: Parental psychopathology and maternal parenting. *Journal of Consulting and Clinical Psychology, 60,* 49–55.

Frick, P.J., & Loney, B.R. (2002) Understanding the association between parent and child antisocial behavior. In R.J. McMahon & R. DeV. Peters (Eds.), *The*

Effects of Parental Dysfunction on Children (pp. 105-126). Kluwer Academic/Plenum Publishers: New York.

Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology, 103,* 700–707.

Hare, R. D. (1991). *The Hare Psychopathy Checklist–Revised*. Toronto, Canada: Multi-Health Systems.

Hare, R.D. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior, 23(1),* 25-54.

Hare, R. D. (1999). Psychopathy as a risk factor for violence. *Psychiatric Quarterly, 70, 181–197.*

Hare, R. D., Hart, S. D., & Harpur, T. J. (1991). Psychopathy and the *DSM-IV* criteria for the antisocial personality disorder. *Journal of Abnormal Psychology, 100,* 391-398.

Hare, R. D., & McPherson, L. M. (1984). Violent and aggressive behaviour by criminal psychopaths. *International Journal of Law and Psychiatry, 7,* 329-337.

Hare, R.D., McPherson, L.M., & Forth, A.E. (1988). Male psychopaths and their criminal careers. *Journal of Consulting and Clinical Psychology, 56(5),* 710–714.

Hart, S. D., Kropp, P. R., & Hare, R. D. (1988). Performance of male psychopaths following conditional release from prison. *Journal of Consulting and Clinical Psychology*, *56,* 227–232.

Henry, B., Caspi, A., Moffitt, T., & Silva, P. (1996). Temperamental and familial predictors of violent and nonviolent criminal convictions: Age 3 to age 18. *Developmental Psychology, 32(4),* 614-623.

Kagan, J., & Snidman, N. (1991). Temperamental factors in human development. *American Psychologist, 46,* 856-862.

Kimonis, E.R., Frick, P.J., & Barry, C.T. (2004). Callous-unemotional traits and delinquent peer affiliation. *Journal of Consulting and Clinical Psychology, 72(6),* 956-966.

Kimonis, E.R., Frick, P.J., Skeem, J.L., Marsee, M.A., Cruise, K., Munoz, L.C., Aucoin, K.J., & Morris, A.S. (2008). Assessing callous-unemotional traits in adolescent offenders: Validation of the Inventory of Callous-Unemotional Traits. *International Journal of Law and Psychiatry, 31(3),* 241-252.

Kochanska, G. (1994). Beyond cognition: Expanding the search for the early roots of internalization and conscience. *Developmental Psychology, 30(1),* 20-22.

Kochanska, G. (1997). Multiple pathways to conscience for children with different temperaments: From toddlerhood to age 5. *Developmental Psychology, 33(2),* 228-240.

Kochanska, G., Aksan, N., & Joy, M. (2007). Children's fearfulness as a moderator of parenting in early socialization: Two longitudinal studies. *Developmental Psychology, 43(1),* 222-237.

Loeber, R. (1982). The stability of antisocial and delinquent child behavior: A review. *Child Development, 53,* 1431-1446.

Loney, B.R., Taylor, J., Butler, M.A., & Iacono, W.G. (2007). Adolescent psychopathy features: 6-year temporal stability and the prediction of externalizing symptoms during the transition to adulthood. *Aggressive Behavior, 33,* 242-252.

Loney, B.R, Huntenburg, A., Counts-Allan, C., & Schmeelk, K.M. (2007) A preliminary examination of the intergenerational continuity of maternal psychopathic features. *Aggressive Behavior, 33,* 14-25.

Marsee, M. A., Silverthorn, P., & Frick, P. J. (2005). The association of psychopathic traits with aggression and delinquency in nonreferred boys and girls. *Behavioral Science and the Law, 23,* 1-15

O'Brien, B.S., & Frick, P.J. (1996). Reward dominance: Associations with anxiety, conduct problems, and psychopathy in children. *Journal of Abnormal Child Psychology, 24*, 223-240.

Obradovic, J., Pardini, D.A., Long, J.D., & Loeber, R. (2007). Measuring interpersonal callousness in boys from childhood to adolescence: An examination of longitudinal invariance and temporal stability. *Journal of Clinical Child and Adolescent Psychology, 36(3),* 276-292.

Pardini, D.A., Fite, P.J, & Burke, J.D. (2008). Bidirectional associations between parenting practices and conduct problems in boys from childhood to adolescence: The moderating effect of age and African-American ethnicity. *Journal of Abnormal Child Psychology, 36(5),* 647-662.

Pardini, D.A., Lochman, J.E., & Powell, N. (2007). The development of callous-unemotional traits and antisocial behaviour in children: Are there shared and/or unique predictors? *Journal of Clinical Child and Adolescent Psychology, 36(3),* 319-333.

Patterson, G.R., DeBaryshe, B.D., & Ramsey, E. (1989). A developmental perspective on antisocial behaviour. *American Psychologist, 44(2),* 329-335.

Rutter, M.L. (1997). Nature-nurture integration: The example of antisocial behaviour. *American Psychologist, 52(4),* 390-398.

Serin, R. C. (1991). Psychopathy and violence in criminals. *Journal of Interpersonal Violence, 6,* 423—431.

Shelton, K.K., Frick, P.J., & Wootton, J. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology, 25,* 317-329.

Silverthorn, P., & Frick, P. J. (1999). Developmental pathways to antisocial behavior: The delayed-onset pathway in girls. *Development and Psychopathology*, *11,* 101–126.

Stafford, E., & Cornell, D.G. (2003). Psychopathy scores predict adolescent inpatient aggression. *Assessment, 10(1),* 102-112.

Statistics New Zealand report (2001). *Crime in New Zealand*. Wellington, New Zealand.

Vuchinich, S., Bank, L., & Patterson, G.R. (1992). Parenting, peers, and the stability of antisocial behaviour in preadolescent boys. *Developmental Psychology, 28(3),* 510-521.

Vitacco, M.J., Rogers, R., & Neumann, C.S. (2003). The Antisocial Process Screening Device: An examination of its construct and criterion-related validity. *Assessment, 10(2),* 143-150.

Wootton, J. M., Frick, P. J., Shelton, K. K., & Silverthorn, P. (1997). Ineffective parenting and childhood conduct problems: The moderating role of callous-unemotional traits. *Journal of Consulting and Clinical Psychology, 65,* 301-308.

Appendices

Appendix A: Antisocial Process Screening Device – Parent Version

Appendix B: Antisocial Process Screening Device – Youth Version

Appendix C: Inventory of Callous-Unemotional Traits – Parent Version

Appendix D: Inventory of Callous-Unemotional Traits – Youth Version

Appendix E: Alabama Parenting Questionnaire – Parent Form

Appendix F: Alabama Parenting Questionnaire – Child Form

Appendix G: Interpersonal Reactivity Index

Appendix H: Information Sheets– from Dr. Nina McLouglin's project *'A study of the risk and protective factors for offending behaviour in New Zealand children'*

Appendix I: Consent Forms – from Dr. Nina McLoughlin's project *'A study of the risk and protective factors for offending behaviour in New Zealand children'*

Appendix A

APSD
(Parent Version)

Name of Child:_____ Date of Birth:____/____/____

Completed By: Mother Father Other:_____

Date Completed:____/____/____

Instructions: Please complete the background information above. Then read each statement and decide how well it describes your child. Mark your answer by circling the appropriate number (0-2) for each statement. Do not leave any statement unrated.

	Not at all True	Sometimes True	Definitely True
1. Blames others for his/her mistakes.	0	1	2
2. Engages in illegal activities.	0	1	2
3. Is concerned about how well he/she does at school/work.	0	1	2
4. Acts without thinking of the consequences.	0	1	2
5. His/her emotions seem shallow and not genuine.	0	1	2
6. Lies easily and skillfully.	0	1	2
7. Is good at keeping promises.	0	1	2
8. Brags excessively about his/her abilities, accomplishments, or possessions.	0	1	2
9. Gets bored easily.	0	1	2
10. Uses or "cons" other people to get what he/she wants.	0	1	2

(Over)

	Not at all True	Sometimes True	Definitel True
11. Teases or makes fun of other people.	0	1	2
12. Feels bad or guilty when he/she does something wrong.	0	1	2
13. Engages in risky or dangerous activities.	0	1	2
14. Can be charming at times, but in ways that seem insincere or superficial.	0	1	2
15. Becomes angry when corrected or punished.	0	1	2
16. Seems to think that he or she is better or more important than other people.	0	1	2
17. Does not plan ahead, or leaves things to the "last minute."	0	1	2
18. Is concerned about the feelings of others.	0	1	2
19. Does not show feelings or emotions.	0	1	2
20. Keeps the same friends.	0	1	2

Appendix B

APSD
(Youth Version)

Name:_____ Date Completed: ___/___/___

Instructions: Please read each statement and decide how well it describes you. Mark your answer by circling the appropriate number (0-2) for each statement. Do not leave any statement unrated.

	Not at all True	Sometimes True	Definitely True
1. You blame others for your mistakes.	0	1	2
2. You engage in illegal activities.	0	1	2
3. You care about how well you do at school/work.	0	1	2
4. You act without thinking of the consequences.	0	1	2
5. Your emotions are shallow and fake.	0	1	2
6. You lie easily and skillfully.	0	1	2
7. You are good at keeping promises.	0	1	2
8. You brag a lot about your abilities, accomplishments, or possessions.	0	1	2
9. You get bored easily.	0	1	2
10. You use or "con" other people to get what you want.	0	1	2
11. You tease or make fun of other people.	0	1	2
12. You feel bad or guilty when you do something wrong.	0	1	2

(Over)

	Not at all True	Sometimes True	Definitely True
13. You do risky or dangerous things.	0	1	2
14. You act charming and nice to get things you want.	0	1	2
15. You get angry when corrected or punished.	0	1	2
16. You think you are better or more important than other people.	0	1	2
17. You do not plan ahead or you leave things until the "last minute."	0	1	2
18. You are concerned about the feelings of others.	0	1	2
19. You hide your feelings or emotions from others.	0	1	2
20. You keep the same friends.	0	1	2

Appendix C

ICU
(Parent Version)

Name of Child: _____ Date of Birth: _____

Completed by: Mother Father Other: _____

Date completed: _____

Instructions: *Please complete the background information above. Then read each statement and decide how well it describes your child. Mark your answer by circling the appropriate number (0-3) for each statement. Do not leave any statement unrated.*

	Not at all true	Somewhat true	Very true	Definitely True
1. Expresses his/her feelings openly.	0	1	2	3
2. Does not seem to know "right" from "wrong".	0	1	2	3
3. Is concerned about schoolwork.	0	1	2	3
4. Does not care who he/she hurts to get what he/she wants.	0	1	2	3
5. Feels bad or guilty when he/she has done something wrong.	0	1	2	3
6. Does not show emotions.	0	1	2	3
7. Does not care about being on time.	0	1	2	3
8. Is concerned about the feelings of others.	0	1	2	3
9. Does not care if he/she is in trouble.	0	1	2	3
10. Does not let feelings control him/her.	0	1	2	3
11. Does not care about doing things well.	0	1	2	3
12. Seems very cold and uncaring.	0	1	2	3
13. Easily admits to being wrong.	0	1	2	3
14. It is easy to tell how he/she is feeling.	0	1	2	3
15. Always tries his/her best.	0	1	2	3
16. Apologizes ("says he/she is sorry") to persons he/she has hurt.	0	1	2	3
17. Tries not to hurt others' feelings.	0	1	2	3

18. Shows no remorse when he/she has done something wrong.	0	1	2	3
19. Is very expressive and emotional.	0	1	2	3
20. Does not like to put the time into doing things well.	0	1	2	3
21. The feelings of others are unimportant to him/her.	0	1	2	3
22. Hides his/her feelings from others.	0	1	2	3
23. Works hard on everything.	0	1	2	3
24. Does things to make others feel good.	0	1	2	3

Unpublished rating scale by Paul J. Frick, Department of Psychology, University of New Orleans (pfrick@uno.edu)

Appendix D

ICU
(Youth Version)

Name: _____

Date Completed: _____

Instructions: Please read each statement and decide how well it describes you. Mark your answer by circling the appropriate number (0-3) for each statement. Do not leave any statement unrated.

	Not at all true	Somewhat true	Very true	Definitely True
1. I express my feelings openly.	0	1	2	3
2. What I think is "right" and "wrong" is different from what other people think.	0	1	2	3
3. I care about how well I do at school or work.	0	1	2	3
4. I do not care who I hurt to get what I want.	0	1	2	3
5. I feel bad or guilty when I do something wrong.	0	1	2	3
6. I do not show my emotions to others.	0	1	2	3
7. I do not care about being on time.	0	1	2	3
8. I am concerned about the feelings of others.	0	1	2	3
9. I do not care if I get into trouble.	0	1	2	3
10. I do not let my feelings control me.	0	1	2	3
11. I do not care about doing things well.	0	1	2	3
12. I seem very cold and uncaring to others.	0	1	2	3
13. I easily admit to being wrong.	0	1	2	3
14. It is easy for others to tell how I am feeling.	0	1	2	3
15. I always try my best.	0	1	2	3
16. I apologize ("say I am sorry") to persons I hurt.	0	1	2	3
17. I try not to hurt others' feelings.	0	1	2	3
18. I do not feel remorseful when I do something wrong.	0	1	2	3
19. I am very expressive and emotional.	0	1	2	3
20. I do not like to put the time into doing things well.	0	1	2	3

21. The feelings of others are unimportant to me.	0	1	2	3
22. I hide my feelings from others.	0	1	2	3
23. I work hard on everything I do.	0	1	2	3
24. I do things to make others feel good.	0	1	2	3

Unpublished rating scale by Paul J. Frick, Department of Psychology, University of New Orleans (pfrick@uno.edu) .

Appendix E

The University of New Orleans
Alabama Parenting Questionnaire (APQ)
(Parent Form)

Child's Name: _____ ID#: _____

Parent Completing Form(Circle one): Mother Father Other: _____

Instructions: The following are a number of statements about your family. Please rate each item as to how often it TYPICALLY occurs in your home. The possible answers are Never (1), Almost Never (2), Sometimes (3), Often (4), Always (5). PLEASE ANSWER ALL ITEMS.

	Never	Almost Never	Sometimes	Often	Always
1. You have a friendly talk with your child.	1	2	3	4	5
2. You let your child know when he/she is doing a good job with something.	1	2	3	4	5
3. You threaten to punish your child and then do not actually punish him/her.	1	2	3	4	5
4. You volunteer to help with special activities that your child is involved in (such as sports, boy/girl scouts, church youth groups).	1	2	3	4	5
5. You reward or give something extra to your child for obeying you or behaving well.	1	2	3	4	5
6. Your child fails to leave a note or to let you know where he/she is going.	1	2	3	4	5
7. You play games or do other fun things with your child.	1	2	3	4	5
8. Your child talks you out of being punished after he/she has done something wrong.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
9. You ask your child about his/her day in school.	1	2	3	4	5
10. Your child stays out in the evening past the time he/she is supposed to be home.	1	2	3	4	5
11. You help your child with his/her homework.	1	2	3	4	5
12. You feel that getting your child to obey you is more trouble that it's worth.	1	2	3	4	5
13. You compliment your child when he/she does something well.	1	2	3	4	5
14. You ask your child what his/her plans are for the coming day.	1	2	3	4	5
15. You drive your child to a special activity.	1	2	3	4	5
16. You praise your child if he/she behaves well.	1	2	3	4	5
17. Your child is out with friends you don't know.	1	2	3	4	5
18. You hug or kiss your child when he/she has done something well.	1	2	3	4	5
19. Your child goes out without a set time to be home.	1	2	3	4	5
20. You talk to your child about his/her friends.	1	2	3	4	5
21. Your child is out after dark without an adult with him/her.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
22. You let your child out of a punishment early (like lift restrictions earlier than you originally said).	1	2	3	4	5
23. Your child helps plan family activities.	1	2	3	4	5
24. You get so busy that you forget where your child is and what he/she is doing.	1	2	3	4	5
25. Your child is not punished when he/she has done something wrong.	1	2	3	4	5
26. You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.	1	2	3	4	5
27. You tell your child that you like it when he/she helps out around the house.	1	2	3	4	5
28. You don't check that your child comes home at the time she/he was supposed to.	1	2	3	4	5
29. You don't tell your child where you are going.	1	2	3	4	5
30. Your child comes home from school more than an hour past the time you expect him/her.	1	2	3	4	5
31. The punishment you give your child depends on your mood.	1	2	3	4	5
32. Your child is at home without adult supervision.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
33. You spank your child with your hand when he/she has done something wrong.	1	2	3	4	5
34. You ignore your child when he/she is misbehaving.	1	2	3	4	5
35. You slap your child when he/she has done something wrong.	1	2	3	4	5
36. You take away privileges or money from your child as a punishment.	1	2	3	4	5
37. You send your child to his/her room as a punishment.	1	2	3	4	5
38. You hit your child with a belt, switch, or other object when he/she has done something wrong.	1	2	3	4	5
39. You yell or scream at your child when he/she has done something wrong.	1	2	3	4	5
40. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.	1	2	3	4	5
41. You use time out (make him/her sit or stand in a corner) as a punishment.	1	2	3	4	5
42. You give your child extra chores as a punishment.	1	2	3	4	5

Appendix F

The University of New Orleans
Alabama Parenting Questionnaire (APQ)
(Child Form)

Name: _____ ID#: _____

Instructions: The following are a number of statements about your family. Please rate each item as to how often it TYPICALLY occurs in your home. The possible answers are Never (1), Almost Never (2), Sometimes (3), Often (4), Always (5). If your dad or mom is not currently living at home with you, then skip the questions that ask about that person.

	Never	Almost Never	Sometimes	Often	Always
1. You have a friendly talk with your mom.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
2. Your parents tell you that you are doing a good job.	1	2	3	4	5
3. Your parents threaten to punish you and then do not do it.	1	2	3	4	5
4. Your mom helps with some of your special activities (such as sports, boy/girl scouts, church youth groups).	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
5. Your parents reward or give something extra to you for behaving well.	1	2	3	4	5
6. You fail to leave a note or let your parents know where you are going.	1	2	3	4	5
7. You play games or do other fun things with your mom.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
8. You talk your parents out of punishing you after you have done something wrong.	1	2	3	4	5
9. Your mom asks you about your day in school.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
10. You stay out in the evening past the time you are supposed to be home.	1	2	3	4	5
11. Your mom helps you with your homework.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
12. Your parents give up trying to get you to obey them because it's too much trouble.	1	2	3	4	5
13. Your parents compliment you when you have done something well.	1	2	3	4	5
14. Your mom asks you what your plans are for the coming day.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
15. Your mom drives you to a special activity.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
16. Your parents praise you for behaving well.	1	2	3	4	5
17. Your parents do not know the friends you are with.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
18. Your parents hug or kiss you when you have done something well.	1	2	3	4	5
19. You go out without a set time to be home.	1	2	3	4	5
20. Your mom talks to you about your friends.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
21. You go out after dark without an adult with you.	1	2	3	4	5
22. Your parents let you out of a punishment early (like lift restrictions earlier than they originally said).	1	2	3	4	5
23. You help plan family activities.	1	2	3	4	5
24. Your parents get so busy that they forget where you are and what you are doing.	1	2	3	4	5
25. Your parents do not punish you when you have done something wrong.	1	2	3	4	5
26. Your mom goes to a meeting at school, like a PTA meeting or parent/teacher conference.	1	2	3	4	5
A. How about your dad?	1	2	3	4	5
27. Your parents tell you that they like it when you help out around the house.	1	2	3	4	5
28. You stay out later than you are supposed to and your parents don't know it.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
29. Your parents leave the house and don't tell you where they are going.	1	2	3	4	5
30. You come home from school more than an hour past the time your parents expect you to be home.	1	2	3	4	5
31. The punishment your parents give depends on their mood.	1	2	3	4	5
32. You are at home without an adult being with you.	1	2	3	4	5
33. Your parents spank you with their hand when you have done something wrong.	1	2	3	4	5
34. Your parents ignore you when you are misbehaving.	1	2	3	4	5
35. Your parents slap you when you have done something wrong.	1	2	3	4	5
36. Your parents take away a privilege or money from you as a punishment.	1	2	3	4	5
37. Your parents send you to your room as a punishment.	1	2	3	4	5
38. Your parents hit you with a belt, switch, or other object when you have done something wrong.	1	2	3	4	5
39. Your parents yell or scream at you when you have done something wrong.	1	2	3	4	5
40. Your parents calmly explain to you why your behavior was wrong when you misbehave.	1	2	3	4	5

	Never	Almost Never	Sometimes	Often	Always
41. Your parents use time out (makes you sit or stand in a corner) as a punishment.	1	2	3	4	5
42. Your parents give you extra chores as a punishment.	1	2	3	4	5

Appendix G

INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me. (FS)

2. I often have tender, concerned feelings for people less fortunate than me. (EC)

3. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)

4. Sometimes I don't feel very sorry for other people when they are having problems. (EC) (-)

5. I really get involved with the feelings of the characters in a novel. (FS)

6. In emergency situations, I feel apprehensive and ill-at-ease. (PD)

7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (FS) (-)

8. I try to look at everybody's side of a disagreement before I make a decision. (PT)

9. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)

10. I sometimes feel helpless when I am in the middle of a very emotional situation. (PD)

11. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)

12. Becoming extremely involved in a good book or movie is somewhat rare for me. (FS) (-)

13. When I see someone get hurt, I tend to remain calm. (PD) (-)

14. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)

15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)

16. After seeing a play or movie, I have felt as though I were one of the characters. (FS)

17. Being in a tense emotional situation scares me. (PD)

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC) (-)

19. I am usually pretty effective in dealing with emergencies. (PD) (-)

20. I am often quite touched by things that I see happen. (EC)

21. I believe that there are two sides to every question and try to look at them both. (PT)

22. I would describe myself as a pretty soft-hearted person. (EC)

23. When I watch a good movie, I can very easily put myself in the place of a leading character. (FS)

24. I tend to lose control during emergencies. (PD)

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (FS)

27. When I see someone who badly needs help in an emergency, I go to pieces. (PD)

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE: (-) denotes item to be scored in reverse fashion

PT = perspective-taking scale
FS = fantasy scale
EC = empathic concern scale
PD = personal distress scale

A = 0

B = 1
C = 2
D = 3
E = 4

Except for reversed-scored items, which are scored:

A = 4
B = 3
C = 2
D = 1
E = 0

Appendix H

Form Ai

Youth information sheet

University of Canterbury
Department of Psychology

The research

We are doing a project to look at New Zealand children and what leads them to crime as they get older. We also want to know what helps children grow up to be successful adults. You took part in this project last year and now we would like to know if you are interested in taking part again.

If you take part we will ask you questions about yourself, your family, your friends and school life. You will come to our University with your caregiver to answer these questions. It will take 3 hours. If you cannot come to our university we can ask the questions at your home and over the phone. We will contact you again at the same time next year.

We will also ask you if it is alright to contact one or more of your teachers and ask them some questions. We also would like to look at records about you from the police, your school and from Child, Youth and Family services.

If you would like to see your results we can show them to you. We will also ask your caregiver if it is alright for you to take part.

Harms

There are no known harms associated with this study.

Benefits

This study will give you a look at how well you are doing compared to people your age. We also want to help Christchurch Police and other people to help children as they grow up.

Keeping your results private

Your name will be replaced with a number so no one will be able to trace back anything to you. All of your answers will be locked away and the only people that will look at it will be people on the project. However, if we think you are a danger to yourself or to others we will have to pass your information on to keep you safe. Your results will be published along with all the other children, but your name will not be mentioned.

Money

You and your caregiver will get a koha / gift for taking part in our project. You will get a $50 voucher and your caregiver will get a $25 voucher. You and your caregiver will get a voucher every year you take part.

The project is being carried out by Dr Nina McLoughlin. Her supervisors are Dr Julia Rucklidge, Assoc. Prof Randolph Grace and Dr Anthony McLean. We can be contacted at:

The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
Phone: 03 364 2987 ext 3894

We will be pleased to talk to you about any problems you may. The project has been looked over by the University of Canterbury Human Ethics Committee.

Form Bi
Caregiver information sheet

University of Canterbury
Department of Psychology

Purpose of research

You are invited to participate in the research project 'A study of the risk and protective factors for offending behaviour in New Zealand Children.'
The aim of this project is to investigate what things leads to potential problems in the future as well as the things that help children develop into successful adults. You and your child took part in this project last year and now we would like to know if you would like to take part again.

Description of research

Your involvement in this project will involve answering questions about yourself, your child's friends, family and school life. A researcher will carry out some tasks with you face-to-face. These will include some questions about family functioning and parent stress and anxiety. These tasks can be carried out at the University. This will take 2 hours. Your child's assessment will take 3 hours. If this is not possible we could carry the tasks out at you home and over the phone. As a follow-up to this, you will be contacted again next year.

We will also ask for your permission to:

- Contact one or more of your child's school teachers and ask for them to complete a questionnaire
- Access any records about your child that may be held by their school, the police, and/or Child, Youth and Family Services.
- Access any records about you that may be held by the police.

You may have access to your results at any time.

Potential harms

There are no known harms associated with this study.

Potential benefits

We also hope that this information will be of use to Christchurch Police, youth services as well as other services to provide for young people as they grow up.

Confidentiality

You are assured of the complete confidentiality of data gathered in this investigation: the identity of participants will not be made public. To ensure anonymity and confidentiality you will be assigned a case number to replace your name. However, in cases where we are concerned about the safety of you, your child or the safety of others we may need to take measures to either keep you or others safe. All data will be stored securely and only accessed by people on the project.

The results of the project will be used for research purposes and will be published. However no names will be mentioned and your information will not be traced back to you.

Reimbursement

You and your child will get a koha / gift for taking part in our project. You will receive a $20 voucher and your child will receive a $50 voucher. You and your child will receive a voucher each, every year you take part.

The project is being carried out by Dr Nina McLoughlin under the supervision of Dr Julia Rucklidge, Assoc. Prof Randolph Grace and Dr Anthony McLean. We can be contacted at:

The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
Phone: 03 364 2987 ext 3894

We will be pleased to discuss any concerns you may have about participation in the project. The project has been reviewed ***and approved*** by the University of Canterbury Human Ethics Committee.

Appendix I

Form Ai
Youth consent form

Dr Nina Mcloughlin
The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
03 364 7001 (ext 3894)
nina.mcloughlin@canterbury.ac.nz

September 2007

'A study of the things that put children at risk and things that protect them from committing crimes in New Zealand'

I have read and I understand what I am being asked to do in this project. I agree to take part and agree for the results of the project to be published as long as my name is not used. I understand that I can drop out of the project at any time and ask for my results back.

I allow information to be accessed about me from the police, my school and from Child, Youth and Family Services

YES NO

I agree for my name to be kept so that I can be contacted in the future about other projects. I do not have to take part in these future projects.

YES NO

I would like a copy of my results

YES NO

I agree to participate:

NAME (please print):

Signature:

Caregiver's signature:

Date

:

Form Aii
Youth consent form (for police / CYFS records)

Dr Nina Mcloughlin
The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
03 364 7001 (ext 3894)
nina.mcloughlin@canterbury.ac.nz

September 2007

'A study of the things that put children at risk and things that protect them from committing crimes in New Zealand'

Name:

Date of birth:

Current address:

I hereby give my consent for information to be gathered about me from police/child youth and family records to Dr Nina Mcloughlin.

Name of youth:

Signed youth:

Date:

Signed caregiver:

Consent obtained from:

Form Bi
Caregiver consent form (for youth's participation)

Dr Nina Mcloughlin
The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
03 364 7001 (ext 3894)
nina.mcloughlin@canterbury.ac.nz

September 2007

'A study of the risk and protective factors for offending behaviour in New Zealand Children'

I have read and understood the description of the above-named project. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved.
I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

I consent to information being gathered about my child from the police, my child's school and from Child, Youth and Family Services

YES NO

I consent to my and my child's name being stored on a confidential database so that we can be contacted in the future should there be other studies for us to participate in with the understanding that we can choose whether to participate in such studies or not

YES NO

I wish to have a copy of my child's results

YES NO

I hereby consent to my child participating in the study:

NAME (please print):

Signature:

Date:

Consent obtained from:

Form Bii
Caregiver consent form (for youth's teacher)

Dr Nina Mcloughlin
The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
03 364 7001 (ext 3894)
nina.mcloughlin@canterbury.ac.nz

September 2007

'A study of the risk and protective factors for offending behaviour in New Zealand Children'

Name and address of school:

Name of teacher:

Child's name:

Child's date of birth:

I hereby give my permission for the disclosure of the following information to Dr Nina McLoughlin:

- School records about my child
- Social Behavior Inventory
- Anti-social Process Screening Device (APSD)
- Inventory of Callous-Unemotional traits (ICU)
- Child Behaviour Checklist (CBCL)

Name of caregiver:

Signed caregiver:

Date:

Consent obtained from:

Form Biii
Caregiver consent form (access to caregivers police records)

Dr Nina Mcloughlin
The University of Canterbury
Psychology Department
Private bag 4800
Christchurch
03 364 7001 (ext 3894)
nina.mcloughlin@canterbury.ac.nz

September 2007

'A study of the risk and protective factors for offending behaviour in New Zealand Children'

This is providing is with access to your police records. These are kept <u>completely confidential</u>. Once we have accessed your records, your name will be replaced by a number. There will be no way that anyone outside of this project will gain access to your police records without your consent.

Name:

Previous names (if different from above):

Date of birth:

Current address:

I hereby give my consent for information to be gathered about me from police records to Dr Nina Mcloughlin.

Name:

Signed:

Date:

Consent obtained from: