

**THE ASSOCIATION BETWEEN PARENTING AND CHILD ANTISOCIAL
BEHAVIOUR: A ROLE FOR MODERATING FACTORS?**

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Overview

This thesis begins with a review of empirical findings on conduct disorder and aims to present a developmental model of conduct disorder that integrates previous research into a coherent model. The review will then summarise a large body of empirical findings that specifically focus on the association between parenting and conduct disorder. The review will end with an examination of factors that have been found to moderate the association between parenting and antisocial behaviour.

The second section of this thesis, the empirical paper, investigates the relative contributions of positive and negative parenting to child antisocial behaviour and whether the direction or magnitude of these contributions is moderated by having an antisocial father. A sample of 140 children and their parents were recruited and a multi-method, multi-informant methodology was used. Measures of parenting behaviour, child antisocial behaviour, and paternal antisocial behaviour were provided by questionnaire, semi-structured interview, and observational data from structured parent-child interaction tasks. Parent, child, and teacher completed questionnaires. The results are discussed in relation to the relevant literature concerning antisocial behaviour and parenting. Clinical and research implications are also discussed.

The third and final section, the critical appraisal, discusses process issues and critically evaluates the methodology and design of the present study. It also considers limitations and research issues in the general field of conduct disorder, and discusses recommendations for future research in light of these observations.

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SECTION 1:
LITERATURE REVIEW

**HOW DOES CHILD AND ADOLESCENT ANTISOCIAL BEHAVIOUR
DEVELOP AND WHAT IS THE ROLE OF PARENTING?**

1.1 Abstract

Among all the child psychopathologies, the literature on the study of child and adolescent antisocial behaviour is perhaps the most abundant and historically rich. The present paper adds to this literature by reviewing and summarising recent research that advances our understanding into the development of severe antisocial behaviour.

This review is separated into four main areas. Firstly, the topic of antisocial behaviour and conduct disorder is introduced, with reference to the political, economic, and social reasons why research in this area is becoming so relevant. This is followed by brief discussion of definitions of antisocial behaviour and their descriptive features, prognostic subtypes, and epidemiology. Secondly, a developmental model of conduct disorder is presented that attempts to integrate and synthesise the vast research that has been conducted in this area. Such a model aims to provide a coherent understanding as to how multiple factors operate together and lead to conduct problems. Thirdly, the review focuses specifically on studies that investigate the association between parenting and antisocial behaviour. It summarises the evidence as to which dimensions and features of parenting are most commonly linked to, and how they are hypothesised to operate on, antisocial behaviour. Finally, the review considers recent evidence for factors that moderate the link between parenting and antisocial behaviour (i.e. is a particular parenting behaviour always associated with child antisocial behaviour, or only under certain conditions?).

1.2 Conduct Disorder: Descriptive Features, Prognosis, Epidemiology

1.2.1 Conduct Disorder: Worthy of Enquiry?

Interest in the factors that contribute to antisocial behaviour in children and adolescence is growing as researchers, practitioners, and policymakers look for ways of identifying at-risk children and developing empirically based interventions that might successfully target such behaviour. Conduct disorder is a significant and growing problem, both at an individual and societal level (Scott, Knapp, Henderson & Maughan, 2001). The 2003 Green Paper, *Every Child Matters* (Chief Secretary to the Treasury, 2003) estimates that one in seven 5-year-olds (15%) has oppositional defiant disorder and a recent British survey concluded that 7.4% of boys aged 5-15 and 3.2% of girls were conduct disordered (Meltzer, Gatward, Goodman & Ford, 2000). Conduct disorders constitute a third to a half of all clinic referrals, much more than any other childhood disorder, and more than twice as common as emotional disorders for this age group (Farrington, 1995). By the time young people showing persistent antisocial behaviour reach adolescence, they are remarkably unresponsive to treatment and interventions are usually ineffective (Lipsey, 1995; Kazdin, 1997).

Conduct problems represent the single most costly disorder of childhood and adolescence (Carr, 2003), and individuals displaying persistent antisocial behaviour have been estimated to cost the public ten times more than controls by the time they reach age 28 (Scott et al, 2001). The cost to society is not finite, as antisocial behaviour has been shown to be intergenerationally transmitted (Rutter, Giller & Hagell, 1998). Adults with a history of conduct disorder are at increased risk of bringing up children with conduct difficulties (Carr, 2003).

In the UK, a major independent inquiry concluded that unless there were adequate specialised services for the mental health needs of children, the economic and social costs would be considerable later on (Mental Health Foundation, 1999). Recognition of these costs has led to a wide range of government initiatives to reduce antisocial behaviour. For example, The Sure Start programme targets families of preschool children in high-risk areas, the Children Fund provides services for vulnerable 5-13 year olds, and the On Track programme supports families in preventing child criminality. Indeed, the extent of the concurrent and projected financial cost of antisocial behaviour to British society is illustrated by the fact that the Sure Start programmes were commissioned not by the department of Health or Education, but by the Treasury.

Over the past two decades, antisocial behaviour has thus become the focus of extensive theoretical and empirical inquiry. For example, of particular concern has been a greater understanding of the origins and development of antisocial behaviour, early identification of children at risk of later antisocial behaviour, identifying what pathways characterise the developmental course of antisocial behaviour, and elucidating the independent and interactive effects of genes and environment on its development and maintenance. All of these inquiries are essential to the subsequent development of effective and well validated interventions that seek to remediate antisocial behaviour.

1.2.2 Definitions

Aggressive, norm- and law-breaking behaviours are defined differently depending on research tradition (such as criminology, medicine, psychology), historical period and

context, and age of sample. A cursory look at the research literature reveals that studies use a wide variety of terms to describe antisocial behaviour. One consequence of operationalising and measuring antisocial behaviour differently is that findings can not always be reliably compared and assimilated.

Conduct disorder is just one of many terms used to refer to a heterogeneous class of antisocial and aggressive behaviours shown in childhood and adolescence. A variety of synonyms have also been used to refer to these broad patterns of behaviour, including 'conduct problems', 'antisocial behaviour', 'externalising behaviour', 'delinquency', and 'disruptive behaviour'. These synonyms are often used in connection with conduct disorder, but must be delineated from the psychiatric diagnosis. CD is a psychiatric, diagnostic term referring to a cluster of symptoms that include all of the above, but defines them from the point of view of psychopathology.

In this review, 'antisocial behaviour' will be used as an umbrella term. Although the primary interest is establishing those factors contributing to the development of conduct disorder, it will not restrict itself to studies using a clinical-diagnostic approach (i.e. only conduct disorder) but will also incorporate those studies that include broader definitions of antisocial behaviour. Although such an approach inevitably leads to a loss of specificity, it echoes the view of Lahey, Waldman, & McBurnett (1999). They treat antisocial behaviour as a continuous variable, with the diagnosis of conduct disorder being at the extreme end of the continuum of antisocial behaviour. They argue that the cut-off between conduct disorder and 'normal antisocial behaviour' is a convention rather than a 'dichotomy in nature' (p.670).

Oppositional defiant disorder (ODD) and conduct disorder (CD) are the predominant disorders associated with antisocial behaviour in mental health clinics (Kazdin, 1995). According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994), the clinical diagnostic approach most commonly employed in studies of child antisocial behaviour, the essential features of CD are a repetitive and persistent pattern of behaviour that involves the basic violation of the basic rights of others and of major age-appropriate social norms. Although there is extraordinary variability that occurs in populations of youngsters with CD, common behaviours include aggression to people and animals, damage to property, stealing, lying, and cheating. Oppositional Defiant Disorder is defined as a recurrent pattern of negativistic, defiant, disobedient, and hostile behaviour toward authority figures. Typical behaviours include arguing with parents, anger, resentment, and non-compliance (American Psychiatric Association, 1994).

The decision to separate conduct disorder in the DSM-IV (APA, 1994) into two distinct categories of ODD and CD has led to considerable debate regarding the degree to which they relate to, and should be distinguished from, one another. One important unanswered question is whether ODD is a developmental precursor to CD or whether it is a distinct profile with a different pathway and associated with less serious outcomes (Burke, Loeber & Birmaher, 2002). The majority of empirical evidence supports a distinction, with numerous studies finding that many individuals develop CD in adolescence without a previous history of antisocial behaviour (Angold, Costello & Erkanli, 1999).

1.2.3 Developmental Pathways & Trajectories

Attempts have been made to add specificity to the broad diagnosis of conduct disorder. The subtyping of CD has arisen out of a need to differentiate those youths who are likely to persist in antisocial behaviour, those who will escalate to serious levels of such behaviour, and those that are likely to desist from or outgrow the behaviour. Kazdin (1987) argues that increased specificity permits the development of what he calls “mini-theories”. These theories account for “specific facets of conduct disorder rather than attempt a comprehensive explanation of how the full range of dysfunctions has emerged” (Kazdin, 1987. p.116). Such specificity may help to identify different etiological pictures and developmental courses, and these distinctions may produce subgroups of children who are differentially responsive to treatment.

Three developmental pathways (overt, covert, authority conflict) to delinquency have been described in longitudinal studies of delinquency (Loeber, Wung, Keenan, Giroux, Stouthamer-Loeber, & Van Kammen, 1993). Forms of aggression that are direct, confrontative and aversive have been referred to as overt antisocial. Examples of overt antisocial behaviour include physical aggression, defiance, and aversive social aggression (e.g., arguing, name calling, verbal aggression). The overt pathway begins with minor aggression (bullying, teasing), followed by physical fighting and later violent acts (physical attack, rape, assault and battery). Forms of problem behaviour that are playful, involve deceit, and volitional have been referred to as covert antisocial behaviour. Examples of covert antisocial behaviour include stealing, lying, and proactive aggression (e.g., bullying and relational aggression). The covert pathway begins with minor covert problem behaviours (i.e., shoplifting, frequent

lying, stealing), moving to damaging property, and later to delinquent acts (i.e., fraud, theft, burglary). Authority Conflict Pathway begins with stubborn behaviour, then defiant behaviour, and developing later into avoidance of authority figures (e.g., truancy, running away, staying out late).

Dishion & Patterson (2006) agree that the distinction between overt and covert antisocial behaviours is useful conceptually and integrate it into a developmental model. Essentially they believe that the acquisition of, and intensive training for, overt forms takes place during preschool years in the home through interactions with family members, whereby the family provides negative reinforcement for deviant behaviour. When the child brings these behaviours to the school setting, his behaviours lead to rejection by normal peers and can be followed by a rapid entry into the deviant peer group. Therefore, the intensive training for covert forms begins much later and takes place in the school where the deviant peers tend to use positive reinforcement for deviancy. As a result, they propose that overt forms of antisocial behaviour emerge in early childhood, peak in middle childhood, and begin to decrease by early adolescence and thereafter. In contrast, covert forms of antisocial behaviour begin in middle childhood and peak in adolescence and decrease in late adolescence and early adulthood. Dishion & Patterson (2006) propose that the developmental sequence from overt to covert behaviours can be mapped onto the DSM-IV classification of Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD).

The DSM-IV (American Psychiatric Association, 1994) separates CD into two distinct subgroups based on the age of onset: early-onset (age 10 or younger) versus

late-onset (11 or older) of first CD symptoms. Lahey et al. (1999) treat the age of onset of the earliest antisocial behaviour as a key variable, with the variation in severity of antisocial behaviour being inversely related to the age of onset. The prevalence of frequent lying, bullying, starting fights, vandalism, and use of a weapon have all been found to decline significantly with increasingly older ages of onset (Lahey et al., 1998).

According to Patterson, DeBaryshe & Ramsey (1989) “early-starters” are those who develop oppositional behaviours before the age of eleven and who show an increasing diversity in their disruptive behaviours as they get older, most notably showing an increase in aggression, and often moving from overt to more covert behaviours. For example, although there is generally a reduction in physical aggression with increasing age (i.e. Tremblay et al., 1996), there has been found to be an age related increase in the prevalence of serious physical aggression among some youths (Loeber & Hay, 1997). Lahey and colleagues (1999) believe that early-onset, highly aggressive youths follow a different trajectory to others, and as they get older, they add new aggressive behaviours and replace less serious forms of aggression (i.e. bullying) with more serious forms (e.g. mugging). Most serious aggression during adolescence and adulthood is committed by youths who have been persistently aggressive since childhood (Loeber & Hay, 1997). Because early-onset antisocial behaviour is thought to be highly persistent, youths who follow this pattern have been termed “lifetime persistent” (Moffitt, 1993) and are associated with a more chronic developmental pathway. Finally, early-onset CD is often preceded and predicted by a diagnosis of ODD (Lahey et al., 1999). Scott et al., (2001) describe a typical pattern of early onset CD, which begins at the age of 2-3 years and is

associated with “*comorbid psychopathology such as hyperactivity and emotional problems, language disorders, neuropsychological deficits such as poor attention and lower IQ, high heritability, and life-long antisocial behaviour*” (p.1). Moffitt, Caspi, Harrington, and Milne (2002) followed up the Dunedin sample through age 26 to demonstrate that, as adults, the early-onset group was more at risk for substance use, mental and personality problems, financial and work problems, and violent crime. The late-onset group also tended to be at elevated risk for most of these problems, but at less extreme levels.

Late-onset conduct problems, also called “adolescent limited” (Moffitt, 1993), by contrast, are thought to be less severe, stable, and persistent, are thought to be more environmentally driven (i.e. delinquent peer influence) than genetically driven, are not associated with other disorders or neuropsychological deficits, and tend not to persist into adulthood (Hill, 2002).

Studies have also found a particularly high rate of attention deficit and hyperactivity symptoms co-occurring with conduct problems, leading some to suggest that CD should also be subtyped by the presence or absence of co-morbid ADHD (i.e. Angold et al., 1999). Although findings have been inconsistent as to whether boys with comorbid CD and ADHD have worst outcomes than boys with CD alone (i.e. Lahey et al., 1999), and the role of ADHD in the development and pathway of CD is unclear, the distinction may be important, because one consistent finding has been that youths with ADHD and comorbid CD have an earlier age of onset of antisocial behaviours than youths with CD alone (Loeber, Green, Keenan, & Lahey, 1995). Similarly, children with earlier ages of onset of antisocial behaviour are more likely

to meet diagnostic criteria for ADHD than those with later ages of onset (Lahey et al., 1999; Loeber, Burke, Lahey, Winters & Zera, 2000).

1.2.4 Epidemiology

Conduct Disorder is the commonest psychiatric disorder in childhood and the commonest reason for referral of children and adolescents to mental health services, accounting for between 33-75% of clinic referrals (Scott et al., 2001). The prevalence rate of CD is rising (Rutter et al., 1998) and current estimates vary between 2-9% (McMahon & Estes, 1997), and 4-14% (Angold et al., 1999). However, the variation in prevalence rates over time may reflect changes in the particular population sampled and precise diagnostic criteria adopted (Lahey et al., 1999).

Prevalence estimates of CD also increase with certain risk factors, such as age, gender, socioeconomic status, and neighbourhood. There are no definitive conclusions regarding age as a moderator in the prevalence of CD. Some studies have found an increase from childhood to adolescence in the prevalence of non-aggressive covert CD behaviours (i.e. serious theft and fraud) and a decrease in overt aggression (i.e. fighting), though serious forms of aggression (i.e. rape, homicide) tend to increase during adolescence (Achenbach, Howell, Quay, & Conners, 1991; Lahey, Loeber, & Quay, 1998).

It has also been suggested that variation in prevalence rates reflects inter-gender effects. Several studies have found odds of CD that were 3 to 4 times as high for boys as girls across different ages (Loeber et al., 2000). Gender differences have also been found in the age of onset of CD. Most boys have an onset before age 10,

whereas age of onset for girls concentrates in the early teens (Kazdin, 1995), leading some reviewers to conclude that late-onset CD is the only type of CD found in girls (Silverthorn & Frick, 1999). Some authors argue that this gender difference in prevalence is solely an artefact of the diagnostic criteria used to diagnose CD (Zoccolillo, Tremblay, & Vitaro, 1996). For example, it has been suggested that, in contrast to the physical aggression typically displayed by boys, females display a different constellation of antisocial behaviours, such as indirect, verbal, and relational aggression (i.e. ostracism, alienation), all of which are not represented among the CD symptoms in the DSM-IV (Crick, 1995). Other theories suggest that the differences are real and are the result of differences between the genders in the socialisation process, communication skills, the development of guilt and empathy (Lahey et al., 1999), and differential susceptibility to low maternal responsiveness (Shaw, Winslow, Owens, Vondra, Cohn & Bell, 1998).

Variation in the prevalence rates of CD is also strongly associated with social and educational disadvantage, such as low socio-economic status and living in neighbourhoods characterised by high crime rates and social disorganisation (Lahey et al., 1999). It occurs four times more often in families with unskilled occupations than in professional families (Meltzer et al., 2000), and youths from low socio-economic status families who live in disadvantaged neighbourhoods are at considerably greater risk, with the prevalence rate for this subgroup found to be nearly 20% in one study (Attride-Stirling, Davis, Day & Sclare, 2000). According to Loeber et al. (2000), early-onset CD is concentrated in urban areas, particularly in deprived inner city neighbourhoods.

1.3 Developmental Theory of Conduct Disorder

Over the past 50 years, a plethora of studies have found a consistent statistical association between antisocial behaviour and a variety of personal, social, and socioeconomic risk factors (i.e. Farrington, 1995; Loeber & Stouthamer-Loeber, 1986). Indeed, in 1983, Rutter & Giller concluded that the facts of these broad associations were so well established and accepted that it was no longer worthwhile to support research that sought to examine if there is a relationship between these risk factors (i.e. family discord, coercive parenting, lack of supervision, poverty, delinquent peer group) and antisocial behaviour (Rutter & Giller, 1983). Instead, controversies centred on the interpretation of the findings. For example,

- Do the associations between family characteristics and antisocial behaviour reflect genetic or environmental mediation?
- Can genetic and environmental effects be considered independent?
- Is the direction of effects between risk factors and antisocial behaviour uni- or bi-directional?
- Are the associations between antisocial behaviour and the various individual risk factors due to the operation of some third variable?
- In so far as the risk factors do have a truly casual yet environmentally mediated impact, by what mechanisms do the risks operate?

Until the 1970's, statistical associations between psychosocial risk factors (i.e. coercive parenting) and antisocial behaviour were almost always interpreted as a causal effect of the environment on the child. As well as overstating conclusions, socialisation researchers have been accused of neglecting significant forces other

than parenting that may contribute to individual differences. The most commonly cited sources of alternative influences are heredity and peers (Harris, 1995). The emergence of behavioural-genetic research suggesting that heredity accounts for a substantial proportion of similarity has led some psychologists to assert that parents actually have little influence on children's behaviour and personality (Scarr, 1992). Indeed, it has even been suggested that the 'burden of proof' now lies with environment rather than genes (Harris, 1995).

Needless to say, research during the past 20 years has witnessed numerous focused but independent empirical inquiries into the origins of antisocial behaviour, including studies of genetic, hormonal, autonomic nervous system, temperament, sociocultural, family process, peer rejection, deviant peer influence, and social-cognitive factors. Most of this research has been produced largely without regard to the other influences. The result is a loose array of diverse predictors of antisocial development, without integration or understanding of how these predictors operate together. Owing to the lack of demonstrable causal connections, Rutter (2003) suggested that such factors may best be construed as "contributory".

Recently, various authors have attempted to synthesise the findings from these diverse studies into a coherent model of antisocial behaviour, setting out how multiple factors (biological, cognitive, interpersonal) operate together and lead to conduct problems (i.e. Dodge & Pettit, 2003; Lahey et al., 1999). This signals a move away from asking if there is any role of genetic factors or assuming that there is only a role for environmental processes to a more developmentally sophisticated

model that assesses how predispositions interact with experiences in shaping outcomes and growth trajectories.

Such an integrative and developmental model of antisocial behaviour is presented below and attempts to set out how distal risk factors (i.e. difficult temperament, socioeconomic disadvantage) relate to life experiences that unfold over time (i.e. harsh discipline, peer rejection) to eventuate in proximal processes (i.e. emotional reactions, cognitive interpretations) that result in antisocial behaviours. Each component of the developmental model is presented separately, starting with the distal factors (biological disposition, socio-cultural context), followed by early life experiences, and ending with the more proximal processes (social-cognitions). An illustration is also provided as an example of how these factors may operate and interact together to lead to the development of antisocial behaviour over time.

1.3.1 Biological Predisposition

The model begins with the distal factor of biological predispositions present at or near birth, which is proposed to be probabilistically linked to conduct disorder and that its influence on antisocial propensity may be indirect (i.e. through its impact on transactions in the social environment). Some children inherit from their parents traits and characteristics that may be directly involved in the development of antisocial behaviour. Genetically informed research has revealed a moderate degree of heritability for aggression. Because of genes or in-utero experiences (i.e. exposure to toxic prenatal environment), some children are born with an underactive behavioural inhibition system, autonomic nervous system hyperactivity, cognitive problems in sustaining attention to cues, low cerebrospinal fluid concentrations of

serotonin metabolites (which affects delay of gratification) or a difficult temperament (Dodge & Pettit, 2003). All of these factors are proposed to predispose young children to adolescent conduct problems. The most well studied of these factors is temperament, with multiple dimensions of temperament believed to operate together to influence antisocial behaviour through their interaction with the environment.

Oppositional temperament has been most strongly associated with antisocial behaviour. During infancy, difficult temperament is characterised by irritability, temper tantrums, and resistance to control. By early childhood, after frequent maladaptive interactions with parents, this has been transformed into arguing, defiance, and vindictiveness (Sanson, Smart, Prior, & Oberklaid, 1993). Callousness (little empathy or concern for others, diminished guilt, little care about winning approval) is also an enduring dimension of temperament that increases risk for antisocial behaviour (i.e. Frick, O'Brien, Wootton, & McBurnett, 1994). Finally, children high in the dimension of the temperament 'harm avoidance' (cautious, apprehensive, shy, inhibited) have been found to be less likely to engage in antisocial behaviour and this may therefore be viewed as a protective factor (Lahey et al., 1999).

Genetic factors may operate indirectly by instigating some of the environmental risk conditions known to be associated with antisocial behaviour. Temperamental characteristics may set in motion a chain of reactions from others that put children at risk. Difficultness, irritability, and resistance to control in infants evoke hostility, criticism, a tendency to ignore the child, and coercive discipline in mothers. This was well illustrated by the Colorado Adoption Project in which adopted children were

classified as being at genetic risk or not at genetic risk for antisocial behaviour based on their biological mothers' self-report history of antisocial behaviour (collected prior to the birth of the child). Children at risk were consistently more likely to receive negative parenting from their adoptive parents than children not at genetic risk, indicating an evocative genotype-environment correlation (O'Connor, Deater-Deckard, Fulker, Rutter, & Plomin, 1998).

Bates, Pettit, & Dodge (1995) found that infants' early characteristics elicited harsh parenting at age 4, which in turn predicted externalising problems when the children were young adolescents, over and above that predicted from infant temperament. Life experiences, then, may be the means through which inherited dispositions exert an impact on later antisocial outcomes. Many twin studies have suggested that aspects of temperament relevant to antisocial behaviour (i.e. empathy, harm avoidance, oppositionality) are moderately to highly heritable (i.e. Goldsmith, Buss, & Lemery, 1997).

Caspi et al. (2002) have provided strong evidence that biological predisposition may be linked to antisocial behaviour through the presence or absence of a particular gene. They tested male children in the Dunedin study for differences in one particular gene called monoamine oxidase A (MAOA) and then compared it to their upbringing. They found that the ones with high-active MAOA genes were virtually immune to the effect of maltreatment. They did not get into trouble even if maltreated as youngsters. However, those with low-active genes were much more antisocial if maltreated. The low-active maltreated men did four times their share of serious offending. The implication from this study is that it is not enough to have maltreatment, you must also have the low-active gene; or it is not enough to have the

low-active gene, you must also be maltreated. Put another way, this study makes clear that a 'bad' genotype is not a sentence; it also requires a bad environment. Likewise, a 'bad' environment is not a sentence; it also requires a 'bad' genotype.

Supporting evidence that genetic antisocial predispositions manifest in problem behaviour only when environmental risk is high is provided by numerous studies (i.e. Bohman, 1996; Mednick, Gabrielli, & Hutchings, 1984). Bohman (1996) studied adopted children whose biological parents had a history of criminality. If adopted into well functioning homes, 12% of these children displayed petty criminality in adulthood. However, if adopted into families carrying an environmental risk (i.e. abuse, neglect), their rate of criminality rose to 40%. These findings suggest that well-functioning parents can buffer children at genetic risk.

Finally, evocative or active genotype-environment correlations may be another way in which antisocial predispositions manifest in antisocial behaviour through their interaction with the environment. Environments and experiences are not randomly distributed in the population, as individuals are active agents in seeking out and evoking experiences and reactions from their environment. The observed similarity between adolescents and their friends across numerous variables (i.e. aggression, drug use) is mostly due to the tendency for individuals to select like-minded friends, as well as the influence that friends have over each other. A child with antisocial inclinations may be far more likely to join a similarly inclined peer group than an antisocial peer group is to corrupt a well behaved youngster (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000)

1.3.2 Socio-Cultural Context

The model proposes that early contexts of social disadvantage place a child at probabilistic risk for later conduct problems and that this path is also likely to be indirect. The crowded inner city, characterised by poverty, ethnic heterogeneity and high crime is a context for chronic problem development. The school or classroom context has also been implicated, with kindergarten classrooms varying widely in the incidence of peer nominated aggression, which in turn has an influence over a child's tendency to value aggression. At the family level, socioeconomic status at birth, indexed by income, occupation, and education of parents is one of the strongest risk factors for later conduct problems. Other family level risk factors include parental divorce, interparental conflict, and being born to a teenage mother.

Conger, Ge, Elder, Lorenz, & Simons (1994) have demonstrated that many of the deleterious effects of poverty on children's development are mediated through the effect of poverty on parenting; economic stress and disadvantage increase parental punitiveness, which in turn adversely affects the child. Many apparent 'effects' of social class or economic disadvantage are mediated through the effect of these factors on parenting practices. Lahey et al. (1999) point out that children of families with low income have an increased risk of living in a high crime neighbourhood and attending school with delinquent peers, which may represent independent causal factors. As with genetic risk, family level risk factors may also interact with environmental factors; that is, family risk factors may be manifested in antisocial behaviour only when environmental risk is high. For example, findings from research linking parental discord and child externalising suggest that discord leads to a greater

increase in problem behaviours for sons than for daughters only when the children are preadolescent and only when they are living with an unmarried mother (Zaslow, 1989).

1.3.3 Early Life Experience

This model proposes that life experiences that involve harsh treatment and rejection place a child at probabilistic risk for conduct problems and that these experiences are partially predictable from predispositions and sociocultural contexts and may mediate the effects of these more distal variables. This position is consistent with the notion that genetic factors instigate environmental risk conditions and with the notion that social experiences (e.g. harsh, inconsistent discipline) serve as a connecting link between social ecological stressors, such as poverty, and subsequent antisocial behaviour.

Early inconsistent and harsh discipline and a coercive, hostile, critical, punitive parenting style is associated with a substantially increased risk for antisocial behaviour (Patterson, Reid, & Dishion, 1992; Loeber & Stouthamer-Loeber, 1986) and a focal point of Patterson's coercion theory (Patterson et al., 1992). Patterson and colleagues described a four step dyadic chain in which a parent makes an intrusive request of the child, the child responds with aversive behaviour (i.e. screaming), resulting in the parent backing off and ceasing to require the child's compliance. When the parent, in effect, gives in, the child stops the counterattack, so completing a cycle of reinforcement of disruptive behaviour. Given that parent-child relationships set the scene for the development of later social functioning, social relationships, and social problem solving (Rutter, 1995), chronic exposure to

violence, hostility, and coercive styles of interaction within the home environment may foster an acceptance of these styles as acceptable and effective means of dealing with problems and relationships.

There is also evidence from many studies that harsh discipline and parental use of corporal punishment may play a causal role in the development of antisocial behaviour, though cultural differences in this association have been found (Deater-Deckard, Dodge, Bates, & Pettit, 1996; see section later). The mechanism of operation may be through modelling of aggressive behaviour or perhaps by the poor quality of the parent-child relationship implied by the harsh treatment rather than from the parenting itself. A third possibility is that the association represents genetic mediation as there is extensive evidence that parents who display hostile and coercive parenting have themselves shown antisocial behaviour (Bank, Forgatch, Patterson, & Fetrow 1993).

The importance of some aspects of parenting has been found to differ depending on the child's age. Several research groups (Dishion & McMahon, 1998) have suggested that contingent responding to child misbehaviour and positive parental control in early and mid childhood are important for preventing late disruptive behaviour. In adolescence, monitoring (but not control) is most closely associated with positive behavioural adjustment. Patterson et al (1992) proposed that the primary reason that lax parental supervision is associated with antisocial behaviour in youths is that less parental supervision allows youths to spend more time with delinquent peers. Finally, lack of parental warmth to the child has also been associated with child antisocial outcomes (Dodge & Pettit, 2003). Parental warmth may operate on antisocial

behaviour through its modelling effects of positive interaction. As stated already, the effects of child disposition and sociocultural factors on antisocial behaviour are believed to be mediated through their effects on parenting and the probabilistic likelihood that they will contribute to maladaptive parenting practices (i.e. punitive, inconsistent discipline, anger). As such, vulnerability factors that increase the likelihood of children's risk of conduct disorder do so mainly through their impact on parenting (Patterson & Forgatch, 1995)

One other major domain of early life experience risk factors involves the child's peer relationships. Exposure to aggressive peers in day care or preschool is predictive of later child antisocial behaviour (Dodge & Pettit, 2003), perhaps through modelling effects. Being liked and accepted by peers is also a crucial developmental task and protective factor against future conduct problems. Children with earlier ages of onset of antisocial behaviour tend to have fewer well behaved friends than other youths, but also have friendships with other aggressive children (Tremblay, Masse, Vitaro, & Dobkin, 1995), perhaps because aggressive children alienate themselves from well-behaved children and are attracted to one another. Affiliation with other aggressive and antisocial children leads to the reciprocal teaching of new antisocial behaviours and gang membership leads to increases in frequency and severity of such behaviour (Thornberry et al., 1993).

Evidence supporting a link between the quality of relationships in the family and social competence (i.e. peer relationships) is substantial. For instance, several studies demonstrate that the quality of the parent-child attachment in infancy and early childhood predicts relationship quality with peers concurrently and longitudinally.

Clearly, the infant temperament and the manner in which the parent responds to this temperament will have a significant bearing on the parent-child attachment.

Compared to children who were judged to have an insecure attachment relationship with parents, children with a secure attachment relationship are more likely to be rated as popular and accepted by peers, and to be rated as having more prosocial skills that promote positive peer interactions. Social learning theory posits that the connection between parenting and peer relationships is mediated by social cognitions (i.e. concerning the effectiveness of aggressive behaviour) and the importance of parental monitoring and control is thought to operate through preventing the child from developing affiliations with deviant peers and poor role models. A related approach proposes that social-cognitive capacities important for positive peer relationships, such as emotional understanding, perspective taking, and emotional regulation, are developed in the context of the early parent-child relationship and are carried forward or generalised to later social relationships.

1.3.4 Social-Cognitions

Social-cognitive mechanisms have been proposed to account directly for the association between social experiences and children's aggressive behaviour. Dodge and colleagues suggest that many antisocial children have a tendency to selectively focus on aggressive cues rather than non-aggressive ones, and to wrongly attribute hostile intent to neutral or ambiguous social situations (Dodge, 1986). Dodge & Pettit (2003) propose that emotional and cognitive processing during social events are crucial factors that mediate the relation between risk factors and antisocial behaviour. Risk factors can be construed as child dispositions (i.e. temperament, physiological reactions to stress), environment/sociocultural (i.e. poverty, racism),

and early life experiences (i.e. harsh parenting, rejection by peers, exposure to parental violence).

Early life experiences may be situations where the child has been a victim of negative behaviour which predisposes him/her to readily attribute hostile intent to others. For example, in a given ambiguous situation with a peer (i.e. lending a peer something and having it returned broken), the probability of antisocial behaviour is increased if the child pays particular attention to cues that might indicate his peer is being hostile (i.e. the peer has arms folded), if he interprets the other youngster as being hostile toward him (i.e. interpret the smile of the peer as mocking or interpreting the situation as the peer having broken the object intentionally), if he rapidly accesses aggressive responses (i.e. as opposed to walking away, laughing), and if he evaluates aggressive responses as likely to result in a positive outcome.

However, Dishion & Patterson (2006) point out that aggressive children live in a world in which they are frequently attacked and consequently their “biases” may be an accurate reflection of their high base rates for such behaviour. Patterson (1982) showed that aggressive children received attacks by their mothers 5% of the time when they were behaving prosocially. Similar rates for fathers and siblings were 4% and 3%, respectively. One implication from this is that interventions that aim to prevent the development of antisocial behaviour may not only provide child social skills training but also promote parent’s use of more contingency based and positive discipline. However, such direct causal interpretations may be incorrect and it is possible that the association between parental hostile behaviour directed at the child

and social-cognitive impairments are accounted for by their association with a third variable, such as attachment.

Fonagy, Gergely, Jurist, & Target (2004) posit that “*there is unequivocal evidence... that secure attachment in infancy is strongly associated with the development of a range of...social cognitive capacities (i.e. perspective taking, empathy) and emotion regulation*” (p.130). For example, Fonagy (1997) reported superior performance on theory of mind tasks among children with a history of secure attachment in infancy. Fonagy et al. (2004) argue that it is not attachment security per se that predicts the acquisition of these capacities, but the features of the interpersonal environment that generate attachment security. Early negative experience (i.e. insensitive, neglectful parenting) may jeopardise the development of the processing skills required to deal with social interaction, and the extent to which these social-cognitive capacities can function under stress and process emotionally charged information.

DeKlyen, Speltz, & Greenberg (1998) suggests that attachment operates on child problem behaviour through its effect on emotion regulation and social-cognitive capacities. They believe that if strong emotions such as frustration and anger are rejected or ignored by parents, the child is consequently not helped to modulate the arousal and may come to regard them as overwhelming and threatening. The child may then learn a restricted and rigid set of rules for relating to others, minimising or heightening emotional expression in an effort to reach equilibrium (Cassidy, 1994). As children grow older, effective parents continue to play a crucial role in the development of emotion regulation by coaching the child to recognise and manage emotions (Gottman, Katz, & Hooven, 1996). Laible and Thomson (1998) reported

that securely attached children have higher competence in understanding negative emotion.

Finally, sensitive and warm parents are likely to help the child learn that interpersonal interactions can be mutually gratifying and make it more likely that the child develops an internal working model for secure attachments, and a more positive attribution bias (Bowlby, 1982). Cassidy, Kirsch, Scolton, & Parke (1996) found that securely attached kindergarteners were less likely to infer hostile intent in stories with ambiguous content.

1.3.5 Illustration

It is helpful at this point to illustrate the chain of events between distal and proximal risk factors with antisocial behaviour. A difficult to manage child (perhaps born with oppositional temperament) grows up in a family in which parents lack key child-management skills (perhaps because they were antisocial as children and value aggression as an effective way of problem solving) which are further compromised by sociocultural factors (i.e. poverty, divorce and stress leading to an impaired ability to be consistent with child). The child learns that if he actively resists his parent's demands, the parent will eventually capitulate. This contributes to a coercive and hostile pattern of interaction and the resulting parent-child relationship sets the scene for the non-development of later social functioning and social relationships. The child learns that coercive behaviour allows him to successfully escape his parent's attempts to control him and subsequently applies such tactics at school with peers and teachers. Such aggressive behaviours lead to rejection by peers and academic failure and the child lacks the opportunities for learning positive interpersonal skills

and gravitates to an antisocial group (living in inner city neighbourhood increased prevalence of deviant peers in school) that models and reinforces further antisocial behaviour.

Having presented a developmental model of conduct disorder, the next section of this review selects one aspect of the above model, parenting, and considers what the evidence is that parenting is indeed associated with antisocial behaviour, what aspects seem more important, and how that are thought to operate on antisocial behaviour.

1.4 Parenting and Conduct Disorder

There is a very extensive literature on what is involved in parenting and on which features are most likely to promote adaptive social functioning. Most theories that attempt to explain the development and maintenance of conduct problems in children place a heavy emphasis on the role of parenting practices in their aetiology (Maccoby & Martin, 1983). Although greater clarity concerning the mechanisms by which parenting practices operate on child antisocial behaviour awaits further research, there is an emerging consensus over which parenting practices seem to be the most related to conduct problems (Loeber & Stouthamer-Loeber, 1986).

The best summary of the vast empirical literature on parenting behaviours and child conduct problems is provided by a meta-analysis of over 300 studies linking parenting practices to aggressive and antisocial behaviour in children and adolescents (Loeber & Stouthamer-Loeber, 1986). This meta-analysis concluded that socialisation variables were the most powerful predictors of conduct problems in

children and adolescents. More specifically, two types of socialisation variables, parental involvement in their child's activities and parental supervision, emerged from this meta-analysis as being the most consistently associated with conduct problems in past research. In addition, several aspects of parental discipline have been consistently linked to childhood conduct disorder, leading some authors to suggest that it represents the third most important parenting behaviour related to conduct problems (i.e. Frick, 1994).

In general, families characterised by poor monitoring and supervision, coercive interaction styles, harsh and inconsistent discipline, lack of parental involvement, and lack of positive and warm interactions between child and parent have been consistently linked to child conduct problems, association with deviant peers, engagement in delinquent behaviours, fighting at home and school, and poor school performance (Laub & Sampson, 1988; Loeber & Dishion, 1984). These associations have been replicated in numerous cross sectional and longitudinal studies, using sophisticated multi-method and multi-informant measurement strategies (i.e. Patterson et al., 1989; Patterson et al., 1992).

Despite the size and consistency of the literature linking these specific dimensions of parenting practices to the development of conduct problems, the relative importance and emphasis placed on the different parenting dimensions is in part dependent on the theoretical orientation of the researcher. Social Interactional theory (i.e. coercion theory; Patterson, 1982) focuses mainly on the promotion of antisocial behaviour, emphasising the quality of early childhood parent-child interactions as important risk factors predicting behaviour problems during middle childhood and adolescence

(Patterson et al, 1982). In contrast, socialisation theories start with a recognition that a degree of stubbornness, defiance, assertiveness, and aggression are normal aspects of children's development of autonomy and independence (Loeber & Hay, 1994). For socialisation theorists, the challenge for parents is to encourage the latter whilst at the same time ensuring that the former elements do not go beyond flexible acceptance limits.

1.4.1 Involvement, Supervision & Monitoring

Monitoring has been operationalised in a variety of ways, but a core feature of most definitions is an emphasis on parents being unaware of where their child is, who the child is with, and what their child is doing. Through knowledge about, active involvement in, and regulation of children's after-school activities, parents may exert positive socialisation pressures toward adaptive behavioural adjustment. Patterson et al. (1992) proposed that the primary reason that lax parental supervision is associated with antisocial behaviour in youths is that less parental supervision allows youths to spend more time with delinquent peers. For example, during primary school and beyond, parents can propel their children towards certain peers by managing and being involved in their child's social activities, which has the effect of increasing contact with some peers and diminishing it with others. In their meta-analysis, Loeber & Stouthamer-Loeber (1986) found that a lack of parental involvement (i.e. time spent together, parent's interest in child's education and friends) showed a significant concurrent relationship with delinquency and aggression in 22 of 29 analyses reviewed. In the only longitudinal study using parental involvement reviewed by them, this variable also significantly predicted later delinquency. In a more recent meta-analysis (Frick, 1994), parental supervision was significantly

related concurrently to conduct problems in 10 of 11 analyses reviewed, with six longitudinal studies finding that lack of supervision was a significant predictor of later antisocial behaviour.

1.4.2 Coercion, Hostility, & Negative Discipline

There is abundant evidence from numerous studies that a coercive, hostile, critical, punitive parenting style and negative discipline is associated with a substantially increased risk for antisocial behaviour (Loeber & Stouthamer-Loeber, 1986; Patterson, 1982). Harsh and negative discipline is defined in various ways by different researchers. In general, harsh discipline encompasses a restrictive style of interaction with children which does not take their views into account, and in which the parent responds to unwanted child behaviour with severe punishment. It refers to parents' provision of inconsistent consequences for child non-compliance, to parents' use of scolding and sarcasm for trivial or significant child antisocial behaviour, and also includes parents' use of corporal punishment.

In the Loeber & Stouthamer-Loeber (1986) meta-analysis, harsh or abusive parental discipline, as well as parental inconsistency in providing discipline, was related to aggressive behaviour. A social learning perspective (Bandura, 1977) suggests that through being physically disciplined, children learn that aggression is an acceptable strategy for dealing with problems and will be more likely to use aggression in future encounters with others.

Coercive family theory defines the family management practices of dysfunctional coercive families as a combination of negative parental discipline and low parental

monitoring (Patterson, 1982) and hypothesises that when parent-child exchanges are characterised by negative and intense emotionality, risk for conduct problems intensifies. Patterson hypothesised that one of the pathways leading to child antisocial behaviour begins when a child is reinforced for responding aversively to terminate the undesired behaviours of parents and siblings (Patterson, 1982). For example, when asked by a parent to do a chore, a child first ignores the parent. As the intensity of the parental request increases in tone and volume, the child refuses outright to do the chore, then yells at the parent to stop asking, and finally runs out the front door. If these behaviours effectively stop the repetition of the undesired parental request, it is likely that the child will repeat them in the future (i.e. such behaviours are negatively reinforced by the termination of an undesired stimulus).

Unfortunately for the exasperated parent, the more frequently these types of interactions occur, the more likely the child is to become increasingly difficult to handle. The more uncooperative the child becomes, the less likely the child is to receive attention and positive feedback from the parent when appropriate behaviours are exhibited.

Studies at the Oregon Social Learning Centre (Baldwin & Skinner, 1989; Patterson & Bank, 1986) have validated the theoretical predictions in Patterson's developmental model of child antisocial behaviour. In their studies, variations in parent discipline and monitoring accounted for a significant amount of variance (i.e. 10-40%) in child antisocial behaviour.

Children who exhibit more behaviours associated with a difficult temperament (i.e. resistant to control, quick & intense negativity) seem to be at a heightened risk for eliciting parenting that is negative, angry or coercive, and highly controlling (Hinde, Tamplin, & Barrett, 1993; Bates, Pettit, Dodge & Ridge, 1998). Such parental responses seem to exacerbate children's behaviour problems. One way in which the behavioural characteristics of children may affect risk for problem behaviour is by influencing the quality of their interactions with parents. Given that parent-child relationships set the scene for the development of later social functioning, the emergence of negative interactional sequences and exposure to violence and hostility during early childhood is hypothesised to have significant implications for the development of social competence, problem solving, and adjustment later on (Rutter, 1995). Such a maladaptive home environment, characterised by highly reciprocal negative and hostile parent-child interactions, may interfere with the child's development of social-cognitive capacities (i.e. perspective taking, emotional regulation, empathy), thus compromising their capacities to engage in socially appropriate interactions with peers. In addition, it may also foster an acceptance of these aggressive styles as acceptable and effective means of dealing with problems and relationships, thus impeding the child's ability to gain acceptance from peers, placing him/her on a trajectory of increasing risk for adjustment problems (i.e. depression; Patterson & Stoolmiller, 1991) during middle childhood and adolescence.

1.4.3 Parenting styles

There is strong evidence connecting parenting styles to child outcomes (Maccoby & Martin, 1983). Constellations of various parenting behaviours that are thought to

covary are hypothesised to form three distinct parenting styles (authoritarian, permissive, authoritative), with each being associated with differential child outcomes. Parents who adopt an authoritarian parenting style are generally overly restrictive and demanding of children, and exhibit little warmth and affection. Authoritarian parents typically make decisions regarding their children based on the needs of the adults rather than the needs of the child. Communication between authoritarian parents and their children, therefore, tends to be unilateral, with parents dictating the outcomes of decisions without considering the children's needs or wishes. Maccoby & Martin (1983) describe an 'authoritarian-power assertive' dimension of parenting characterised by 'firmly enforced rules and edicts decided by parents, without acceptance of children's demands and without bargaining and discussion'. Preschool children who receive this style of parenting have been shown to be less content, less secure and more likely to become hostile when under stress than other children (Dekovic & Janssens, 1992).

In contrast, parents who develop a permissive parenting style are undemanding and highly tolerant of their children's impulsive behaviours. Children of permissive parents, for the most part, tend to make their own decisions with little parental input. Both permissive parenting and, especially, authoritarian parenting are associated with adolescents' antisocial behaviour and poor school performance (Steinberg, 1997).

Finally, parents who adopt an authoritative parenting style make age-appropriate demands for their children's behaviour and display high levels of warmth and affection. Authoritative parents are generally open to listening to the children's point of view when considering decisions involving their children. Communication

between parents and their children, therefore, tends to be bilateral, with much negotiation. Not surprisingly, these parenting behaviours, as well as other dimensions of parenting that typically co-occur (e.g. supportiveness, inductive reasoning, and non-punitive reasoning) is associated with adolescents' personal and social competence (Amato, 1989). Lack of parental warmth to the child has also been associated with child antisocial outcomes (Dodge & Pettit, 2003). Whilst the mechanism is not clear, it is possible that the absence of warmth may operate on antisocial behaviour through the implied lack of modelling of positive interaction.

1.4.4 Summary

Whilst numerous parenting behaviours have been associated with child antisocial behaviour, debate remains as to the relative importance of each parenting behaviour. Although there are several complexities involved, it is clear that several rather different needs must be met for parenting to be considered effective: effective monitoring or supervision of the children's activities so that parents can know which behaviours seem likely to lead to trouble; clear setting of standards with explicit and unambiguous feedback so that children may learn what is expected of them; skilled diversion or distraction to avoid the development of confrontations and crises; responsiveness to the children's sensitivities and needs; fostering of prosocial behaviour, self-efficacy, and social problem solving; and encouraging the development of internal controls through open communication, recognition of children's rights, and the taking of responsibility (Rutter et al, 1998).

1.4.5 Challenges for the future

Given the correlational nature of most of the research undertaken in this field, one difficulty has been in the interpretation of the findings. For example, does inept parenting cause child antisocial behaviour, or child antisocial behaviour cause inept parenting, or are child antisocial behaviour and inept parenting caused by some unconsidered third factor (i.e. genes)? Another question that has emerged is whether the prediction of antisocial behaviours is strongest from conflict dimensions than from other parenting dimensions, such as warmth or control or monitoring. In many cases it has been observed that several dimensions of the parent-child relationship independently predict disturbance. That is, for example, after controlling for the effects of conflict in the relationship, the amount of warmth or type of control predict additional variance in externalising problems (Fletcher, Steinberg, & Williams-Wheeler, 2004). What seems clear is that we will almost certainly not be able to boil down the origins of externalising behaviours in terms of a single component of the parent-child relationship.

The challenge for this research field is to increase specificity and examine the extent to which there are specific connections between particular dimensions of parenting and particular outcomes (i.e. does the association hold only under certain conditions or circumstances?). A central tenet of ecological models is that the effect of parenting is embedded in the myriad of other social factors (marital, sibling, peer relationships) to broader environmental factors ranging from neighbourhood violence to economic strain. If causal claims were to be supported, they would need to be prescribed for particular children in particular circumstances. Studying aspects of family dysfunction in isolation from each other and in isolation from other possible

causal mechanisms (i.e. biological, sociocultural) has prevented the field from being able to translate findings on family dysfunction into sound casual theories. Several studies now support the notion that the 'effects' of parenting are unlikely to be sample or population wide. These findings illustrate the importance of multivariate models in interpreting the relationship between family dysfunction and child conduct problems. Theoretical models of the processes by which parenting behaviour may be associated with disturbed child behaviour have become increasingly sophisticated, moving from simplistic cause and effect ideas to complex multi-factorial models which include the impact that children have on their parent's behaviour. We are now gaining specific empirical examples of how larger social context does, in fact, moderate the patterns of associations and causal processes that operate more proximally to the parent child relationship. Movement away from a 'one size fits all' approach has meant that there is a need to take caution now about generalising from one study to another.

1.5 Moderating Factors

The rest of the review now considers the evidence that has been collected over the past 10 years on what factors moderate the link between inept parenting and conduct problems. Put another way, what is the evidence that the 'effects' of parenting are not population wide, and which personal or social factors are most relevant in moderating the link? For example, does harsh discipline always lead to child antisocial behaviour, or only for particular children in particular circumstances?

1.5.1 Age

Research has largely ignored the possibility of age-related variations in the association between parenting and conduct problems. Uncovering such age trends may help to explain some of the inconsistencies in the existing research on the relative importance of certain parenting practices in the development of conduct problems. For example, Loeber & Stouthamer-Loeber (1986) found very modest associations between parental discipline and antisocial behaviour in their meta-analysis, whereas Patterson et al. (1992) found harsh and inconsistent discipline to be some of the strongest predictors of conduct problems. The main difference between these two articles is age: specifically, Loeber & Stouthamer-Loeber mostly focused on studies of older children and adolescents, whereas Patterson and colleagues focused on a much younger sample.

In their cross sectional study, Frick, Christian, & Wootton (1999) investigated whether there were age trends in the association between parenting practices (parental involvement, positive parenting, poor monitoring/supervision, inconsistent discipline, and corporal punishment) and child conduct problems by subdividing their clinical sample into three age groups (age 6-8, 9-12, and 13-17). Consistent with previous research, they found that parents' involvement in their children's activities, supervision and monitoring, and use of corporal punishment all decreased as the children got older. However, they found a number of age effects. Firstly, parental involvement seemed to have the biggest influence on antisocial behaviour in the adolescent group. Therefore, although parents were less involved with their adolescent children (perhaps in response for child's need for autonomy), the maintenance of some level of positive involvement was important for reducing the

risk for conduct problems. Inconsistent discipline also tended to be highly associated with conduct problems in the adolescent age group. In contrast, corporal punishment was highly associated with conduct problems in the middle age group ($R^2 = .44$) but only weakly or moderately associated with conduct problems in the other age groups (adolescent group: $R^2 = .20$; young group: $R^2 = .07$). What seems clear is that child antisocial behaviour is particularly sensitive to different parenting behaviours at different times and an important task for parents is to adapt their parenting and disciplinary styles as the child gets older. Critically, these findings need to be disseminated to parents (i.e. parent-training programmes, parenting leaflets) so that they are aware of such age trends.

Finally, poor monitoring and supervision was only weakly associated with conduct problems in the young group ($R^2 = .07$), but increased its association (albeit at a moderate level) for the older age groups (middle group: $R^2 = .20$; adolescent group: $R^2 = .017$). This finding contrasts with that of Loeber & Stouthamer-Loeber's meta-analysis (1986) in which monitoring and supervision was one of the strongest correlates of conduct problems. This disparity could be accounted for by the fact that Frick et al.'s study used a rural sample as opposed to the urban samples commonly used in Loeber & Stouthamer-Loeber's meta-analysis. The importance of supervision and monitoring may be especially important in crowded inner-city areas. The generalisability of these results may therefore be limited by the rural geographical area in which the sample was taken and also from the fact that most of the sample was male. In addition, the measure of parenting practices was uni-informant, with mothers completing questionnaires to report their own parenting behaviours. This may have made the data sensitive to social desirability bias and is perhaps not as

reliable an indicator of parenting behaviours as a multi-informant assessment would provide. Finally, most of the children in the adolescent age group (13-17yrs) were aged 13-15yrs, and so the findings from this age group may only apply to the children in early adolescence. However, despite the various methodological considerations, Frick et al.'s study provides compelling evidence that the impact of various parenting behaviours on child antisocial behaviour varies as a function of the child's age.

1.5.2 Ethnicity

As already stated, research has shown that, over time, harsh parental control and coercive parent-child interactions are associated with child antisocial behaviour, such as hostility and aggression (Rothbaum & Weisz, 1994; Patterson et al., 1992).

However, almost all this research has focused on middle class European American families; little is known about the similarities or differences in these processes across ethnic and cultural groups.

In an attempt to elucidate if there are ethnic group differences in these processes, in their US study, Deater-Deckard et al. (1996) tested whether the association between physical discipline and child externalising behaviours was different for European American and African American children. Using a representative community sample, they found that the experience of physical discipline in the first five years of life was associated with higher levels of teacher- and peer-reported externalising behaviour for European American children when they were in kindergarten through to third grade. However, there was no relation between teacher and peer rated externalising problems and the harshness of physical discipline for African American children.

Surprisingly there was a trend whereby African American children receiving harsh discipline had lower aggression and externalising scores. After controlling for socioeconomic status, gender, and marital status, the race*physical discipline interaction explained an additional 1% of the variance in child externalising problems.

One limitation of this study is its narrow focus, whereby only one parenting construct (physical discipline) and one child behaviour outcome (externalising behaviours) is assessed, such that the potential contribution of other parenting behaviours is not considered. Importantly, ethnic group differences in the effects of harsh discipline on externalising behaviours holds only within the nonabusive range of discipline. The experience of severe physical abuse is a predictor of aggressive behaviour outcomes in all children and this relation does not vary significantly across socioeconomic or ethnic groups (Weiss, Dodge, Bates & Pettit, 1992).

Another limitation with the above study is that it considers the effects of physical discipline on externalising behaviour only for children aged 5-8yrs, such that the findings may not generalise to other age groups. In response to this, Lansford, Deater-Deckard, Dodge, Bates & Pettit (2004) prospectively investigated whether the ethnic differences in effects of physical discipline on children's adjustment depended on the developmental stage of the child. They sought to replicate and extend the findings reported by Deater-Deckard et al. (1996) by following the same sample through to age 17. In addition, they included more outcome measures of externalising behaviours. A very similar pattern of results to Deater-Deckard et al. (1996) was found. After controlling for parents' marital status, socioeconomic status,

and child temperament, significant interactions between physical discipline in the child's first 5 years of life and race were found in the prediction of 3 of the 7 teacher- and peer-rated adolescent externalising outcomes assessed. Significant interactions between physical discipline during grades 6 and 8 and race were also found in the prediction of all 7 teacher- and peer-rated externalising outcomes. Physical punishment of a European American child was associated with later externalising behaviour, though in African American families, parent's use of sub-abuse levels of physical discipline was related to *fewer* externalising behaviours. The significant interactions explained between 1% and 2% of additional variance in grade 11 externalising behaviour. McClelland & Judd (1993) have argued that effect sizes as small as these may still be practically and theoretically important. The authors suggest that it is perhaps not physical discipline per se that is associated with externalising behaviours, but the context and meaning ascribed to that discipline. Thus African American children may regard physical discipline as a legitimate parenting practice that does not necessarily convey a lack of warmth or affection.

These studies provide further evidence that a 'one size fits all' approach to parenting and conduct problems is not realistic. Physical discipline clearly does not covary with externalising problems for all children in all conditions. Unfortunately, there is little research that investigates the moderating effect of ethnicity on the association between externalising behaviour and other parenting behaviours. Baumrind (1993) cited two studies where she found that authoritarian parenting (a restrictive, often physical discipline style) was not associated with negative social-emotional outcomes for African American schoolgirls, whereas it was related to more negative outcomes for European American school girls.

1.5.3 Parent Psychopathology

Research has clearly demonstrated that the families of youth with a wide variety of forms of psychopathology tend to be disturbed. Frick, Lahey, Loeber, Stouthamer-Loeber, Christ, and Hanson (1992) reported that both parental antisocial personality disorder and deviant maternal parenting were associated with offspring conduct disorder. However, when both of these factors were entered together into a model predicting offspring conduct disorder, only parental antisocial personality disorder remained significantly associated with conduct disorder. In no analyses were any measures of parenting behaviour significantly associated with conduct disorder, independent of antisocial personality disorder.

McCord (1991) found that criminality in the father appeared to moderate the relationship between parenting and criminality in their sons. However, illustrating the complexity involved in understanding such interactions, the form the interaction took depended on the type of parenting behaviour studied. For those with a criminal father, affection in maternal parenting reduced the risk for offspring criminality. However, low parental supervision was associated with criminality only for offspring without a criminal father. This is perhaps because those with a criminal father had a genetic liability to behave in an antisocial way and were antisocial regardless of parenting.

In their cross sectional study, Pfflner, McBurnett, Rathouz, and Judice (2005) investigated the relative contribution of parent psychopathology and dysfunctional parenting to the emergence of conduct problems in a sample of children diagnosed

with ADHD. Negative/ineffective parenting and lack of parental positive involvement were both associated with higher rates of conduct disorder. Paternal antisocial personality disorder was found to interact with parenting. The study found that ineffective parenting is related to conduct disorder only in families without paternal antisocial personality disorder, such that increases in dysfunctional parenting are associated with increases in conduct disorder. When paternal antisocial personality disorder is present in the family, ineffective parenting appears not to be related to conduct disorder, such that levels of conduct disorder are already elevated and increases in dysfunctional parenting did not correspondingly increase levels of conduct disorder. One difficulty with this study is that it only included young children (mean = 8), and so may only apply to pre-adolescents. Also, measures of parenting were self-report and so will be sensitive to reporter bias. Finally, the study was restricted to mostly white middle class boys, and so generalisability across gender, social class, and ethnicity is limited.

Marmorstein & Iacono (2004) addressed the relationship between parental psychopathology (specifically, major depressive disorder and antisocial personality disorder) and family interaction patterns. As expected, they found that child conduct disorder was directly related to high parent-child conflict. However, they found that the association between parent-child conflict and conduct disorder was dependent on the psychological status of the parent. Specifically, mother-child conflict was associated with conduct disorder only when the mother had a diagnosis of major depressive disorder. Put another way, if the mother had no psychopathology, there was no association between parent-child conflict and conduct disorder. Interestingly, parental history of antisocial personality disorder did not interact with parent-child

conflict in the prediction of conduct disorder, which is inconsistent with the findings of the studies highlighted above. However, there are a number of methodological weaknesses with this study that may limit the generalisability of the results. Because participants from this study were selected from an epidemiological sample, their cases of CD may have been less severe than cases of these disorders found in clinic settings. In addition, the study diagnosed participants with conduct disorder if they met criteria as a 'definite' and 'probable' case, which may well have resulted in the inclusion of participants with sub-clinical cases of the disorders. Participants were 97% caucasian, which may limit generalisability to other ethnic groups. Finally, parent-child conflict was assessed by self report rather than independent observations and may consequently have been misreported due to social desirability biases.

It would appear that parental psychopathology moderates the association between parenting and antisocial behaviour. The complexities of family interaction and child antisocial behaviour is exemplified by the findings that parental psychopathology moderates this association only for certain parenting behaviours. Clearly more research is needed to elucidate which parenting behaviours are most important and which aspects of the child are more relevant (i.e. age, gender, ethnicity) to the moderating effect of parental psychopathology.

1.5.4 Neighbourhood

The extent to which neighbourhood characteristics might moderate the impact of poor parental supervision and monitoring on adjustment outcomes in childhood and adolescents is not yet clear. Coley & Hoffman (1996) found that levels of neighbourhood danger interacted with types of supervision and monitoring in the

prediction of school aged children's behaviour problems. The lowest rates of problem behaviours were found for those children living in low danger neighbourhoods, whose mothers provided high amounts of monitoring. Interestingly, the highest level of problem behaviour was shown by closely supervised children living in high danger neighbourhoods. Collective socialisation, whereby adults in the neighbourhood share in the responsibilities of child-care supervision, guidance, and regulation, and the provision of role models, is hypothesised to be involved in this moderating impact of neighbourhood characteristics.

Pettit, Bates, Dodge, & Meece (1999) sought to examine the role of perceived neighbourhood safety as a moderator of the impact of unsupervised peer contact and parental monitoring on child adjustment. They found that children reporting high amounts of unsupervised peer contact were at greater risk for behaviour problems when they resided in comparatively unsafe neighbourhoods and experienced lower levels of parental monitoring. If monitoring occurred at a higher rate, the adolescents' behaviour problem scores were reduced markedly. As a buffer, parental monitoring was most influential for children living in neighbourhoods rated by parents as low in safety and security. That is, children in comparatively less safe neighbourhoods were better adjusted when monitoring occurred at a higher rate. This was the case for adolescents reporting both high and low amounts of unsupervised peer contact. This study suggests therefore that the impact of low supervision and monitoring on child behaviour problems varies as a function of the perceived neighbourhood safety. In less safe areas, parental monitoring has a much greater impact on protecting against behaviour problems. Conversely, in safer areas, poor

monitoring is not strongly associated with poor child outcomes. Clearly, monitoring is more important in areas where there are greater risks.

In a similar study, Kilgore, Snyder, & Lentz (2000) investigated whether the parent's choice of kindergarten school for their child moderated the impact of low monitoring on later child conduct problems. Although using a small sample and one that was not representative of the general population, they found evidence that enrolling their children in relatively high risk schools mediated the prospective association of parental monitoring with kindergarten conduct problems. This implies again that, whilst parental monitoring is important for all children, the importance of child monitoring in high crime and unsafe neighbourhoods (i.e. those attending high risk schools) is particularly important.

1.5.5 Peer Relationships

Lansford, Criss, Pettit, Dodge, & Bates (2003) examined whether the quality of peer relationships and perceived peer antisocial behaviour moderated the link between negative parenting and externalising behaviour problems in school. They compared various measures of parenting (unilateral decision making, low supervision and monitoring, and harsh discipline) with teacher ratings of child antisocial behaviour and examined the extent to which the association varied as a function of quality of the relationship with the child's best friend, peer group affiliation, best friend deviancy, and peer group deviancy.

The study found significant three way interactions, such that whereas low friendship quality and low peer group affiliation amplified the association between unilateral

parental decision making and adolescent externalising behaviour in school, this was particularly true when the adolescents interacted with peers they perceived to be highly antisocial. In addition, peer group affiliation, regardless of the peers' level of antisocial behaviour, served as a moderator in children experiencing low supervision and awareness. Finally, having friends and peer groups perceived to be low in antisocial behaviour buffered adolescents against the effects of harsh discipline. This study found stronger support for the moderating role of peer groups than for dyadic friendships, suggesting that when adolescents come from homes characterised by inadequate socialisation experiences, adolescents may be able to gain these experiences in the peer context. Again, although many of the interactions among negative parenting, peer relationship, and peer antisocial behaviour variables were significant, the interactions accounted for only 1% to 2% of the variance in externalising behaviour, after controlling for main effects and demographics. Although small, most interaction effects reported in social science account for between 1% and 3% of the variance in regression models (Chaplin, 1991).

Unfortunately, this study did not use a clinical sample and most parenting was actually positive. Therefore negative parenting in the study should be viewed as relatively negative in relation to the parenting experienced by other participants in the sample.

1.6 Summary

Antisocial behaviour in children and adolescence is a growing problem and has a profoundly negative impact on the individual, society, and the economy.

Consequently, the government has identified the reduction of serious antisocial

behaviour as a policy priority and has commissioned a number of initiatives to achieve this goal (i.e. Sure Start). However, severe and persistent antisocial behaviour becomes increasingly difficult to treat as children grow older (Kazdin, 1997) and by the time children reach adolescence interventions (i.e. parenting programmes) are usually ineffective (Lipsey, 1995). This may be due to problem behaviour becoming embedded over time and reinforced by exposure to additional risk factors such as school failure, social rejection, and deviant peer groups.

There has therefore been extensive empirical enquiry over the past 20 years to investigate how severe antisocial behaviour develops and how it may be prevented. The vast majority of the research conducted in recent years has focused on understanding the different developmental pathways through which children develop severe conduct problems. Specifically, this research operates from the basic developmental psychopathology assumption that the same outcome (e.g., antisocial behavior) can result from a number of different developmental processes. The goal of this research is to understand these diverse pathways through which children may develop severe antisocial behavior and aggression and to use this understanding to enhance preventive and treatment interventions for antisocial youth.

A review of the literature has revealed a number of factors that place children at risk for the development of CD. The risk factors also may describe causes of the problem. Although the definitive model of CD has yet to be developed, one possible model is that of genetic liability triggered by environmental risk. In this way, genetic antisocial predispositions manifest in problem behaviour only when environmental risk is high. Genetic risk may include temperament (irritable, resistant to control,

callous) and low active MAOA genes. Environmental risk may include socio-cultural factors (i.e. poverty, high crime neighbourhood, overcrowding), negative parenting (corporal punishment, ineffective discipline, poor monitoring), and social-cognitive impairments (i.e. hostile attribution bias). Genetic factors may also operate indirectly by instigating some of the environmental risk conditions known to be associated with antisocial behaviour (i.e. evoking harsh parenting, selecting antisocial peer group).

What is becoming clear is that broad associations between risk factors and outcomes (i.e. corporal punishment and antisocial behaviour) do not hold across all children. Studies reviewed above highlight how factors such as age, friendship quality, parent psychopathology, and neighbourhood characteristics, can all moderate the association between a risk factor and antisocial behaviour. These studies highlight the complexity of the field and suggest that a more sophisticated understanding of the etiology of antisocial behaviour is needed if effective interventions are to be developed. In this way, interventions can be tailored to the exact specifications of each child and their environmental and genetic liability.

1.7 References

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SECTION 2:
EMPIRICAL PAPER

**DO POSITIVE AND NEGATIVE PARENTING BOTH UNIQUELY
CONTRIBUTE TO THE PREDICTION OF ADOLESCENT ANISOCIAL
BEHAVIOUR? DOES PATERNAL ANTISOCIAL PERSONALITY HAVE A
MODERATING EFFECT ON THIS CONTRIBUTION?**

2.1 Abstract

The present study examined concurrent associations between parenting and adolescent antisocial behaviour. In addition, the study examined whether positive and negative parenting each made an independent contribution to the prediction of antisocial behaviour and whether paternal antisocial personality moderated the link between parenting and antisocial behaviour. 95 boys and 45 girls (aged 9 to 17) were recruited from a sample of families in which the parents had previously taken part in a clinical and community trial for parenting programmes in South London. A multi-method multi-informant methodology was used in assessing antisocial behaviour, parenting, and paternal psychopathology. Multiple regression analyses revealed that both positive and negative parenting made significant independent contributions to antisocial behaviour, explaining up to 14% of the variance. A significant paternal antisocial personality * negative parenting interaction was found in the prediction of antisocial behaviour. These findings are discussed with reference to the relevant literature. Limitations of the study, future research, and clinical implications are also considered.

2.2 Introduction

Most research on conduct problems has focused on school aged children and adolescents. However, children and adolescents who display severe antisocial behaviour are commonly found to have a history of problems dating back to early childhood (Patterson, Reid, & Dishion, 1992), leading Moffitt (1993) to propose two distinct developmental patterns of childhood conduct problems: early-onset life-persistent and adolescent limited. The 2003 Green Paper, *Every Child Matters* (cited in Hutchings & Lane, 2005) estimates that one in seven 5-year-olds has oppositional defiant disorder, whilst other studies suggest that between 4-14% of preschool and early school-age children meet the criteria for a clinical diagnosis of oppositional defiant disorder (ODD) or early onset conduct disorder (CD) (e.g. Angold, Costello, & Erkanli, 1999). In addition to this, the prevalence rate is rising in Britain and Westernised countries (Rutter, Giller, & Hagell, 1998, Collishaw, Maughan, Goodman, & Pickles, 2004).

Developmental theorists suggest that these “early starters” (conduct problems that emerge during early childhood, typically at the age of 2 or 3 years) are at a high risk of following a developmental trajectory during middle childhood and adolescence that includes impaired social skills, low self-esteem, peer rejection, poor academic performance, an increased risk of school drop-out, drug and alcohol abuse, and deviant peer group affiliation (Webster-Stratton, 1991; Burke, Loeber, & Birmaher, 2002; Coie & Dodge, 1998). Longitudinal research provides robust evidence for the stability of antisocial behaviour over time and consequent poor long-term prognosis, with over 70% becoming chronic delinquents (Patterson et al, 1992; Farrington, 2002). As they enter adulthood, these ‘early starters’ are at a pronounced risk for

unemployment, mental health difficulties, criminality, domestic violence, marital instability, and social exclusion (Loeber, Burke, & Lahey, 2002; Rutter et al., 1998). Up to 50% will go on to develop antisocial personality disorder (Simonoff, Elander, Holmshaw, Pickles, Murray, & Rutter, 2004; Rutter et al, 1998). The 'harder end' of antisocial youth cause particularly high damage – even though the base rates of adolescent violence are high, the great majority of violent acts (over 60%) are perpetrated by a small minority of the population (6%) (Elliott, 1994).

Conduct problems represent the single most costly disorder of childhood and adolescence (Carr, 2003). The long-term public cost from childhood for individuals with conduct disorder is up to ten times more than for controls, with crime being the most costly area, followed by education, care, and state benefits (Scott, Knapp, Henderson, & Maughan, 2001).

Because early onset conduct problems have been shown to lead to such an array of negative individual, family, social, and financial outcomes, there has been an intense scientific interest in identifying the processes that contribute to the development of conduct disorders (e.g. Patterson et al, 1992). This is not only to further understand the etiology of these problems and the developmental trajectories they foster, but also to inform the design of preventive interventions. Over the past 50 years, a plethora of studies have found a consistent statistical association between antisocial behaviour and a variety of personal (i.e. difficult temperament), social (i.e. depressed mother, family discord), and socioeconomic (living in violent neighbourhood, poverty) risk factors (Loeber & Stouthamer-Loeber, 1986; Rutter et al, 1998). These broad associations are well accepted, and the debate instead focuses on the mechanisms

through which these risk factors operate on child antisocial behaviour. One dominant theory is that these risk factors operate through their negative impact on parenting (e.g. Patterson & Forgatch, 1995; Dodge & Pettit, 2003). For example, social disadvantage, overcrowding, and social isolation may increase the stress experienced by the parents which may compromise their capacity to nurture and discipline their children in a consistent and tolerant manner.

The role of family process, especially parenting and the parent-child relationship, in both producing and maintaining conduct problems during adolescence has been explored extensively (Dodge, Pettit, Bates, & Valente, 1995; Hetherington, Henderson, & Reiss, 1999) and there is now considerable evidence that parent-child relationship quality is significantly associated with child maladjustment (e.g. Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). However, agreement on the magnitude of the associations is somewhat less clear and has been found to depend on how the data were collected and the sample used. Given the correlational nature of the vast majority of these studies, it is not possible to identify direction of effects and therefore a simple linear causal model seems untenable at present.

Three parenting processes have been shown to be particularly relevant to the development and maintenance of conduct disorder. Firstly, early inconsistent and harsh discipline, coercive and punitive parenting style, physical punishment, rejection, and conflictual parent-child relationships have been consistently linked with an increased risk for antisocial behaviour in older children (Paterson et al, 1992; Loeber & Stouthamer-Loeber, 1986; Loeber, 1990). Both mothers and fathers of young children with behaviour problems also appear to be more critical, harsh, and

punitive in their discipline strategies, and engage in more hostile practices than comparison mothers and fathers (Wasserman, Miller, Pinner, & Jaramillo, 1996; DeKlyen, Speltz, & Greenberg, 1998; Lansford, Criss, Pettit, Dodge, & Bates, 2003).

Harsh and negative parenting is hypothesised to contribute to the development of conduct problems in a number of ways. Patterson's coercive family process model identifies cycles of negative reinforcement in which the moment-to-moment exchanges are crucial, whereby episodes of child non-compliance to parental demand are rewarded by the parent either through increased attention or giving in to child demands (Patterson, 1982). This model essentially suggests that children learn strategies about managing emotions, resolving disputes, and engaging with others not only from their own experiences, but also from the way their reactions are responded to.

Modelling may be an alternative mechanism for the transmission of conduct problems. Several studies have shown that observed aggression leads to aggressive behaviour in children (e.g. Bandura, Ross, & Ross, 1963), and so if parental preferred method of achieving their goals is through aggression (i.e. shouting, hitting), then it is possible that their behaviours will be imitated. This position is supported by a large body of evidence, particularly that which points to the intrafamilial transmission of aggressive behaviour (Kazdin, 1995).

Finally, harsh parenting (i.e. criticalness, angry outbursts, rejection) may disrupt the image of the parent as a reliable source of support and of the parent-child relationship as a working model for positive interpersonal interactions (DeKlyen et

al, 1998; Bowlby, 1982). A history of inconsistent and insensitive care with the parent may lead the child to develop an internal model of self and others as unlovable and unloving/threatening resulting in diminished expectations that positive relationships are possible and in hostile attributions for others' motivations in relationships (Dodge, 1991). Given that children take these models and apply them to other settings (i.e. peers and teachers), there would be a carrying forward of effects of parent-child relationships across time and setting. For example, if they learn that they are not worthy of affection and expect parents to be hostile towards them, they may apply the same expectations to peers. They may then interpret the behaviours of their peers as threatening, possibly responding with aggression or social avoidance, thereby making it more likely that they will have problematic peer relationships.

Given their historical emphasis on altering negative, aggressive behaviour in the child, many of the dominant theories (e.g. Social Learning Theory; Patterson et al, 1992) traditionally focused on parental conflict, consistent discipline, and coercion. As a consequence, the more positive aspects of parenting received less emphasis and research interest. However, more recently, interest has grown in promoting a more positive and effective relationship context for parental disciplinary interventions (Gardner, Sonuga-Barke, & Sayal, 1999), and evidence is emerging that positive aspects of parenting (i.e. warmth, positive involvement) prevent conduct disorder from developing, even in situations of psychosocial adversity (Pettit, Bates, & Dodge, 1997; Strayhorn & Weidman, 1991; Wasserman et al, 1996). For example, significant negative associations have been found between parental warmth/affection and antisocial behaviour in both kindergarten-aged children (McFadyen-Ketchum, Bates, Dode, & Pettit, 1996) and adolescents (Fletcher, Steinberg, & Williams-

Wheeler, 2004). Among the presumably positive aspects of parenting that have been investigated are positive affect (Biringen & Robinson, 1991), emotional support (Wasserman et al, 1996), positive reinforcement (Patterson et al., 1992), sensitive responding (Shaw, Keenan, & Vondra, 1994), and emotional warmth (Ruchkin, Eisemann, & Hagglof, 1998). There may be gender differences in the effects of certain aspects of positive parenting, with one study finding that affection was associated with a reduction in prospective disruptive behaviour for boys but an increase for girls (McFadyen-Ketchum et al., 1996).

Again, the hypothesized mechanisms through which positive parenting operates on child antisocial behaviour are varied. Maccoby & Martin (1983) argue that limit setting and discipline may be less effective in the absence of a positive, warm parent-child relationship. Patterson et al. (1992) suggest that positive parenting works when a mother responds to prosocial child behaviour with approval and positive affect, thus reinforcing such behaviours and making their use more likely. Children must learn prosocial strategies for influencing others, to replace behaviours which become increasingly inappropriate as the child grows older (e.g. tantrums, whining).

Alternatively, Fletcher et al. (2004) proposed a model in which parental warmth has an indirect effect on antisocial behaviour, mediated through its association with parental knowledge and monitoring. High levels of parental warmth and responsiveness (suggestive of a positive parent-child relationship) in early childhood are hypothesised to facilitate children's willingness in later childhood and adolescence to disclose information about their activities, behaviours, and associates outside the home, and to be responsive to parents' solicitation of information and

limit setting in relation to these activities, behaviours, and associates (Stattin & Kerr, 2000). Such knowledge about their children's whereabouts and behaviour was hypothesised to place the parent in a better position to intervene in their children's lives where appropriate.

DeKlyen et al (1998) suggest that positive parenting operates on child problem behaviour through its effect on emotion regulation. If strong emotions such as frustration and anger are rejected by parents, the child may come to regard them as overwhelming and threatening, whereas such emotions may be manageable if the parental response is supportive, enabling the child to gain mastery over the situation. An insensitive, intrusive parent does not allow the child to maintain a manageable level of stimulation during interactions, and an unresponsive one is not available to help the child modulate the arousal. In either case, the child may learn a restricted and rigid set of rules for relating to others, minimising or heightening emotional expression in an effort to reach equilibrium (Cassidy, 1994). In addition, if a parent does not help a stressed or overstimulated child to calm down, the child may be left to his own immature resources (i.e. tantrums, aggression). Youngsters with difficult temperaments who have difficulty in regulating negative emotional states and regulating their activity levels may be in particular need of sensitive and responsive parents. As children grow older, effective parents continue to play a crucial role in the development of emotion regulation by coaching the child to recognise and manage emotions (Gottman, Katz, & Hooven, 1996). Finally, sensitive and warm parents are likely to help the child learn that interpersonal interactions can be mutually gratifying and make it more likely that the child develops an internal

working model for secure attachments, and a more positive attribution bias (Bowlby, 1982).

The third parenting process relevant to conduct disorder is monitoring and control. According to a vast body of research, when parents are characterised as high in behavioural control and are effective monitors of their children's behaviour, children are less likely to engage in antisocial behaviour (i.e. Loeber & Stouthamer-Loeber, 1986). Patterson et al (1992) proposed that the primary reason that lax parental supervision is associated with antisocial behaviour in youths is that less parental supervision allows youths to spend more time with delinquent peers.

One question that has emerged is whether the prediction of antisocial behaviour is strongest from negative parenting than from other parenting dimensions such as warmth or monitoring. For example, after controlling for the effects of negative parenting, do positive aspects of parenting predict additional variance in antisocial behaviour? Only a few studies have included both positive and negative measures and tested this hypothesis, with mixed outcomes (e.g. Patterson et al, 1992; Wasserman et al, 1996). Ruchkin, Eisemann & Hagglof (1998), using parent- and child-report questionnaires, compared the parenting (rejection, emotional warmth, overprotection) of male delinquent adolescents and controls. They found that emotional warmth did not account for additional variance in adolescent delinquency, aggression, or externalising for the delinquent group, and only in delinquent behaviour for the control group. In contrast, parental rejection accounted for additional variance in delinquent behaviour for the delinquent group, and aggression and externalising behaviour for the control group. Patterson et al (1992) did not find

that their measures of positive involvement and positive reinforcement predicted antisocial outcomes. Greenberg, Speltz, & DeKlyen (1993) have argued that positive aspects of parenting make a contribution to the likelihood of behaviour problems independent of negative parenting, though this was only partially supported in their more recent study, in which mother's positive involvement and father's harsh parenting accounted for unique variance (DeKlyen et al., 1998).

Pettit et al. (1997) found that supportive parenting at age 5 (as indexed by warmth, inductive discipline, positive involvement, and proactive teaching) accounted for little variance in behaviour problems at age 11, after controlling for early harsh parenting (as indexed by harsh, physical discipline). Wasserman et al. (1996) investigated the relative importance of positive and negative parenting on conduct problems for their sample of 8 year old boys, and found that parent-child conflict (as indexed by rejection, punishment, and fighting) and involvement (as indexed by emotional support and communication) each made a significant and independent contribution to later conduct problems, even after controlling for earlier parenting and conduct problems. These results illustrate the complexity of the interrelationships of these parenting constructs and caution against independent, univariate analyses, instead highlighting the need for future research that uses multivariate analysis.

If negative and positive parenting do indeed both independently contribute to child conduct problems, one important unanswered question is whether they do so in an additive or interactive fashion. Each behaviour forms part of a constellation of parenting behaviours and it is not meaningful to single out individual aspects of

parenting. As Baumrind (1967) and others have demonstrated, the functional significance of a parenting behaviour is dependent on how it is combined with other parenting behaviours. One important consideration is whether positive and negative parenting represents a single, bipolar dimension, or whether they represent distinct constructs. Put another way, is positive parenting a marker for the absence of negative parenting, and therefore unlikely to account for unique variance?

Importantly, warmth-support and conflict-negativity were found to be distinct constructs in previous research (Steinberg, 1990) and through factor analysis of the NEAD data (Reiss et al, 1994). There is evidence that harsh discipline is associated with negative outcomes for children in low warmth families, but not for children in high warmth families, suggesting an interaction effect (Deater-Deckard & Dodge, 1997).

Not only do positive and negative parenting represent small pieces of the parenting mosaic that should be considered and interpreted within the context of other parenting behaviours, the effect of parenting is also embedded in the myriad of other social factors affecting child development ranging from other family influences to broader environmental factors such as neighbourhood violence and poverty. We are now gaining specific empirical examples of how the larger social context does, in fact, moderate the patterns of associations and causal processes that operate more proximal to the parent-child relationship. For example, Piffner, McBurnett, Rathouz, & Judice (2005) found that paternal antisocial personality disorder (ASPD) interacted with parenting. They found that ineffective parenting was related to conduct disorder only in families without paternal ASPD, such that increases in dysfunctional parenting were associated with increases in conduct disorder. When

paternal ASPD was present in the family, ineffective parenting appeared not to be related to conduct disorder, such that levels of conduct disorder were already elevated and increases in dysfunctional parenting did not correspondingly increment levels of conduct disorder. Likewise, Frick, Lahey, Loeber, Stouthamer-Loeber, Christ, & Hanson (1992) did not find any of their measures of parenting behaviour to be significantly associated with conduct disorder, independent of parental ASPD. However, McCord (1991) found that maternal affection reduced the risk for child antisocial behaviour in families with a criminal father, suggesting that parenting may indeed have an impact on child antisocial behaviour in the presence of parental psychopathology.

The inconsistency of the findings of research that investigates the relative importance of positive and negative parenting is puzzling and may in part be due to the fact that many of the studies used different instruments, which cover diverse aspects of the topic. Unfortunately, as DeKlyen et al. (1998) note, a variety of measures have been used under the rubrics of positive and negative parenting, some of which have been demonstrated to be independent of one another. Examples include involvement, communication, sensitive responding, warmth, emotional support, calm discussion, and proactive teaching for positive parenting; and verbal aggression, violence, inconsistent parenting, corporal punishment, fighting, anger, and rejection for negative parenting.

In addition to these wide ranging measures of parenting, some investigators have collapsed across these parenting behaviours to create broadly construed dimensions of parental positivity and negativity (Gottman et al., 1996). The implication with this

strategy seems to be that 'all good things go together' and that parents who are positive in one domain are likely to be positive in another. Other investigators have created separate indicators of positive and negative parenting behaviours, implying a position that parents may be high in some aspects of a particular parenting dimension, but not others. There is evidence that measures of parental negativity covary empirically to a greater degree than measures of positive parenting (Patterson et al, 1992), suggesting that the dimensions of negative parenting 'go together' to a greater extent than do aspects of positive parenting. Russell & Russell (1996) demonstrated that positive involvement and parental warmth are distinct constructs, associated with different child outcomes. Patterson et al. (1992) reported that parental involvement was differentiated from positive reinforcement, but neither of their measures were a good predictor of child antisocial behaviour. Pettit et al. (1997) found that their measures of supportive parenting were mostly unrelated to one another.

Not only is there a need for a wider and more consistent range of parenting measures, there is also a need for the utilisation of more varied assessment techniques. How parenting behaviours and child outcomes are assessed may have a great deal to do with what findings are obtained and what conclusions are drawn. In other words, using the same person (i.e. child) to report on both constructs of interest (i.e. parenting behaviour and antisocial behaviour) using the same assessment tool (i.e. questionnaire) will yield a large 'effect' on the association under investigation. This 'common method' variance may inflate the strength of associations and is evident in a number of studies (i.e. Wasserman et al., 1996). This methodological difficulty is in part overcome by using multi-informants when collecting data.

Parent-, child-, and teacher-report questionnaires are frequently used to assess parenting behaviour and child antisocial behaviour in family process research. However, a heavy reliance on such an assessment tool has been criticised for a number of reasons. Rothbaum & Weisz (1994) describe questionnaires as having “marginally acceptable levels of reliability”. Retrospective approaches to the assessment of parental rearing styles have been criticised for possible subjective misreporting of data by the respondents, on the grounds that social desirability may have lead to reporting in a positive light, or that a time lag may distort recall. Indeed, low correlations of reported behaviours between reporters suggest that family member reports are not reliable or valid indicators (Feinberg, Howe, Reiss, & Hetherington, 2000). Parent-adolescent agreement about their relationship seems to be low whether the target is measured in terms of concrete items (i.e. frequency of talking) or more abstract items (i.e. closeness; Jessop, 1981). In addition, agreement is low for reporting of life events, with one study finding a parent-adolescent concordance rate of just under 25% (Bridges, 1997; cited in Feinberg et al, 2000). Other assessment tools similarly have limitations, such as interviews relying on accurate parental report and observational assessment potentially influencing the behaviour of the observed and missing low frequency, high intensity behaviours (i.e. hitting).

Given these limitations, research based on a single method approach is of questionable value and as a result the new gold standard in family process research is to use each assessment tool (i.e. questionnaire, interview, observation) and several

informants (i.e. child, parent, interviewer, teacher), the so-called ‘multi-agent, multi-method’ approach.

The present study is the first to investigate the relative contributions of positive and negative parenting on child antisocial behaviour in the UK. It is also the first to use the ‘multi-agent, multi-method’ approach. Numerous measures of positive and negative parenting will be included and will be derived from multiple sources and assessment tools. The methodological strength of this study should help to elucidate the relative importance of these two parenting dimensions in a UK sample and help clarify some of the inconsistencies that have appeared in previous research. In addition, this study will also explore whether there is a moderating effect of parental psychopathology on the observed association. Specifically, the present study seeks to investigate the following research questions:

1. After controlling for negative parenting, does positive parenting independently contribute to child antisocial behaviour?
2. After controlling for positive parenting, does negative parenting independently contribute to child antisocial behaviour?
3. Do positive and negative parenting interact with each other and moderate the effects of the other?
4. Does paternal psychopathology moderate the association between parenting and antisocial behaviour?

2.3 Method

2.3.1 Overview

This was a cross-sectional concurrent study examining the association between positive and negative parenting behaviours and child antisocial behaviour. The moderating effect of paternal antisocial behaviour on this association was also examined. The study used child-report, parent-report, and teacher-report questionnaires, as well as a semi-structured interview and three structured parent-child interaction tasks that were videotaped, observed and coded according to theoretically guided coding categories. Measures of parenting behaviour were obtained via a self-report and parent-report questionnaire and observational data from the interaction tasks. Measures of child antisocial behaviour were obtained via child-report, parent-report, and teacher-report questionnaires, and a semi-structured interview conducted with the parent. Paternal antisocial behaviour was obtained via a parent-report questionnaire.

2.3.2 Ethics

Ethical approval was obtained from the South London & Maudsley / Institute of Psychiatry main Research Ethics Committee (REC) for the wider project of which this study was a part. See Appendix 1 for copies of the ethical approval letters.

2.3.3 Recruitment

The participants were 155 children recruited as part of a long-term follow-up of two randomised control trials of parenting groups for childhood antisocial behaviour. In the present study, 86 children were followed up from the first clinical trial (N=141; treatment group: 90, control group: 51) which took place between 1995-9 in four

NHS child and adolescent mental health services in South London and Sussex (Scott, Spender, Doolan, Jacobs, & Apsland, 2001). At the time of the original trial, the children were aged 3 to 8 years and had been referred to their local mental health service for antisocial behaviour (above the 97th percentile – antisocial behaviour assessed by PACS interview). 69 children were followed up from the second community trial (N=112; treatment group: 61, control group: 51) which took place between 1999-2002 in eight schools in inner-city London (Scott et al., submitted for publication). At the time of the trial, the children were aged between 5 and 6 years and those included had been screened in their school and had scored above the 82nd percentile (antisocial behaviour assessed by PACS interview) for antisocial behaviour.

The sample described here represents a subsample of the participants involved in the two trials described above. Of the original 253 children, 155 had been traced, followed-up, and provided data at the time of writing. Figure 1 illustrates the participant flow during recruitment.

2.3.4 Procedure

Each family was contacted and had the procedure explained to them. Parents, children, and teachers were then visited in the child's home and at school. One parent (usually mother), the teacher identified as knowing the child best, and the child him/herself completed an extensive set of interview and questionnaire measures during the home and school visits. Teachers were given a questionnaire booklet containing the *Strengths & Difficulties Questionnaire* (Goodman, 1997) and *Antisocial Process Screening Device* (Frick & Hare, 2001). Parents were given two

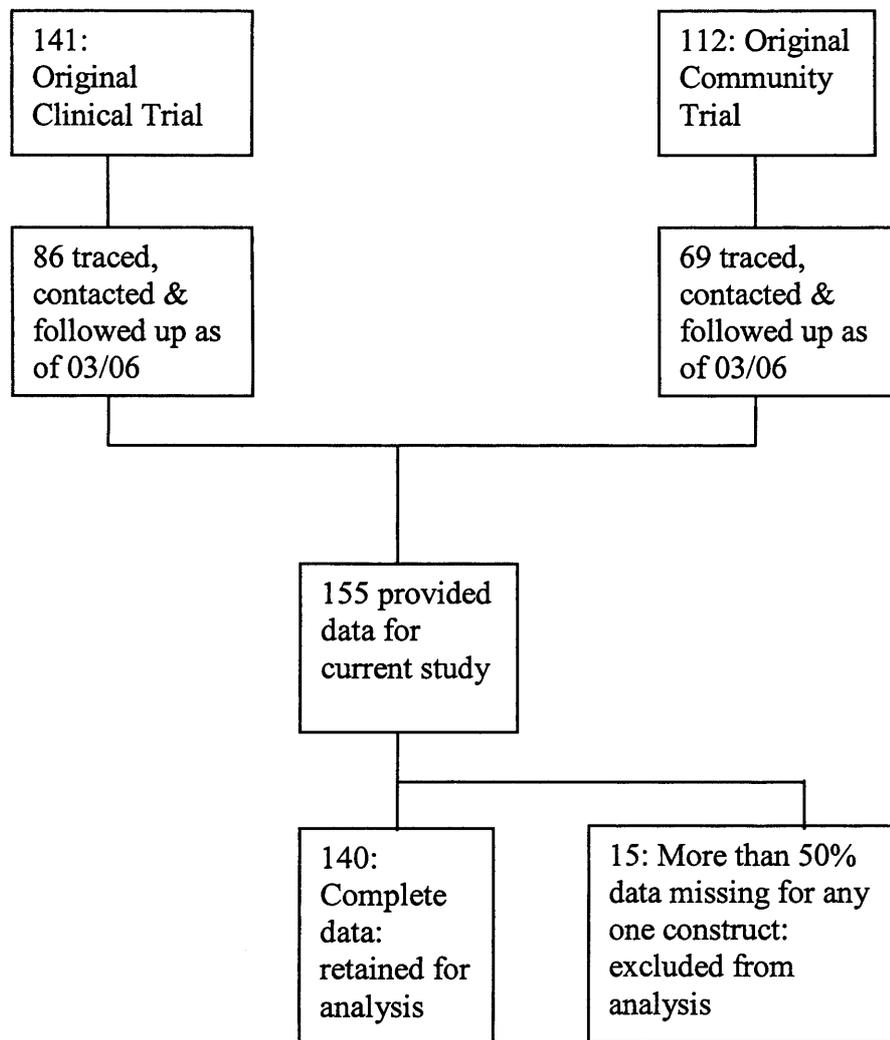


Figure 1. Participant Flow

questionnaire booklets containing the *Strengths & Difficulties Questionnaire* (Goodman, 1997), *Antisocial Process Screening Device* (Frick & Hare, 2001), *Alabama Parenting Questionnaire* (Frick, Christian, & Wootton, 1999), and *Mother's & Father's Antisocial Personality Questionnaire* – as measured in the E-Risk Study (Jaffee, Moffitt, Caspi, & Taylor, 2003). They also received a booklet to complete that captured demographic information. A semi-structured interview, the Child & Adolescent Psychiatric Assessment (ODD/CD section, Angold, Prendergast,

Cox, Harrington, Simonoff, & Rutter, 1995) was also completed with the parent. The children participating in this study were also given a questionnaire booklet to complete, which included the *Alabama Parenting Questionnaire* (Frick et al, 1999) and Self-Report Delinquency Questionnaire (Smith & McVie, 2003). During the home visit, a 20-minute dyadic parent-child interaction was videotaped. The 20 minute interaction was divided into two 5 minute and one 10minute tasks. In the first task (5min), parent and child were instructed to discuss and plan a holiday within a given budget and were provided with a sheet with prompts (*where shall we go, how will we get there, where will we stay overnight, what will we doing during the day?*). Before the start of the second task (10mins), parent and child were presented with a list of 57 'hot topics' (possible areas of conflict between parent and child, i.e. untidy room, curfew) and asked to rate each one on a scale of 0-3 (0=not a problem, 3=boiling hot) that identified which areas they disagreed on the most. The two 'hottest' topics were subsequently chosen and both parent and child were asked to discuss and try to solve them. Other researchers (i.e. O'Connor, Hetherington, Reiss, & Plomin, 1995) have found that such 'hot' problem solving interactions elicit a wide variety of behaviours that appear to be minimally influenced by experimental conditions. The third task (5mins) was a construction task in which the child was given a difficult magnetic puzzle and asked to create a model with the pieces that matched a picture on a sheet provided. The child was instructed to do as much as he/she could in the allotted time and told that he/she may ask for the parent's help if required. The researcher left the room after the start of each task and returned after the allotted time period.

The videotape coding procedures were as follows. The behaviours selected for coding were drawn from two coding schemes that most relate to negative and positive parenting. The first, the *Family Interaction Coding Scheme*, is a well-validated global coding system of five-point Likert scales (Hetherington & Clingempeel, 1992). The second, the *Attachment Promoting Behaviours Coding Scheme* (Matias, Sharpley, Scott, & O'Connor, 2003, unpublished) is a coding scheme of seven-point Likert scales. Across all observational rating scales, each point was defined by specific behaviours that described both the frequency and intensity of the types of behaviours the given rating would indicate. Two trainee clinical psychologists received extensive training on the coding systems. Training consisted of studying the coding manuals and receiving group tutorial coding sessions throughout the study. Disagreements were discussed and resolved by consensus with the project co-ordinators, who were both involved in the construction of the second coding scheme. Approximately 15% of the videos were coded for reliability and checks were conducted on a frequent basis. Any items where high interrater agreement could not be achieved were dropped. Mean intraclass correlation coefficients for interrater reliability on the final items included were .78 (range .72 to .87) for the positive parenting items and .74 (range .63 to .84) for the negative parenting items across the three tasks. The final items selected for scoring were warmth/support, involvement, communication, & sensitive responding (positive parenting) and anger/rejection, coercion, & parental intrusiveness (negative parenting).

2.3.5 Measures

2.3.5.1 Dependent Variable: Child Conduct Problems.

1. The parent was interviewed using the *Child and Adolescent Psychiatric Assessment* (CAPA; Angold et al., 1995), which generates DSM-IV diagnoses of conduct disorder (CD) and oppositional defiant disorder (ODD) and also a measure of the frequency, intensity, and impact on functioning of each symptom criterion that contributes to such diagnoses. The focus was on behaviours occurring during the preceding 3-month period. In the present study, the symptom count for CD and ODD were included as outcome measures. Intraclass correlation (ICC) is the appropriate statistical method in reliability analysis and an evaluation of agreement between raters has shown good reliability for the DSM-IV-R symptom count scores for both ODD (0.5) and CD (.62) (Angold et al., 1995).

2. Child psychopathy was measured using a 20-item multi-informant (parent, teacher) measure of the affective, interpersonal, and behavioural features called the *Antisocial Process Screening Device* (APSD; Frick & Hare, 2001). Participants rate each item using a three-point scale as 0 (“not at all true”), 1 (“sometimes true”), or 2 (“definitely true”). The items are summed to form a total score. Internal consistency was assessed using Cronbach’s coefficient alpha (Cronbach, 1951). Coefficient alpha is the most appropriate measure of internal consistency for tests with items that depart from a binary response format (e.g., 1 = correct; 0 = incorrect; Anastasi & Urbina, 1997). Cronbach’s alpha coefficients indicated very high internal consistency (alpha > 0.88) for both parent and teacher reports.

3. Children’s behavioural adjustment problems were also assessed by parent’s and teacher’s ratings on the *Strengths and Difficulties Questionnaire* (Goodman, 1997), a reliable and validated measure that contains 25 items rated on a 3-point

Likert-type scale (0 = not true, 1 = somewhat true, 2 = certainly true). The 25 items generate five clinical scales: *hyperactivity/inattention*, *emotional symptoms*, *conduct problems*, *peer relationship problems*, and *prosocial behaviour*. For each clinical scale, the score can range from 0 to 10. In the present study, only the *conduct problems* scale is retained for analysis. Cronbach's alpha coefficients indicated high internal consistency ($\alpha > 0.74$) for both parent and teacher reports.

4. Children completed a modified version of the Self-report Delinquency questionnaire (Smith & McVie, 2003). The original scale contained 15 items of delinquency behaviour that assessed both the variety and volume of the child's offending. The child was required to answer whether or not he/she engaged in each different offending behaviour (variety), and then to state how frequently he/she engaged in that behaviour (volume). The modified version contained an additional four behaviours, such that the child was asked if he/she engaged in 19 different offending behaviours. In practice, the two measures are very highly correlated (Spearman's rho: .93) and as a result only the variety of offending measure was retained for analysis. Cronbach's alpha coefficients indicated very high internal consistency ($\alpha = 0.83$) for the self-report delinquency scale.

Composite measures for conduct problems.

The four parent-report measures of conduct problems (conduct problems scale of SDQ, total scale score of the ASPD, the ODD & CD symptom frequency count of the CAPA) were significantly correlated with each other ($p < .001$) and the associations were modest-strong (r scores ranged from .45 to .77). The two teacher-report measures of conduct problems (conduct problems scale of SDQ, total scale score of the ASPD) were also significantly and strongly correlated ($r = .84$, $p < .001$).

The correlations across informant measures were significant, though the associations were modest (r scores ranged from .05 to .46, mean $r = .32$), suggesting that the degree to which parent, teacher, and child agreed upon the extent of the child's antisocial behaviour was modest. It was therefore decided that a composite score would be calculated for each informant. Standardised scores were calculated for each and the mean of these standard scores was calculated to give one continuous outcome measure for parent, teacher, and child. For example, for teacher-report, the scores on the conduct problems scale of the SDQ and total scale score of the ASPD were standardised. This created two teacher-reported standardised scores for each child and these scores were averaged to create one teacher-reported score for each child.

2.3.5.2 Independent Variable: Parenting

1. The *Alabama Parenting Questionnaire* (APQ; Frick et al., 1999) was administered to both child and parent. The APQ is a 42-item measure of parenting practices and uses a five point Likert scale (0=never, 1=almost never, 2=sometimes, 3=often, 4=always). The Parental Involvement subscale (10 items) and Positive Parenting subscale (6 items) were used in the current study as measures of positive parenting. The Ineffective Discipline subscale (6 items) and Corporal Punishment subscale (3 items) were used as measures of negative parenting. A score on each of these subscales was obtained from both the child and parent. Cronbach's alpha coefficients indicated acceptable consistency (alpha range 0.57 – 0.88) for each subscale across both informants.
2. Parenting behaviour was assessed by observation of the videotaped parent-child interactions. Four dimensions of positive parenting and three dimensions of

negative parenting were observed. Each measure was measured on a 5-point or 7-point rating scale, with higher scores reflecting more of the construct measured:

Positive Parenting: *Warmth/Support* (5-point scale) measures the degree to which the target is positive to the other, offers supportive comments or humour, and demonstrates positive nonverbal expressions (e.g. smiles). *Communication* (5-point scale) measures the extent to which the target clearly states opinions, listens to the other, explains his or her position, and solicits the other's views. *Involvement* (5-point scale) indexes the target's tendency to initiate or add to the conversation/interaction and continually engage the other in the discussion/interaction. *Sensitive Responding* (7-point scale) measures the extent to which the parent is attentively engaged in what the child is doing, is aware of the child's needs, and is sensitive and responsive to his/her signals.

Negative Parenting: *Anger/Hostility* (5-point scale) measures the most extreme negative, angry, or rejecting remark made by the target. Nonverbal behaviours such as tone of voice, body orientation, and ignoring the other were also considered.

Coercion (5-point scale) measures the degree to which the target expressed his or her need or opinions in a negative, controlling, or stubborn manner. *Parental Intrusiveness* (7-point scale) measures the extent to which the parent interrupts and/or breaks the child's flow and enjoyment by attempting to control/dominate or be unnecessarily directive in the proceedings.

Each of the three tasks was coded in isolation such that three scores were yielded for each parenting dimension. The three scores were summed and averaged to give the parent one score for each of the seven dimensions. Averaging the scores across the three tasks was expected to provide a more valid measure of parenting as it included information on interactional styles across more than one context.

Composite Measures for Parenting

Positive Parenting. The four observer ratings of positive parenting (warmth, involvement, communication, sensitive responding) were significantly and strongly correlated with each other (r scores ranged from .52 to .90, $p < .001$). The two parent-report measures of positive parenting (APQ involvement, APQ positive parenting) correlated significantly with each other ($r = .66$, $p < .001$) as did the same child-report measures ($r = .47$, $p < .001$). The measures did not consistently correlate across informants, so composite measures were created for each of the three informants [parent, child, observation) for positive parenting. Standardised scores were calculated for each measure provided by each informant separately and the mean of these standard scores was calculated to give one continuous outcome measure for parent, child, and observation. For example, a single measure of parent-reported positive parenting was created by standardising the APQ involvement and positive parenting scales. The two standardised scores for involvement and positive parenting were then averaged to create a single parent-report positive parenting score for each child.

Negative Parenting. The three observational scales of negative parenting (anger, coercion, parental intrusiveness) were significantly and strongly correlated with each other (r scores ranged from .42 to .77, $p < .001$). The two parent-report measures of negative parenting (APQ ineffective discipline, APQ corporal punishment) did not correlate strongly with each other ($r = .66$, $p < .001$), nor did the same child-report measures ($r = .47$, $p < .001$). The measures also did not consistently correlate across informants. As a result, a composite score was created for the observer ratings of

negative parenting using the same procedure as described above. The other four measures remained as individual measures.

2.3.5.3 Independent Variable: Parental Antisocial Behaviour

Parental ASPD. Father's and mother's history of antisocial behaviour was reported by the mothers, who completed the *Mother's and Father's Antisocial Personality* questionnaire (Jaffee et al., 2003). Cronbach's alpha coefficients indicated high internal consistency for both the maternal (0.74) and paternal (0.94) antisocial behaviour scales. Scores ranged from 0-40 (mean=3.96, SD=3.3, range=0-15) on the maternal antisocial behaviour scale, and from 0-34 (mean=8.05, SD=7.74, range 0-33) on the paternal antisocial behaviour scale. In their methodological study of mother-father agreement about men's antisocial behaviour, Caspi, Taylor, Smart, Jackson, Tagami, & Moffitt (2001) found that women provided reliable information about their children's father's behaviour, with the correlation between men's and women's reports about men's antisocial behaviour being .74.

2.3.6 Demographics

Within the demographic questionnaire, the parent was asked about the current parenting set-up. This was divided into two options: 'single parent' or 'two parents' currently residing in the family home. The parent was also asked to report the total weekly family income. This questionnaire also included information on child's age, gender and ethnicity. Data from all questions were included in the present study's analysis.

2.3.7 Missing Data

If less than 10% of the items from a scale were missing, the absent data were calculated using SPSS Missing Value Analysis. This occurred in 12 of the 155 cases. When this was carried out, checks as to the significance of missing values within the sample were also done using Little's MCAR test, none of which were significant. When more than 50% of outcome measures for a construct (i.e. antisocial behaviour) were missing, the case was excluded from further analyses. 15 out of 155 cases were missing more than 50% of outcome measures for a particular construct and consequently the final overall sample size retained was reduced to 140 cases. Of these 140 cases, 24 were missing between 0-50% of outcome measures for any particular construct, and in this instance this data was calculated using SPSS Missing Value Analysis. Again, Little's MCAR test was run and found not to be significant.

2.4 Results

2.4.1 Overview and analysis

Descriptive statistics on demographic measures along with correlations among all the measures are initially presented. Analysis of the association between each demographic measure and conduct problems measure is then provided. Following this, the main set of analysis was conducted to test the association between each of the parenting constructs with each measure of conduct problems. A series of ‘enter method’ multiple regression analyses were then conducted to investigate whether positive and/or negative parenting behaviours uniquely account for any variance in child conduct problems. In the context of these regressions, two-way interactions were examined to test the hypotheses that positive/negative parenting and paternal antisocial behaviour would moderate the associations between negative/positive parenting and conduct problems. Independent variables were centred before creating interaction terms. Significant interaction effects in these regressions were followed up with a method described by Jaccard, Turrisi, and Wan (1990). Specifically, to interpret two-way interactions, regression slopes depicting associations between the predictor and child conduct problems were examined at low (-1SD) and high (+1SD) levels of the moderator.

2.4.2 Distributions

Prior to the correlation and multiple regression analysis, data were examined to see if they were normally distributed and to ensure that the assumptions of parametric testing were met. The following variables were found to *not* have normal distributions: parent-report corporal punishment and child-report corporal

punishment; parent-report, child-report, and teacher report conduct problems; maternal and paternal ASPD. On examination, these variables were all significantly positively skewed. Square root transformations were performed on parent-report corporal punishment, parent-report and teacher-report conduct problems, and maternal and paternal ASPD. Log 10 transformations were performed on child-report corporal punishment and child-report conduct problems. On completion of these transformations, all variables were normally distributed.

2.4.3 Sample Characteristics

In the original trials, the treatment group received either the Webster-Stratton basic videotape programme (clinical trial) or the Incredible Years child behaviour management programme (community trial). The control group received either standard treatment (clinical trial) or access to an information helpline (community trial). Because the intervention is not being considered as part of this study, preliminary analyses independent measure ANOVAs were first carried out to assess if there were significant differences in parenting and antisocial behaviour between the children in the treatment and control groups. For parent-reported behaviour there was no significant main effect of previous intervention ($F_{(1,140)} = .00, p=0.99$), nor an interaction between positive parenting and previous intervention ($F_{(13,101)} = .57, p=0.87$) or negative parenting and previous intervention ($F_{(13,101)} = .92, p=0.53$). For teacher-reported behaviour there was also no significant main effect of previous intervention ($F_{(1,140)} = .67, p=0.42$), nor an interaction between positive parenting and previous intervention ($F_{(13,101)} = .57, p=0.87$) or negative parenting and previous intervention ($F_{(13,101)} = .92, p=0.53$). A measure of dysfunctional parenting (Alabama Parenting Questionnaire; Frick et al, 1999) was used in which a median split

occurred, creating two groups: low dysfunctional and high dysfunctional parenting. A Chi-Squared test on the total sample revealed no association between previous intervention (control or treatment) and quality of parenting ($\chi^2 = 0.034$, $df = 2$, $N = 142$, $p = .854$). Thus, it was concluded that previous intervention would not impact on the current results.

Demographic information. The age of the participants included in this study ranged from 9.2 to 17.2 years (mean: 12.2 yrs, SD: 1.92) with 68% of the sample being male. The ethnicity of the sample was relatively diverse and participants described themselves as either White, North European (74%), Black British, African or Caribbean (16%), or mixed race or British Indian (10%). Forty three percent currently resided with both biological parents, 17% resided with one biological parent and a co-habiting partner, 32% lived with a single parent, and 8% lived with a parent whose partner did not currently reside at the child's home. The modal total weekly household income range was £176-£275, with 36.5% receiving £0-£275pw, 42.5% receiving £275-£600pw, and 20.5% receiving >£600pw. 30% of the sample were receiving housing benefit and 4% receiving jobseekers allowance.

2.4.4 Demographic Measures and Conduct Problems

2.4.4.1 Gender: As expected, males were rated as exhibiting more conduct problem behaviours than females by all informants. However, independent *t*-tests showed that the differences were not significant for parent-report ($t = -.772$, $df = 135$, $p = .44$, two-tailed) or child-report ($t = -1.676$, $df = 135$, $p = .096$, two-tailed), but were significant for teacher-report ($t = -2.08$, $df = 135$, $p = .04$, two-tailed).

2.4.4.2 Age: Child conduct problems increased with age according to child report.

Four age groups were created by sub-dividing the sample into age quartiles and one-way between-subjects ANOVAs were carried out to investigate whether there was a significant age effect on conduct problems. There was not a statistically significant effect of age on the parent-report of conduct problems ($F(3,133) = 1.678, p=.17$) or teacher-report ($F(3,133) = .807, p=.49$), though there was a significant effect of age on the child-report ($F(3,133) = 6.08, p=.001$).

2.4.4.3 Parenting set-up: Children growing up in single- or sole-parent (i.e. where partner resides elsewhere) families were rated as having significantly greater conduct problems than children growing up in two-parent families (i.e. with both biological parents or with one biological parent and his/her partner). Independent *t*-tests showed that the differences in conduct problems between children of one- and two-parent families was significant across all conduct measures (parent-report: $t=2.46, df=136, p=.015$; teacher-report: $t= 2.61, df=136, p=.01$; child-report: $t=2.56, df=136, p=.01$; all two-tailed).

2.4.4.4 Total Household Weekly Income: Child conduct problems decreased as total household weekly income increased. A median split in total household weekly income was made to create two groups: low income (<£325 per week) and high income (>£326 per week). Independent *t*-tests revealed that the difference in child conduct problems between the low- and high-income families was significant across all conduct measures (parent-report: $t=3.12, df=134, p=.002$; teacher-report: $t=2.58, df=134, p=.01$; child-report: $t=2.39, df=134, p=.02$; all two-tailed).

Demographic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.age	1																
2.gender	0.04	2															
3.marital status	-0.17	-0.05	3														
4.household inc	-0.17	-0.14	0.48	4													
Positive Parenting																	
5.observation	-0.08	-0.16	0.05	0.23	5												
6.parent report	-0.32	-0.11	0.22	<u>0.18</u>	0.26	6											
7.child report	-0.23	<u>-0.17</u>	0.01	0.10	0.13	0.28	7										
Negative Parenting																	
8.observation	0.09	0.14	<u>-0.20</u>	-0.10	-0.41	-0.24	<u>-0.22</u>	8									
9.parent ineff dis	-0.09	-0.07	0.00	-0.06	-0.16	-0.02	0.03	0.04	9								
10.parent corp pun	-0.09	-0.07	-0.03	0.00	<u>-0.18</u>	-0.07	-0.01	<u>0.19</u>	0.14	10							
11.child ineff dis	0.12	0.00	-0.08	-0.10	-0.17	-0.24	-0.10	<u>0.19</u>	<u>0.20</u>	0.06	11						
12.child corp pun	<u>-0.22</u>	<u>0.19</u>	-0.09	0.04	-0.15	-0.08	-0.05	0.22	0.12	0.25	<u>0.22</u>	12					
Conduct																	
13.child report	0.34	0.14	<u>-0.22</u>	<u>-0.19</u>	<u>-0.19</u>	-0.26	-0.14	0.01	0.09	-0.02	<u>0.20</u>	<u>0.19</u>	13				
14.parent report	0.13	0.06	<u>-0.21</u>	-0.23	-0.22	-0.15	-0.09	0.14	0.34	0.10	0.06	<u>0.18</u>	0.31	14			
15.teacher report	0.09	0.09	<u>-0.22</u>	-0.26	-0.29	-0.02	-0.14	0.23	0.03	0.08	-0.03	<u>0.20</u>	0.34	0.44	15		
Parental ASPD																	
16.mother	0.08	0.08	<u>-0.20</u>	-0.36	-0.14	-0.27	-0.07	0.02	0.17	0.16	0.04	0.05	0.06	0.30	0.11	16	
17.father	0.08	0.07	-0.45	-0.46	-0.03	-0.16	-0.10	0.01	0.09	0.12	-0.01	-0.03	0.13	0.42	0.28	0.49	17

Table 1. Correlations among Demographics, Parenting, Conduct Problems, and their associations with Parental ASPD.

[**Bold**: significant at 0.01 level; Underlined: significant at 0.05 level]

2.4.5 Bivariate Correlations

Table 1 presents correlations among demographic measures, parenting measures, conduct problem measures, and parental antisocial behaviour. The correlations are presented for descriptive purposes rather than to test hypotheses, so post-hoc corrections were not made. The formal testing of research questions takes place in the next section, in the context of multiple regressions.

Positive Parenting: As expected, each measure of positive parenting correlated positively with the other, though child- and parent-report were only weakly correlated, suggesting that parents and their children perceive the degree of positivity of the parenting differently. The positive parenting measures were generally negatively correlated with measures of negative parenting, suggesting that high levels of one covary with low levels of the other. The observer rating of positive parenting was most strongly associated with negative parenting measures, whilst child-report of positive parenting was weakly correlated with measures of negative parenting. Interestingly, parent- and child-reports of corporal punishment seemed unrelated to levels of positive parenting, suggesting that the presence of corporal punishment does not necessarily imply the absence of positive parenting.

As expected, positive parenting was negatively associated with conduct problems across all measures, though the strength of the association varied to a large extent on the informant used for each measure. The observer ratings of positive parenting were most strongly and consistently correlated with informant reports of conduct problems, though strongest with teacher reports. This suggests that the relationship between observed positive parenting and conduct problems holds for child behaviour

in both the classroom and home environment. The association between parent-report of positive parenting and conduct problems is significant only for the child-reported conduct measure. The correlation with teacher-report is close to zero, suggesting that the positiveness with which parents perceive that they interact with their children is unrelated to the level of conduct problems exhibited in the classroom. Finally, child-reported positive parenting is weakly correlated with all measures of conduct problems.

Negative Parenting: Negative parenting was positively associated with conduct problems, though again, this varied as a function of the source of the data and the type of negative parenting. Observation of negative parenting was most strongly correlated with teacher-reported conduct problems, suggesting that observer ratings of parenting (both positive and negative) are strongly associated with child school-based antisocial behaviour. Parent-reported ineffective discipline was strongly correlated only with parent-reported conduct problems, such that increases in inconsistent disciplinary practices covaried with increased child conduct problems. Parent-reported corporal punishment correlated weakly with all conduct measures, but child-reported corporal punishment correlated strongly with all conduct measures. Finally, child reports of their parent's ineffective discipline practices was only correlated with child-reported conduct problems, suggesting that children who perceived their parents to be ineffective disciplinarians also rated themselves higher on antisocial behaviour.

2.4.6 Regression Analysis

Research Question 1: Table 2 shows the results of analyses that tested the first research question, namely that after controlling for the effects of positive parenting, whether negative parenting would account for additional variance in conduct problems. Controlling for the effects of demographics and positive parenting, negative parenting explained 14.3% of the variance in parent-reported conduct problems (sig F Change = 0.001), 6.4% in teacher-reported conduct problems (non-significant F Change), and 8.9% in child-reported conduct problems (sig F change = 0.009). Of the measures of negative parenting, child-reported corporal punishment was the only significant predictor across all three informant-reports.

Research Question 2: After controlling for the effects of demographics and negative parenting, positive parenting accounted for an incremental 0.9% of the variance in parent-reported conduct problems, 5.3% in teacher-reported conduct problems, and 2.4% in child-reported conduct problems. Positive parenting only accounted for a significant amount of additional variance in teacher-reported conduct problems (sig F change = 0.026). The composite observer rating of positive parenting was the only significant predictor of teacher-reported conduct problems.

Research Question 3: Table 3 shows the results of analyses that tested the third research question, namely whether positive parenting would interact with negative parenting in the prediction of conduct problems. It was found that positive parenting did not significantly moderate the link between negative parenting and conduct problems, irrespective of whether parent-, teacher-, or child-report of conduct problems was used as the dependent variable.

Table 2. Results of regression analyses, explaining conduct problems after controlling for positive parenting and negative parenting

Step Predictor	Parent report		Teacher report		Child report	
	B	ΔR^2	B	ΔR^2	B	ΔR^2
1 Demographics		.077*		.102**		.161***
Age	0.01		0.00		0.07***	
Gender	0.03		0.11		0.12	
Parenting set-up	-0.07		-0.06		-0.11	
Household Income	-0.02		-0.04*		-0.02	
2 Positive Parenting		.032		.084**		.027
Child report Alabama	-0.01		-0.04		-0.00	
Parent report Alabama	-0.01		0.06		-0.05	
Observation	-0.06		-0.11**		-0.06	
3 Negative Parenting		.143***		.064		.089*
Parent Report Ineffective Disc.	0.03***		0.00		0.00	
Parent Report Corporal Pun.	0.00		0.01		-0.04	
Child Report Ineffective Disc.	-0.01		-0.01*		0.00	
Child Report Corporal Pun.	0.05*		0.07*		0.11**	
Observation	0.02		0.13		-0.29*	

Step Predictor	Parent report		Teacher report		Child report	
	B	ΔR^2	B	ΔR^2	B	ΔR^2
1 Demographics		.077*		.102**		.161***
Age	0.01		0.00		0.07***	
Gender	0.03		0.11		0.12	
Parenting set-up	-0.07		-0.06		-0.11	
Household Income	-0.02		-0.04*		-0.02	
2 Negative Parenting		.167***		.095*		.091*
Parent Report Ineffective Disc.	0.03***		0.00		0.00	
Parent Report Corporal Pun.	0.01		0.01		-0.03	
Child Report Ineffective Disc.	-0.01		-0.02		0.00	
Child Report Corporal Pun.	0.06*		0.07*		0.12**	
Observation	0.06		0.20*		-0.19	
3 Positive Parenting		.009		.053*		.024
Child report Alabama	-0.00		-0.03		-0.00	
Parent report Alabama	-0.00		0.06		-0.04	
Observation	-0.03		-0.08*		-0.07	

Note. B is the unstandardised beta. *p<.05; **p<.01; ***p<.001

Table 3. Results of regression analyses examining positive parenting as a moderator of the link between negative parenting and conduct problems.

Step	Predictor	Parent report		Teacher report		Child report	
		B	ΔR^2	B	ΔR^2	B	ΔR^2
1	Demographics		.077*		.102**		.161***
	Age	0.01		0.00		0.07***	
	Gender	0.03		0.11		0.12	
	Parenting set-up	-0.07		-0.06		-0.11	
	Household Income	-0.02		-0.04*		-0.02	
2	Positive and Negative Parenting		.176**		.148**		.116
	ChildReport Alabama (P1)	0.00		0.06		-0.04	
	ParentReport Alabama (P2)	0.00		-0.08*		-0.07	
	Positive Observation (P3)	0.03***		0.00		0.00	
	ParentReport Ineffect Disc. (N1)	0.00		0.01		-0.04	
	ParentReport Corp Pun. (N2)	-0.01		-0.01*		0.00	
	ChildReport Ineffect Disc. (N3)	0.05*		0.07*		0.11**	
	ChildReport Corporal Pun. (N4)	0.02		0.13		-0.29*	
	Negative Observation (N5)						
3	Interaction Positive Parenting * Negative Parenting		.104		.093		.077
	P1*N1	0.00		0.00		0.00	
	P1*N2	-0.02		0.01		-0.02	
	P1*N3	0.00		0.00		-0.01	
	P1*N4	0.04		0.05		0.07	
	P1*N5	-0.16		-0.37**		-0.16	
	P2*N1	0.00		0.00		-0.01	
	P2*N2	-0.09*		-0.05		0.02	
	P2*N3	0.00		0.00		0.00	
	P2*N4	0.01		0.00		-0.05	
	P2*N5	0.12		0.16		-0.13	
	P3*N1	-0.02*		0.00		0.00	
	P3*N2	0.04		0.05		0.04	
	P3*N3	0.00		0.02		0.02	
	P3*N4	0.04		0.05		-0.03	
	P3*N5	-0.11		-0.11		-0.08	

Note. B is the unstandardised beta. * $p < .05$; ** $p < .01$; *** $p < .001$

Research Question 4: Table 4 shows the results of analyses that tested the fourth research question, which tested whether paternal antisocial personality traits would moderate the link between parenting and child conduct problems. It was found that paternal ASPD did not significantly moderate the link between positive parenting and conduct problems. However, a significant paternal ASPD x negative parenting interaction was found in the prediction of teacher-reported conduct problems, whereby both parent-reported ineffective discipline and parent-reported corporal punishment both interacted separately with paternal ASPD in the prediction of

conduct problems. The two-way interactions between paternal ASPD and negative parenting were not significant for parent-reported and child-reported conduct problems.

Table 4. Results of regression analyses examining paternal ASPD as a moderator of the link between positive parenting and conduct problems, and negative parenting and conduct problems

Step Predictor	Parent report		Teacher report		Child report	
	B	ΔR^2	B	ΔR^2	B	ΔR^2
1 Demographics		.077*		.102**		.161***
Age	0.01		0.00		0.07***	
Gender	0.03		0.11		0.12	
Parenting set-up	-0.07		-0.06		-0.11	
Household Income	-0.02		-0.04*		-0.02	
2 Positive Parenting, ASPD		.146***		.109**		.027
Paternal ASPD	0.08***		0.05*		0.00	
Child report Alabama	-0.00		-0.04		-0.00	
Parent report Alabama	-0.00		0.06		-0.05	
Observation	-0.07*		-0.11**		-0.05	
3 Interaction		.015		.045		.016
ASPD*Child report Alabama	-0.01		-0.00		0.02	
ASPD*Parent report Alabama	0.02		0.06*		0.03	
ASPD*Observation	-0.03		-0.05		0.01	

Step Predictor	Parent report		Teacher report		Child report	
	B	ΔR^2	B	ΔR^2	B	ΔR^2
1 Demographics		.077*		.102**		.161***
Age	0.01		0.00		0.07***	
Gender	0.03		0.11		0.12	
Parenting set-up	-0.07		-0.06		-0.11	
Household Income	-0.02		-0.04*		-0.02	
2 Negative Parenting, ASPD		.262***		.116**		.091*
ASPD	0.08***		0.04*		0.00	
Parent Report Ineffective Disc.	0.02***		0.00		0.00	
Parent Report Corporal Pun.	-0.00		0.00		-0.03	
Child Report Ineffective Disc.	-0.00		-0.01*		0.00	
Child Report Corporal Pun.	0.06*		0.08*		0.12**	
Observation	0.09		0.24*		-0.19	
3 Interaction		.029		.100**		.017
ASPD*Parent Report Ineff Disc.	0.00		0.01*		0.00	
ASPD*Parent Report Corp Pun.	0.02		0.06*		0.05	
ASPD*Child Report Ineff Disc.	0.00		0.00		0.00	
ASPD*Child Report Corp Pun.	0.02		0.02		-0.17	
ASPD*Observation	0.06		-0.12		-0.04	

Note. B is the unstandardised beta. *p<.05; **p<.01; ***p<.001

Inspection of the regression slopes (Figure 2) indicated support for the postulated role of paternal ASPD. As shown in the top part of Figure 2, high levels of parent-reported ineffective discipline was related to higher levels of teacher-reported

conduct problems for those children with high but not low antisocial fathers. As shown in the bottom part of Figure 2, high levels of parent-reported corporal punishment was related to higher levels of teacher-reported conduct problems for those children with highly antisocial fathers, but to lower levels of conduct problems for those whose fathers were low on antisocial propensity.

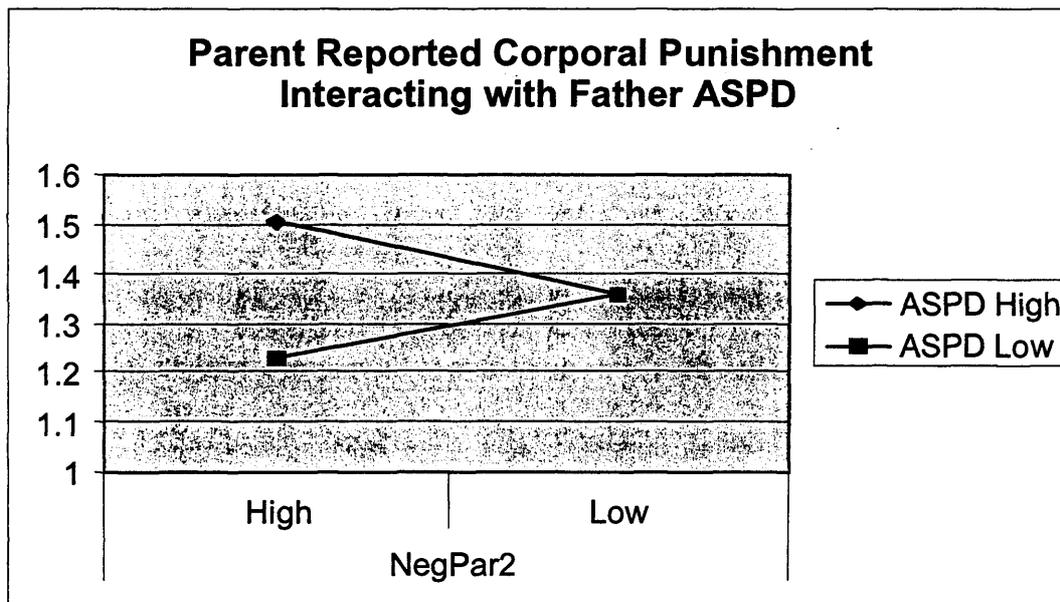
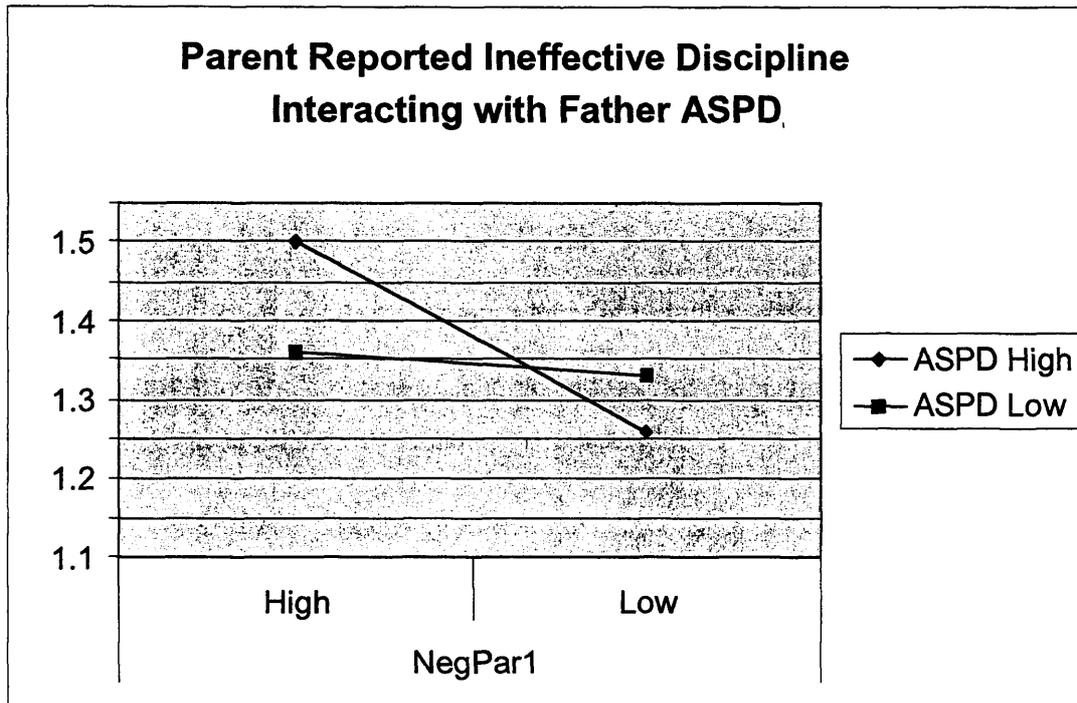


FIGURE 2. Significant two-way Parent-reported Ineffective Discipline x Paternal ASPD and Parent-reported corporal punishment interactions predicting teacher-report conduct problems.

2.4.7 Summary

In summary, after controlling for the effects of demographics and negative parenting, positive parenting was only significantly related to teacher-report conduct problems and uniquely accounted for an additional 5.3% of the variance. After controlling for demographics and positive parenting, negative parenting made a significant and independent contribution to parent-report and child-report conduct problems, accounting for 14.3% and 8.9% of additional variance respectively. Surprisingly, positive and negative parenting did not interact in the prediction of conduct problems. In other words, positive parenting did not attenuate the link between negative parenting and conduct problems, and neither did negative parenting exacerbate the link between positive parenting and conduct problems. However, two-way interactions between paternal ASPD and negative parenting were found, albeit only when using teacher-reports of conduct problems. When using the parent as the informant for parenting behaviours, it appears that the presence of an antisocial father has a moderating impact on the relationship between negative parenting and conduct problems. Without an antisocial father, ineffective discipline appears to have little effect on child antisocial behaviour. However, a child with an antisocial father appears sensitive to ineffective discipline, whereby high ineffective discipline sees a corresponding increase in child antisocial behaviour. This suggests that effective discipline is important in managing child antisocial behaviour, especially when a child has an antisocial father. High levels of corporal punishment are associated with a reduction in antisocial behaviour for those children without an antisocial father, but an increase for those *with* an antisocial father. This suggests that high levels of corporal punishment are likely to have a more negative impact on child

antisocial behaviour when that child has an antisocial father, but an improvement in such behaviour if the father is not antisocial.

2.5 Discussion

2.5.1 Overview

The purpose of the present investigation was to use a multi-method multi-informant design to elucidate the relationship between positive and negative parenting and child antisocial behaviour in a UK sample, and to examine paternal antisocial behaviour as a moderator of the link between parenting and such behaviour. The results highlighted the benefit of multi-method-multi-informant methodology, as obtained findings were not consistent across informants, nor across measures of the same construct. Such a methodology affords a more valid and reliable picture of interrelationships between variables and tempers global unqualified generalisations.

2.5.2 Main Findings

As expected, negative and positive parenting were positively and negatively associated with current conduct problems respectively, and the strength of the associations were similar to previous studies (i.e. Wasserman et al., 1996; Lansford et al., 2003). However, the magnitude of these associations varied depending on the modality through which parenting and conduct problems was assessed. The majority of parenting measures were weakly correlated with the three measures of conduct problems. The observer rating of positive parenting and child report of corporal punishment were the only parenting measures to consistently correlate well with all three conduct measures. In general, observer ratings of parenting showed the strongest associations with teacher-reported conduct problems, suggesting that observer ratings of parenting are most reliable in estimating school based antisocial behaviour. Parent-reported corporal punishment correlated weakly with all conduct

measures, but as stated, child-reported corporal punishment correlated well with all conduct measures. This may be a result of social desirability bias whereby parents underreport corporal punishment practices, or alternatively because children more accurately recall such practices due to the increased salience of the behaviours to them. Unfortunately, correlational analysis and concurrent assessment obscure the directionality of the findings.

Testing of the first research question revealed that, after controlling for demographics and negative parenting, positive parenting did not contribute to parent reported and child reported conduct problems. Positive parenting did significantly and independently contribute 5.3% of the variance in teacher reported conduct problems, with the observer rating of positive parenting being the only significant predictor. This suggests that positive parenting (i.e. warmth, sensitive responding) may have a greater impact on a child's antisocial behaviour in the school setting than at home and in the community.

Negative parenting had much greater predictive power of conduct problems than positive parenting. After controlling for demographics and positive parenting, negative parenting contributed 14.3% of the variance in parent's report of their children's conduct problems and 8.9% in children's report of their own conduct problems, with child-reported corporal punishment being a consistent significant predictor. Interestingly, negative parenting did not uniquely contribute to teacher reported conduct problems. This suggests that negative parenting has a significant and independent impact on child antisocial behaviour in the home and community, but little influence on their school-based antisocial behaviour. It is not clear why

positive parenting should predict antisocial behaviour in the school and negative parenting should predict home- and community-based antisocial behaviour. It is possible that the effects of negative parenting on antisocial behaviour were buffered by the structure, monitoring, and boundaries put in place at school, such that these children exhibited antisocial behaviour in all other areas of their life (i.e. at home and in the community where structure, monitoring, and boundaries may be low) but not in school. One possible explanation why positive parenting predicts antisocial behaviour in the school, after controlling for negative parenting, is that it may confer particular social competencies in the child (i.e. perspective taking, empathy). The effect of this may be that the child is less at risk of interpersonal antisocial behaviour (i.e. bullying, aggression, fighting) but will continue to behave antisocially in non relational areas, such as property crime, stealing, drug abuse, vandalism. It is possible that within the school setting, relational aggression is more often observed than non-relational aggression (i.e. stealing cars) and so these children will be rated differentially by their teachers on antisocial behaviour, as compared to their peers who have not experienced positive parenting.

The present study did not provide evidence to support the third research question and found that positive parenting did not interact with or moderate the link between negative parenting and conduct problems. This is in contrast to Baumrind's (1967) assertion that the functional significance of parenting behaviours depends on how they are combined with other parenting behaviours. The findings in the present study suggest that positive parenting does not protect against antisocial behaviour if it takes place in the context of co-occurring negative parenting, of which corporal punishment appears particularly pertinent. One possible explanation is that positive

parenting does not co-occur with negative parenting as they represent opposite poles of the same construct. If parents are only either negative or positive, and not both, then positive parenting would not have moderating effects. Perhaps it is more likely that one parent would be negative and the other positive than both parenting styles being exhibited within the same person. In such a case, positive parenting by one parent may moderate the link between the negative parenting of the other parent and antisocial behaviour. As a result, positive parenting from one parent may become more important in cases where the other parent is high on the negative parenting dimension. This raises implications for socially isolated single parent families, and suggests that positive parenting may be particularly important where the child has no access to the positive moderating influences of other influential adults. Indeed, Pettit et al. (1997) found that supportive parenting acted as a protective factor against behavioural problems only for those children who had been reared in single parent families. Given that most children are raised by two parents, carrying out a study that only captures aspects of parenting from one parent may limit the validity of the conclusions drawn.

Testing of the fourth research question revealed that paternal antisocial behaviour moderated the link between parent reports of ineffective discipline and corporal punishment and teacher reported antisocial behaviour. A significant interaction was found whereby the antisocial behaviour exhibited by children whose fathers were not antisocial was not influenced by ineffective parental discipline. However, those with antisocial fathers were particularly sensitive to high levels of ineffective discipline and became increasingly more antisocial themselves. The interaction between corporal punishment and paternal ASPD revealed that corporal punishment led to a

reduction in antisocial behaviour for those who do not have an antisocial father but to an increase in antisocial behaviour for those with an antisocial father. One implication is that high levels of corporal punishment are effective in managing antisocial behaviour if the child's father is not antisocial, but very ineffective and damaging if the father *is* antisocial. However, such an interpretation is tentative and ignores other possibilities. For example, the effects of high levels of corporal punishment may manifest differently in children whereby those with antisocial fathers externalise and become more antisocial whereas those without an antisocial father internalise and become less antisocial but perhaps develop emotional problems. Gershoff reviewed 88 studies involving over 36,000 participants over 62 years between 1939 and 2001 (Gershoff (2002) and concluded that the use of physical punishment of all types can have undesirable consequences for the child. These included decreased ability to be self-disciplined, increased aggression, delinquency and anti-social behaviour, decreased quality of relationship between parent and child, and decreased mental health. Both interactions occurred only with teacher reports of antisocial behaviour which perhaps suggests that they relate specifically to school based antisocial behaviour and further support the importance of multi-informants in clarifying the confidence that can be taken in particular associations and the extent to which they can be generalised across settings.

These findings are supported by Quinton & Rutter (1988) who reported that persistent conduct problems were greatest amongst children who were exposed to both hostile parenting and parents with an antisocial personality disorder. However, the finding that dysfunctional parenting is related to antisocial behaviour primarily in families with Paternal ASPD is inconsistent with other research findings. For

example, other studies have found the reverse to be true, that dysfunctional parenting was related to antisocial behaviour only in families *without* paternal ASPD (i.e. Pffiffer et al., 2005; Frick et al., 1992). No interaction was found in the present study between positive parenting and paternal ASPD, but McCord (1991) found that maternal positive parenting acted as a buffer against antisocial behaviour in children with antisocial fathers. However, these studies only included children with a diagnosis of CD, and given that the present study used a sample that covered a broader range of antisocial behaviour, it is possible that associations differ according to severity of conduct problems. It is possible that children with more severe antisocial behaviour (i.e. with CD) have a greater genetic vulnerability that is less influenced by environmental factors such as parenting. In addition, Jaffee et al., (2003) found that antisocial fathers provide both a genetic and environmental risk for child conduct problems, such that in families with highly antisocial fathers children have the worst behavioural problems when the father resides in the home. The present study did not control for the absence or presence of the father in the family home and this may have masked important associations.

2.5.3 Limitations

Examination of means, medians, and distributions of the constructs that formed the composite observer rating of negative parenting (anger, rejection, coercion, intrusiveness) revealed that for most of the children, their parents were not very negative. 'Negative parenting' in this sample should be interpreted as relatively negative in relation to the parenting experienced by other participants in the sample. It is possible that the tasks the parent and child were asked to complete for the observational measure were too contrived and impeded a natural interaction. It could

be argued that the tasks were not ecologically valid as they involved tasks that the children and their mothers may not have encountered in their everyday lives. Chang et al. (2003) argued that the association between harsh parenting and antisocial behaviour depends on whether parental control behaviours are carried out in an emotionally controlled or an emotionally charged manner. Given that the tasks were structured so as to be more frustrating for the child than the mother, they may not have facilitated the experience and expression of emotion that may normally take place between the dyad and thus the parent was able to exert appropriate control across the interaction. A more naturalistic interaction would have perhaps revealed more negative parenting. However, as stated, one difficulty with observation is that it is not always possible to pick up low frequency, high intensity negative behaviours.

Another limitation of the present study is that it is a cross-sectional concurrent assessment of parenting and antisocial behaviour within a predominantly teenage sample. Frick et al. (1999) suggest that parenting practices change as the child grows older and found evidence that different kinds of parenting (i.e. corporal punishment, ineffective discipline, warmth) may have more of an impact at different ages. There is evidence that child antisocial behaviour is particularly sensitive to parenting behaviour in the first six years of life. For example, a review of over 400 parenting programme trials for teenage antisocial behaviour found an average effect size of zero (Lipsey, 1995) whereas parenting programmes in childhood have repeatedly been demonstrated to reduce antisocial behaviour by moderate to large effects (Kazdin, 1997). Therefore, concurrent associations between parenting practices and antisocial behaviour may be spurious. For example, a child may receive particularly dysfunctional parenting in his/her first eight years of life (i.e. mother has depression

and is not sensitive or responsive and/or mother has not entered a parenting programme) which increases the risk for antisocial behaviour. However, the parenting may improve as the child gets older (i.e. depression remits and mother displays more warmth and/or after mother has successfully completed a parenting programme) but the concurrent nature of the present study means that the meaning and importance of the earlier parenting style on the development of antisocial behaviour is lost. A longitudinal study which follows children from a young age would help to resolve these difficulties so that changes in parenting over time could be compared with changes in antisocial behaviour, providing an opportunity to better test directionality of effects. The findings from the present study cannot therefore be generalised to younger children. The impact on parenting of receiving the parenting intervention has not been controlled for as previous measures of parenting were not taken prior to the programmes. It is therefore not clear in what way and how much parenting has changed over the course of the child's upbringing. Perhaps the parents were very negative before the intervention at a very sensitive point in the child's life and the 'damage was done'. Subsequent attendance at a parenting group may improve parenting and reduce negativity, but these parenting changes may have no impact on the antisocial behaviour which is now resistant to parental influence. As a result, this study would find weak correlations between concurrent negative parenting and antisocial behaviour, implying incorrectly that negative parenting is not related to antisocial behaviour.

A further limitation with the present study is that it does not take into account broader aspects of the child's social context. Moffitt (1993) highlights the increasing influence of environmental factors and especially peer influence on adolescent

antisocial behaviour. Lansford et al. (2003) found that friendship quality and peer group affiliation moderated the link between parenting and antisocial behaviour, but such socialisation factors are not considered in the present study.

Finally, the present study's multi-method multi-informant approach has inevitably increased the risk of Type 1 errors. Given the low correlations among informants and methods, the simplest solution to managing the multi-method multi-informant data has been to leave the data in a largely disaggregated and original form (although some composite measures were possible). Whilst one advantage of this approach has been the resulting opportunity to examine the effects of each source and method separately, this strategy has also resulted in a large number of analyses, which has increased the chance of Type 1 errors.

2.5.4 Clinical Implications

Notwithstanding the fact that validation of these findings through further replication is needed before clinical implications can be implemented in practice, the findings from this study are relevant for policy and prevention concerning at-risk children. Currently in the UK, a number of government initiatives are underway to address antisocial behaviour in children and adolescents, such as parenting programmes and mental health services for children (e.g. Sure Start, On-Track). In addition, the government has recently issued proposals to develop policies to manage dangerous people with severe personality disorders (Home Office, Department of Health, 2000) with prevention identified as part of the overall strategy that targets adolescents who behave in an antisocial way. Success of such strategies depends on

establishing which types of interventions work best, under what circumstances, and for whom.

The role of factors that moderate the commonly found association between parenting and antisocial behaviour seem particularly relevant. Clearly a manualised 'one size fits all' parenting intervention may not be effective, given that previous research has found that factors such as age, gender, race and peer group affiliation all moderate the link between parenting and antisocial behaviour, and the present study adds paternal antisocial behaviour to that list. It is becoming increasingly more obvious that interventions and parenting programmes need to be tailored to meet the individual make-up and history of each child and family.

Drawing clinical inferences depends on assuming that the correlates reported here are likely to be involved in facilitating, maintaining, or exacerbating antisocial behaviour in children. Granting this assumption, this study suggests that clinical interventions such as parenting programmes target negative parenting management skills such as ineffective discipline and corporal punishment in order to reduce the risk of antisocial behaviour, especially if the father is antisocial. The negative interpersonal style of the parent as measured by observation (i.e. displays of anger, rejection, criticism) was surprisingly not a significant predictor of antisocial behaviour. In terms of identifying children and adolescents for interventions, having a parent with ASPD (and especially living with that parent) is likely to be a significant factor in raising risk of ASPD in the child if that child is exposed to negative parenting.

Parents of such children may be allocated more resources in such interventions so that they receive more intensive parent training. Although practical difficulties may exist in encouraging the participation of antisocial fathers in interventions, a more viable option may be to provide intensive services to the mothers of these children. This is supported by the finding in the present study that the risk for antisocial behaviour conferred by having an antisocial father can be overcome by the absence of dysfunctional parenting. Importantly, paternal APSD correlated .49 with maternal ASPD, and so more specialist services may be needed for those children whose both parents are antisocial. Consideration would also be needed of any social (i.e. overcrowded housing) or biological factors (maternal depression) that may impede the parent's ability to carry out the strategies learned in such interventions.

The role of positive parenting is less clear and less consistent. However, whilst negative parenting should perhaps be prioritised, deficiencies in warmth, support, involvement and attachment should also be addressed. The finding that high levels of corporal punishment in children of families without an antisocial father are associated with improvements in behaviour should be treated with caution and not used as evidence that advocates the use of such practices. It is at present unclear what effects beyond reducing antisocial behaviour such practices are associated with.

In conclusion, it appears that negative parenting has a broader influence on child antisocial behaviour than positive parenting and as such should be the focus of interventions such as parenting programmes. However, positive parenting also has an important role in child development. It has been independently associated with school based antisocial behaviour and in addition its benefits may well extend

beyond reducing antisocial behaviour (i.e. increasing child self-esteem, reducing internalising disorders). Involvement in interventions of both parents in two-parent families may also improve outcomes so that gains in parenting made by one parent are not undermined by the dysfunctional parenting practices of the other. Whilst the present study contributes to the field of child development and psychopathology, future research needs to demonstrate more than an association between a particular factor and an outcome. It needs to uncover the way in which the factor of interest operates to produce its effect, or in the words of Rutter et al. (1998), “to differentiate between risk indicators and risk mechanisms”.

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SECTION 3:
CRITICAL APPRAISAL

3.1 Critical Appraisal

This study investigated the relative contributions of negative and positive parenting to the prediction of adolescent antisocial behaviour. In addition, it explored whether negative and positive parenting interacted in the prediction of conduct problems and whether having an antisocial father moderated the associations between parenting and conduct problems. The study had a number of strengths. Firstly, it recruited adolescents who had previously been involved in either a community or clinical trial on the basis of early childhood antisocial behaviour and also included children from the associated control groups. This allowed for the inclusion of participants that exhibited a broad range of antisocial behaviour. The study also adopted a multi-method multi-informant approach to assessing conduct problems and parenting behaviour.

In this section of the thesis, the aim is to discuss both the strengths and weaknesses of the current study and to link these to themes that exist in the general research area of conduct disorder. There will also be discussion of the main findings of the current study and how they can be assimilated into the broader area and what implications can be drawn, both theoretically and clinically. Finally, personal reflections will be offered on the researcher's experience of conducting this study and process issues that arose.

As stated, the multi-method, multi-informant methodology was considered a strength of the current study. A number of alternative strategies for assessing parent-child relationship quality and antisocial behaviour have previously been used (questionnaire, interview, direct observation). Debate continues as to which is the

best, but it appears that each method yields its own insights and each has its own profile of strengths and weaknesses. For example, whilst questionnaires are cheap and quick to administer and have adequate reliability and validity, they are subject to social desirability bias and depend on accurate memory recall. Interviews can yield a richer supply of information, but again require the informant to report in an accurate manner. Confidence in accurate reporting may fall when discussing controversial issues such as child neglect and severe antisocial behaviour such as rape.

Observational assessment is the gold standard for assessing moment-to-moment quality of the parent-child relationship because it is unfiltered by parental or child opinions, but is prone to 'observer effects', is time-consuming, and due to the limited time observation can realistically go on for, may miss low frequency, high impact behaviours (i.e. smacking, fighting).

Perhaps the only area of convergence of opinion is on the pitfalls of using the same assessment method or informant to measure different constructs. This is due to the likelihood of "method variance", which has been found to inflate the strength of associations, such that conclusions from research can have as much to do with the methods used as they do with the nature of the phenomenon. Whilst there is no best manner of assessing parent-child relationship quality or child antisocial behaviour, the only mistake would appear to be relying exclusively on one method. As a result the new gold standard in family process research is to use each assessment tool (i.e. questionnaire, interview, observation) and several informants (i.e. child, parent, interviewer, teacher), the so-called 'multi-informant, multi-method' approach.

Aside from the issues described above on choosing the method of assessment, another dilemma exists in terms of how to define and operationalise the construct of interest in the first place. If we are to have a greater understanding of the contributing factors to the development and trajectory/pathway of antisocial behaviour, a starting block must be to have an accurate and valid measure of antisocial behaviour. As noted in the introduction, previous studies vary in how they define such behaviour (i.e. delinquency, conduct problems, aggression, externalising behaviour, covert vs overt). Whilst these studies define and measure different behaviours, it becomes increasingly difficult to calibrate their findings as they don't mean the same thing. "Delinquent" is a legal term referring to juveniles committing offences against the law. The behaviour in question is viewed from a legal perspective. "Antisocial behaviour" refers to behaviour that is hostile to the principles, rules, and laws of a society. The behaviour in question is evaluated from the point of view of a society, but is not necessarily adjudicated. Consequently, if a child bullies his peers, his behaviour would be considered antisocial, but not delinquent. These differences are borne out of the different theoretical perspectives of the researchers, and as long as they continue, replicating the findings of studies and comparing them to others will be difficult.

Given these dilemmas and difficulties that exist in the field of social research, the current study used a broad definition of antisocial behaviour and used the multi-method, multi-informant approach. However, although the child-, parent-, and teacher- reports of child antisocial behaviour correlated well with each other, only parent-report correlated strongly with any of the parenting questionnaire measures (parent-report ineffective discipline). This raises a dilemma on how meaningful these

findings are and how best to interpret the results. Does this mean that parental ineffective discipline is indeed associated with antisocial behaviour? The answer to that would appear to be “it depends who you ask”. The most clinically meaningful informant report to use would be that which most accurately reflects the genuine level of child antisocial behaviour, but there is no definitive answer on who that is.

This raises the question of how do we get an accurate measure of just how antisocial the child is (once you define what antisocial is). Perhaps the most reliable and accurate measure would be to observe the child naturalistically for a prolonged period of time covertly, but this is neither ethical, practical, or realistic. Perhaps only using official police records would yield an accurate measure, though this is limited in the sense that not all antisocial behaviour is detected and followed-up by the police, and also not all antisocial behaviour is illegal. Perhaps creating a latent construct via all three measures is preferable, but decisions need to be made on how much weighting to give each informant’s report. The rationale of taking measures from teacher, parent, and child is that they will all capture aspects of the child’s antisocial behaviour and together provide a more valid measure. However, in the present study the reports did not correlate strongly enough to form a composite measure. This is understandable given that children may conceal antisocial behaviour from their parents and teachers, especially those children that spend prolonged periods of time unsupervised. The child may not necessarily be the most reliable informant either as they may underreport antisocial behaviour or indeed over-report, depending on how they value and perceive such behaviours and wish to represent themselves. However, this presented a dilemma in interpreting the results. It was found that paternal antisocial personality moderated the association between parent

report corporal punishment and teacher report antisocial behaviour. Put another way, it was also found that paternal antisocial personality didn't moderate the association between parent report corporal punishment and child- or parent-report antisocial behaviour. These inconsistencies make interpretation of results difficult. If the child's measure is most accurate, then paternal antisocial personality doesn't moderate the association between corporal punishment. Alternatively, as hypothesised in the discussion section, it may be that teacher report provides only a measure of the school-based antisocial behaviour and this may explain why its correlation with parent and child report is not high. Consequently, it is possible that corporal punishment leads to an increase in antisocial behaviour at school for those with an antisocial father and a decrease for those without an antisocial father. However, it has no effect on antisocial behaviour outside of the school environment.

Ultimately, it is possible that all reports of antisocial behaviour are valid. It might be expected that a parental behaviour such as corporal punishment would not have a global impact on all antisocial behaviour, but only certain types. Perhaps the types of behaviour it has greatest impact on is that witnessed by teachers. For example, corporal punishment may lead to an increase in child aggression which manifests in fighting and bullying at school. This would be reflected in an increase in teacher report antisocial behaviour. Corporal punishment may not have such an impact on other types of antisocial behaviour, such as graffiti, theft, or vandalism, so would not have as much impact on child report which probably reflects a much broader assessment of antisocial behaviour.

Difficulties also exist with measures of parenting. If we wish to study what parenting behaviours best predict antisocial behaviour (and as a result modify those behaviours accordingly) it is necessary to establish how best to operationalise and assess these behaviours. Parent and child report of parenting do not always correlate highly (in this study, parent and child report of ineffective discipline was only modestly correlated). Where does the genuine level lie? Or is that not important? Perhaps the child's perception is more important than any objective measure? It is possible that the relative importance of objective and subjective measures may depend on which parenting behaviour is being assessed.

If a child report of corporal punishment is low compared to the parent report, perhaps the child's perception is more important than the more objective measure by the parent. Perhaps what is more important is the meaning the child attaches to the behaviour. For example, in the case of corporal punishment, if a child is smacked a lot but interprets smacking as a normal and justified action that does not mean he is not loved and wanted by his parents, would he be less affected than a child who is smacked rarely but interprets such behaviours as abusive and an indication that his parents don't love him? Perhaps with ineffective discipline, which is maybe less obvious to the child and subtler, the parents report is more valid as the child may not notice that the parent is using particular disciplining techniques. These issues need to be resolved so that findings can be more confidently interpreted. For example, in this study, parent report corporal punishment was a significant predictor ($p < 0.001$) of parent report conduct problems, but child report corporal punishment did not predict at all. When translating such findings into recommendations for interventions, it

becomes necessary to establish whose report is the more valid. Unfortunately, guidelines do not exist to aid such decisions.

One weakness of the current study is that it is a cross sectional study that only includes parenting and paternal psychopathology as predictors of antisocial behaviour. It may not be helpful or meaningful to only take a concurrent snapshot of these factors and also to ignore all the other social, individual, and environmental issues at the same time. A central tenet of ecological models is that the effect of parenting is embedded in the myriad of other social factors (marital, sibling, peer relationships) to broader environmental factors ranging from neighbourhood violence to economic strain. We know from previous research that many factors moderate the associations between parenting and antisocial behaviour, such as neighbourhood safety, ethnicity, genes (e.g. MAOA gene), and age.

Studying aspects of family dysfunction in isolation from each other and in isolation from other possible causal mechanisms (e.g. biological, sociocultural) has prevented the field from being able to translate findings on family dysfunction into sound causal theories. Several studies now support the notion that the 'effects' of parenting are unlikely to be sample or population wide.

This presents researchers with something of a challenge. It was certainly felt by this researcher that the study was limited by not having considered and controlled for all these factors. However, the gold standard for research design also needs to be balanced with pragmatism and realistic expectations. The complexity of antisocial behaviour and conduct disorder can become overwhelming when designing and

conducting a study. Gone are the days of simple correlations leading to simple causal explanations. Given that studies are now showing how one parenting behaviour can have opposite effects on the child depending on age, ethnicity, genes, gender, neighbourhood, peer relationships, parental antisocial behaviour, temperament etc. it can feel like any study is too limited, that enough factors haven't been controlled for.

Obviously a sample size of 20,000, twin/adoption study design carried out longitudinally over 25 years would allow for large enough cell sizes to account and control for the various factors that have shown to be important, such as age, ethnicity, peer group status, socioeconomic background, parental substance abuse, genetic liability, neighbourhood violence, school or kindergarten aggression, etc. However, these types of studies are extremely expensive and rare. Such a 'gold standard' study would assess the full range of antisocial behaviour and parenting behaviours, using a multi-informant multi-method approach. We know that there are critical ages for the child at which particular parenting behaviours may have the greatest and most enduring impact. Elucidating and understanding these complex interplays would only be possible using a longitudinal design. Given that for the majority of researchers such a study design is unachievable, the challenge instead centres on conducting meaningful research that adds to the field, but is able to minimise the number of limitations and thus increase the external validity of the results.

There is a personal motivation to conduct this research that drives my interest in this topic. There is a growing concern about the rising proportion of children with severe antisocial behaviour. There is also recognition that if left untreated, this behaviour

can result in huge personal, social and financial costs. I am also motivated by the belief that severe antisocial behaviour is a societal problem for which we all have collective responsibility, and interest in this specific area of antisocial behaviour (i.e. parenting) is driven by the belief that a potent way of improving these children's prospects is through modifying their family environment.

Individuals seeking to shape policies are motivated by the goal of 'making evidence the catalyst for social change'. They are eager to translate research findings from studies of parent-child relationships and child adjustment to a broader context and for a larger sample of families who might benefit. Researchers fulfil a crucial role in communicating the findings from their research to those who are best positioned to effect change: local authority policy makers, central government departments, and parents themselves. However, the underlying motivation for change may not always be the same. For example, the Treasury commissioned Sure Start for economic reasons. They sanctioned Sure Start out of a desire to save money in the long-term having uncovered the long-term costs of untreated antisocial behaviour.

Psychologists on the other hand may be motivated to improve the children's' quality of life and make their goal 'making children in this country happy'. Whilst these two apparently conflicting objectives may not necessarily be mutually exclusive, it is an important consideration in terms of being realistic about the limitations of translating research into practice. If we find that changing something (i.e. after school activities, team building activities) improves children's quality of life and makes them happy, but does not reduce their antisocial behaviour (i.e. doesn't reduce the cost to the treasury in the short- or long-term), will recommendations to achieve this aim be considered a priority or even relevant? Put another way, if we find that taking

antisocial children out of their family home and placing them in treatment foster care leads to significant reductions in antisocial behaviour but a decrease in child psychological well being, would the ends be considered to justify the means?

The myriad nuances and qualifications that shape our understanding of the development of severe antisocial behaviour are only starting to be uncovered, yet the most effective treatment for antisocial behaviour at present is parenting programmes. However, these tend to be manualised, which does not seem to reflect the complexity of the research on which it is based. This is perhaps one of the reasons that parenting programmes have largely been found to be ineffective in reducing antisocial behaviour (Lipsey, 1995). Clearly, the most effective treatment would depend on a thorough assessment of the child, his family, the socio-cultural background, social-cognitive abilities etc, and then a treatment package could be tailored to match the child's needs. However, such a treatment would require resources that do not presently exist in the public health service.

Whilst research that seeks to understand how to ameliorate antisocial behaviour and how best to help the most disadvantaged, severe and in need group is a valuable endeavour, it is also essential to find more effective ways of engaging them in services. Research may find the panacea for antisocial behaviour, but this is only helpful if there is an efficient and effective way of finding those in need and getting them engaged in services. Currently in the UK, approximately 25% of children who meet diagnostic criteria for an impairing mental health disorder get to a specialist health service (Meltzer et al., 2000).

Despite the daunting challenges facing researchers in this area, the good news is that environment does have an impact on child's adjustment. There is convincing evidence from numerous studies that genetic antisocial predispositions manifest in problem behaviour only when environmental risk is high (i.e. Bohman, 1996; Mednick, Gabrielli, & Hutchings, 1984). Indeed, in the present study, it was found that having an antisocial father predicted increases in child antisocial behaviour, but only if the parents used high levels of corporal punishment. When that aspect of environmental risk (use of corporal punishment) was low, having an antisocial father did not predict increases in child antisocial behaviour. These findings should encourage researchers to continue with the difficult challenge of identifying how best to help such a damaging disorder.

3.2 References

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Appendix B: Information sheet and consent form for parents of children within the clinical sample.

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INFORMATION AND CONSENT FORM FOR PARENTS

FOLLOW-UP STUDY OF CHILDREN AND YOUNG PEOPLE SEEN BY CHILD AND FAMILY SERVICES BETWEEN 1995 AND 1999 (This study is funded by The Health Foundation)

INTRODUCTION: Between 1995 and 1999, your child was seen by the Child and Family Consultation Service, because at the time their behaviour was causing concern. You kindly helped us then by agreeing to be interviewed, and to being videotaped while you played with your child.

Now that your child is older, we would like to know how he/she is getting along. This will help us to find out whether the treatment offered at the time had lasting benefits, or whether anything further could have been done.

ASSESSMENT: If you agreed to be seen again, this would involve:

- An interview with you to get a detailed picture of your child's habits and behaviour
- Questionnaires for you and for your child's teacher to fill in
- A reading and ability test for your child (which could take place at school)
- A videotape of you and your child talking together at home.
- A videotape of your child being interviewed

The interview would take a couple of hours, and the video 30 minutes. The questionnaires would be left with you to be completed whenever was most convenient for you.

All information from these assessments will be kept securely, and treated in confidence, in keeping with the Children's Act (1989). Only the research team will have access to the information, which will be used for research purposes only. By taking part in the study, you will be helping other families in the future by enabling us to find out the most effective way to help children make a good start in school.

To compensate you for your time, we are able to pay you £20.00, with a further £10.00 for your child. You can withdraw from the project at any time without having to give a reason. If you decide not to take part in this study, your choice will be fully respected, and it will not affect the schooling your child usually receives.

If you have any queries about the study, please call Jackie Briskman, the Senior Researcher on

CONSENT

I, (Parent's name)

the parent/guardian of (Child's name)

agree to take part in the SPACE project described on the attached information sheet, and explained to me by

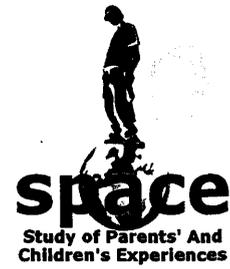
..... (Researcher's name in capitals)

I have read the attached information sheet and understand it. I also understand that if I change my mind and decide not to take part, I may withdraw from the study at any stage without having to give a reason.

Signed (Parent's Signature)

Date

Signed (Researcher's Signature)



CONSENT TO CONTACT MY CHILD'S TEACHER

I **do / do not** give permission for the SPACE project team to contact my child's teacher to request information on his/her progress at school.

I **do / do not** give permission for the SPACE project team to visit my child at school to conduct an assessment.

I **do / do not** give permission for the SPACE project team to conduct a video-taped interview as part of this assessment.

I **do / do not** give permission for the SPACE project team to inform my child's teacher of his/her scores on ability tests included in the assessment.

Signature

Name

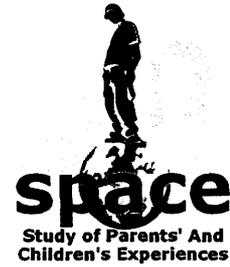
Date

Appendix B: Information sheet and consent form for child within the clinical sample.

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**INFORMATION AND CONSENT FORM FOR YOUNG PERSON
FOLLOW-UP STUDY OF CHILDREN AND YOUNG PEOPLE SEEN BY CHILD
AND FAMILY SERVICES BETWEEN 1995 AND 1998**
(This study is funded by The Health Foundation)

INTRODUCTION: Between 1995 and 1998, when you were younger, your family and yourself were seen by the Child and Family Consultation Service, because at the time your parent(s) wanted advice on how you were getting on at home and at school. You kindly helped us then by letting us videotape you playing with your mother.

We would now be interested to know how you are getting along. This will help us to know what effect seeing the Family Services has on young's people's later experiences.

ASSESSMENT: If you agreed to be seen again, this would involve:

- An interview with you to get to know how you are getting on at school and with your family
- Questionnaires for you to fill in (on a computer)
- A reading and ability test (which could take place at school or at home, whichever you prefer)
- A videotape of you and your mother talking together at home.

The interview would take half an hour, and the tests 40 minutes. The computer questionnaires would take about half an hour.

All information from these assessments will be kept securely, and treated in confidence, in keeping with the Children's Act (1989). Only the research team will have access to the information, which will be used for research purposes only. By taking part in the study, you will be helping other families in the future by enabling us to find out the most effective way to help children make a good start in school.

To compensate you for your time, we are able to pay you £10.00. (We will also be making a payment to your parent for taking part). You can withdraw from the project at any time without having to give a reason. If you decide not to take part in this study, your choice will be fully respected, and it will not affect the schooling you usually receive.

OVER

PLEASE TURN

If you have any queries about the study, please call Jackie Briskman, the Senior Researcher on

CONSENT

I, (Young person's name)

agree to take part in the SPACE project described on the attached information sheet, and explained to me by

..... (Researcher's name in capitals)

I have read the attached information sheet and understand it. I also understand that if I change my mind and decide not to take part, I may withdraw from the study at any stage without having to give a reason.

Signed (Young Person's Signature)

Date

Signed (Researcher's Signature)



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INFORMATION SHEET FOR TEACHERS

FOLLOW-UP STUDY OF CHILDREN AND YOUNG PEOPLE WHO TOOK PART IN A FAMILY STUDY BETWEEN 1995 – 1999

Introduction: Between 1995 and 1999, your pupil and his/her family were part of a research study. Of the families who took part, some were assigned to a group which examined styles of parenting, while others were part of a control group.

Overall, the results of the study showed a significant improvement in family functioning and relationships (when compared with families on a waiting list). The families were visited a year later, and it was found that these gains had been sustained. These results have been published in the BMJ (Vol 323, July 2001).

The aim of our current study is to assess whether these positive effects have lasted beyond the period of the original study. We will be interviewing all the children's parents to find out what has happened to them in the interim, and how the children function at home. We will also be taking into account a wide range of social, economic and environmental influences on the children's subsequent development and behaviour.

We would like to see the child while s/he is at school, to make an assessment of verbal and non-verbal skills, as well conduct a short videotaped interview. As part of the original study, the child's teacher filled in a questionnaire. It would be very helpful if you could also assist us by completing a version of the same questionnaire, which we can then use to make comparisons with their previous assessment. We would also like to ask you some questions about support that the child may receive through school in relation to their behaviour. The information gathered from this will be stored securely and treated in confidence, in keeping with the Children's Act (1989).

If you have any queries about the study, please call Jackie Briskman, the Senior Researcher on the project, on [redacted]. The project director is Dr Stephen Scott, Consultant Child and Adolescent Psychiatrist.

Appendix C: Alternative introductions to information sheets used for the community sample (SPOKES)

INFORMATION AND CONSENT FORM FOR PARENTS

FOLLOW-UP STUDY OF THE SPOKES PROJECT

(This study is funded by The Health Foundation)

INTRODUCTION: Between 1998 and 2001, you kindly took part in the SPOKES Study. SPOKES (**S**upporting **P**arents on **K**ids **E**ducation in **S**chools), was looking at ways of giving children a good start by showing their parents methods that teachers use to improve children's reading and behaviour. At that time, you and their teacher filled in questionnaires, you were interviewed, and your child was videotaped playing with you.

We would now be very interested to see how your child has progressed since that time. The results of this study will help us to assess how effective the SPOKES methods were, and what other teaching programmes schools might use to ensure that all pupils are given the best ways of achieving their potential.

We would like to invite you to take part in this new follow-up study, which we have called SPACE (**S**tudy of **P**arents' **A**nd **C**hildren's **E**xperiences). It is just an assessment, and does not involve taking part in any training groups.

INFORMATION AND CONSENT FORM FOR YOUNG PERSON

FOLLOW-UP STUDY OF THE SPOKES PROJECT

(This study is funded by The Health Foundation)

INTRODUCTION: Between 1998 and 2001, you and your parents took part in the SPOKES Study. (SPOKES stands for **S**upporting **P**arents on **K**ids **E**ducation in **S**chools). This study was looking at ways of giving children a good start by showing their parents methods that teachers use to improve children's reading and behaviour.

We would now be interested to know how you are getting along. This will help us to find out what effect the SPOKES method has on young people later on. We have called this new follow-up study "The SPACE Project", and we would like to invite you to take part.

INFORMATION SHEET FOR TEACHERS

FOLLOW-UP STUDY OF THE SPOKES PROJECT

(This study is funded by The Health Foundation)

INTRODUCTION: Between 1995 and 1998, your pupil and his/her family were part of the SPOKES Study. SPOKES (Supporting Parents on Kids Education in Schools), was looking at ways of giving children a good start by showing their parents the methods that teachers use to improve children's reading and behaviour. This project was carried out in eight Lambeth schools with reception and year 1 pupils.

We are now contacting all the families who took part in the original study, to find out how their children have progressed since that time. The results of this research will help us to assess how effective the SPOKES methods were, and what other teaching programmes schools might use to ensure that all pupils are given the best ways of achieving their potential.

We will be interviewing all the children's parents at home to find out what has happened to them in the interim, and how the children behave at home. We will also be taking into account a wide range of social, economic and environmental influences on the children's subsequent development and behaviour.

As part of the original study, the child's teacher filled in a questionnaire. It would be very helpful if you could also assist us by completing a version of the same questionnaire, which we can then use to make comparisons with their previous assessment. We may also like to see the child while s/he is at school, to make an assessment of verbal and non-verbal skills. We would also like to ask you some questions about support that the child may receive through school in relation to their behaviour. The information gathered from this will be stored securely and treated in confidence, in keeping with the Children's Act (1989).

If you have any queries about the study, please call Jackie Briskman, the Senior Researcher on the project, on [redacted]. The project director is Dr Stephen Scott, Consultant Child and Adolescent Psychiatrist.

Appendix D: Observation: Task Instructions & Sample Coding Scheme.

Task Instructions

Before beginning the task/whilst filling in the forms, check that the sound is working on the camera and that it is in the right place. Try to have them parent and child sitting by a table, as this makes the 3rd task easier.

1. PLANNING TASK

“I’d like you to imagine you’re all going on a 2-day holiday together. suppose that you are given X £ to spend. You both have to decide on where you will go, how you will get there, where you will stay overnight, and what you will do there during the day. You have just five minutes to agree on all these things. I will leave the room while you’re discussing this”.

Money allocated for hypothetical holiday:

- Just mum and one child (£200 for adult, £100 for child) = £300
- For every additional person (including partner or other children) - £100
- Maximum amount to allocate (irrespective of who is going) - £800

Give them the sheet summarising what they have to discuss and leave the room.

2. HOT DISCUSSION TOPICS TASK

Place Issues Checklist in front of mother and say:

“We're going to use this checklist to help figure out the issues you might want to talk to your son/daughter about. I mean things like keeping their room clean, having friends over.... (read introduction on the Issues Checklist). We are interested in what topics parents and their.... “.

Have Mother fill out checklist. Instruct mother to read items and first decide if it's a topic/issue/problem. If it's not, she'll choose 0-No Problem. If it is a topic/issue/problem, have her rate how hot the topic is. (So, doing homework is a topic. How hot/how mad are you about that? Not at all hot, hot, or boiling hot. So, it goes from not at all hot to really hot.) Make sure mum is choosing issues. Provide guidance as necessary.

After mother has completed checklist, have her decide on top four hottest topics rated in order of Hottest, 2nd Hottest, etc.. Look at the ratings and help mum select four of the "hottest" topics to talk about. Write the numbers of the top four topics in order of "heat intensity" in the box on page 3 of the checklist. It's okay if she can't come up with four topics, but she needs at least three topics (in case one of her topics is the same as youth's topic).

For this next activity, I'd like you to stay in these chairs. We're interested in learning about how families talk about issues. First, you'll talk about an issue that Mom picked.

So, for the next few minutes, please talk about (issue). Talk about what the issue is and try to work toward solving it. If you get done talking about this issue, you can talk about whatever you like, - except please do not talk about the other issues you previously chose. Please stay seated in the chairs until I come back. Do you have any questions? Then you can begin as soon as I close the door.

Start camera, leave the room and set your timer for 5 minutes.

At the end of 5 minutes, return and switch off the camera.

Repeat using the hot topic chosen by the child.

1 TOPICS HOW HOT

	N/A	Not at all Hot	Hot	Boiling Hot
1. Going to bed/getting up in the morning	0	1	2	3
2. Cleaning up bedroom	0	1	2	3
3. Doing homework	0	1	2	3
4. Telephone problems	0	1	2	3
5. Using the television	0	1	2	3
6. Cleanliness (washing, showers, etc.)	0	1	2	3
7. Clothes and appearance	0	1	2	3
8. Making too much noise at home	0	1	2	3
9. Mealtimes	0	1	2	3
10. Fighting	0	1	2	3
11. Swearing	0	1	2	3
12. How money is spent	0	1	2	3
13. Choosing books, movies, videos, music	0	1	2	3
14. Issues around money/ pocket money	0	1	2	3
15. Playing stereo or radio too loudly	0	1	2	3
16. Going places without adults	0	1	2	3
17. Turning off lights or appliances in house	0	1	2	3
18. Taking Drugs	0	1	2	3

	N/A	Not at all Hot	Hot	Boiling Hot
19. Going on dates	0	1	2	3
20. Drinking beer or other alcohol.	0	1	2	3
21. Unsuitable friends	0	1	2	3
22. Sex	0	1	2	3
23. Coming home on time	0	1	2	3
24. Getting to school on time	0	1	2	3
25. Getting in trouble at school	0	1	2	3
26. Lying	0	1	2	3
27. Helping out around the house / messiness.	0	1	2	3
28. Talking back and arguing with parent(s)	0	1	2	3
29. How to spend free time	0	1	2	3
31. Not spending enough time with Child	0	1	2	3
30. Punishment issues	0	1	2	3
31. Attending family events	0	1	2	3
32. School problems	0	1	2	3
33. Video games, computer games	0	1	2	3
34. Driving cars/scooters	0	1	2	3
35. Internet use	0	1	2	3
36. Not knowing where child is.	0	1	2	3

3. CONSTRUCTION TASK

For this next activity, I'm going to give you a model that I'd like you (child) to have a go at. It's quite hard so don't expect to finish it in the time. Just do as much as you can with (mum)'s help. Is that ok?

Start camera, time for 5 minutes.

Return and praise for how well they've done with the model.

Sample Coding Scheme

Warmth/Support

This scale measures the degree to which the target is positive to the other, is nice to the other, enjoys being with the other, and is supportive of the other. Take the following into account:

NONVERBAL COMMUNICATION, such as physical gestures (i.e. touching, kissing, hugging, holding hands, arm over the back of the other's chair) and body posture (i.e. relaxed, sitting close, facing the other), and eye contact;

EMOTIONAL EXPRESSION, such as smiling, laughing, seeming content, happy or good humoured;

SUPPORT, such as responsiveness, showing concerns for the other's welfare, offering encouragement or praise, offering to change behaviour for the other;

CONTENT of the statements themselves such as "I like you" or "you're doing much better".

1. The target **RARELY OR NEVER** displays examples of warmth and support for the other. He/she may be **MINIMALLY RESPONSIVE** (i.e. head nods, um-hmms, yes/no answers) to the other and/or **OVERLY ANGRY AND REJECTING** and does not appear to be interested in or to be enjoying the interaction or the other's company. He/she does not go out of his/her way to be nice to the other.
2. The target displays **SOME EVIDENCE** of warmth and support. He/she is **OCCASIONALLY** caring, concerned, or encouraging; is **RESPONSIVE** to the other and displays **SOME INTEREST** in the other (i.e. occasionally solicits other's opinions or concerns); **AND/OR** displays some evidence of enjoying the other's company, or makes an occasional encouraging or enthusiastic remark. There is some evidence that the target is nice to the other.
3. The target displays **MORE FREQUENT AND INTENSE** warmth and support. He/she is **RESPONSIVE**, **INTERESTED** and **ATTENTIVE** to the other and may offer to change his/her behaviour after hearing the other's needs. He/she displays more **POSITIVE EMOTIONAL EXPRESSIONS** (i.e. smiles, frequent eye contact, and touching) or more **SUPPORT** (i.e. interest in other's concerns, low level sympathy, or eliciting other's point of view even if it is in conflict with his/her own). (see clarification #4)
4. The target is **HIGHLY** warm and supportive. He/she **USUALLY** displays high warmth and support by actively soliciting information about the other's concerns, offering a high degree of encouragement and praise, and/or the target may display high degree of touching, smiling, eye contact, or laughing. The target is **USUALLY NICE** to the other. (see clarification #5)
5. The target is **CONSISTENTLY** warm and supportive. He/she offers a high degree of support, encouragement, and praise; actively solicits the other's opinions and concerns; maintains eye contact; and **FREQUENTLY** touches smiles at or laughs with the other. The target is **GENUINELY NICE** to the other even if the other is angry, rejecting, or coercive.

Clarifications: Warmth/Support

1. Positive affect at the others expense IS NOT warmth or support.
2. The highly warm target is generally positive and pleasant.
3. It is important to note that Warmth/Support can be expressed by a variety of behaviours, some of which are assessed by other scales in the coding system: communication, positive mood, and self-disclosure. Consider the general nature of the Warmth/Support scale when rating with it, and REMEMBER THAT IT IS OK THAT THERE IS SOME OVERLAP.
4. In order to score “3”, the target must not only be responsive, but he/she must also show either a higher degree of positive emotional affect, or show moderate support. Examples include:
 - a. Responsive AND interested.
 - b. Showing concern for the other’s welfare.
 - c. Taking interest in the other’s concerns.
 - d. Actively eliciting information about the other’s point of view even if it is in conflict with his/her own.
 - e. Low level, nonpersonalised sympathy (“that’s understandable”) or empathy (“you feel sad, right?”)
 - f. Nonpersonalised praise (“things have been getting better lately”).
5. In order to be scored “4” the target must consistently show support. Examples include:
 - a. Offering praise or encouraging comments (“I think your behaviour has improved” or “you’re a good daughter”).
 - b. Showing personalised empathy (“I feel that way too sometimes”).
 - c. Showing higher levels of sympathy (“I’m sorry she hurt you”).
 - d. Demonstrating a willingness to change his/her behaviour for the other, and/or to accept responsibility for some of the problems (“Yes, I am too hard on you”).

Coding Strategies: Warmth/Support

Warmth/Support may be displayed through some combination of the following behaviours:

1. Nonverbal communication:
 - a. Physical gestures – touching, kisses, hugs, tickling.
 - b. Body posture – relaxed, attentive, sitting close.
 - c. Eye contact – displaying interest, looking often at the other when listening or emphasising a point.
2. Emotional Expression
 - a. Smiling, laughing
 - b. Seeming happy and pleasant
 - c. Enjoying the other’s company
 - d. Affectionate
 - e. Good humoured.

Involvement

This scale assesses the degree to which the target is involved in the interaction with the other. Take into account the degree to which the target is genuinely involved in the conversation, initiates ideas within the topic areas, or initiates new topics if necessary. There are no positive or negative judgements implied by Involvement. The target can be highly involved in either a positive or negative manner.

1. the target is characteristically **UNINVOLVED** or **INACTIVE** and shows no interest in interacting with the other person. His/her participation is very limited. The target responds to the comments of the other with brief head nods or headshakes or monosyllabic statements. The target **MAY BE SOMEWHAT RESPONSIVE**, but he/she virtually never initiates interaction nor attempts to solicit the other's point of view.
2. the target is **OFTEN UNINVOLVED** or **INACTIVE** but shows some interest in interacting with the other person. He/she may participate in the conversation, but his/her involvement is solicited and responsive in nature. The target may often limit his/her participation.
3. the target is more often involved. He/she will occasionally initiate his/her own ideas about the topics discussed, and will contribute to the conversation, but he/she may not bring up new topics if the conversation lags or encourage the other's participation.
4. the target is **USUALLY ACTIVE AND INVOLVED**. He/she contributes his/her ideas and initiates new topics if necessary. The target **MAY SOLICIT** the other's point of view in order to encourage his/her involvement. There may be a few examples when the target withdraws or limits his/her participation, or fails to bring his/her opinions.
5. the target is **CONSISTENTLY INVOLVED AND ACTIVE**. He/she consistently **INITIATES** his/her ideas within the discussion and switches topics if the conversation begins to stagnate. The target encourages the other's involvement either by soliciting the other's point of view or egging the other on. There is virtually no evidence of withdrawal or limited participation.

Clarification: Involvement

1. involvement can be positive or negative. The target can be either highly angry or coercive **OR** highly warm and supportive and be scored on the high end of the Involvement scale.
2. in order to score a "3" the target **MUST** initiate his/her ideas or opinions about the subjects discussed. He/she **MUST** contribute to the conversation and not be solely responsive.
3. in order to be scored a "5" the target must consistently initiate his/her ideas about the subjects discussed, solicit the other's point of view in order to encourage his/her participation, or initiate new topics of discussion if and when necessary.
4. examples of limited involvement:

- a. target talks to the camera or to a third person about the other instead of addressing the other directly. (“Ron is a fine son”, “Michelle thinks that i treat her unfairly”)
- b. “Dead Air” is exhibited (several seconds pass during which time the subjects seem to have nothing to say to each other).
- c. Everything that the target says is solicited and in response to the questioning and encouragement of the other.
- d. The target limits or withdraws his/her participation. This may be demonstrated by body posture which is oriented away from the other.
- e. The target asks questions which seem designed to take up time, but which do not elicit more discussion. (“Nice weather we’re having, isn’t it?”, “So, are you dating anyone now?”, “What classes did you say you were taking this year”.)
- f. The target doesn’t respond to the other even when asked a direct question.

Communication Skills

This scale measures the degree to which the target demonstrates good communication skills. Good communication entails several components:

- (A) the ability to clearly state opinions, wants, and needs;
- (B) the ability to listen to the other so that responses are appropriate and reasonable;
- (C) the use of explanation and clarifications;
- (D) the solicitation of the other's views, encouraging the other explain and clarify his/her point of view.

1. poor communication skills predominate. The target RARELY uses reasoning, explanations, and clarifications to make himself/herself understood. His/her comments may be difficult to follow, short or monosyllabic, or disruptive; are often SOLICITED and ADD LITTLE TO THE CONVERSATION. Looking and listening behaviours are poor. The target does not solicit the other's views and does not give the other appropriate feedback.
2. the target displays some BASIC communication skills, i.e. answers questions and listens to the other. However, he/she rarely elaborates or clarifies; rarely solicits the other's views or verbalisations are primarily solicited.
3. the target display AVERAGE communication skills. He/she can clearly express needs, wants, and opinions, and occasionally uses explanations and clarifications. The target displays some looking and attending behaviours but rarely solicits the other's views, explanations or clarifications. OR, the target solicits but does not clearly explain his/her point of view.
4. good communication skills predominate. The target clearly expresses his/her wants, needs, o opinions, FREQUENTLY uses clarifications and explanations, LISTENS to and SOLICITS the other's views. However, there are a few instances when poor communication skills are displayed.
5. the target CONSISTENTLY displays good communication skills. He/she is able to tailor his/her explanations and clarifications to the cognitive level of the other and is able to modify his/her approach to more effectively convey his/her needs, wants, or opinions. He/she SOLICITS the other's views and gives the other APPROPRIATE FEEDBACK.

Clarifications: Communication Skills

1. Good communication skills:
 - a. Identifies own position clearly
 - b. Tailors comments to cognitive level of the other.
 - c. Expands upon own statements with clarifications and examples.
 - d. Asks follow up questions
 - e. Asks open ended versus closed questions.
2. Reasoning: Has logical arguments that follow the other's comments.
3. note that SOLICITATION does not mean just asking questions. The questions must be asked for the purpose of understanding the other person's point of view or for helping the other to understand the target's point of view. An indication of poor solicitation skills would be asking only closed ended

questions, not giving the other a chance to answer a question, or asking negative, manipulative questions.

4. even if all good communication skills are not displayed (e.g. eye contact), the target can still receive a high score if he/she excels in other areas of communication (e.g. solicitations and explanations). A target who does not solicit can still receive a high communication score if the solicitation is replaced by verbal turn-taking and non-verbal solicitation: the target invites the other to express his/her point of view by pausing and giving the other plenty of opportunity to talk and the other volunteers his/her point of view frequently. If the target has no opportunity to solicit especially children) but still displays very good explanation, clarification and listening skills, he/she can still score up to a "4".

Coding Strategies: Communication Skills.

1. The target should not be rated down for an idiosyncratic manner of communication which appears unclear to the coder, yet is understandable to the listener in the interaction. The target should still display reasoning, clarifications, and listening behaviour in some form in order to be rated high on communication.
2. interruptions: Look at the outcome of the interruption:
 - a. Good Outcomes: the target may
 - i. Expand on his/her views when the other misunderstands
 - ii. Clarifies other's position
 - iii. Clarify his/her position
 - iv. Agree with the other.
 - b. Bad outcomes: the target may:
 - i. Disrupt the conversation
 - ii. Not allow the other to present his/her views or to clarify his/her views.
 - iii. Prevent the resolution of a problem.
3. coercion and assertiveness are naturally a part of communication. Someone who is highly coercive would be scored lower accordingly.

Anger/Rejection/Hostility

This scale measures the intensity of the target's most extreme, angry, rejecting, or hostile behaviour. Look for the following:

NONVERBAL BEHAVIOUR, such as a frown, an irritable, sarcastic, or curt tone of voice or shouting;

REJECTION, such as actively ignoring the other, turning away from the other, failing to listen to the other, or denying the other's needs;

CONTENT of the statements themselves, such as critical remarks, denigrating remarks, e.g. "you don't know anything" or "you have an irritating personality".

Bear in mind that just because two people disagree, that does not necessarily mean they are angry, rejecting or hostile.

1. The target displays no negative, angry, rejecting, or hostile behaviours.
2. The most extreme negative, angry, rejecting, or hostile behaviour is of **LOW INTENSITY** and is **QUICKLY ABATED**. Examples: a frown, a mildly negative (e.g. frustrated or irritable) tone of voice, a mildly critical remark, an abrupt remark or refusal, mild passive rejection, or a brief low intensity argument.
3. The most extreme negative, angry, rejecting or hostile behaviour is of **LOW to MODERATE INTENSITY** and is **QUICKLY ABATED**. Examples: a more critical remark, taunt or tease, moderate passive rejection, or a brief low intensity argument.
4. The most extreme negative, angry, rejecting or hostile behaviour is of **MODERATE INTENSITY**. Examples: a curt or irritable response, moderate active rejection, or some moderately intense anger or criticism. (the intensity of the negative affect helps to distinguish between a "3" and a "4".)
5. The most extreme negative, angry, rejecting or hostile behaviour is of **HIGH INTENSITY**. Examples: more intense and prolonged critical comment, denigration, mocking or shouting. The target may also show more intense rejection or rebuffing of the other person's requests for assistance or affection.

Clarifications: Anger/Rejection/Hostility

1. This scale is **NOT** an assessment of the general amount of negativity generated between two people. This scale **IS** an assessment of negative, angry, rejecting, or hostile behaviours directed by one person to another.
2. Hitting (not playful or teasing hitting) is scored a least a "4". Prolonged or frequent bouts may be scored a "5".
3. Keep in mind that when no overt anger or hostility is demonstrated, a person can receive a high score on this scale for being passively rejecting (e.g. ignoring, turning away).
4. Criticism is **NOT** considered negative or hostile if it is presented in a constructive, non-denigrating, or supportive manner.

Coding Strategy: Anger/Rejection/Hostility

Angry, ejecting, or hostile behaviours may be displayed through some combination of the following behaviours:

1. Nonverbal communication
 - a. Facial gestures: frowning, scowling, disgust, disdain.
 - b. Body postures: hands on hips, shaking a finger at the other, turning away from the other, rejecting positive physical advances of the other.
2. Emotional Expressions:
 - a. Irritable
 - b. Negative sarcasm
 - c. Tense
 - d. Angry, curt, sharp, or sneering tone of voice.
3. Rejection
 - a. Deliberately ignoring the other
 - b. Not responding to the other or responding in minimal/monosyllabic terms.
 - c. Denying the other's needs
 - d. Mocking the other
 - e. Making non-constructive critical statements
 - f. Making abrupt or unreasonable refusals.
 - g. Being Rude