

EXPOSURE TO CHILDHOOD PHYSICAL ABUSE AND LATER PARENTING OUTCOMES

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Abstract

Data from a prospective, longitudinal study of a birth cohort of over 1000 New Zealanders was used to examine the relationships between the level of childhood physical abuse a young person is exposed to during childhood (birth to 16 years), and a range of later parenting outcomes in young adulthood. To address this issue, three questions were considered. First, the study examined risk factors that contribute to an early transition to parenthood. Second, this study investigated the current family circumstances of contemporary young parents and their families. And finally, the association between childhood physical abuse and later parenting outcomes was examined. All members of the Christchurch Health and Development Study (CHDS) who had become parents by age 25 (112 women and 55 men) were included in the study. To be eligible for inclusion cohort members had to be either biological parents or actively involved in the parenting of non-biological children on a regular basis. Exposure to childhood physical abuse (CPA) was measured at ages 18 and 21 based on cohort member's retrospective reports. At age 25, a parenting interview was conducted which included the following measures of parenting: the Conflict-Tactics Scale (CTS-PC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), Dunn scales of positivity and negativity (Dunn, Deater-Deckard, Pickering, & Golding, 1999), the Parenting Practices Questionnaire (PPQ; Robinson, Mandelco, Olsen, & Hart, 1995), HOME ratings of responsiveness and avoidance of punishment (Caldwell & Bradley, 1979), and interviewer ratings of parental warmth, sensitivity, and child management (Quinton, Rutter, & Liddle, 1984). Findings showed that parents who experienced higher levels of punishment whilst growing up were more negative and less positive towards their own children, were more accepting of the use of physical discipline, and scored lower on warmth, sensitivity and child management compared to those with lower levels of exposure to childhood physical abuse. These findings contribute to our understanding of the effects of childhood physical abuse on later parenting outcomes.

1. Exposure to Childhood Physical Abuse and Later Parenting Outcomes

A major issue that has attracted widespread public health interest and debate concerns the extent to which individuals with a history of physical abuse during childhood are at risk of maltreating their own children. Specifically, a recurring theme in the literature regarding physical punishment is the idea that children who experience harsh or abusive parenting are likely to become harsh and abusive parents. There is some evidence to suggest that parents who experience corporal punishment during their own childhood are more likely to be accepting of the use of corporal punishment (Belsky & Pensky, 1988; Rogosch, Cicchetti, Shields, & Toth, 1995; Simons, Whitbeck, Conger, & Chyi-In, 1991), are more likely to employ physical punishment as a means of punishing their children (Dubow, Huesmann, & Boxer, 2003), and are more likely to use more extreme forms of punitive parenting (Burkett, 1991) such as harsh and abusive parenting styles. On the other side of this debate, not all research has suggested a strong association between exposure to family violence and the propensity for continuing the so called 'cycle of violence' (e.g., Ringwalt, Browne, Rosenbloom, Evans, & Kotch, 1989). Studies have reported varying rates of intergenerational transmission ranging from 1% (Widom, 1989a) to nearly 100% (Oliver, 1993). The rate of intergenerational transmission has been inconsistently reported, thus there is a need for further research to examine the extent of the impact of physical abuse on later parenting outcomes.

The current study examined the effects of exposure to physical abuse on later parenting outcomes among an early parenting cohort. Research into the continuities of punitive parenting practices is of particular relevance given that the use of physical punishment by parents is relatively common (Maxwell, 1993; Straus, 1994), and a substantial number of children are exposed to parental discipline practices that are sufficient to cause physical injury (Wolfner & Gelles, 1993). Of further interest are the effects of childhood

physical abuse on parenting outcomes in general. Research on intergenerational continuity, focusing on the processes leading to disadvantaged child-rearing conditions within high-risk families has the potential to inform and guide preventive intervention policies.

The main objectives of this study were: (1) To describe the social background, childhood, family circumstances, and personal characteristics of individuals making an early transition to parenthood by age 25. (2) To examine the current family circumstances of contemporary young parents and their families. (3) To examine associations between childhood experiences of physical abuse and later parenting outcomes at age 25. (4) To examine the impact of family structure and family background characteristics that may have modified the association between childhood physical abuse and later parenting outcomes.

As a background to this study, the following section provides an overview of the significance of family violence through examining the prevalence of childhood physical punishment and abuse in New Zealand. Furthermore, a literature review specifically examining research investigating the intergenerational transmission of family violence is presented. Additionally, given that the present study is based on a high risk sample, predictors of an early transition to parenthood and an examination of the literature on the current circumstances for contemporary New Zealand families are described. Finally, limitations to previous research are discussed, and a description of the current study is given.

Definitions

There is no single agreed upon definition for physical punishment or abuse. However, in general, physical punishment refers to the use of force to cause pain, but not injury, for the purpose of correction or control (Straus & Stewart, 1999).

In contrast child physical abuse is defined as causing physical injury, ranging from minor bruises to severe fractures or death, as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting with a hand, stick, strap, or other object,

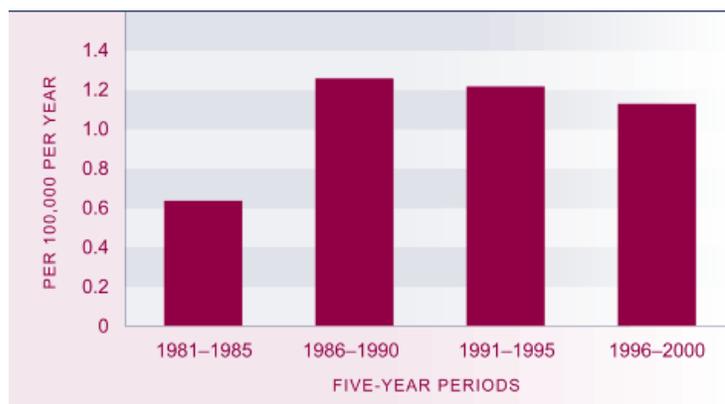
burning, or otherwise harming a child (NCCAN, 2006). Such injury is considered abuse regardless of whether the caretaker intended to hurt the child or not. Physical abuse can range widely in terms of severity and potential to cause lasting physical harm. Injuries may be relatively minor, such as bruises or cuts, or major, such as burns, lacerations, and brain or internal injuries (Wenar & Kerig, 2006).

Child Physical Punishment and Abuse in New Zealand

Child physical abuse is a significant public health issue affecting large numbers of children and families in New Zealand. In 2000 and 2001, nine children each year were victims of homicide by caregivers (NZHIS, 2003). In 2003, 33,000 care and protection notifications were made to the Department of Child Youth and Family (CYF). A further 116 children were hospitalised as a result of assault (NZHIS, 2003). The Social Report (Ministry of Social Development, 2004) stated that in the year to June 2003 7,361 children were identified as abused or neglected by CYF, resulting in a substantiated child abuse rate of 7.4 per 1,000 for children aged between 0 to 16 years.

In September 2003 a UNICEF report revealed that New Zealand has one of the highest rates of child death from maltreatment among OECD countries (UNICEF, 2003). The UNICEF table of child maltreatment deaths in rich nations ranked New Zealand third highest, with 1.2 per 100,000 children dying from maltreatment annually, behind only the United States and Mexico (both 2.2 per 100,000). These rates show a stable trend in child maltreatment rates for the past 15 years. This is illustrated in Figure 1.

Figure 1: Five-Year Average Annual Maltreatment Mortality Rates For Children Under 15 Years. (<http://www.socialreport.msd.govt.nz/safety/injury-child-mortality.html>)



Prevalence of Physical Punishment and Abuse in New Zealand

Public health records and empirical research have indicated high rates of physical punishment and child maltreatment in New Zealand. However, these statistics are probably an under-representation of the true extent of child physical abuse in New Zealand. Public records are more likely to report rates at the high end of severity of physical abuse because such injuries are more likely to be reported to public and governmental services. For this reason, a review of general population surveys is of importance. Studies regarding the use of punitive discipline practices with children add to our understanding of issues relating to the use of childhood physical abuse and punishment. Research of the general population also suggests that physical punishment is widely accepted in New Zealand.

For example, when questioned at age 26, 80% of young adults in the Dunedin longitudinal study reported having been physically punished during their childhood (Millichamp, Martin, & Langley, 2006). These retrospective rates are consistent with those reported previously from the Christchurch longitudinal study (Fergusson & Lynskey, 1997). Maxwell's (1995) national opinion poll of 1,000 adult New Zealanders found similar results with the majority of parents (88%) considering that it was acceptable for parents to smack a child in some circumstances, with twice as many men (40%) as women (21%) endorsing

severe physical punishment. Almost half (45%) of parents had used some form of physical punishment in the last week.

While physical punishment is widely accepted in New Zealand, further investigation into the use of harsh physical punishment or abuse has found rates to be around six percent of the general population. For example six to seven percent of a representative cohort of New Zealand children reported experiencing harsh or severe physical abuse from one or both parents before the age of 16 years (Fergusson, Boden, & Horwood, 2006). This figure was further validated by Millichamp, Martin and Langley (2006) who, in their sample of 962 New Zealand adults, found 6% of adults reported extreme physical punishment in retrospective reports.

Effects of Childhood Physical Abuse

Concerns about the health and social impacts of these high rates of physical punishment and abuse are strongly reinforced by evidence which shows that children exposed to punitive parenting are at a high risk for a range of adverse outcomes. These outcomes include: impaired cognitive abilities, lower levels of academic achievement, aggression, conduct problems, psychiatric disorders, suicidal behaviour, and interpersonal problems such as aggression and violence towards peers and partners (Cicchetti & Manly, 2001; Fergusson et al., 2006; Fergusson & Lynskey, 1997; Kendall-Tackett, Williams, & Finkelhor, 1993; Swinford, DeMaris, Cernkovich, & Giordano, 2000; Veltman & Brown, 2001). For example, Jaffee, Caspi, Moffit and Taylor (2001) conducted a study with a representative environmental-risk cohort of 1,116 twin pairs and their families. Their findings illustrated that physical maltreatment plays a causal role in the development of children's antisocial behaviour. Furthermore, Sachs-Ericsson, Blazer, Plant and Arnow (2005) found that individuals who experienced physical abuse in childhood were twice as likely to have a serious health problem than those who experienced no physical abuse in childhood. These

findings have prompted research concerned with identifying the causes of such parenting practices.

Intergenerational Continuities

There are a number of studies which have examined the continuities of parenting practices. In order to identify previous research examining intergenerational continuities of family violence, a search of the literature was conducted. Nineteen studies specifically examining the effects of family violence on later parenting outcomes were identified. These studies, ordered by date of publication, are summarised in Table 1. Of the 19 studies, 18 found varying continuities in the cycle of violence. The overwhelming conclusion is that there is some association between exposure to abuse in childhood and the continuity of abusive parenting practices in later life. However, the strength of this association has been diversely reported across studies.

Rates of Intergenerational Transmission

Intergenerational transmission of abusive behaviour is by no means a certainty; estimated rates of transmission vary widely from 1% (Widom, 1989a) to nearly 100% (Oliver, 1993). Egeland (1993) found that those parents whose children reported being abused were twice as likely to have been abused themselves than to have had no such history. More recently, Pears and Capaldi (2001) indicated a 23% rate of intergenerational transmission. In large part, the differing estimates are because of a number of methodological problems in the literature, including the use of retrospective designs, varying definitions of abuse, and failure to consider third variable explanations. Egeland (1993), Kaufman and Zigler (1993), and Oliver (1993) all conclude that intergenerational transmission is far from inevitable, they conclude that between 30 and 40% of abused parents will go on to abuse their children. There is evidence to suggest a number of methodological differences in these

studies including sample size, definition of physical abuse, and frequency of exposure to physical abuse. A fuller consideration of these issues will be discussed towards the end of this chapter.

Meta-analysis

Putallaz and colleagues (1998) examined the differences in rates of intergenerational abuse by examining the two predominant types of studies which characterise the literature on intergenerational abuse: prospective and retrospective. The general consensus from retrospective studies is that a parent's own experience of abuse is associated with their abuse of their own offspring. Although retrospective studies have found substantial continuity of abuse, prospective studies also reveal a second pattern, one of discontinuity, whereby some parents with an abusive history do not repeat this cycle with their own children (Hunter & Kilstrom, 1979; Kaufman & Zigler, 1987).

Continuity of Punitive Parenting Practices

To a large extent, studies have focussed on the effects of exposure to physical abuse on later punitive parenting. These studies have revealed substantial continuities in punitive parenting practices. For example, Dixon, Browne, and Hamilton-Giachritsis' (2005) in their community based study examined the intergenerational continuity of physical abuse among 4,351 families. Nurses completed assessments as part of a 'health visiting' service and found that 3.1% of parents had a history of abuse in childhood. Findings demonstrated that parents who experienced physical abuse in their own childhoods were significantly more likely to abuse their own children (1 in 15) in the first 13 months of life when compared to parents with no experience of abuse in childhood (1 in 234) (Dixon et al., 2005).

Table 1: Studies Examining the Intergenerational Continuities of Childhood Physical Abuse.

Author/s	Design	Sample	Type of Maltreatment	Measures of Abuse	Outcome Measures	Results	Strengths/Limitations
Hunter & Kilstrom (1979)	Prospective	282 parents of preterm infants	Neglect and physical abuse	Self reported neglect and abuse	Via state registry	82% of abused parents did not maltreat their offspring, 18% did.	Prospective Unrepresentative sample Definition of abuse very broad Follow up too short (1 year)
Egeland & Sroufe (1981)	Longitudinal Retrospective	160 low income mostly single mothers with a child age 4-5 years	Severe physical abuse	Retrospective reports of the quality of care they experienced as children	Observed behaviour with their own children	Transmission rate reported to be 70%.	Assessment of multiple factors Under-representative sample Broad definition of abuse
Egeland, Jacobvitz, & Sroufe (1988)	Longitudinal Retrospective Design	267 mothers from lower socioeconomic backgrounds	Physical abuse	Retrospective reports of the quality of care these mothers experienced as children. On the basis of their responses, Mothers were classified as either 'not abused' N=114 or 'abused' N=47	Observed behaviour with their own children when the infant was 7 and 10 days old, and at 3, 6, 9, and 12 months of age, and from lab observations when the infant was 9, 12, 18 and 24 months old. Additionally during each home visit, a child care rating scale was completed (Egeland & Deinard, 1975) The IPAT Anxiety Scale The Personality Research Form (PRF) The Profile of Mood States (POMS)	Abused mothers who re-enacted their maltreatment with their own children experienced significantly more life stress ($p < .05$) and were more anxious, dependent, immature and depressed At 64 months: M (SD) life stress of mothers who continued the abuse 15.0 (9.7). M (SD) life stress of mothers who did not continue the abuse 8.8 (4.5). M (SD) depression of mothers who continued the abuse 30.9 (20.4). M (SD) depression of mothers who did not continue the abuse 12.7 (7.6).	Only mothers Retrospective reports Data was obtained at multiple time points
Ringwalt, Browne, Rosenbloom, Evans & Kotch (1989)	Retrospective Cross sectional	330 new mothers whose mother and father lived at home when they were 14 years old.	Corporal punishment	Home Interviews. Mothers gave retrospective reports of violence they experienced in their childhoods	Home interview Mothers gave reports on their own approval of the use of corporal punishment	No relationship was found between violence experienced as a child and approval of corporal punishment	No standardised measures of abuse No control for severity of punishment experienced Only measure of approval of, not measure of current use of corporal punishment Only mothers

Author/s	Design	Sample	Type of Maltreatment	Measures of Abuse	Outcome Measures	Results	Strengths/Limitations
Cappell & Heiner (1990)	Retrospective	888 parents (487 females and 401 males) with one or more children (3-17 years) living at home	Physical abuse, interparental violence	Retrospective reports of experience of physical abuse and interparental violence	CTS	Aggression between parent and child in female respondents' families of origin increased the likelihood that females and males behaved aggressively toward their children ($p < .01$).	Information collected at one time point Males and females Retrospective reports. Varying ages of parents and children
Simons, Whitbeck, Conger & Wu (1991)	Longitudinal retrospective design	Iowa sample of 451 2-parent families, each of which included a 7 th grader	Harsh Discipline (psychological aggression and punitive punishment)	Self reported retrospective reports of harsh parenting experienced as children using Harsh Discipline Scale	Children reported how frequently their parents engaged in various harsh parenting practices using the Harsh Discipline Scale Self reported use of harsh parenting with their own children using Harsh Discipline Scale Commitment to Physical Discipline Scale Hostile interpersonal style	Parents self-reported lower rates of aggressive parenting than did their adolescent children. The results provide evidence for intergenerational transmission ($p < .01$) with grandmothers' parenting, but not the parenting of grandfathers, being strongly associated with harsh parenting by mothers and fathers. Correlations of grandmothers parenting with parenting of G2: $r = .25$ for fathers and $r = .24$ for mothers. Both were significant to ($p < .01$).	Parent and child reports of continuing harsh discipline. Multiple informants Longitudinal
Muller, Hunter & Stollak (1995)	Cross Sectional design	1,536 parents and 983 psychology college students recruited as part of class credit	Punitive physical punishment	CTS Aggressive behaviour scale The Demographic Questionnaire	CTS Aggressive behaviour scale The Demographic Questionnaire	Mothers corporal punishment from their own parents correlated $r = .53$ with their own use of physical punishment with their children ($p < .05$). Parents corporal punishment experiences correlated $.36$ with their own use of physical punishment with their children ($p < .05$).	Self reported questionnaires Multiple sources Not representative population
Murphy-Cowan & Stringer (1999)	Retrospective	Northern Irish parents (N=371). Reports from a posted interview. Cross section of schools	Physical punishment	Retrospective reports of their parents disciplinary behaviours	Physical punishment questionnaire Commitment to physical punishment scale Cook Medley Hostility Scale	Correlation of $r = 0.25$, $p < .0001$ observed between grandparents and parents smacking.	Sample selection bias due to a 37% return rate

Author/s	Design	Sample	Type of Maltreatment	Measures of Abuse	Outcome Measures	Results	Strengths/Limitations
Markowitz (2001)	Prospective	General population sample (N=245) and a sample of ex-offenders who had been living in the community (N=141). The analysis of violence against children is based on those who reported having children (N=214)	Physical abuse, psychological aggression	Retrospective reports of experience of family violence including physical abuse and interparental violence	Prospective reports of physical abuse	Older parents were more approving of the use of violence toward children. Experiencing violence a child was related to self reported violence against children.	
Newcomb & Locke (2001)	Longitudinal Retrospective	Community Sample (N=383 parents)	Emotional neglect, physical neglect, physical abuse and sexual abuse	Retrospective report of childhood maltreatment on the Child Trauma Questionnaire (CTQ)	Parental acceptance and rejection questionnaire (PARQ)	Results revealed a moderately strong effect of child maltreatment on poor parenting for both mothers ($r=.36$, $p<.0001$) and fathers ($r=.38$, $p<.05$).	Retrospective Single informant
Sidebotham, & Golding (2001)	Nested case-control study based on a longitudinal birth cohort. Retrospective	Sample consisted of 14,138 children	Sexual abuse, physical abuse or emotional abuse	Retrospective reports using the Parental bonding instrument	Child protection registers screened for any investigations of abuse or neglect	Mothers who were physically abused were more likely to have children investigated for abuse (12.6% compared to 3.4%, $p<.01$). Fathers who were physically abused were more likely to have children investigated for abuse (14.4% compared to 5%, $p<.05$).	Large sample size Single category for maltreatment Limitations of legal records only – no known perpetrator
Pears & Capaldi (2001)	Longitudinal retrospective study	Parents (N=109) and their male children. Participants were recruited from the highest crime-rate areas of a medium sized city	Physical Abuse	Retrospective reports of their own experiences of abuse using the Assessing Environment III Questionnaire	Ten years later the G2 youths reported on the G1 parents' abusive behaviour toward them Assessing Environments III Questionnaire	23% of the G1 parents who had been abused as children had a G2 youth who reported being abused, compared to only 10% of the parents who reported no history of having been abused ($p<.08$).	Retrospective self reports of experiences of abuse
Bower-Russa, Knutson, & Winebarger (2001)	Retrospective	225 Caucasian undergraduate psychology students	Punitive discipline	Retrospective reports of their own experiences of physical discipline using the Assessing Environments III Questionnaire (AE-III)	Abuse Opinion Questionnaire (AOQ-R) Analog Parenting Task Perception of Parenting	Those who had experienced being hit with an object were more positive toward physical discipline than those who had no experience ($p<.05$). For example Rating of hitting with a belt or strap was favoured by 94% of those with history of abuse, compared to 67% of those with no history ($p<.0001$).	Single informant
Heyman, & Smith-Slep (2002)	Retrospective	Phone interviews with 6,002 men and women aged 18 years or older who were married, cohabiting, separate, or a single parent	Physical punishment Interparental violence	Retrospective reports of physical punishment and family violence	CTS	For fathers and mothers, violence in the family of origin was significantly associated with parent-child abuse in the past year ($p<.05$).	Range of ages, retrospective reports Telephone interviews Large sample size

Author/s	Design	Sample	Type of Maltreatment	Measures of Abuse	Outcome Measures	Results	Strengths/Limitations
Hops, Davis, Leve, & Sheeber (2003)	Prospective longitudinal study	N=39 adults and their young children (age 2-8 years) Community sample of males and females	Aggressive parenting – psychological aggression	Direct observation of parent-adolescent and parent-child interactions Living in Familial Environments	Child Behaviour Checklist Living in Familial Environments Coding System Dyadic parent-child interaction Youth Self Report	Significant intergenerational relation between G1 aggressive parent behaviour and G2 aggressive parent behaviour ($r=.38$, $p<.05$).	Small sample size Non-representative sample
Capaldi, Pears, Patterson, & Owen (2003)	Prospective longitudinal study	Parents (N=204) and their sons who attended schools in higher crime areas Early parenting cohort, Males only	Harsh or abusive discipline	Parent-child relations Monitoring Discipline Family Process Code Teacher questionnaires	Parent-child relations Monitoring Discipline Parent-Child Rearing Task Delinquency, assessed using parent and youth reports as well as by official arrest records.	There was a significant direct association found between G1's poor parenting of their G2 study son and G2's subsequent poor parenting of his offspring 12 years later ($r=.46$, $p<.01$).	High risk men G1's discipline of G2 was observationally based Parenting practices were assessed when their offspring were different ages (ages 9-12 for G1 and age 22 months for G2)
Smith & Farrington (2004)	Prospective longitudinal study	411 males from the Cambridge Study in Delinquent Development (CSDD). The CSDD is a prospective longitudinal study of the development of offending and antisocial behaviour in a cohort of inner London boys born in 1953.	Antisocial/criminal behaviour Authoritarian parenting	Home based interviews Parental Attitude Schedule Parenting styles	Home based interviews Parental Attitude Schedule Parenting styles	Convicted G1 fathers and mothers were more likely than non convicted parents to have antisocial and criminal sons ($p<.05$). Measures of authoritarian parenting were comparable across the two generations ($p<.05$).	More of effects of parenting on the child's behaviour Low rate of attrition
Milan, Lewis, Ethier, Kershaw & Ickovics (2004)	Prospective longitudinal study	203 low-income adolescents (14-19 years old) followed from the 3 rd trimester of pregnancy	Physical maltreatment	Physical Assault domain of the CTS	Parenting Stress Index Parenting Sense of Competence Scale	There was a direct path between history of physical maltreatment and mother-infant relationship difficulty ($p<.01$).	Single informants Only Mothers
Dixon, Hamilton-Giachritsis, & Browne (2005)	Community based study Retrospective	4351 families visited by community nurses as part of the Child Assessment Rating Evaluation (CARE) programme. CARE is a programme which involves at least four home visits to families with newborns in the first 13 months of the infant's life.	Physical or sexual maltreatment	Two home visits at age 4-6 weeks and 3-5 months Interviewer ratings Parents gave retrospective reports of any physical or sexual maltreatment during their own childhood	Information was collated as to whether or not the child was referred to child protection professionals for suspected or actual physical, sexual or emotional child abuse and neglect.	6.7% of families in which one parent had been abused as a child were referred for maltreating their own child in comparison with 0.4% of families who had no history of childhood victimisation. Parents who had experienced abuse in their own childhoods were less positive, sensitive, supportive, accessible, and accepting of their babies at 4-6 weeks ($p<.01$). These findings were consistent with ratings made again when their children were 3-5 months.	Large sample. Professional nurses did interview ratings and home based assessments. Public health records are an under-representation of the true incidence of child maltreatment. Very select age group of children

Similar results were found in Sidebotham and Golding's (2001) nested case-control study which examined parental risk factors for child maltreatment. Of the 14,138 children who were included in the study, 162 were identified as having a history of maltreatment. History of maltreatment was identified by screening child protection registers for any investigations of abuse or neglect. Results indicated that mothers and fathers who were physically abused in their own childhoods were significantly more likely than parents with no history of abuse to have their own children investigated by legal services on suspicion of having been abused (Sidebotham & Golding, 2001).

Findings on the intergenerational continuity of physical abuse have indicated a dose-response where parents who experience multiple acts of abuse are more likely to become abusive than parents who experience less abuse (Pears & Capaldi, 2001). Pears and Capaldi's (2001) longitudinal study of 109 high risk parents and their male children examined the association between a parent's history of abuse and the parent's own abusive behaviour towards their offspring. The Assessing Environments (III) Questionnaire (Berger, Knutson, Mehm, & Perkins, 1988) was used as an assessment tool for both exposure to, and current use of, physical abuse. Findings indicated that 23% of parents who had been abused as children had a child who reported being abused compared to only 10% of parents with no history of abuse. Additionally, a greater severity of exposure to abuse was linked to a greater likelihood of using abusive behaviour with the next generation (Pears & Capaldi, 2001).

Parenting Behaviour

While research into intergenerational continuities has found an association between exposure to childhood physical abuse and punitive parenting, a less well studied issue concerns the extent to which there may be continuities in parenting per se. There are several exceptions given in Table 1 including Egeland, Jacobvitz & Sroufe (1988), Newcomb & Lock (2001), Capaldi, Pears, Patterson, & Owen (2003) and Dixon, Hamilton-Giachritsis &

Browne (2005). These studies suggest that parents who are exposed to physical abuse are at higher risk, not just for continuing the cycle of violence, but also for less positive parenting practices. Specifically, research indicates that individuals abused as children demonstrate less nurturing parenting styles (Burkett, 1991) and less effective parenting behaviour (Cole, Woolger, Power, & Smith, 1992).

Research by Simons and colleagues (1991) using an Iowa sample of 451 2-parent families, found that retrospective reports of harsh parenting by mothers was linked to harsh parenting of the next generation as reported by both male and female children. This study used the Harsh Discipline Scale (Straus, Gelles, & Steinmetz, 1980) to obtain both parent self-report and adolescent self-report measures of physical abuse exposure. Results provide evidence for the intergenerational transmission of harsh parenting. A further study based on the Iowa project found that retrospective recall of supportive parenting by parents, correlated with reports of parenting from their own adolescent children (Simons, Beaman, Conger, & Chao, 1992).

Capaldi, Pears, Patterson, & Owen (2003) in a longitudinal study, found a strong association between the poor parenting practices of parents and those of their sons approximately 12 years later. Their prospective study examined 204 young men from an at-risk sample who were recruited during grade four by targeting schools in high crime rate areas. Findings indicated a direct effect of the intergenerational transmission of parent-child relations, parental monitoring strategies, and discipline techniques. Research into continuing family violence shows that the experience of abuse in childhood, not only affects a parent's punitive practices, but can also impact their ability to be competent and effective parents (Capaldi et al., 2003).

Risk Factors

In addition to experiences of parenting in the family of origin, a number of other risk

factors have been identified as being associated with a greater likelihood of continuing the cycle of abuse (Egeland, Bosquet, & Chung, 2002; Newcomb & Locke, 2001; Pears & Capaldi, 2001). The general consensus from the literature is that parents who are exposed to personal and family risk factors are more likely to use punitive parenting practices with their own children. For example, Egeland, Jacobvitz, and Sroufe (1988) found that mothers who continued the cycle of violence, relative to those who did not, experienced more stress and were more “anxious, dependent, immature, and depressed” (p. 1080). Widom (1999) found that children who experienced maltreatment were more likely to come from families with criminal or substance abuse problems, who were receiving welfare during the childhood period, or who had a large number of children. More recent research by Dixon and colleagues (2005) found that being a parent under 21 years, having a history of mental illness or depression, and residing with a violent adult, provided partial explanation of the intergenerational continuity of child maltreatment, explaining 53% of the total effect (Dixon et al., 2005). Therefore, although an abusive childhood puts an individual at increased risk of exhibiting violence in later life, specific risk factors can make the cycle of violence more likely (Dixon et al., 2005; Egeland et al., 1988; Kaufman & Zigler, 1987).

A number of studies have found that antisocial behaviour plays a significant role in the continuity of family violence. Capaldi, Pears, Patterson and Owen (2003) found support for a mediated effect whereby poor parenting practices in the family of origin placed a child at risk for the development of antisocial behaviour. The development of antisocial behaviour then makes it more likely that, as an adult, offspring will display poor parenting practices. This idea is consistent with research by Hops, Davis, Leve, & Sheeber (2003) who found that adolescents who were exposed to parental hostility were more likely to display aggressive behavioural styles, and that these behavioural styles were a good predictor of the nature of their interactions with their own children. Similar results were found by Fagot et al. (1998) in a prospective observational study, who concluded that when boys at high risk for antisocial

behaviour become parents, they demonstrate behaviours similar to those of their own parents (Fagot, Pears, Capaldi, Crosby, & Leve, 1998). Specifically, these boys used more physical discipline, more negative feedback, and less cognitive assistance with their children than did parents in the community sample (Fagot et al., 1998).

Protective Factors

In contrast to those parents who do, those parents who do not continue the cycle of abuse have been identified as having a number of protective factors. As early as the late 1980s, research established that those mothers who did not go on to use physical abuse with their own children were more likely to have had a supportive relationship with an adult in their childhood (Egeland et al., 1988; Quinton et al., 1984). Hunter and Kilstrom (1979) conducted a study of 282 mothers of preterm infants who reported a personal history of abuse at their child's birth. Findings indicated that mothers who did not go on to abuse their own children had more extensive social supports, their babies were physically healthier, they had fewer ambivalent feelings towards their child, were more open about their own abuse, and had a better relationship with their parents than those who did go on to abuse their own children (Hunter & Kilstrom, 1979).

Social Learning Theory

The mechanism by which children continue the cycle of violence has often been explained by social learning theory. Several studies examining the intergenerational transmission of violence have used social learning theory to explain the reason for the continuity. Social learning theory argues that growing up in an abusive family teaches individuals that the use of physical force is a viable means for dealing with interpersonal conflicts and increases the likelihood of becoming involved in future aggression (Bandura, 1973).

Simons and associates (1991) hypothesised that the intergenerational transmission of childhood maltreatment may involve children learning their parents' values and practices of discipline and using them to guide their own parenting practices. Their results found support for the social learning theory, with a belief in strict physical discipline mediating the relationship between receiving harsh discipline as a child and perpetuating this parenting style as an adult. Muller, Hunter, and Stollak's (1995) cross-sectional study on the intergenerational transmission of corporal punishment of 1,536 parents and their 983 college students also found support for the social learning position. In order to provide an indication of the respondent's childhood experience of physical punishment, and of the continuity of such practices, the Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used. Those who experienced greater levels of corporal punishment from their own parents were found to display a greater manifestation of their own aggressive behaviour (Muller et al., 1995).

Summary

Upon examination of these studies, the general conclusion is that the most significant determinant of becoming an abusive parent is having experienced harsh punishment as a child. This research indicates that those parents who experienced childhood physical abuse are more likely than parents who did not suffer abuse as children to use physical discipline with their own offspring (Cappell & Heiner, 1990; Egeland & Sroufe, 1981; Heyman & Smith Slep, 2002; Hunter & Kilstrom, 1979; Markowitz, 2001; Milan, Lewis, Ethier, Kershaw, & Ickovics, 2004; Murphy-Cowan & Stringer, 1999; Smith & Farrington, 2004).

Furthermore, research suggests that those who are exposed to high levels of risk are more likely to continue the cycle of violence. For this reason, studying disadvantaged populations is imperative to gain a clearer picture about risk and protective factors amongst groups who may be predisposed towards the continuity of family violence.

2. Early Transition to Parenthood

The current study examines intergenerational findings on the continuity of punitive practices among an early parenting cohort. Early childbearing has been linked to both a history of abuse and abusive parenting practices (Pears & Capaldi, 2001). Consequently, understanding and studying the circumstances and environments in which families are raised and nurtured, as well as explicit patterns of parenting, is of particular relevance.

In recent years, studies concerned with the developmental processes associated with an early transition have found widespread evidence to suggest that becoming a parent early is influenced by a wide range of antecedent life-course experiences (Jaffee et al., 2001; Woodward, Fergusson, & Horwood, 2006; Woodward, Horwood, & Fergusson, 2001). Early pregnancy appears to be a discriminating process where an individual's personal adjustment, social background, peer relationships, risk taking behaviour, ethnic identification, educational opportunities, and family experiences contribute to the risk of early transition to parenthood (Bardonne, Moffitt, Caspi, Dickson, & Silva, 1996; Fagot et al., 1998; Jaffee et al., 2001; Lopez Turley, 2003; Manlove, 1997; Morash & Rucker, 1989; Serbin et al., 1998; Woodward, 2001; Woodward et al., 2006).

A study by Gest and colleagues (1999) found that during school years, those most at risk of becoming parents early were aggressive, poor school achievers, unpopular with their peers, and came from disadvantaged social backgrounds (Gest et al., 1999). These findings are consistent with Woodward and colleagues (Woodward et al., 2006) who found strong associations between the risk of early parenthood and childhood disadvantage including low socio-economic status during childhood, family dysfunction, educational underachievement, antisocial behaviour, and adolescent risk taking. Further research has shown a dose-response between the number of adverse childhood experiences and teenage pregnancy. Hillis and colleagues (2004) found that as the number of adverse childhood experiences increased, the risk of adolescent pregnancy also increased (Hillis et al., 2004).

More recent research by Afifi and Brownridge (2006) and Dixon and colleagues (2005) has indicated that an early transition to parenthood can itself contribute to the likelihood of continuing the cycle of violence. For example, Afifi and Brownridge (2006) in their comparative study of 4,387 adolescent and non-adolescent mothers found that children of adolescent mothers were significantly more likely to be abused than non-adolescent mothers as measured by child self-reports of exposure to abuse.

Findings on early transition to parenthood are of concern given that parents who experience a wide array of negative risk factors are likely to provide a poorer environment and use less effective and more maladaptive styles of parenting (Capaldi et al., 2003; Pears & Capaldi, 2001).

3. Family Circumstances

As can be seen from the literature, an exploration of risk factors is important for several reasons. High rates of personal and family instability, and socio economic disadvantage can place young people at risk for early parenthood. Such risk factors are also associated with greater levels of exposure to physical abuse, and additionally, these risk factors have been found to be associated with a greater likelihood of continuing the cycle of violence. Studying specific families; their histories and current circumstances, is important if we are to gain a greater understanding of how these risk factors play a role in family functioning. Equally important however, is understanding the global and national context in which New Zealand families are raising their children. The following section looks at national and international statistics and trends and assesses their relevancy for the context of early childbearing in New Zealand.

Even though there has been a significant decline in the overall birth rate, New Zealand continues to have one of the highest teenage pregnancy rates in the developed world, being second only to the United States when compared with similar OECD countries (Cheesbrough, Ingham, & Massey, 1999; Dickson, Sporle, & Rimene, 2000; Statistics New Zealand, 2000b). National birth trend data indicates that from 1995-2000 the mean age at first childbirth for the average New Zealand women was 28-29 years (Statistics New Zealand, 2000b). Evidence indicates that, since the mid 1980's, while the mean age at first childbirth has increased, rates of teenage pregnancy and parenthood have also increased (Dickson et al., 2000), indicating that those who become parents during their teenage years are a small but significant minority who are going against the national trend.

The context of teenage childbearing in the developed world has changed dramatically since the 1970s. Research from the United States reveals that contemporary teenage childbearing is more likely to occur outside of marriage and consequently young mothers

cannot rely on a partner's income for support. Today nearly 90% of births to teens occur outside of wedlock compared to 40% twenty years ago (Social Exclusion Unit, 1999).

Research has shown that one in three births today is to an unmarried woman.

Although the timing of marriage and parenthood has become uncoupled for many women across the childbearing years, teenage mothers have been the leaders in this trend (Brooks-Gunn, Schley, & Hardy, 2000). Seventy percent of all United States births to adolescent women under the age of 20 now occur out of wedlock (The Alan Guttmacher Institute, 1994).

Early childbearing places mothers at risk for a range of negative consequences.

Contemporary childbearing before age 21 reduces the likelihood of obtaining post-secondary education, something that is increasingly necessary for success in the modern labour market.

Early transition to parenthood has also been found to be associated with long-term social welfare dependence, low occupational status, divorce, and large family size (Hotz, McElroy, & Sanders, 1997; Kiernan, 1995; Maughan & Lindelow, 1997).

In 2004 Jensen and colleagues published a study on New Zealander's living standards. Upon examining the relationship between living standards and stages of life, this study found that living standards often drop when a person first transitions to parenthood. Additionally, families with dependent children have lower living standards than the overall population (Jensen, Krishnan, Hodgson, Sathiyandra, & Templeton, 2006). Income-tested beneficiary families with children were found to be the most prominent disadvantaged group in this study, with nearly one in three indicating "severe hardship", meaning they had few economic advantages and a high rate of multiple adversities (Jensen et al., 2006). Welfare dependent families were found to have lower incomes than the overall population, fewer assets, and a higher likelihood of having experienced marital dissolution, multiple life shocks, and multiple restrictions due to health problems (Jensen et al., 2006).

An examination of the socio-economic wellbeing of families indicates that while the majority of New Zealanders live comfortably, those who have children generally have a

lower standard of living. Those who transition to parenthood early are an even more disadvantaged group in terms of being at a higher risk for long-term welfare dependence, placing them at risk for multiple disadvantages. Those who become parents early are effectively going against the national trends in several ways including age of first childbirth, general standards of living, higher rates of socioeconomic adversity, and a higher likelihood of long-term welfare dependence. In other words, those who become parents at a young age are a minority, high risk population who are likely to be raising their children in social contexts characterised by socioeconomic disadvantage and family instability.

4. Limitations in the Current Research

While research into the longer-term consequences of child abuse has considerably clarified the linkages between childhood experiences of family violence and later outcomes, this research is subject to a number of recurrent methodological problems that limit the extent to which clear conclusions may be drawn about the causal effects of child abuse on longer term development. Methodological difficulties have been centred around issues of sampling, measurement, and the control of confounding factors (Cahill, Llewelyn, & Pearson, 1991; Plunkett & Oates, 1990). More specifically, problems associated with methodological difficulties include:

1) Measurement Problems

One major limitation of the existing literature on child abuse is the fact that many studies of childhood experiences of physical and sexual abuse have used a cross-sectional design, relying upon retrospective recall of abuse. Few studies have obtained prospective data across generations, relying instead on adults' retrospective reports on the environment of their family of origin (see review by Putallaz et al., 1998). Moreover, studies most often rely on the young adult as single informant for information on the behaviour of both themselves and their parents or other family members (Bower-Russa, Knutson, & Winebarger, 2001). Such reports are subject to biases inherent in self-report data in general, as well as to the particular inaccuracies that occur in retrospective reports. Additionally, several studies have relied solely on official records for prevalence of maltreatment as an indicator of the extent of continuity of family violence. These reports are an under-representation of the true extent of childhood physical abuse.

2) Sampling Problems

A second major limitation is that a number of studies of the long term effects of CPA have examined these in the context of specialised populations including young mothers with newborn infants, students, delinquent populations, and prisoners. The extent to which findings from such specialised samples can be applied to the general population remains unclear.

3) Definition problems

A problem noted by Widom (1989b) and others (Kaufman & Zigler, 1993; Knutson & Schartz, 1997; Pears & Capaldi, 2001) is the variability in definitions or thresholds of child abuse across studies. Some studies included regular spanking in their definition of abuse (Egeland et al., 1988), whereas other studies use more extreme physical behaviours such as burning children with hot objects or causing bruises or broken bones (O'Keefe, 1995). Such disparate definitions of child abuse are likely to lead to widely varying estimates of intergenerational transmission.

4) Confounding Factors

A fourth issue is that a large number of studies of CPA have not controlled for a variety of background and contextual factors that may be correlated with CPA and may be a cause of later adjustment difficulties. It could be argued, therefore, that the apparent relationships between CPA and later adverse outcomes are the product of the family, social, and personal background factors present in the child's environment, rather than a direct result of CPA.

The present study attempts to circumvent these methodological difficulties that have limited previous studies. First, this study has been based on a birth cohort, which represents the general population, and has been followed from birth onwards. Second, the research has

assessed exposure to physical abuse using retrospective reports which were obtained at both 18 years and 21 years. These reports were combined to construct a best estimate of childhood exposure to physical abuse. Third, parents gave prospective self reported measures of their current use of punitive parenting practices. Fourth, outcomes have been assessed using well-established measures of parenting outcomes. Fifth, the study had available a wide range of social, family and related covariate factors so that any association between exposure to childhood physical abuse and later outcomes could be adjusted for the family context in which the effects of this abuse were played out.

Given these patterns of continuity in parenting, an ideal way to investigate the presence of intergenerational transmission of maltreatment is through looking at parenting practices. Understanding the reasons why children do, or do not, grow up to resemble their parents with regard to specific characteristics may help us understand the etiology of complex patterns of behaviour and cognitive functioning. Prospective longitudinal intergenerational designs represent a unique methodological approach: a research paradigm that can be adapted to address many types of theoretical and empirical issues (Serbin & Karp, 2005).

5. The Current Study

One way to examine the intergenerational expression of family violence is to study the influence of experiences of family violence on later parenting practices. The best way to address issues of sampling, measurement and statistical control is through the use of a longitudinal research design in which a representative birth cohort is studied from infancy to adulthood with measures of exposure to physical abuse. A study of physical abuse using a general longitudinal design means details can be collected on social, family, and related conditions during childhood and into young adulthood. It is possible then to collect retrospective reports of childhood physical abuse from cohort members as young adults. The essential features of this study include:

1. Over the period of childhood (birth to 16 years), extensive information was collected on a birth cohort of more than 1,000 New Zealand children, including family circumstances, social economic factors, personal adjustment characteristics and related circumstances.
2. At 18 and 21 years subjects were asked to provide retrospective reports of childhood physical abuse (CPA) experiences during childhood. This use of a test/retest design made it possible to assess the reliability and stability of reports and to construct robust measures that take into account errors of reporting.
3. At age 25, all cohort members who had become parents were interviewed. As part of the interview parents gave self reported measures of parenting style including the conflict tactics, a measure of the parent-child relationship, and parenting styles. Following the interview, interviewer ratings were made on the quality of the home environment (HOME), and the parent's use of warmth, sensitivity and child management.

Against this background, this study was designed to examine the extent to which exposure to childhood physical abuse effects later parenting outcomes within a high-risk sample of parents. More specifically, issues that were addressed can be divided into four primary questions.

First, the family and social background characteristics of 167 young adults who had become parents were compared to 772 cohort members who had not become parents in order to help clarify risk factors that may have contributed to early parenthood. It was hypothesised that those who became parents by age 25 would have experienced greater personal and family instability and more adverse socio demographic background factors compared to cohort members who did not become parents by age 25.

Second, a description of the current parenting and family characteristics of those cohort members who became parents is presented. It was hypothesised that families would be characterised by high rates of adverse socio economic circumstances and unstable intimate relationships.

Finally, this thesis examined the linkages between childhood exposure to family violence and later parenting outcomes. Correlated childhood and family factors were examined to assess whether the effects of family violence could be accounted for by other extraneous variables. It was hypothesised that parents who were exposed to harsh levels of physical abuse would display less effective and more negative parenting practices.

Methods

1 Data Source

The Christchurch Health and Development Study (CHDS) is a prospective longitudinal study of a birth cohort of 1,265 Christchurch (NZ) born children who have been studied from birth to age 25 years. The sample for this study was recruited over a 4-month period during 1977 by contacting mothers of all live-born children giving birth in public and private maternity hospitals within the Christchurch urban region. Of the 1,310 mothers giving birth during this time, 97% agreed to participate.

These children and their families have now been studied at birth, 4 months, 1 year, at annual intervals to age 16, and again at ages 18, 21 and 25 years. The study has collected a wide range of data on the health, development, and adjustment of the cohort throughout this period. The Christchurch Health and Development study has been approved by the Canterbury (New Zealand) Regional Ethics Committee, and all aspects of the data collection have been subject to the informed consent of these participants.

2 Participants

The present analysis is based on 1,003 participants who were assessed at age 25 years. This figure represents 79% of the original 1,265 sample members. As part of the assessment, participants who had become parents by age 25 were invited to participate in a separate parenting interview. For the purposes of this interview parents were defined to include all those who had given birth to or fathered a biological child or who were parenting a non-biological child at age 25. A total of 231 sample members had become parents of whom 174 (75%) were fully assessed on the parenting interview. Table 1 summarises the reasons for sample losses of those who became parents by age 25. Explanations for sample loss included refusal to participate, inability to contact, inability to trace, and other. Examination of the

Table shows that of the 57 participants who did not take part in the parenting study, 38 were because of a refusal to take part, 6 because of a refusal to take part once referred to the parenting study, 8 because of an inability to contact, and 2 because of an inability to trace. There were 3 participants who did not participate for alternative reasons. Those who consented to participate in the parenting interview were compared with those who did not on a range of measures including ethnicity, gender, and age of transition to parenthood. No significant differences were found on the basis of these comparisons. The final cohort represents 75% of the original sample who were eligible for inclusion.

Table 2: Sample Selection Losses.

	Total Number (N=231)	Percent %
Refusal	38	16.5
Referred to parenting study and then refused	6	2.5
Inability to contact	8	3.5
Inability to trace	2	1.2
Other	3	1.3
Total losses	57	25
Total sample who completed the parenting interview	174	75

The present study is based on the sample of parents who were actively involved in parenting a child. To be included in the parenting study, cohort members had to be either biological parents or non-biological parents. Those parents whose children did not live with them, but who had frequent (fortnightly or greater) contact with their children were also included. The total number of parents included in this study was 167; this sample comprised

146 residential parents, 12 non-resident parents, and 9 parents who met the criteria for both resident and non-resident parents.

The description of these parent's transition to parenthood as early was justified on the grounds that (a) the greater part (78%) of the cohort had yet to become parents at age 25, and (b) national demographic data indicated that, for the same period, the median age of first parenthood for females and males was 28.3 and 30.1 years, respectively (Statistics New Zealand, <http://www.stats.govt.nz/>).

3 Procedure

During the main parenting interview at age 25 years, all cohort members were questioned about any pregnancies or children born to either themselves or their partner. These questions included: whether they or their partner were pregnant or had become pregnant in the previous years; the outcome/s of all reported pregnancies; whether they were currently a step or foster parent to any children; the dates of birth of all children; and the number of children for whom they were a custodial and/or non-custodial parent.

Additionally, all parents completed further questions about their parenting attitudes and behaviour, family circumstances, and their children's development. All interviews were completed by trained interviewers in the parent's home or at a location of their choice. Telephone interviews were undertaken with those living abroad. Non-custodial parents completed a slightly shorter version of the interview.

4 Measurement

Information collected as part of the parenting interview included: 1) detailed information about all children born to respondents and their care arrangements; 2) an assessment of parenting attitudes and behaviour including abuse and neglect, and the quality of the home environment; and 3) an assessment of the family context and socioeconomic

circumstances in which respondents' offspring were being raised. The following section gives a description of each of the measures included in the analysis of parenting and current family characteristics.

Family Characteristics

As part of the parenting interview, parents were asked a range of questions regarding their relationships with their children and their partners. Parents were asked to describe family circumstances, relationship status, child characteristics, current family structure, and financial and economic factors. A description of each of these variables is given below.

Family Circumstances

Number of children: Parents were asked to give the total number of children they had given birth to or had parented, including if they were caring for any step or non-biological children. For each child being parented, parenting cohort members indicated whether children were biological or non-biological, and also whether the children were living with them or living with another caregiver.

Children's custody arrangements: Parents coded each child's current custodial circumstances as shared or full custody. Children who were in alternative custodial arrangements, for example those in foster care, were also coded for.

Age of children: Each child's age was identified in whole years at the time of the interview.

Gender of children: Each child's gender was identified as either male or female.

Current Family Structure

To give an indication of the structure of contemporary young families, the sample was classified into groups on the basis of four measures of family circumstances. These measures were: (a) gender of parent (female vs. male); (b) partnership status (not currently partnered,

married, or cohabiting); (c) whether all children being parented were biological children (yes/no); and (d) whether all children being parented were living with the parent (yes/no).

Partnership History and Transition to Parenthood

Age became parent: Parents identified the age, in whole years, when they first became a parent.

Number of partners lived with since becoming a parent: Parents gave the sum of the total number of partners they had lived with since onset of parenthood.

Current Financial Resources and Economic Wellbeing

Respondent in paid employment: Parents specified if they were in paid employment, full or part-time, at the time of the interview. This was scored as a dichotomous value, where parents were coded as being in either paid employment or not in paid employment.

Partner in paid employment: Parents specified if their partner was in paid employment, full or part-time, at the time of the interview. This was scored as a dichotomous value, where partners were coded as being in either paid employment or not in paid employment.

Weekly income: Parents specified the amount they received each week after tax from their paid employment, and any benefits including domestic purposes benefit, unemployment benefit, sickness/invalid's benefit, or any other social welfare benefit. Parents also identified if they had any other source of income, for example, donations from parents, or investment income.

Respondent on any welfare in the past 12 months: Parents noted whether they were in receipt of any domestic purposes, unemployment, sickness or invalid's benefits at the time of the parenting interview. If parents indicated yes to any of these, they were then asked to indicate the total sum received in benefit payments weekly.

Dependent on welfare: Those parenting cohort members who indicated that their only source of income at the time of the parenting interview was welfare benefits were coded as being dependent on welfare.

Ever had money worries: Parents were asked to indicate if in the past year they had to do any of the following because they were short of money:

- Borrow money from family or friends
- Unable to pay electricity bill
- Unable to pay rent
- Unable to pay phone bill
- Gone without meals on some days
- Bought second hand clothing
- Postponed visits to the doctor
- Postponed visits to the dentist
- Visited budget advisory service
- Been declared bankrupt
- Received a summons regarding unpaid bills
- Had to sell or pawn belongings to get money
- Needed to seek help from the food bank or a social agency
- Needed to seek assistance from WINZ (Work and Income New Zealand) to pay bills
- Moved to cheaper accommodation

If parents answered yes to any of the above, they were coded as having had money problems in the previous 12 months. Items were summed to give the total number of financial difficulties parents had encountered in the last 12 months.

Family home owned or mortgaged: Parents indicated the type of housing they were living in. Those who indicated they owned their house or flat were coded as being homeowners. Those

who indicated they were renting, living in a state owned house or flat, or staying with other family members were coded as not owning their own home.

Quality of housing: Parents were asked to indicate how adequate their current accommodation was in meeting their family's needs. Parents coded their housing as very inadequate, inadequate, adequate, or more than adequate.

Parenting and Family Functioning at Age 25

To gain an understanding of the current parenting and family functioning at age 25, measures of parenting outcomes were analysed. Measures of parenting outcomes were coded for by parents themselves, and then by interviewers following the interview. Parents gave self ratings of their parenting abilities, coded for each child parented, using the Parenting Practices Questionnaire (PPQ), the Parent-Child Conflict-Tactics Scale (CTS-PC), and Dunn's scales of the parent-child relationship. Interviewer ratings were then made using the scales of responsiveness and avoidance of punishment from the Home Observation for Measurement of the Environment (HOME). Interviewer ratings were also made on the parents' use of warmth, control and child management. The following section describes each of these measures.

Parenting Practices Questionnaire (PPQ)

The parenting practices questionnaire (PPQ; Robinson et al., 1995) was designed to tap into theoretically meaningful parenting dimensions that are associated with child behavioural outcomes (Hart, Newell, & Olsen, 2003). The PPQ is a 62-item self-report instrument designed to determine parenting practices based on Baumrind's (Baumrind, 1971) prototypes of authoritative, authoritarian and permissive styles of parenting.

The PPQ yields a separate, continuous score for each dimension of parenting with larger numbers indicating increased use of parenting practices associated with a particular

style. Scale scores, created in accordance with Robinson and colleagues (1995), combine to three subtypes of parenting. The authoritative scale comprises 27 items relating to warmth and involvement, reasoning, democratic participation, and good nature. The authoritarian scale comprises 20 items relating to verbal hostility, corporal punishment, punitive strategies, and directiveness. The permissiveness scale (15 items) comprises questions relating to lack of follow through, ignoring misbehaviour, and self-confidence. For each question, parents coded the frequency with which they engaged in the particular behaviour for each individual child being parented.

Derived from the well-established Block Q-Sort, the PPQ uses typologies of parenting style as defined by Baumrind (Baumrind, 1971). Baumrind viewed two independent dimensions of parenting as essential: *warmth* and *control*. By assessing parents on these two dimensions, she derived parenting styles.

The authoritarian parent is high on control but low on warmth. Consequently, this parent is demanding and controlling. According to Baumrind, authoritarian parents make children conform to a set standard of conduct and punish them at random when they violate the rules. Authoritarian parents are more detached and less warm than other parents, and their children tend to be more discontented, withdrawn, and distrustful.

The permissive parent is high on warmth without accompanying structure or control. Permissive parents make few demands and allow children to monitor their own activities as much as possible. When they make rules, they explain the reasons for them. Permissive parents consult with their children about decisions and rarely punish. This style of parenting can result in dependent, irresponsible, and spoiled children.

Authoritative parents, in contrast, are high on both warmth and control. Authoritative parents set standards of mature behaviour and expect the child to comply, but these parents are also highly involved, consistent, communicative, and respectful of the child's point of view. Children of authoritative parents tend to be self-reliant, self-controlled, and secure.

Steinberg and colleagues (1994) have shown that the authoritative parenting style is predictive of good adjustment in adolescence, as measured by psychosocial development and school achievement. Authoritarian parenting is predictive of poor self-concepts and self-reliance in adolescence and permissive parenting is predictive of adolescent misconduct, poor achievement at school, and drug abuse. These findings were stable when adolescents were reassessed one year later (Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994).

The reliability of these qualitative indices of parenting style was assessed using Cronbach's alpha. The alpha coefficient was .92 for the 27 items of the authoritative index, .87 for the 20 items of the authoritarian index, and .6 for the 15 items of the permissiveness index. The alphas for the authoritative and authoritarian were high, and the alpha for the permissive index was slightly lower. The slightly lower reliability for permissive parenting may be a product of the limited nature of the indicators of permissiveness within the parenting questionnaire. The concept of permissiveness may be tapping two distinct and identifiable parental attitudes. Permissiveness may refer to a parenting attitude that is caring and concerned or ideologically neglectful. It is difficult to disentangle these differing orientations in this permissiveness scale. Caution is recommended in interpreting those portions of the results that feature indicators of permissiveness.

The PPQ and its predecessor, the Block Q-Sort, have good internal consistency as well as discriminant and predictive validity (Coplan, Findlay, & Nelson, 2004; Oyserman, Bybee, Mowbray, & Hart-Johnson, 2005; Wu et al., 2002). Scales have also been shown to correlate with observed parenting behaviour (Dekovic, Janssens, & Gerris, 1991; Kochanska, Kuczynski, & Radke-Yarrow, 1989). The PPQ was recently praised in a review of measures assessing parenting practices (Locke & Prinz, 2002) as one of the few measurement tools relating to parental warmth and control available with psychometrically valid scales.

Parent-child Relationship Scale

On the Parent-child relationship measure, adapted from the previously validated scale by Dunn (Dunn et al., 1999; Dunn, Deater-Deckard, Pickering, & O'Connor, 1998), parents were asked to rate how eight statements concerning parent-child relationships applied to their relationship with each of their children. The parent rated each statement as 0 (disagree), 1 (agree somewhat), or 2 (strongly agree). Scales were created to form two scales.

Items summed to create a Positivity scale were:

- I really love this child
- This child makes me pretty happy
- This child is very affectionate to me
- I feel very close to this child

Items summed to create a Negativity scale were:

- I often get very irritated with this child
- I dislike the mess and noise that surrounds this child
- I have frequent battles of will with this child
- This child gets on my nerves

These scales have been shown to measure sibling relationships and correlate with observed parenting (Dunn et al., 1999). Measures of negativity and positivity have been used widely in other studies and have been found to predict child and adolescent outcome (Baumrind, 1991; Hetherington & Clingempeel, 1992). The Cronbach's alpha analysis revealed moderate reliability, with each of the scales having a Cronbach's alpha composite score of .66.

Parent-Child Conflict Tactics Scale (CTS-PC)

The CTS-PC (Straus et al., 1998) is a 22-item, self-report inventory that assesses the frequency, on a scale ranging from 0 [*never*] to 6 [*more than 20 times*], of parent discipline behaviours in the past 12 months. The Conflict Tactics Scale was designed as a practical method of ascertaining the presence and degree of maltreatment (Straus, 1990; Straus et al., 1996). The CTS-PC is based on the original CTS (Straus, 1990), with modifications to improve its reliability and validity in assessing parent-to-child aggression.

The CTS-PC scales in the current study included those of psychological aggression, and all physical assault scales: minor assault, severe physical assault, and very severe physical assault.

The *psychological aggression* scale is intended to measure verbal and symbolic acts by the parent intended to cause psychological pain or fear on the part of the child. Items included ‘threatened to spank or hit him/her but did not actually do it’ and ‘shouted, yelled, screamed at him/her’.

The *physical assault* scale has twelve items which cover a wide range of severity and legality. At the low severity end, spanking and other forms of corporal punishment are acts that have traditionally been expected responses of parents to persistent misbehaviour (Straus, 1994). Scores at the high severity end of the scale (such as punching or kicking a child) are indicators of physical maltreatment. The items in this scale can be used to compute subscales for minor assault, severe assault, and very severe assault.

For the purposes of the present analysis, dichotomous categories were formed for each of psychological aggression, minor physical punishment, severe assault and very severe assault, where any score on each of these scales indicated children were exposed to the scale that the item was related to.

The CTS-PC has been used in many studies and has demonstrated reliability and validity (Straus et al., 1998). Bennett, Sullivan and Lewis (2006) concluded that while the

CTS-PC is useful in assessing parenting behaviours among mothers with a history of maltreatment, “socially desirable responding is a significant problem” (p.63). The Cronbach’s alpha for each of the subscales varied from moderate to good internal consistency. Cronbach’s alpha for the composite of psychological aggression was .85, for minor assault .7, for severe assault .57 and for very severe assault the Cronbach’s alpha was .76.

Home Observation Measurement of the Environment (HOME) Inventory

The primary goal of the Home Observation for Measurement of the Environment (HOME; Caldwell & Bradley, 1979) is to measure, within a naturalistic context, the quality and quantity of stimulation and support available to a child in the home environment (Totsika & Sylva, 2004).

Experienced and specially trained interviewers assessed the quality of the home environment using the HOME-SF scales of responsivity and avoidance of punishment. Information needed to score items on the inventory is obtained through a combination of observation and semi-structured interview.

Items on the HOME were scored in a dichotomous fashion (yes or no). Caldwell and Bradley (1979) clustered items on the original HOME scales into subscales based on a review of research and theory. Factor analysis was used to form empirically distinct, psychometrically sound, conceptual scales. For the responsivity scale 9 items were used, and 8 items were used for the scale of avoidance of punishment

Responsivity, as defined by the HOME manual, is the extent to which a parent responds to the child’s behaviour (Caldwell & Bradley, 2001). This construct assesses the parent’s use of reinforcement for desired behaviour and their ability to communicate competently with their children. Avoidance of punishment is measured by assessing parent’s approval of less than optimal behaviour from the child. This construct looks at parents’

avoidance of unwarranted restriction and punishment. Low scores on this scale suggest that parents are less likely to avoid the use of punishment; hence they are more accepting of the use of punitive discipline.

The HOME scale is a well established, reliable and valid observational inventory measuring social, emotional, and cognitive support available to the child in the home (Bradley et al., 1989). Previous studies have documented that the HOME is a dynamic measure sensitive to both changes in the family environment and parenting abilities (Elardo & Bradley, 1981). These measures were found to be correlated with each other ($r=.58$, $p\leq.01$).

Global Ratings

After conducting the interview, interviewers completed an interviewer schedule. As part of this schedule, the interviewer was required to rate the degree of warmth and the degree of sensitivity the parent showed towards the child, as well as the parents use of effective child management strategies. Ratings were made for each child on a scale of one to five, children who were asleep or not present were not coded for. High scores indicated higher levels of warmth and sensitivity, and more effective child management strategies.

Warmth assessed a parent's display of affection and enjoyment of their children. Parents were rated as high on warmth if they were genuinely interested and enthusiastic in their interactions with their children. Low warmth was coded for when parents were hostile, uninterested, or had flat affect towards their children.

Sensitivity assessed the extent to which a parent recognised and responded to a child's worries and concerns, modified their behaviour in response to a child's needs, and helped the child to anticipate and confront problematic situations.

Child Management assessed the extent to which a parent monitored their child's behaviour and made use of effective child management strategies. Parents with poor child

management were overly harsh and punitive in disciplining their children and made no attempts to monitor or guide their children's behaviour.

These ratings were adapted from Quinton, Rutter and Liddle (1984) whose ratings have been found to correlate well with the child rearing practices report (Block, 1981). Significantly high levels of agreement have been found between interviewer ratings of parenting quality and direct observation measures of parenting behaviour (Dowdney, Mrazek, Quinton, & Rutter, 1984). Each of these ratings was found to be normally distributed, and correlated with each other ≥ 0.8 .

Covariates

A range of measures were selected from the database of the study to describe the childhood and family experiences of cohort members. Measures included social background, family structure, family functioning, behavioural adjustment, cognitive ability, and adolescent functioning scales. A description of each of the measures is given below.

Family Social Background Characteristics

Maternal age at first childbirth: The age of the sample member's mother at first childbirth was given in whole years at the time of the survey child's birth.

Maternal and paternal education: Maternal and paternal level of education was assessed at the time of the child's birth. Parents were coded from 1-3, reflecting the level of achievement attained, where 1 was coded for no formal qualifications, 2 was coded for high school qualifications, and 3 was coded for tertiary level qualifications. Those who had never attained any high school qualifications by age 21, either while they were at high school or subsequently as adult students, were classified as having no formal educational qualifications.

Socioeconomic Status: Family socio economic status at the time of the child's birth was assessed using the Elley and Irving (1976) scale of socioeconomic status for New Zealand. This scale categorises families into six classes on the basis of paternal occupation ranging from 1 = professional to 6 = unskilled occupation. In cases where the child's mother was a single parent, the occupational status of the child's natural father was used to obtain an SES code. An account of the construction and validation of this scale is provided by Elley and Irving (Elley & Irving, 1976).

Family Functioning

Parental changes: Comprehensive life history data was collected annually from birth to 15 years on any experience of parental changes due to separation/divorce, death, remarriage, and reconciliation. On the basis of these measures a composite measure was formed to indicate the level of family instability each cohort member had experienced. A measure of whether cohort members had entered a single parent family at birth was also obtained from this data.

Interparental violence: At the age of 18, sample members were questioned concerning their experience of interparental violence during their childhood. This questioning was based on a series of eight items derived from the Conflict Tactics Scales (Straus, 1979). Items were chosen on the basis that the behaviours could have been readily observed and reported on by the participants, and also to span the potential range of violent behaviours from verbal abuse to physical assault. Separate questioning was conducted for violence initiated by the father toward the mother and for violence initiated by the mother toward the father.

Quality of parental attachment: The quality of the young person's relationships with their parents was assessed at age 15 years using the Armsden and Greenberg scale of parental attachment (Armsden & Greenberg, 1987). Higher scores implied closer attachment to parents. This scale was found to have good reliability ($\alpha=.87$).

Parental Adjustment

Parental Depression or Anxiety: At age 15 years the young person's parents were asked if they had any history of anxiety disorders or depressive disorders. Responses were combined to form a dichotomous variable where 1 was for at least one parent had a history of depression or anxiety problems, and 0 was for no parental history of depression or anxiety.

Parental Alcohol Problems: At age 15 years the young person's parents were asked whether they had a history of alcoholism or problems with alcohol. These reports were combined to form a dichotomous measure of whether or not the young person's parents reported experiencing alcoholism or problems with alcohol.

Parental Criminal Offending: At age 15 years the young person's parents were asked if they had a record for criminal offending. A dichotomous measure was used to indicate whether or not the parent had a history of offending.

Parental Illicit Drug Use: When sample members were age 11 years their parents were questioned about parental usage of illicit drugs including cannabis.

Childhood characteristics

Gender: The gender of the respondent was coded as male or female.

Ethnicity: The young people were classified as being of either Maori or non-Maori ethnicity on the basis of their self-reported ethnic identification at age 21 years.

Intelligence: At age 8, as part of a comprehensive school based evaluation, children's intellectual ability was assessed using the Wechsler Intelligence Scale for children (WISC-R; Wechsler, 1974). The full scale IQ score was used in the present analysis. The split half reliability of this scale was .93

Scholastic ability: At age 13 years cohort members were administered the Test of Scholastic Abilities (TOSCA; Reid, Jackson, Cilmore, & Croft, 1981). This test is designed to assess the extent to which the child exhibits the skills and competencies necessary for academic work in

high school. An account of the construction and validation of this measure has been provided by Reid et al. (1981). The test was scored as recommended in the test manual to give a total scholastic ability score. The reliability of this score, assessed by coefficient alpha, was .95.

Conduct, attention, and emotional problems: At each year from age 7-13, parent and teacher reports of the child's tendency to display conduct, attention, and emotional problems were obtained using instruments that combined items from Rutter (Rutter, Tizard, & Whitmore, 1970) and Conners (Conners, 1969, 1970) behaviour rating scales. Conduct problem items spanned a range of behaviours relating to disobedience and defiance of authority, fits of temper, and irritability. Attention problem items spanned a range of behaviours relating to inattention, poor concentration, short attention span, distractibility, restlessness, and hyperactivity. Emotional problem items spanned a range of behaviours including feeling hurt easily, overly sensitive, and fearful of authority. All items were scored on a 3-point scale ranging from 1 (not at all) to 3 (a great deal). For the purposes of the present analysis the parent and teacher item scores were summed for each year and then averaged over an interval of 7-13 years to create global measures of the child's tendencies to conduct, emotional, and attentional problems in middle childhood. This procedure was used to reduce the effects of situational and rater bias. The resulting scales were of moderate to good reliability with coefficient alpha values of .97 for the scale of conduct problems, .93 for attention problems, and .63 for emotional problems.

Age of onset of Menarche: This measure consisted of the age (in years and months) at which young women experienced their first menstrual period.

Adolescent Behaviour

Early sexual intercourse: Sample members were questioned at ages 15 and 16 years about whether they had ever engaged in consensual sexual intercourse, with those responding positively being asked to provide an estimate of the age at which they initiated consensual intercourse. Those reporting having consensual intercourse before age 16 were classified as having had early sexual intercourse.

Novelty Seeking: Novelty seeking was assessed at age 16 using novelty seeking items from the Tridimensional Personality Questionnaire (Cloninger, 1987). This scale was found to be of moderate reliability ($\alpha=.76$).

Truancy: Parent and child reports were combined to form a dichotomous measure of whether or not the child had truanted from school between the ages of 12 to 14 years.

Cannabis and tobacco use: Substance use was assessed by interview at age 15. Those reporting using cigarettes or cannabis prior to age 15 years were coded as early substance users.

Suicidal ideation: Cohort members were questioned at age 16 years about any history of suicidal ideation. Suicidal ideation was assessed by asking sample members whether they had ever thought about killing themselves or had attempted suicide prior to age 16 and the frequency of such thoughts or attempts. Responses were coded as either no history of suicidal ideation or attempt, or some history of suicidal ideation or attempt.

History of Depression: Depression was coded for at ages 14-16 years. A dichotomous variable was formed representing whether the young person had ever met DSM-III-R (American Psychiatric Association, 1987) diagnostic criteria for major depression during this time, either on the basis of self report or parental report.

History of Anxiety: Anxiety disorders, including social phobia, simple phobia, generalised anxiety disorder, and overanxious disorder were coded for at ages 14-16 years. A dichotomous variable was formed representing whether the young person had ever met DSM-

III-R (American Psychiatric Association, 1987) diagnostic criteria for an anxiety disorder, either on the basis of self report or parental report.

Deviant peer affiliations: Deviant peer affiliations consisted of a scale score measure of the young person's self reported extent of affiliations with delinquent or substance using peers at age 15, with a higher score implying greater affiliation with deviant peers. This index was based on sample members' reports of the extent to which their best friend and other friends used tobacco, alcohol, and cannabis, truanted, or broke the law. These items were summed to produce a scale measure of the extent to which the sample member reported affiliating with delinquent or substance using peers. The construction of this scale has been described previously (Fergusson & Horwood, 1996), and was of moderate reliability, with an alpha coefficient of .76.

Measures of Violence Exposure

Childhood physical punishment/abuse (CPA) and childhood sexual abuse (CSA) exposure

Retrospective reports of exposure to physical abuse and sexual abuse prior to age 16 were obtained from cohort members at ages 18 and 21 years. At each assessment, participants were asked whether, before the age of 16, they had experienced any CSA or CPA.

For experiences of CSA a series of 15 sexual activities were posed for consideration. These activities spanned: (a) non-contact episodes involving indecent exposure, public masturbation, or unwanted sexual propositions; (b) episodes involving sexual contact in the form of sexual fondling, genital contact, or attempts to undress the respondent; (c) episodes involving attempted or completed vaginal, oral or anal intercourse. Respondents who reported CSA were asked a further series of questions relating to the extent and nature of the experienced abuse (Fergusson, Lynskey, & Horwood, 1996).

Reports were made on experiences of CPA using a five point scale ranging from ‘my parent never used physical punishment’ to ‘my parent treated me in a harsh and abusive way’ (Fergusson & Lynskey, 1997). Separate ratings were made for mother figures and father figures (if available). Ratings for both parents were then combined into a single rating at each age by classifying the participants into one of four groups based on the greatest level of exposure to physical punishment reported for either parent. These groups were: (a) parents never or seldom used physical punishment; (b) at least one parent used frequent punishment; (c) at least one parent used severe punishment; or (d) at least one parent treated the participant in a harsh/abusive manner. Participants were classified into the group corresponding to the most severe level of punishment/abuse reported at either age 18 or 21 years. In the present analysis, parents who never used physical punishment are combined with parents who seldom used physical punishment as preliminary analyses showed that members of these groups had very similar outcomes in terms of the outcome measures reported in this study.

The availability of repeated measures data on CPA and CSA provided an opportunity to examine the stability of abuse reported and the effects of current mental state on reporting errors. This analysis has been reported on by Fergusson, Horwood & Woodward (2000) which produced the following conclusions:

- i) Reports of CPA and CSA showed considerable instability with kappa values between assessments made at 18 and 21 ranging from .45 to .47.
- ii) Whilst reports showed considerable instability and change between 18 and 21 years, there was no evidence to suggest that these reports were influenced by current mental state measures.
- iii) Latent class analyses showed that combining the reports gathered at ages 18 and 21 using an “Or” algorithm in which the participant was assigned to the most severe outcome reported at age 18 or 21 led to a correct rate of assignment to the latent classes of greater than 98%.

In summary, these findings suggest that combining reports of physical abuse and sexual abuse in the ways described above led to an accurate classification of reported exposure to CPA and CSA.

To account for the fact that this thesis is focussing on the effects of CPA on parenting outcomes, a cross validation of the overall classification was conducted. Table 3 shows the associations between the global rating of physical punishment/maltreatment described above and specific reports of abusive experiences in childhood. These measures were based on self-report measures of punitive experiences described by Berger, Knutson, Mehm, and Perkins (1988), augmented by a number of other measures. Examination of the Table shows clear gradients in the extent to which reports of abusive experiences were made. These results support the view that the overall rating of exposure to abuse during childhood was generally consistent with the individual reports of punishment and abuse experiences in childhood.

Table 3: Profile of Parenting Cohort Members Experiences of Childhood Physical Punishment as Reported on Items From the 18 and 21 Year Interviews.

	Never/rarely (N=111)	Regular (N=24)	Severe (N=15)	Harsh (N=14)	p
% Minor Assault Mother	90.1	95.8	100	92.9	.500
% Minor Assault Father	61.3	83.3	86.7	100	.003
% Minor Assault Either	92.8	100	100	100	.260
% Severe Assault Mother	10.8	50	60	35.7	.000
% Severe Assault Father	12.6	45.8	86.7	92.9	.000
% Severe Assault Either	19.8	70.8	100	100	.000
% Bruised by Mother	2.7	12.5	26.7	42.9	.000
% Bruised by Father	6.3	29.2	66.7	85.7	.000
% Bruised by Either	8.1	37.5	73.3	92.9	.000

Results

1. Childhood and Family Circumstances of those who became parents by age 25

The first objective of this study was to compare the earlier life course experiences of those cohort members who became parents by age 25 with those who did not. For the purposes of these analyses, the parenting group consisted of all cohort members who had become parents and were interviewed at age 25. Whereas the non-parenting group consisted of those cohort members who had not become parents by age 25 and non-resident parents who were in less than fortnightly contact with their children. This chapter presents a series of comparisons between parenting and non-parenting cohort members on a range of earlier life course measures, including social background characteristics, family functioning, parental adjustment, childhood and adolescent characteristics, and experiences of family violence. Between group comparisons were made using the independent samples t-test for continuous measures and the chi squared test for categorical measures.

Family Social Background Characteristics

Table 4 compares the family and social background characteristics of those cohort members who had become parents with those who did not become parents by age 25. Measures included family socioeconomic status at birth, parents' level of educational achievement, and maternal age at first childbirth. Table 4 shows that those who became parents prior to age 25 were significantly more likely to have been born to a teenage mother ($p < .0001$) and to parents who had no educational qualifications at birth compared to cohort members who did not become parents ($p < .0001$). There was also a clear tendency for early parenting cohort members to be born into families where parents were of either semi-skilled or unskilled socio-economic status ($p < .0001$). These findings show that those cohort

members who became parents early were more likely to have been raised in family circumstances characterised by early motherhood, limited economic resources, and lower levels of parental educational achievement.

Table 4: Family Social Background Characteristics of Cohort Members Who Did and Did Not Become Parents by Age 25.

Measure	Parent by age 25 (N=167)	Non-parent (N=772)	χ^2	p
% Own mother aged <20 years at first birth	47.3	19.4	58.60	<.0001
% Mother lacked formal educational qualifications at first childbirth	70.7	45.2	36.05	<.0001
% Father lacked formal educational qualifications at first childbirth	67.3	44.4	27.18	<.0001
% Family of semi-skilled/unskilled socioeconomic status at birth	40.7	21.4	27.95	<.0001

Family Life Experiences

Table 5 compares the earlier family life experiences of cohort members who became parents with those who did not become parents by age 25. Measures of family circumstances consisted of family structure at birth, including the number of parental changes cohort members had experienced, their experiences of single parent and stepparent families, and changes in this structure during childhood. Examination of the Table shows that those who became parents early were significantly more likely to have experienced high levels of family instability, as characterised by high levels of parental changes, than cohort members who did not become parents early ($p<.0001$). Those who became parents early were four times more likely to have been born into a single parent family (16% compared to 4%, $p<.0001$), and were more than twice as likely to have had a stepparent at some stage during their childhood ($p<.0001$). Young parents also reported lower levels of attachment to their parents indicating

they felt less close to their parents at age 15 than those who did not become parents by age 25 ($p < .0001$). In addition, those cohort members who became parents by age 25 were exposed to nearly twice as much interparental violence as cohort members who did not become parents by age 25 ($p < .0001$). In summary, early parenting cohort members reported greater amounts of family instability, were more likely to have been born into families characterised by single parenthood, and high levels of interparental violence, and as a result had a higher likelihood of involvement in a blended family.

Table 5: Childhood Family Circumstances of Cohort Members Who Did and Did Not Become Parents by Age 25.

Measures	Parent by age 25 (N=167)	Non-parent (N=772)	t/χ^2	p
% Entered single parent family at birth	16.2	4.3	33.27	<.0001
% Ever experienced parental separation (0-15 years)	48.7	26.2	30.62	<.0001
% Ever entered step parent family (0-15 years)	39.5	17.5	36.98	<.0001
% Interparental violence	34.0	20.6	13.6	<.0001
Mean (SD) number of parental changes	2.27 (3.28)	.98 (2.09)	4.88	<.0001
Mean (SD) quality of parental attachment (15 years)	70.23 (10.55)	73.44 (9.43)	-3.75	<.0001

Parental Adjustment

Table 6 compares the parental adjustment characteristics for those cohort members who became parents with those who did not become parents by age 25. Measures of parental adjustment included parent's history of depression and anxiety, drug abuse, alcohol problems, and criminality. Examination of the Table shows those who became parents early were more likely to have parents who reported alcohol problems ($p < .0001$) and parents with a criminal

history ($p=.015$) than cohort members who did not become parents by age 25. There was also a clear tendency for greater incidence of parental use of illicit drugs for those cohort members who became parents early ($p=.021$). There were no significant differences for parental mental illness. These findings illustrate that those who became parents early were more likely to have been raised by parents characterised by alcohol problems, illicit drug use, and criminality than those who did not become parents by age 25.

Table 6: Comparison of Those Who Did and Did Not Become Parents by Age 25 on Measures of Parental Adjustment During Childhood.

	Parent by age 25 (N=167)	Non-parent (N=772)	χ^2	p
% Parental depression/anxiety problems (age 15 years)	31.8	30.0	0.19	.662
% Parental alcohol problems (age 15 years)	21.2	10.3	14.3	<.0001
% Parental history of criminality (age 15 years)	19.2	11.9	5.89	.015
% Parent used illicit drugs (age 11 years)	31.6	23.0	5.36	.021

Childhood Characteristics

Table 7 compares the individual characteristics during childhood for those cohort members who became parents with those who did not become parents by age 25. Childhood characteristics included measures of gender and ethnic origin, as well as early personal characteristics including behavioural adjustment, intelligence, and scholastic ability. Examination of the Table shows that two thirds of those who became parents by age 25 were women. This was not unexpected given demographic differences in the mean age of women at first childbirth being two years below men (Statistics New Zealand, 2000b). Compared to those who had not become parents, those who had become parents were more likely to be of

Maori ethnicity ($p < .0001$). There was also a clear tendency for those who became parents to score lower on their childhood scores of intelligence and scholastic ability. Intellectual ability scores were approximately one third of a standard deviation lower on the WISC at age 8, and the TOSCA at age 13 years ($p < .0001$). There were no significant between group differences in the onset of menarche for women. These findings show that those who became parents early were more likely to be female, of Maori ethnicity, and to exhibit higher rates of problems in childhood including conduct and attentional difficulties, and lower scores on tests of intelligence and scholastic ability.

Table 7: Individual Characteristics During Childhood of Cohort Members Who Did and Did Not Become Parents by Age 25.

Measures	Parent by age 25 (N=167)	Non-parent (N=772)	t/χ^2	p
% Female gender (birth)	67.1	48.2	19.82	<.0001
% Maori ethnicity (self identified at age 21)	23.4	10.9	19.19	<.0001
Mean (SD) WISC-R IQ score (8 years)	97.03 (15.15)	103.23 (15.37)	0.79	<.0001
Mean (SD) TOSCA score (13 years)	96.26 (14.55)	101.06 (15.13)	3.12	.002
% Menarche began < 13 years*	43.1	39.6	0.42	.515
% In highest quartile conduct difficulties score	31.6	19.9	10.99	.001
% In highest quartile attentional difficulties score	33.5	20.7	12.19	<.0001
% In highest quartile emotional difficulties score	26.6	21.6	1.95	.193

*Menarche based on a sample of N=481 females

Adolescent Behaviour

Table 8 describes the adolescent behaviours of those cohort members who became parents with those who did not become parents on a series of measures of adolescent adjustment and risk taking behaviour, including early sexual risk taking, substance use, experimentation, novelty seeking, deviant peer affiliations, and mental health. Examination of the Table shows young parents were significantly more likely to have had sexual intercourse by age 16, truanted from school, engaged in novelty seeking behaviour, and had greater affiliation with deviant peers than cohort members who did not become parents by age 25 ($p < .0001$). There was a clear tendency for parenting cohort members to have a higher prevalence of drug use in adolescence, as illustrated by rates of both cannabis and tobacco use ($p \leq .001$). Those who became parents by age 25 experienced higher rates of mental health issues during their adolescent years, being more likely to have a history of depression, anxiety disorders and/or suicide attempt than cohort members who did not become parents by age 25. These findings show that, for those who became parents by age 25, their adolescent years were characterised by more personal problems such as early onset sexual intercourse, and higher levels of truancy, novelty seeking, drug use, and deviant peer affiliations. Younger parents were also characterised by higher levels of mental health issues.

Table 8: Adolescent Risk Taking Behaviour and Psychological Adjustment of Cohort Members Who Did and Did Not Become Parents by Age 25.

Measures	Parent by age 25 (N=167)	Non-parent (N=772)	t/ χ^2	p
% Sexual intercourse before age 16 years	44.7	20.6	41.78	<.0001
% In highest quartile novelty seeking score	33.1	19.1	14.45	<.0001
% Truanted from school (12-14 years)	29.6	12.0	31.07	<.0001
% Cannabis use before age 15 years	15.7	7.3	6.75	.009
% Tobacco use before age 14 years	38.8	16.8	37.84	<.0001
% History of suicidal ideation by age 16 years	28.1	12.3	25.11	<.0001
% History of major depression (14-16 years)	21.7	11.4	11.82	.001
% History of anxiety disorder (14-16 years)	42.1	27.1	13.71	<.0001
Mean (SD) deviant peer affiliations score (15 years)	5.7 (2.69)	4.2 (2.35)	6.97	<.0001

Child Abuse

Table 9 compares childhood exposure to abuse of those who did and did not become parents on measures of sexual abuse and physical abuse prior to age 16 years. These figures are based on young people's retrospective reports of their childhood experiences at ages 18 and 21 years. Examination of the Table shows that early parenting cohort members were more than twice as likely to have been exposed to severe or harsh physical abuse ($p<.0001$), and any form of sexual abuse ($p<.0001$) before the age of 16 than cohort members who did not become parents by age 25. These findings show that those who became parents early were exposed to greater levels of child abuse during their childhood and adolescent years compared to cohort members who did not become parents by age 25.

Table 9: Exposure to Child Abuse of Cohort Members Who Did and Did Not Become Parents by Age 25.

Measures	Parent by age 25 (N=167)	Non-parent (N=772)	χ^2	p
% Severe or harsh physical abuse	32.1	15.0	27.78	<.0001
% Sexual abuse	26.1	9.0	38.70	<.0001

Conclusion

As hypothesised, results reveal significant differences between cohort members who did and did not become parents by age 25 on a range of measures. Specifically, those who became parents early grew up in more disadvantaged, unstable and violent family circumstances. They also experienced more adverse demographic background factors including lower parental education, a higher incidence of single-parent families, greater family instability, and higher levels of parental substance abuse, mental health issues, and criminality. As individuals, those who became parents by age 25 were less intellectually and academically able, and had higher rates of conduct difficulties. During adolescence young parenting cohort members were more likely to engage in behaviours indexed by early sex, truancy, novelty seeking and drug use. In addition, cohort members who became early parents were more likely to have experienced child abuse.

Collectively these findings show consistently higher rates of socio economic adversity, and greater family and personal instability. Those who became parents early experienced greater levels of childhood adversity across individual, family, and social domains. These results suggest that a wide array of social, family and individual adversities place young people at risk of early onset of parenthood. The results from these analyses raise questions about the preparedness of these parents for the challenges of parenthood.

2. Family Characteristics

The second objective of this study was to describe the current parenting circumstances of cohort members who were parenting at age 25 years. This chapter presents a series of comparisons and descriptors for a range of current family circumstances including the number of children being parented, custodial arrangements, children's ages, current family structure, and economic wellbeing.

Family Structure and Composition

Table 10 presents descriptive data on the current family characteristics of cohort members who were parenting children at age 25 years. Measures of family circumstances included the number of children being parented, whether these children were biological or non-biological, whether children were resident or non-resident with the parenting cohort member, custody arrangements for these children, and current partnership status. This information is shown separately for female parents, male parents, and the total parenting sample. For each comparison, the Table also reports the results of a test of significance (chi squared or t-test as appropriate) of any difference between male and female parenting cohort members.

Examination of the Table shows the following:

1. Just under half (48%) of parents were parenting one child. 34.1% of parents had 2 children, 9.6% had 3 children, 6.6% had 4 children, 1.2% had 5 children, and 0.6% had 6 children. The total number of children in each family ranged from 1 to 6 with a mean of 1.8. The distribution of the number of children being parented was very similar for female and male parents.
2. One in four respondents was parenting a non-biological child, with 10% of parents parenting only non-biological children. Male parents were significantly more

likely ($p < .0001$) than female parents to be parenting only non-biological children (23.6% of males vs. 3.6% of females respectively). These findings suggest that while young parents were predominantly parents of biological children, males were more likely than females to be cohabiting with female partners who already had children from a previous relationship. The total number of biological children ranged from 1-4 and the total number of non-biological children ranged from 0-3.

3. Males were significantly more likely than females to be non-resident parents: 31% of males compared to 3.6% of females reported at least one child who was not living with them ($p < .0001$). This difference was also reflected in the custody arrangements for children with only 67.3% of males having full or shared custody of their children compared with 97.3% of females ($p < .0001$). The majority of parents had full custody of their children (87.4%), and less than 10% had children in shared custody (8.2%), or in the sole custody of the other biological parent (8.6%).
4. In 70% of cases the participant was either married (20%) or living in a cohabiting relationship (50%) with the remainder being single parents. However, partnership status varied significantly ($p = .001$) with parent's gender: more than a third (35%) of mothers were single parents compared to 14.5% of fathers.

Table 10: Current Family Circumstances of Mothers and Fathers Who Were Parenting at Age 25.

Measure	Mothers (N=112) %	Fathers (N=55) %	Total (N=167) %	t/ χ^2	p
<u>Number of children being parented</u>					
1 child	48.2	47.3	47.9		
2 children	38.4	25.5	34.1		
3 children	6.3	16.4	9.6		
4 children	6.3	7.3	6.6		
5 children	0.9	1.8	1.2		
6 children	0.0	1.8	0.6	8.11	.150
Mean (SD) number of children	1.73 (.9)	1.96 (1.19)	1.81 (1.01)	1.27	.205
<u>Parenting of biological versus non-biological children</u>					
Parenting biological children only	85.7	50.9	74.3		
Parenting non-biological children only	3.6	23.6	10.2		
Parenting biological and non-biological children	10.7	25.5	15.6	25.75	<.0001
<u>Resident/non-resident parenting</u>					
All children living with parent	96.4	69.1	87.4		
Some children living with parent	2.7	14.5	6.6		
All children with other caregiver	0.9	16.4	6.0	25.78	<.0001
<u>Custodial arrangements for children</u>					
Has full or shared custody of all children	97.3	67.3	87.4		
Some/all children in alternative custody arrangements	2.7	32.7	12.6	30.3	<.0001
<u>Current partnership status at age 25</u>					
Married	22.3	16.4	20.4		
Cohabiting	39.3	69.1	49.1		
Single	38.4	14.5	30.5	14.19	.001

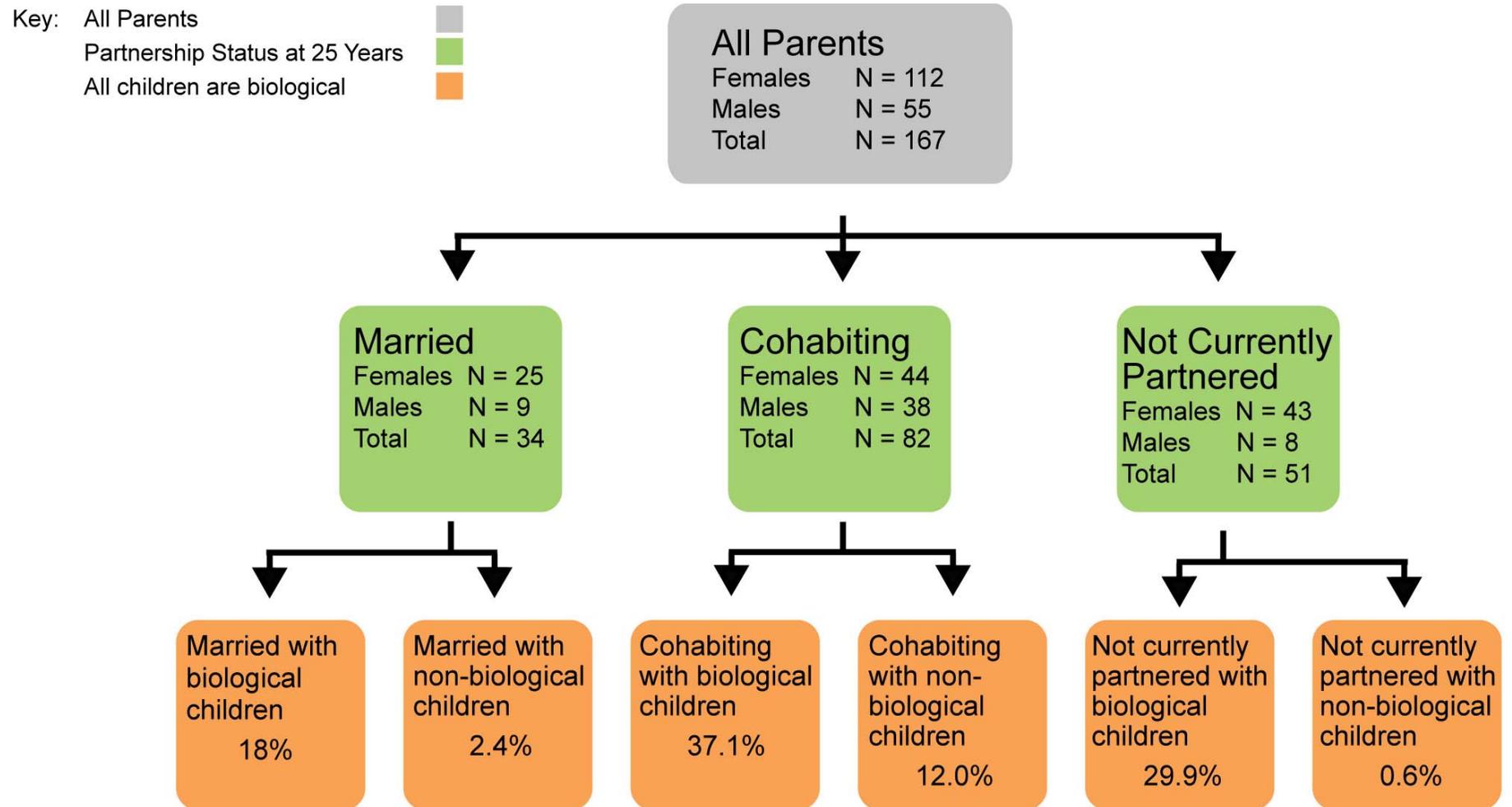
Current Family Structure

Overall the above findings suggest that the parents in this study were living in a wide variety of family contexts depending on the number of children parented, partnership status and other factors. To further illustrate this Table 11 below and Figure 2 on the following page, show the sample classified into groups on the basis of four measures of family circumstances. These measures were: (a) gender of parent (female vs. male); (b) partnership status (not currently partnered, married or cohabiting); (c) whether all children being parented were biological children (yes/no); and (d) whether all children being parented were living with the parent (yes/no). Not all possible combinations of these characteristics exist. However, the Table provides an indication of the distribution of the different family types.

Table 11: Current Family Structure of Parenting Cohort Members.

Family Type			Mothers %	Fathers %
Married	All children are biological	All children are resident	19.6	12.7
Married	All children are biological	Some children are not resident	0.9	0.0
Married	Some children are non-biological	All children are resident	0.0	1.8
Married	Some children are non-biological	Some children are not resident	1.8	1.8
Cohabiting	All children are biological	All children are resident	28.6	34.5
Cohabiting	All children are biological	Some children are not resident	5.4	9.1
Cohabiting	Some children are non-biological	All children are resident	0.9	14.5
Cohabiting	Some children are non-biological	Some children are not resident	4.5	10.9
Not currently partnered	All children are biological	All children are resident	33.0	3.6
Not currently partnered	All children are biological	Some children are not resident	4.5	10.9
Not currently partnered	Some children are non-biological	All children are resident	0.0	0.0
Not currently partnered	Some children are non-biological	Some children are not resident	0.9	0.0

Figure 2: Current Family Structure of Parenting Cohort Members.



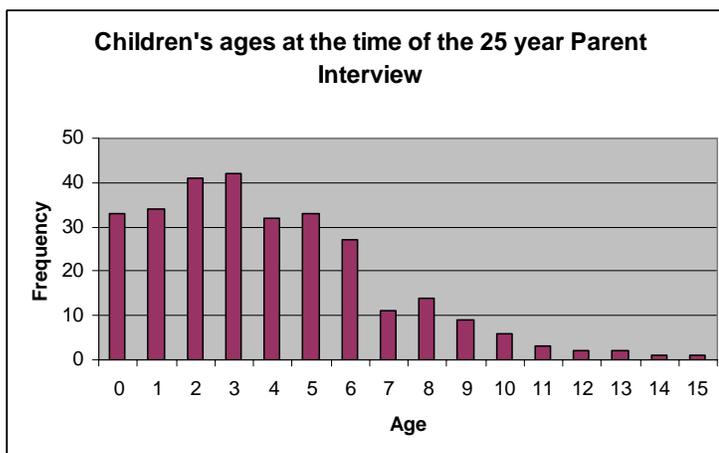
For female parents, the most common family types were single mothers living with biological children (33%), cohabiting mothers living with biological children (28.6%), and married women with biological children (19.6%).

For males there was a wider distribution where, while the predominant group were cohabiting men with biological children (34.5%), other groupings included married men with biological children (12.7%), cohabiting parents with non-biological children (14.5%), cohabiting parents with non-biological children who were not all living with the parenting cohort member (10.9%), and men not currently partnered and whose children were not all living with them (10.9%).

Children's Age Distribution

The 167 parents in the study reported parenting a total of 288 children. Figure 3 shows that the age range for these children was positively skewed with the majority of children being aged 5 or under. The children ranged in age from <1 year up to age 15 years: overall one in four (23%) were <2 years, 40% were preschool age and 38% were school aged. 42.8% of children were female.

Figure 3: Children's Ages at the Time of the 25 Year Parent Interview



Association Between Children's Ages and their Biological, Residential and Custodial Status

Tables 12-14 show the associations between children's ages and their biological relationship with the parent, residential status, and custodial arrangements. Each association has been tested for significance with the chi squared test. Overall 10.9% of children were non-biological and 22.7% were not living with the parenting cohort member. Significant differences were found in the age distribution of these children with those under the age of 5 being more likely to live with the parenting cohort member ($p=.053$), and a greater proportion of non-biological children were school aged ($p<.0001$). There were no significant differences for custodial arrangements in terms of the age distribution of children.

Table 12: Associations Between Children's Ages and their Biological Relationship with the Parenting Cohort Member.

Child's Age (years)	Biological Children (N=257) %	Non-biological children (N=34) %	χ^2	p
< 2	24.5	5.9		
2-4	42.0	20.6		
5+	33.5	73.5	20.8	<.0001

Table 13: Associations Between Children's Ages and Whether or not they Live with the Parenting Cohort Member.

Child's Age (years)	Child lives with parent (N=225) %	Child not living with parent (N=63) %	χ^2	p
< 2	25.0	16.5		
2-4	41.3	35.3		
5+	33.7	48.2	5.89	.053

Table 14: Associations Between Children's Ages and their Current Custodial Arrangement With the Parenting Cohort Member.

Child's Age (years)	Child in full/shared custody of parent (N=233) %	Child in custody of other parent (N=24) %	χ^2	p
< 2	21.9	16.7		
2-4	43.3	29.2		
5+	34.8	54.2	3.56	.169

Partnership History and Transition to Parenthood

Table 15 shows the differences between males and females for age at first childbirth, and the number of partners lived with since parenthood onset. Examination of the Table shows that half of this parenting cohort became parents before the age of 21. Comparisons show proportionately more females became parents before the age of 21 years than males (56.3% for females vs. 31.1% for males, $p=.009$). Women were also more likely to have lived with more than one partner since becoming a parent ($p=.073$).

Table 15: Parent's Age at First Childbirth and Family Stability of Parenting Cohort Members.

	Mothers (N=112)	Fathers (N=55)	All Parents (N=167)	t/χ^2	p
<u>Age became parent</u>					
< 17 years	14.5	13.3	14.2		
18-20 years	41.8	17.8	34.8		
21-25 years	43.6	65.9	51.0	9.33	.009
<u>Family stability</u>					
% Lived with more than one partner since becoming a parent (range 1 – 3)	20.9	8.9	17.4	3.21	.073
Mean (SD) number of partners lived with since becoming a parent	1.15 (.74)	1.11 (.38)	1.14 (.66)	-0.38	.706

Current Financial Resources and Economic Wellbeing

Table 16 presents findings of the current financial resources and economic wellbeing of cohort members who became parents by age 25 and their families. Measures of financial and economic wellbeing included employment circumstances, net weekly income, whether or not they were dependent on welfare, and if they owned their own home. Parents also indicated whether they had experienced any money troubles; more specifically, if they had ever had to borrow money, postpone trips to the dentist or doctor, or been unable to pay bills. Examination of the Table shows that 60% of parents were currently in part or full-time employment, and 46% of families had accessed benefits in the past twelve months. The majority of parents reported financial worries (71%) not surprising given their mean total weekly income of \$371.99, and 23% of families indicated being dependent on welfare support. There was a clear tendency for non-ownership of the family home, with only 20% of parents indicating they owned their own home. The majority of parents reported being satisfied with the quality of their housing, with 94.8% indicating that their accommodation was adequate or more than adequate at meeting their family's needs.

Further comparisons of differences between mothers and fathers found more men were in paid employment than women (87% males vs. 50% females, $p < .0001$). Fathers were on higher gross family incomes in the past 12 months ($p = .048$), and a greater proportion of mothers had accessed the benefit in the past 12 months or were currently accessing the benefit ($p \leq .005$). 91% of single mothers indicated they had accessed welfare in the past 12 months, and 53.5% of single mothers indicated they were dependent on welfare.

These findings show that a large proportion of those who became parents by age 25 were accessing benefits, were prone to experience financial worries, and were unlikely to own their own home.

Table 16: Current Financial Resources and Economic Wellbeing of Mothers and Fathers Who Became Parents by Age 25.

	All Parents (N=167)		All Parents (N=167)
<u>Current employment</u>		<u>Financial difficulties</u>	
% Respondent in paid employment	60.6	% Ever had money worries	71.0
% Partner in paid employment	71.1	% Had to borrow money from family or friends	52.9
		% Unable to pay bills	29.0
		% Postponed visits to the doctor or dentist	37.4
<u>Income</u>		Mean (SD) number of financial difficulties encountered in the last 12 months (range 0-13)	2.9 (2.99)
Mean (SD) net weekly income from:		<u>Family living circumstances</u>	
Paid employment	245.14 (300.61)	% Family home owned or mortgaged	20.0
Welfare	107.59 (156.09)	<u>% Reported quality of housing as:</u>	
Other	19.26 (46.81)	More than adequate	40.6
Total	371.99 (262.81)	Adequate	54.2
<u>Welfare support:</u>		Inadequate	3.9
% Family is currently dependent on welfare (no other source of income)	23.2	Very inadequate	1.3
% Family on any welfare support in the past 12 months	46.5		

Conclusion

The above findings show that those cohort members who became parents by age 25 were predominantly parenting biological children and approximately half of parents had more than one child, with some parenting as many as six. Analysis of relationship status revealed a low rate of legal marriage, but high rates of cohabitation among parenting cohort members. Significant differences were found between mothers and fathers, with single parents being most likely to be mothers and step-parents being most likely to be fathers. Children in the care of those who became parents by age 25 ranged in age from 0-15 years, and were typically the full custodial responsibility of parenting cohort members. Mothers were significantly more likely than fathers to have full custody of their children. In terms of financial and economic factors, families of those who became parents by age 25 were prone to financial worries, many were on a comparatively low income, were unlikely to own their own home, and almost half were accessing benefits.

Collectively, this descriptive chapter of the current family circumstances of young parents suggests that contemporary young parents are typically raising their children in social contexts characterised by socioeconomic disadvantage and diverse family patterns.

3. Exposure to Childhood Physical Abuse and Later Parenting Outcomes

The third objective of this study was to examine the impact of childhood experiences of family violence on parenting outcomes. Presented in this chapter is a set of comparisons of parenting outcomes relating to severity of exposure to physical abuse. Reports of parenting practices were given from two sources: the parents themselves, and through interviewer ratings. As noted in methods, childhood physical abuse (CPA) was measured on a four-point scale with parent's experiences of physical punishment meeting criteria for never/seldom, regular, severe or harsh.

Self Reported Parenting

Table 17 shows the associations between the extent of exposure to CPA and outcomes on a series of measures of parenting as reported by parents. Since parental report measures were obtained for each child being parented, the Table is based on all children rather than individual parents. Between group differences were tested using analysis of variance for continuous data and chi squared analysis for categorical data to assess the parenting outcomes of those cohort members who were parenting at age 25. An overall test of linearity is reported for each outcome reflecting the association between severity of abuse exposure and parenting. Measures of parenting included:

- (a) Measures of parenting styles according to Baumrind's (1991) scales which fit dimensions of authoritative, authoritarian, and permissive styles as measured on the Parenting Practices Questionnaire (Robinson, Mandlco, Olsen & Hart, 1995).
- (b) The parent's positive or negative regard of the child, determined using Dunn's scales of positivity and negativity which measure the parents level of positive and negative attitude towards their children (Dunn, Deater-Deckard, Pickering & O'Connor, 1998).
- (c) Self ratings made using the Parent-Child Conflict Tactics Scale (CTS-PC) to indicate parents' use of punitive parenting practices. Measures included scales of psychological

aggression, severe or very severe physical assault, and a combined measure “any assault” which combined minor assault with severe and very severe assault to obtain a dichotomous variable of any assault. Minor assault included items such as ‘smacked child on bottom’ and ‘shook child’. Severe assault included items such as ‘threw or knocked child down’ and ‘hit child with a fist or kicked them’. Very severe assault included items such as ‘hit child over and over as hard as you could’ and ‘burned or scalded child on purpose’.

Examination of the Table shows the following:

1. Mean scores of authoritative, authoritarian and permissive styles of parenting were similar across all groups. There were no significant differences between levels of exposure to physical abuse and outcomes on parenting styles.
2. There were significant associations ($p \leq .05$) between the extent of abuse and measures of positivity and negativity, reflecting the fact that with increasing severity of abuse exposure, parents reported decreasing positivity and increasing negativity towards their children. This indicates that those who experienced harsh levels of physical punishment in their own childhoods were less positive and more negative in their own parenting.
3. Examination of the Table shows no significant differences between groups on punitive parenting practices as measured on the CTS-PC. However, there was evidence of increasing use of severe or very severe physical assault suggesting that those exposed to harsh physical abuse were more likely than those who were exposed to no physical abuse to employ the use of severe or very severe physical punishment. This association failed to achieve significance.

These results suggest only limited evidence of detrimental effects of physical abuse in this sample of early parents.

Table 17: Associations Between the Extent of Childhood Physical Abuse and Later Parenting Outcomes Self Reported by Parents.

	Extent of Exposure to Physical Abuse				p Linear
	Never/seldom	Regular	Severe	Harsh	
<u>Parenting styles</u>	(N=182)	(N=39)	(N=32)	(N=28)	
Mean (SD) Authoritative	78.84 (13.65)	78.06 (11.45)	80.47 (13.74)	79.32 (16.68)	.697
Mean (SD) Authoritarian	32.58 (6.93)	33.42 (7.70)	32.50 (5.00)	33.79 (6.82)	.462
Mean (SD) Permissive	28.49 (4.25)	30.85 (7.57)	30.41 (4.24)	28.79 (3.56)	.114
<u>Parent-Child Relationship (Dunn)</u>	(N=176)	(N=36)	(N=28)	(N=22)	
Mean (SD) Positivity	11.72 (0.69)	11.61 (0.64)	11.75 (0.52)	11.26 (1.10)	.050
Mean (SD) Negativity	6.36 (1.70)	6.80 (2.01)	7.17 (1.99)	7.50 (1.82)	.001
<u>Parent-Child Conflict Tactics Scale</u>	(N=185)	(N=39)	(N=32)	(N=28)	
% Psychological aggression	79.7	76.9	81.3	82.1	.782
% Severe or very severe physical assault	10.2	10.3	15.6	17.9	.183
% Any assault	67.6	59.0	56.3	57.1	.120

Interviewer Ratings

Parallel to the parental reports, separate ratings of parenting behaviour were made by interviewers. Global ratings of parental warmth, sensitivity and child management were scored on a scale of 1 to 5, with high scores indicating more warmth, better sensitivity, and greater skills relating to child management. Measures of warmth, sensitivity and child

management were child specific but were only available for those children who were present at some stage during the interview. Additionally, interviewers made ratings based on the scales of Responsivity and Avoidance of Punishment as measured by the Home Observation for Measurement of the Environment (HOME; Caldwell, & Bradley, 1984). The HOME scales were made in relation to each parent, not with respect to each individual child; however, only behaviours available or observed could readily be coded for. It should be noted that the sample sizes for the interviewer report measures are substantially lower than for the self report parent ratings. This reflects the fact that interviewer ratings could only be obtained when parenting behaviours could be observed during the interview. As a result, substantially fewer ratings were made.

Table 18 describes the associations between the extent of childhood physical abuse and later parenting outcomes based on interviewer ratings. For these outcomes, associations have been tested for significance using analysis of variance. An overall test of linearity is reported for each outcome reflecting the association between severity of abuse exposure and parenting outcomes. In contrast to findings on those measures which were coded for each child, the interviewer ratings suggest more consistent evidence of an association with childhood exposure to physical abuse. More specifically:

1. Mean scores for parenting strategies employed by parents, as rated by interviewers, revealed significant differences with those who experienced harsh levels of physical abuse scoring lower on warmth, sensitivity and child management compared to those with lower levels of exposure to physical abuse ($p \leq .002$).
2. In addition, there was a significant association between physical abuse and the HOME scale of avoidance of punishment reflecting the fact that parents who were disciplined physically as children were more likely to accept the use of physical

discipline with their own children ($p=.05$). However, the scale of responsivity was not significantly related to childhood physical abuse.

These findings suggest evidence of moderate to strong associations between interviewer ratings and childhood exposure to physical abuse. However, as noted above these observations were only obtained on a sub-sample of families.

To examine whether there were any factors associated with failure to obtain interviewer ratings, the families for whom interviewer ratings were and were not available were compared on a series of measures of family structure and composition. Measures included: current partnership status, age of transition to parenthood, children's ages, number of children, parent's gender, whether children were biological or non-biological, and whether children were resident or not-resident with the parenting cohort member. These comparisons showed that only one factor, gender of parent, was significantly related to whether or not interviewer ratings were scored, with males being less likely to have been observed with their children than females. This suggests that interviewers were less likely to observe male parents in the act of parenting. Thus the above findings may be more relevant to the parenting of mothers than of fathers.

Table 18: Associations Between the Extent of Childhood Physical Abuse and Later Parenting Outcomes Based on Interviewer Ratings.

	Extent of Exposure to Physical Abuse				p Linear
	Never/seldom	Regular	Severe	Harsh	
<u>HOME</u>	(N=39)	(N=9)	(N=5)	(N=6)	
Mean (SD) Responsivity	4.28 (2.40)	2.60 (2.97)	3.00 (3.08)	4.50 (2.59)	.680
Mean (SD) Avoidance of punishment	5.18 (1.83)	5.71 (1.50)	3.25 (2.63)	3.83 (2.04)	.050
<u>Global ratings</u>	(N=70)	(N=14)	(N=11)	(N=19)	
Mean (SD) Parental warmth	3.28 (1.13)	3.64 (1.22)	2.45 (1.51)	2.42 (1.07)	.002
Mean (SD) Parental sensitivity	3.30 (1.18)	3.38 (1.04)	2.27 (1.10)	2.39 (0.92)	.000
Mean (SD) Child management	3.26 (1.15)	3.29 (1.14)	2.36 (1.21)	2.21 (0.79)	.000

Adjustment for Family Structure and Composition

The above findings suggest evidence for an association between childhood exposure to physical abuse and later parenting outcomes. In particular those parents who experienced high levels of childhood physical punishment reported decreasing positivity and increasing negativity towards their children, were more likely to accept the use of physical discipline, and scored lower on warmth, sensitivity and child management compared to those with lower levels of exposure to physical abuse.

However, the associations depicted in Tables 17, 18 do not take any account of the structure or composition of each family. In particular there may be aspects of family structure that are related to exposure to childhood physical abuse or that may modify the association of childhood physical abuse with parenting outcomes. For example, it is possible that the

consequences of exposure to childhood physical abuse may vary with gender of parent or type of family (single vs. partnered). Similarly, for the child specific outcomes, ratings are pooled across children who vary in age from infants (<1 year) up to age 15 years. It is possible, for example, that the effect of exposure to childhood physical abuse on parenting outcomes (e.g. use of physical punishment) only becomes apparent for older children, and that by pooling over all children this association has been masked. To further examine these issues the data in Tables 17, 18 were reanalysed using a series of linear regression models to (a) adjust the observed associations for differences in family structure and composition and (b) test for evidence of effect modification (interaction) in the association between the extent of physical abuse and parenting outcomes across the various components of family structure/composition. A full table with the unadjusted regression coefficients and the regressions after adjustment for family structure/composition is included in Appendix B. For continuously scaled outcomes the analyses were conducted using multiple linear regression models (Cohen, Cohen, West, & Aiken, 2003) whereas for dichotomous outcomes (Parent-Child Conflict Tactics Scale) logistic regression models were fitted (Hosmer & Lemeshow, 2000). In each case the first model fitted was a main effects model in which the outcome was regressed on the measure of physical abuse and measures of family structure/composition. This model was then extended to test for interactions between each measure of family structure and physical abuse.

For parent specific outcomes the following measures of family structure/composition were examined: number of children in the family; parent's gender, parental ethnicity (Maori/non-Maori); and family type (single/partnered). For child specific outcomes the measures included: child's age; child's gender; parent's gender; parent's ethnicity; and family type. For child specific outcomes there was an additional complication due to the fact that in many instances there were multiple children within families. This raises the issue of possible non-independence of observations resulting from clustering of children within families. To

address this issue, regression models for child specific outcomes were fitted using robust (Huber-White) estimates of standard errors (Huber, 1967) to take account of possible clustering in the data.

These analyses led to two general conclusions:

1. With one exception there were no significant interactions detected between exposure to childhood physical abuse and the measures of family structure/composition. The one exception related to the measure of authoritarian parenting style. For this measure there was a significant ($p < .05$) interaction detected between physical abuse and family type, suggesting that the effect of physical abuse on the parenting outcome was stronger for children in single parent families than for those in two-parent families. However, given the large number of interaction tests conducted it is possible that this apparent interaction could simply reflect chance variability in the data. To control for this possibility a Bonferroni correction was used. A total of 63 tests of interaction were conducted, giving a Bonferroni corrected p value of $p < .0002$. At this level of significance the above interaction was no longer significant. This suggests that, to all intents and purposes, there is no evidence within these data to suggest that the effect of childhood physical abuse on later parenting outcomes was in any way modified or dependent on particular aspects of family structure or composition
2. Adjustment for variations in family structure/composition across levels of physical abuse exposure had little effect on the associations between physical abuse and parenting outcomes. This is illustrated in Table 19 which shows estimates of association between childhood physical abuse and parenting outcomes after adjustment for the (main) effects of family structure/composition. For each outcome the Table shows (a) the adjusted mean or percentage for each level of childhood physical abuse, (b) the test of significance of the adjusted effect of

childhood physical abuse on the outcome from the fitted model, and (c) the measures of family structure/composition that were significant in the fitted model. The adjusted means/percentages were calculated using the method described by Lee (1981).

Examination of Table 19 shows that the associations between exposure to childhood physical abuse and later parenting outcomes after adjustment for family structure and composition were largely unchanged. The adjusted mean scores or percentages are in general very similar to those in Tables 17, 18. In addition, the adjustments show a very similar pattern of significant associations with childhood physical abuse suggesting that those exposed to abuse reported increasing negativity toward their children, were more likely to accept the use of physical discipline, and scored lower on warmth, sensitivity and child management.

A mix of covariates were significantly related to parenting outcomes, reflecting the fact that parents of younger children scored lower on parenting styles of authoritative, authoritarian, and permissiveness. Mothers scored higher on authoritative parenting than fathers, but lower than fathers on interviewer ratings of warmth, sensitivity, and child management. Single parents were higher on authoritarian parenting, and higher on negativity than those living with partners. Maori parents were higher on permissiveness, and lower on parental sensitivity.

Table 19: Associations Between Childhood Physical Abuse and Parenting Outcomes After Adjustment for Family Structure and Composition.

Outcome	Physical Abuse				p	Significant Covariates
	Never/seldom	Regular	Severe	Harsh		
<u>Parenting styles</u>						
Mean Authoritative	78.94	79.16	79.37	79.58	.776	Child's age, Parent's gender
Mean Authoritarian	32.83	32.88	32.94	33.00	.886	Child's age, Family type
Mean Permissiveness	29.05	29.24	29.42	29.60	.512	Child's age, Parent's ethnicity
<u>Parent-Child Relationship (Dunn)</u>						
Mean Positivity	11.70	11.35	11.59	11.53	.217	Child's age
Mean Negativity	6.36	6.76	7.15	7.54	.001	Family type
<u>Parent-Child Conflict Tactics Scale</u>						
% Psychological aggression	79.7	79.3	78.9	78.5	.781	Child's age, Family type
% Severe or very severe physical assault	10.2	12.2	14.4	17.0	.225	Child's gender
% Any assault	67.2	62.4	57.4	52.2	.249	Child's age, Parent's gender
<u>HOME</u>						
Mean Responsivity	4.13	3.91	3.69	3.47	.580	None
Mean Avoidance of punishment	5.23	4.77	4.30	3.84	.081	None
<u>Global ratings</u>						
Mean Parental warmth	3.26	2.98	2.71	2.43	.006	Parent's gender
Mean Parental sensitivity	3.23	2.94	2.66	2.37	.004	Parent's gender
Mean Child management	3.19	2.86	2.53	2.21	.001	None

Adjustment for Family Background Adversity

The above findings are consistent with the idea that some aspects of parenting may be related to childhood physical abuse. Table 19 shows that after adjusting for family structure and composition, findings for the association between childhood exposure to physical abuse and parenting outcomes are consistent with results prior to adjustment. Specifically, those parents who experienced high levels of childhood physical punishment reported increasing negativity towards their children, were more likely to accept the use of physical discipline, and scored lower on warmth, sensitivity and child management compared to those with lower levels of exposure to physical abuse.

However, Table 19 does not take any account of the family background characteristics for these parents. As noted in Chapter 1, those who became parents by age 25 were on average a higher risk group characterised by greater socio-economic disadvantage and higher family and personal adversity. It is also possible that family background characteristics or similar factors could be associated with childhood physical abuse and that these factors could explain any association between abuse and later parenting outcomes.

This issue is examined in Table 20 which shows the association between exposure to childhood physical abuse and a series of measures relating to family social background characteristics, family life experiences, parental adjustment, and exposure to child abuse for the whole cohort. For each comparison, the Table also reports a test of linearity. The Table shows evidence of clear and significant associations across all measures reflecting the fact that those exposed to more severe abuse were also characterised by a series of other disadvantages including: greater socioeconomic disadvantage in childhood, higher parental maladjustment, and exposure to family violence.

Table 20: Associations Between Extent of Exposure to Physical Abuse and Measures of Family Background for the Whole Cohort.

	Extent of Exposure to Physical Abuse				p Linear
	Never/seldom (N=868)	Regular (N=118)	Severe (N=38)	Harsh (N=29)	
<u>Family social background characteristics</u>					
% Own mother aged <20 years at first birth	21.0	29.9	55.2	42.2	.004
% Mother lacked formal educational qualifications at first childbirth	47.9	51.7	65.8	69.0	.003
% Father lacked formal educational qualifications at first childbirth	45.9	57.5	45.9	76.9	.002
% Family of semi-skilled/unskilled socioeconomic status at birth	22.4	33.9	42.1	44.8	<.0001
<u>Family life experiences</u>					
% Entered single parent family at birth	5.2	7.6	18.4	24.1	<.0001
% Experienced >3 parental changes (0-15 years)	31.3	50.0	40.0	63.3	.026
% Interparental violence	16.6	34.5	69.7	82.1	<.0001
<u>Parental adjustment</u>					
% Parental depression/anxiety problems (age 15 years)	28.0	35.7	51.5	42.3	.001
% Parental alcohol problems (age 15 years)	9.6	19.1	33.3	30.8	<.0001
% Parental history of criminality (age 15 years)	11.0	15.7	30.3	50.0	<.0001
<u>Exposure to child abuse</u>					
% Exposed to any childhood sexual abuse	23.9	4.2	42.9	57.1	.015

To the extent that the factors examined in Table 20 may also be predictive of later parenting outcomes, these findings suggest the need to adjust for the associations between childhood physical abuse and later parenting for measures of early childhood disadvantage and family functioning. To adjust for the measures reported in Table 20 the regression models in Table 19 were extended to take account of the high risk nature of this parenting cohort. However, there were two important issues that needed to be addressed in conducting this analysis:

1. Sample selection bias. As noted previously, those cohort members who became parents by age 25 were a higher risk group who could not be considered to be representative of either the total CHDS cohort or of parents of young children. This raises the possibility of a sample selection bias that could potentially distort the observed associations between physical abuse and later parenting outcomes. To take account of the high risk nature of this parenting cohort, the sample selection bias correction procedure described by Berk (1983) was used. This procedure involved a two stage process. In the first stage a sample selection model was constructed in which the social, family, and personal characteristics of cohort members were used to predict the probability of inclusion in the parenting sample. This process was based on the analysis conducted by Woodward, Fergusson and Horwood (2006) which identified the following factors as predictive of early parenthood in the CHDS cohort: parent's gender, socioeconomic status, Maori ethnicity, age of participant's mother at first childbirth, number of parental changes, parental use of physical punishment, and childhood conduct problems. These factors were entered into a logistic regression model to predict the probability of inclusion in the parenting sample. In the second stage of the process, the predicted probability of sample inclusion was then entered in the regression models to control for potential sample selection bias.

2. The need for data reduction. While findings in Table 20 suggested strong associations between childhood factors and severity of abuse exposure in the total cohort, within the parenting sample these associations were more modest. This was a reflection of the sample selection process leading to early parenthood, which resulted in a more homogeneous distribution of childhood and family background factors within the parenting sample. Because of the large number of covariates and the relatively small sample size, data reduction techniques were used whereby factors were summed to create an “adversity score” for each participant. To calculate this score each of the characteristics reported in the Table (e.g., own mother aged <20 years at first birth) was first scored as a dichotomous (0/1) variable. The adversity score was created by summing each of the 11 characteristics. The score thus reflected the diversity of the individual’s childhood experience, ranging from those who had experienced none of the disadvantageous features of childhood to those who had experienced most or all of these disadvantages.

Table 21 shows the associations between the extent of exposure to childhood physical abuse for the parenting sample and mean scores on (a) the total childhood adversity score and (b) the probability of parenthood calculated as part of the sample selection bias correction. A full table with regression coefficients after adjustment for adversity and sample selection bias is included in Appendix B. Each score was tested for linearity using linear regression. Examination of the Table shows evidence of strong associations between physical abuse and both childhood adversity and the probability of parenthood.

Table 21: Association Between Extent of Exposure to Physical Abuse and Childhood Adversity and the Probability of Parenthood for Those Who Became Parents by Age 25.

	Extent of Exposure to Physical Abuse				P Linear
	Never/seldom (N=113)	Regular (N=24)	Severe (N=14)	Harsh (N=14)	
Mean (SD) adversity score	4.22 (2.40)	5.08 (1.93)	5.14 (3.01)	6.29 (2.13)	.001
Mean (SD) probability of parenthood score	0.28 (0.17)	0.46 (0.20)	0.56 (0.24)	0.57 (0.20)	<.0001

To adjust for sample selection bias and potential confounding by childhood adversity, the regression models reported in Table 19 were extended to incorporate these measures as additional covariates. These analyses were limited to those parenting outcomes that had statistically significant ($p < .05$) or marginally significant ($p < .10$) associations with physical abuse after adjustment for family structure and composition. These outcomes included Dunn negativity, avoidance of punishment, parental warmth, parental sensitivity, and child management. As previously, the models were estimated using robust estimates of standard errors to take into account the clustering of children within families.

The results of these analyses are summarised in Table 22 which shows mean scores on the parenting outcomes for each level of physical abuse after adjustment for family structure and composition, childhood adversity and sample selection bias. For each outcome the Table also reports the test of significance of the adjusted association with physical abuse. Examination of the Table shows:

1. Dunn Negativity – The mean scores across levels of physical abuse remain largely unchanged after further adjustment for family adversity and sample selection bias. Dunn negativity still remains significant ($p = .008$).

2. Global Ratings – Adjustment for childhood adversity and sample selection has reduced the strength of association between physical abuse and ratings of parental warmth, sensitivity and child management. However, in all three cases the test remains statistically significant.
3. Avoidance of punishment – Mean scores for avoidance of punishment remain marginally significant after adjustment for family background and sample selection bias.

Table 22: Associations Between Childhood Physical Abuse and Parenting Outcomes After Adjustment for Family Structure and Composition, Family Adversity and Sample Selection Bias.

Outcome	Physical Abuse				p
	Never/seldom	Regular	Severe	Harsh	
<u>Parent-Child Relationship (Dunn)</u>					
Mean Negativity	6.37	6.75	7.12	7.49	.008
<u>HOME</u>					
Mean Avoidance of punishment	5.29	4.72	4.16	3.59	.089
<u>Global ratings</u>					
Mean Parental warmth	3.27	2.98	2.69	2.41	.012
Mean Parental sensitivity	3.22	2.94	2.67	2.39	.014
Mean Child management	3.17	2.88	2.58	2.29	.006

Finally, the regression models were further extended to test for interactions between abuse exposure and the childhood adversity index. There were no significant interactions

detected between exposure to childhood physical abuse and the measure of family adversity, suggesting that the impact of childhood physical abuse on later parenting outcomes was not dependent on the extent of childhood adversity.

Summary

The analyses in this chapter have shown that exposure to physical abuse is associated with a number of aspects of parenting in this sample of young parents. In particular, exposure to childhood physical abuse was associated with a higher likelihood of being more negative towards their children. Findings on the HOME scale of avoidance of punishment revealed that parents who were disciplined physically as children were more likely to accept the use of physical discipline with their own children. Interviewer ratings confirmed self reported measures, revealing that parents who experienced harsh levels of physical abuse scored lower on warmth, sensitivity, and child management than parents who experienced less harsh levels of physical abuse.

On the basis of parental self report and interviewer ratings, evidence suggests that exposure to physical abuse in childhood places young parents at increased risk of less effective and more negative parenting practices. These associations appear to be consistent after sample selection bias and data reduction was taken into account. Further examination of the associations after taking into account family background, family structure, and family composition indicate that physical abuse continues to have a direct association with parenting outcomes.

Discussion

This study addressed three research questions regarding the effects of childhood physical abuse on later parenting outcomes using a 25 year longitudinal research design of a birth cohort. To address this issue, three questions were considered. First, the study examined risk factors that have contributed to an early transition to parenthood. Second, this study investigated the current family circumstances of contemporary young parents and their families. And finally, the association between childhood physical abuse and later parenting outcomes was examined.

We know from previous research that there is substantial continuity between early experiences of family violence and behaviour in later life. Research has purported that those individuals who are abused in childhood have a higher likelihood of abusing their own children compared to those with no history of abuse in childhood. The current study views the specific effects of this exposure to abuse on parenting outcomes in an early parenting cohort. The major findings and conclusions from this study are outlined below.

Transition to Parenthood

The first stage of analysis examined the differences between those who did and did not become parents on a series of measures of family and social background characteristics. This was to help clarify risk factors that may have contributed to an early transition to parenthood.

Analyses revealed significant differences between cohort members who did and did not become parents on a range of measures. Bivariate analyses illustrated that early parenthood was associated with a wide range of family social background characteristics including low socio economic status, low parental educational attainment, young and single maternal role models, family instability, and high rates of parental alcohol problems, criminality and illicit drug use. Furthermore, a series of childhood and adolescent lifestyle

factors were also linked with early parenthood, suggesting that young people who were of Maori ethnicity, and who displayed childhood behaviour problems, educational underachievement, novelty seeking tendencies, early initiation of sexual intercourse (<16 years), early drug use, and deviant peer affiliations were at an increased risk of becoming a young parent. In addition, early transition to parenthood was associated with greater exposure to childhood sexual abuse, and childhood physical abuse.

The current findings are consistent with previous research which has shown that high rates of personal and family instability and socio-economic disadvantage can place young people at risk of early parenthood. In accordance with findings by Gest et al. (1999), the current study found family socio economic adversity to be predictive of an early transition to parenthood. Woodward et al. (2006) proposed that the effect of socio-economic disadvantage could be an indication of class related differences between individual's perspectives on family formation and parenthood timing. Coming from a family characterised by socio-economic adversity could also increase economic barriers to alternative life paths, such as going to university or further career training (Fergusson & Woodward, 2000; Woodward et al., 2006).

Being of Maori ethnicity was found to be a predictor of an earlier transition to parenthood. This is consistent with demographic statistics which show the median age of Maori mothers as being four years below the total population (Statistics New Zealand, 2005). Earlier analyses of this cohort also suggested that young Maori women who became pregnant were less likely to seek a termination than other women (Woodward et al., 2001).

Being of female gender was also predictive of an earlier transition to parenthood. This finding is consistent with demographic trends which suggest that the mean age of women at first childbirth was two years below men at the time this cohort was in their early twenties (Statistics New Zealand, 2000a).

In addition to social demographic factors, results from this study also draw attention to the significance of experiences and behaviour in an individual's family background in determining their timing of transition to parenthood. Previous research has emphasised

antisocial childhood behaviour as being a strong predictor of an early onset to parenthood (Bardone, Moffitt, Caspi, Dickson, & Silva, 1996; Cohen et al., 2005; Fagot et al., 1998; Jaffee et al., 2001; Pears, Pierce, Kim, Capaldi, & Owen, 2005; Serbin et al., 1998). Findings from Cohen and colleagues (2005), show that those adolescents who had elevated symptoms of eccentric personality disorder were at increased risk for early parenthood. Similarly, the Dunedin longitudinal study showed that among those who became parents before age 21, over 55% had a previous conduct disorder diagnosis (Moffitt, 2002). Furthermore, childhood social background, educational underachievement, behavioural maladjustment, peer relationships, and risk taking behaviour have also been associated with an early transition to parenthood (Fergusson & Woodward, 2000; Hoffman, Foster, & Furstenberg, 1993; Hotz & Williams-McElroy, 1997; Klepinger, Lundberg, & Plotnick, 1995; Pears et al., 2005; Woodward et al., 2006).

A number of family development factors in the current study were found to be significantly associated with the risk of early parenthood. Firstly, high rates of child abuse, including sexual abuse and physical abuse, were found to be associated with a greater chance of early parenthood. A second family factor linked with early parenthood risk was family life experiences. There was evidence to suggest that those with family backgrounds characterised by single parenthood, step-parenthood, and high numbers of parental changes also had a greater likelihood of an early transition to parenthood. Additionally, those who became parents early were found to be more likely to have parents with a history of alcohol problems, illicit drug use, and a history of criminality. One possible explanation for these findings could be that family dysfunction may hasten young people's exit from the family, thus weakening family of origin ties as well as parental monitoring and support. A third factor linked with early parenthood risk was the age of the respondent's own mother at first childbirth, with findings showing that having been raised by a mother who was herself a young parent contributed to early parenthood risk.

Together these findings suggest that an early transition to parenthood represents a highly selective process. Early parenting cohort members share a diverse range of antecedent factors spanning behavioural, intellectual, familial, and socioeconomic adversity. Such adversity not only increases the risk of early transition to parenthood, but also is likely to affect these parents ability to provide the most advantageous environments for their young families.

Current Family Circumstances

The second stage of the analysis addressed in this study was a description of the current family characteristics of those cohort members who were parenting at age 25. The intention of this analysis was to gain an understanding of the current parenting circumstances of contemporary young parents. Results revealed high rates of socio economic adversity and multiple family patterns.

Findings showed that the young families were living in a diverse range of family patterns. Family contexts differed depending on the number of children being parented, whether or not children were biological, partnership status, and other factors. The total number of children being parented ranged from 1-6 with a mean of 1.8. Parents were predominantly parenting biological children, and children were typically the full custodial responsibility of the parenting cohort members. Analyses illustrated the predominant family types as being married parents with biological children, cohabiting parents with biological children, and single parents with biological children. Significant gender differences in the different family structures were found with men being more likely to be stepparents than women, and women being more likely to be single parents than men. Children being parented by these parents ranged in age from 0-15 years, and approximately half of parents had more than one child. In terms of financial and economic factors, families of those who became parents by age 25 were prone to financial worries, were unlikely to own their own home, and almost half were accessing benefits.

These findings are consistent with previous research which has shown that young parenthood is likely to occur outside of wedlock (Brooks-Gunn et al., 2000). In accordance with Brooks-Gunn and colleagues (2000) the current study found that only 20% of those who became parents by age 25 were married. Further analysis revealed that these young parents had lived with up to three partners since becoming a parent, with women being more than twice as likely to have lived with more than one partner since becoming a parent than men.

The findings assessing the current financial resources and economic wellbeing of young families are consistent with research, which suggests that young families are at high risk for a range of negative consequences (Jensen et al., 2006). The New Zealand report on living standards (Jensen et al., 2006) reported that while the majority of New Zealanders live comfortably, those who have children generally have lower living standards. Jensen further reported that those who indicated having lower living standards were likely to have no economic advantages and multiple sources of adversity. Consistent with this report, 70% of parents in the current study reported having experienced money worries, 50% of parents indicated they had borrowed money from family or friends in the last 12 months, 80% did not own their own home, and 46.5% had accessed the benefit in the last 12 months. These findings are of concern given that not only has an early transition to parenthood been associated with long-term welfare dependence, but beneficiary families have been found to be the most prominent disadvantaged group in New Zealand (Jensen et al., 2006). These results suggest that young families may be less able to provide stable environments for their children both in terms of financial security and parental relationship stability.

The Effects of Childhood Physical Abuse on Later Parenting Outcomes

Finally, this thesis examined the linkages between childhood exposure to family violence and later parenting outcomes. In studying a sample of 167 25 year old men and women followed longitudinally from birth, three core questions were addressed about the intergenerational transmission of parenting: Do punitive childrearing experiences in the

family of origin predict punitive parenting? Does exposure to childhood physical abuse affect other aspects of parenting? And finally, can these effects be accounted for by other social or family characteristics that may be correlated with children's exposure to physical abuse? The following section provides a discussion based around these questions, followed by a discussion on future direction and implications.

Do punitive childrearing experiences in the family of origin predict punitive parenting?

While examination of results found no significant differences between groups on punitive parenting practices as measured on the Conflict Tactics Scale (CTS-PC), trends were consistent with previously reported research findings (e.g. Dixon et al., 2005; Sidebotham & Golding, 2001) suggesting that those exposed to harsh physical abuse were more likely than those exposed to no physical abuse to employ the use of severe or very severe physical punishment. Results show that 10% of those parents who did not experience or seldom experienced physical punishment as children indicated that they were using severe or very severe physical punishment with their own children. Eighteen percent of parents who experienced harsh or severe physical punishment reported continuing the cycle of violence. These rates are both higher than the prevalence of 6% reported as the incidence among the general population from New Zealand cohort studies (Fergusson et al., 2006; Millichamp et al., 2006).

The lack of significant differences between groups in the current study could be accounted for by the high risk nature of the parents, as young parents have been found to be more likely to use punitive practices with their children in general. In this way punitive practices may be related not to experiences in childhood, but to age of transition to parenthood. Research has consistently found that those who transition to parenthood prior to age 21 are at increased risk for using punitive discipline practices with their own children (Afifi & Brownridge, 2006; Dixon et al., 2005; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000; Sidebotham & Golding, 2001). Those parents who experience high levels of personal

and family risk factors are also predisposed to use punitive practices with their own children. Widom (1999) for example, found that parents who were receiving welfare, or who had large numbers of children, were more likely to use punitive practices. Similarly, Pinderhughes and colleagues (2000) argued that factors such as poverty, unemployment, and parental immaturity placed strains on parent's care giving abilities which increases their susceptibility to problematic parenting practices such as the use of physical punishment methods. Sidebotham et al. (2001) postulated that the effect of parental age on risk of maltreatment may be a reflection of limited parenting abilities, experience, and knowledge. Alternatively, young parents may have less access to support networks than other parents. Young parents are also subject to greater stresses because of decreased financial or housing resources, and greater life stress (Sidebotham et al., 2001).

Given the high risk nature of the current parenting cohort, this could account for the higher rate of punitive discipline and why no significant differences between extent of exposure to physical punishment in childhood and the likelihood of continuing this use as parents were found. Had the study been conducted on a general population sample of parents with children one might have expected to see a stronger dose response, and a lower rate of the use of physical abuse overall.

Does exposure to childhood physical abuse affect other aspects of parenting?

The findings of the current study are consistent with the conclusion that at least some experiences of parenting may be influenced by childhood exposure to physical abuse. The predominant themes in the literature examining childhood physical abuse have been focused on intergenerational continuities in family violence, and on factors which contribute to a greater propensity of using punitive discipline. Less research has examined the effects of physical abuse in childhood on specific parenting outcomes.

The results from the current study suggest that the parenting attributes of contemporary young parents are influenced by their experiences of childhood physical abuse.

Specifically, parents who reported extreme physical punishment were more negative towards their children and were more accepting of the use of physical punishment. Additionally, these parents were rated by interviewers as being less warm, less sensitive, and more likely to use ineffective child management techniques than parents who reported no or infrequent physical punishment. Associations were not found for parenting styles of authoritative, authoritarian, and permissive styles as measured on the PPQ, or on Dunn's scale of positivity.

One of the few studies which has examined the effects of exposure to childhood physical abuse on later parenting outcomes is that of Newcomb and Locke (2001). Newcomb and Locke (2001) found that child maltreatment has a direct effect on later parenting. Maltreatment was broadly defined to include emotional neglect, physical neglect, emotional abuse, physical abuse, and sexual abuse. The Parental Acceptance-Rejection Questionnaire (PARQ; Newcomb & Loeb, 1999) was used to measure parental warmth, aggression and neglect of the parent. Comparative to findings by Newcomb and Locke (2001), the current study found an association between childhood exposure to physical abuse and later parenting with parents who were exposed to physical abuse being less warm, less sensitive and more likely to use ineffective child management techniques than those parents who were exposed to no or infrequent physical abuse.

Furthermore, the current study found that parents who experienced abuse in their own childhoods were more likely to accept the use of physical discipline with their own children, and were also more likely to have a negative parent-child relationship. Capaldi, Pears, Patterson, and Owen (2003) found a direct effect of the intergenerational transmission of parent-child relations, parental monitoring strategies, and discipline techniques. Burkett (1991) in a study of parents who had experienced sexual abuse, found that those who experienced abuse in their own childhoods were prone to demonstrate less nurturing parenting styles. In addition, the experience of father-daughter incest has been found to be associated with less effective parenting behaviour when victims themselves become parents (1992). The

current study extends these findings and illustrates that experiences of physical abuse in childhood also have a direct association with later ineffective parenting techniques.

Can these effects be accounted for by other social or family characteristics that may be correlated with children's exposure to physical abuse?

One possible explanation for the observed findings between parenting and childhood physical abuse could be that these associations reflect other childhood and family factors which are correlated with these outcomes. To examine this issue, the data was examined to adjust for measures of family structure/composition and family adversity. The findings of association were found to persist after adjustment, suggesting that childhood exposure to physical punishment is associated with less advantageous parenting attributes. Tests for interaction showed no significant interactions, meaning that associations did not vary with parental gender, parental ethnicity, child gender, child age, relationship status, or childhood exposure to family adversity. The findings of this study reinforce concerns about the longer term impact of exposure to physical maltreatment in childhood. In general, those exposed to such maltreatment appear to show less effective and more negative parenting practices.

Strengths and Limitations

The current study is characterised by a number of methodological strengths. Our design features included reliable and valid psychometric instruments, a longitudinal prospective cohort design, multi-item scales, a sample of both female and male parents, and repeat reporting about experiences of abuse. Reliance in the finding is strengthened by the fact that both self reports of experienced abuse and informant reports of parenting behaviour were used, and such reports were separated by a period of 7 years.

It should be acknowledged that although this study corrected some limitations of past research by using different exposure to physical abuse reports at two time periods, it still relied upon the retrospective reports of those informants. The informants could have recalled

the events inaccurately, thus it is possible that errors in reporting of these outcomes may have attenuated the associations with exposure to physical abuse.

A more subtle threat to the validity of conclusions arises from the limitations imposed by small sample size (N=167 parenting cohort members) on the precision of the results. In addition to the small sample size, interviewer ratings following the interview were not able to be made on all children. Only those children who were present during the interview were able to be coded for. This resulted in significant sample selection losses.

Another limitation to this study is that of sample selection bias. As was described in Chapter one of results, this sample of early parents was a highly selected sample who were exposed to greater levels of risk factors than the wider population across personal, social and family domains over time. The sample selection bias may have reduced heterogeneity in parenting outcomes and the exposure to CPA, thereby limiting the ability of the study to detect associations. While it was possible to control for sample selection bias in the analysis, the fact remains that this is a selected sample, and it may be difficult to apply to wider populations.

A further limitation of the current study is the use of prospectively recalled use of punitive parenting practices. It is possible that reports were subject to biases inherent in self-reported data. However, it is difficult to overcome this limitation as conducting behavioural observations of punitive parenting is subject to further limitations including social desirability and rater bias.

While we have controlled for associations between physical abuse and parenting outcomes for a wide range of prospectively measured confounding factors, the possibility remains that the apparent associations between exposure to physical maltreatment during childhood and later adjustment may be due to the effects of uncontrolled confounding factors. One set of factors that clearly require examination are the role of genetic factors in these associations since it could be argued that both exposure to physical maltreatment and later

violent behaviours may be symptomatic of family environments in which members show generalised tendencies to violence.

However, notwithstanding these limitations, the results of this study clearly suggest that, for this cohort, linkages between exposure to physical abuse in childhood and parenting outcomes at age 25 do exist.

Implications and Future Directions

This thesis is of particular relevance for New Zealand given the recent controversy around the review of Section 59 of the Crimes Act (1961). Until this year, Section 59 of the Crimes Act (1961) has allowed New Zealand parents or caregivers to “use reasonable physical force” when disciplining children. It has been up to a jury to decide if the force used is reasonable in the circumstances.

The very presence of Section 59 in New Zealand sends a message to the public that physical punishment, in and of itself, is reasonable. As a result of this law there have been a number of incidents in which parents or caregivers have been acquitted of criminal charges after using what many studies would describe as extreme physical force with their children. For example, in 1999, a jury in the high court at Palmerston North acquitted a man accused of chaining his wayward 14-year-old stepdaughter to himself, from charges of kidnapping and cruelty to a child. The report states that the defendant’s counsel successfully utilized a defence of “tough love” without having to call evidence (New Zealand Herald, 1999). In 2001 a jury in the Hamilton District Court ruled that a father who struck his 12-year old daughter with a hosepipe was within his rights to do so and acquitted him from assault charges. Also in 2001, a jury in the Napier District Court acquitted a man who struck his son several times on the buttocks with a piece of wood. A paediatrician stated that the injuries the boy received must have been caused by “considerable force” (The Dominion, 2001).

In November of this year (2006), the Justice and Electoral Committee released their amendment bill on Section 59. The bill recommends that section 59 be replaced with a new

section that will remove the defence of “reasonable force” as a means of correction with a child. However, the use of “reasonable force” remains acceptable in the instance that it is “used for the purpose of preventing or minimising harm to the child or another person; or preventing the child from engaging or continuing to engage in conduct that amounts to a criminal offence; or preventing the child from engaging or continuing to engage in offensive or disruptive behaviour; or performing the normal daily tasks that are incidental to good care and parenting” (Justice and Electoral Committee, 2006, p.2).

The fundamental issue, as UNICEF themselves posed, (UNICEF, 2006) is whether or not this substituted wording will improve the status of New Zealand’s children. By looking at the proposed new wording, it is evident there is not a large difference from previously, even with the given specifics of acceptable instances in which parents can use reasonable force. In actuality, this new wording still allows parents to use physical force with their children, with no real indication of the extent of the level of force that is tolerable. However, despite this unclear new wording, New Zealand’s high level of child maltreatment will not be reduced with only a change in law. Further intervention is required.

Study of a high risk group of parents has the potential to guide interventions so they can be targeted specifically to populations which are at high risk of continuing the cycle of violence. The present results suggest that treatment programmes aimed at changing the harsh discipline practices of abusive parents are likely to be most effective when effort is also made to reduce levels of family stress across parent, child, and family domains.

The link between experiences of physical abuse and later parenting outcomes is an important one from a prevention standpoint. Previous research has indicated that outcomes for children who experience violence include aggressive behaviour, anxiety/fear, lower verbal skills, psychosomatic complaints, insecurity, distrust, poor school performance, and regression in developmental tasks as well as many other potential problems (Martin, 2002). Additionally, children exposed to direct violence at home or in the community often experience mental health problems that include posttraumatic stress disorder (PTSD) and

social, emotional, and academic problems. Furthermore, the current study has indicated that childhood exposure to physical abuse has intergenerational implications on later parenting outcomes. All of these findings suggest that an important level of intervention should include parents, extended family, and caregivers such as foster families. A history of having been abused or an early transition to parenthood could serve as early markers for parents at risk for inconsistent parenting styles with their own children.

A number of studies have shown that parents can be taught skills to help them become more effective and consistent, thus reducing the aversive exchanges between themselves and their children and also reducing child behavioural problems (Brestan & Eyberg, 1998; Eddy, Reid, & Fetrow, 2000; Hutchings, 1996; Patterson & Forgatch, 1995). For example, Markie-Dadds and Sanders (2006) found that use of a self-directed parenting program can improve parenting skills to increase pro-social child behaviours and decrease child problem behaviours in home and community settings. Findings on this study of 63 families found that mothers who received intervention reported significantly less child behaviour problems, less use of dysfunctional discipline strategies, and greater parenting competence than mothers in the control group. Mothers' reports at 6-month follow-up indicated that gains in child behaviour and parenting practices achieved at post-intervention were maintained (Markie-Dadds & Sanders, 2006).

The high rates of abuse among this selected sample are comparable to the high-risk control group rates of severe physical assault in the Early Start trials (Fergusson, Grant, Horwood, & Ridder, 2005). This New Zealand based study employed a randomised controlled trial design in which 220 families who received early intervention were compared with a control group of 223 families who did not receive the program. Findings from this study indicated that 11.7% of young parents who had not received early start intervention used very severe physical punishment with their own offspring compared to 4.4% of families who did receive early intervention (Fergusson et al., 2005).

Findings from studies by Fergusson and colleagues (2005) and Markie-Dadds and Sanders (2006) suggest that young parents with a history of abuse may well benefit from specific instruction in effective parenting techniques.

Whilst the current study suggests an intergenerational transmission process, the limited sample size and the highly selected nature of the current sample are problematic. These limit the current study's ability to be applied to the wider population. Further studies characterised by larger sample size, and an older age group of parents may help to better address these issues of sample size and sample selection bias. Follow-up studies of this parenting sample as more cohort members transition to parenthood should help to shed light on the impacts of childhood exposure to physical abuse and implications for these parents' children. It is also likely that many factors that may mediate and moderate the processes by which physical abuse affects parenting outcomes were not included in the current study. Future research might assess the impact of factors such as marital satisfaction, social support, and psychological distress on the relationships found here.

Conclusion

This thesis has undertaken to study the effects of exposure to physical abuse on later parenting outcomes among an early parenting cohort. Overall, this study has demonstrated that higher levels of abuse in childhood predict less effective parenting strategies toward the next generation. This was the case even when other risk factors were included in the model. These findings are consistent with the hypothesised intergenerational transmission of childhood experiences of physical abuse to later parenting practices.

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Appendix A: Parenting Measure Items

Items for Parenting Practices Questionnaire

“I am going to read a list of statements about parents’ relationships with their children. Can you tell me how much of the time these statements would apply to you and your child?”

- 1 Never
- 2 Some of the time
- 3 Most of the time
- 4 All of the time
- 9 NA

Authoritative

Factor 1 (Warmth and Involvement)

- Knows the names of child's friends.
- Aware of problems or concerns about child in school.
- Gives praise when child is good.
- Gives comfort and understanding when child is upset.
- Expresses affection by hugging, kissing, and holding child.
- Show sympathy when child is hurt or frustrated.
- Tells child we appreciate what the child tries or accomplishes.
- Responsive to child's feelings or needs.
- Encourages child to talk about the child's troubles.
- Has warm and intimate times together with child.
- Apologises to child when making a mistake in parenting.

Factor 2 (Reasoning/Induction)

- Explains the consequences of the child's behaviour.
- Gives child reasons why rules should be obeyed.
- Emphasises the reasons for rules.
- Helps child to understand the impact of behaviour by encouraging child to talk about the consequences of her own actions.
- Explains how we feel about her good and bad behaviour.
- Talks it over and reasons with child when the child misbehaves.
- Tells child our expectations regarding behaviour before the child engages in an activity.

Factor 3 (Democratic Participation)

- Takes into account child's preferences in making family plans.
- Allows child to give input into family rules.
- Takes child's desires into account before asking the child to do something.
- Encourages child to freely express herself even when disagreeing with parents.
- Channels child's misbehaviour into a more acceptable activity.

Factor 4 (Good Natured/Easy Going)

- Is easy going and relaxed with child.
- Shows patience with child.
- Jokes and plays with child.
- Shows respect for child's opinions by encouraging child to express them.

Authoritarian

Factor 1 (Verbal Hostility)

Explodes in anger towards child.
 Yells or shouts when child misbehaves.
 Argues with child.
 Disagrees with child.

Factor 2 (Corporal Punishment)

Uses physical punishment as a way of disciplining our child.
 Spanks when our child is disobedient.
 Slaps child when the child misbehaves.
 Grabs child when being disobedient.
 Guides child by punishment more than by reason.
 Shoves child when the child is disobedient.

Factor 3 (Nonreasoning, Punitive Strategies)

Punishes by taking privileges away from child with little if any explanation.
 Punishes by putting child off somewhere alone with little if any explanation.
 Uses threats as punishment with little or no justification.
 When two children are fighting, disciplines children first and asks questions later.
 Appears to be more concerned with own feelings than with child's feelings.
 When child asks why she has to conform, states: because I said so, or I am your parent and I want you to.

Factor 4 (Directiveness)

Tells child what to do.
 Demands that child does/do things.
 Scolds and criticises to make child improve.
 Scolds or criticises when child's behaviour doesn't meet our expectations.

Permissive

Factor 1 (Lack of Follow Through)

States punishments to child and does not actually do them.
 Threatens child with punishment more often than giving it.
 Spoils child.
 Gives in to child when she causes a commotion about something.
 Carries out discipline after child misbehaves.
 Bribes child with rewards to bring about compliance.

Factor 2 (Ignoring Misbehaviour)

Allows child to interrupt others.
 Allows child to annoy someone else.
 Ignores child's misbehaviour.
 Withholds scolding and/or criticism even when child acts contrary to our wishes.

Factor 3 (Self-confidence)

Appears confident about parenting abilities.
 Appears unsure on how to solve child's misbehaviour.
 Finds it difficult to discipline child.
 Sets strict well-established rules for child.
 Is afraid that disciplining child for misbehaviour will cause the child to not like his/her parents.

Dunn Scales of the Parent-Child Relationship

“Being a parent can often be stressful. I am going to read a list of statements about how parents sometimes feel. Thinking about your child, can you tell me whether you agree, agree somewhat, or disagree with each statement? It is important that your first reaction be your answer.

Positivity Scale

- I really love my child
- I feel very close to my child
- My child makes me pretty happy
- My child is affectionate to me

Negativity Scale

- My child gets on my nerves
- I dislike the noise and mess that surround my child
- I frequently have battle of wills with my child
- I get irritated by my child

Parent-Child Conflict Tactics Scale

“I am going to read a list of things that you might have done in the past year when your child did something wrong or made you angry. I would like you to tell me how often you have done each of these things with your child in the past year.”

- 0 Never
- 1 Once only
- 2 Twice only
- 4 3-5 times
- 8 6-10 times
- 15 11-20 times
- 25 21+ times
- 9 NA

Non Violent Discipline

- A. Explained why something was wrong
- B. Put your child in ‘time out’ (or sent to his/her room)
- Q. Took away privileges or a toy
- E. Gave your child something else to do instead of what he/she was doing wrong

Psychological Aggression

- N. Threatened to smack or hit your child but did not actually do it
- F. Shouted, yelled, or screamed at your child
- J. Swore or cursed at your child
- U. Called your child dumb or lazy or some other name like that

Minor Assault (Corporal Punishment)

- H. Smacked your child on the bottom with your bare hand
- D. Hit your child on the bottom with something like a belt, hairbrush, a stick or some other hard object
- P. Slapped your child on the hand, arm or leg
- C. Shook your child

Severe Assault (Physical Maltreatment)

- V. Slapped your child on the face, head or ears
- O. Hit your child on part of the body besides the bottom with something like a belt, hairbrush, a stick or some other hard object
- T. Threw or knocked your child down
- G. Hit your child with a fist or kicked him/her hard

Very Severe Assault (Severe Physical Maltreatment)

- K. Hit your child over and over as hard as you could
- I. Grabbed your child around the neck and choked him/her
- M. Burned or scalded your child on purpose
- R. Punched your child

Interviewer Ratings

The following items are rated on the basis of your observations during the interview. On the basis of your interview with the parent and your observations of the parent and the home situation, please rate the following (Code 8 if not observed or child too young/old for this question to be relevant).

- | | |
|---|----------------|
| 1 | Yes |
| 0 | No |
| 8 | Not applicable |

Home Observation for Measurement of the Environment (HOME)**Responsivity**

1. Parent's speech is distinct and audible
2. Parent initiates conversation with interviewer
3. Parent converses freely and easily
4. Parent responded positively to praise of child offered by interviewer
5. Parent's voice conveyed positive feelings towards child/ren
6. Parent spontaneously praised child at least twice
7. Kissed, hugged or was affectionate to child/ren at least once
8. Parent usually responded to child/ren's vocalisations or communications
9. Parent tells child/ren name of object or person during visit

Avoidance of Punishment (RV= Reverse coded)

1. Parent appeared annoyed or irritated by child at least once (RV)
2. Parent smacked a child at least once during visit (RV)
3. Told off or criticised child during visit (RV)
4. Interfered with or restricted a child at least once during visit (RV)
5. Physically punished a child in last week
6. At least 10 books are present and visible
7. Family has a pet
8. Has lost temper with child in past week

Parental Warmth – Interviewer rating

Rate the degree of warmth the parent showed towards the child on a scale from 1 to 5, using the descriptions below. Record the number corresponding to the best description of the parent's warmth toward each child in the boxes provided. If the child was asleep or not present during the interview, rate 8.

1. No instances of warmth, affection, or enjoyment of infant are observed. Parent is uninterested, passive and affectively flat or harsh, critical, and overly prohibitive. Parents who interact with infant only in a businesslike, affectionless manner should also be scored as 1.
 2. Occasional instances of warmth, affection, or enjoyment of infant are observed, but a passive or critical style of interacting is dominant. Parent may be affectionate and seek out physical contact on some occasions, and become hostile or rejecting at other times. Statements to and regarding infant may range from loving, tender, and accepting, to sarcastic and rejecting.
 3. Instances of warmth, affection, or enjoyment of infant are relatively common, but the parent is also uninterested or critical on at least one occasion. A positive facial expression and tone of voice dominates the interaction, and statements to and regarding infant are predominantly positive.
 4. Instances of warmth, affection, or enjoyment of infant are common, and there are no occasions of disinterest or hostility. A positive facial expression and tone of voice dominates the interaction. The parent seeks physical and eye-contact, but the frequency of expressions of warmth and the degree of warmth expressed is not to the extent of that of a rating of 5.
 5. Very frequent instances of warmth, affection, and enjoyment of infant are observed, or displays of affection are intense and exuberant. Interest and pleasure in infant seems genuine and is reflected in a positive facial expression and tone of voice. Parent is enthusiastic in interactions with infant or in talking about infant, and frequently seeks and enjoys physical contact and/or eye contact with her child.
-
1. Child asleep or not present during interview

Parental Sensitivity – Interviewer rating

Rate the degree of sensitivity the parent showed towards the child on a scale from 1 to 5, using the descriptions below. Record the number corresponding to the best description of the parent's sensitivity toward each child in the boxes provided. If the child was asleep or not present during the interview, rate 9.

1. The parent ignores or misinterprets the majority of the child's cues. The most severe cases of insensitive parenting usually fall into two categories: 1. the depressed, uninterested, and passive parent, 2. the overly controlling, and intrusive parent. The passive parent fails to monitor the child's whereabouts and almost seems to have 'forgotten' the child. Positive overtures from the child often fail to change the parent's bland facial expression, and the parent responds only to the most intense signals of distress from the child. The controlling and intrusive parent will monitor the child and intervene to control the child's behaviour. The parent may also make attempts to interact positively with the child, but interactions commonly upset the child because of the parent's intrusiveness, rough handling, directiveness, and lack of attention to the child's cues, including cues to reduce stimulation or back off. The child's distress is frequently met with annoyance by the parent. The parent may also hurt the child deliberately.
2. The parent ignores or misinterprets many of the child's cues, but responds sensitively some of the time. The parent may attempt to interact positively with the child, but will show some difficulties in pacing the interaction and reading the child's cues, and the interaction will not seem as enjoyable to both parties as interactions in ratings 4 and 5. The parent will typically try to settle the child when s/he is crying, but may become irritated if the crying does not stop quickly. Some instances of rough handling and occasions when the parent upsets the child may be seen, but the parent is not deliberately trying to hurt the child. The parent may fail to monitor the child's state and whereabouts for long periods of time, but will not ignore the child completely.
3. The parent interprets the majority of the child's cues correctly, and responds appropriately, but there is at least one instance of the parent acting in an insensitive manner (for example by ignoring or showing irritation in response to child's distress, failing to identify the source of distress, or upsetting the child by being intrusive). The parent responds to only some of the child's positive overtures. The parent monitors the child's whereabouts most of the time.
4. The parent is mostly well attuned to her child, and reads the child's cues accurately, but here are brief moments when the parent seems internally preoccupied or when her response to the child is somewhat delayed. There are no occasions when the mother fails to respond to her child, or when she responds in a rough manner. Interactions with the child run smoothly most of the time, and the parent rarely upsets the child. If any mismatches between parent behaviour and infant state occur, these are rapidly resolved and the child settles quickly.
5. The parent is highly attuned to her child, reads both obvious and more subtle cues from her child accurately, and responds appropriately. Signs of distress are responded to promptly and successfully. Interactions with the child run smoothly, with each taking turns in play and conversation, and are pleasant for both parties. When not physically close, the parent keeps the child within visual range, and maintains regular contact with the child by calling his/her name, making eye contact, talking to child etc.

Child Management – Interviewer rating

Rate the degree to which the parent relies on physical and emotional punishment versus appropriate child management strategies in managing the child's behaviour, using the descriptions below. Record the number corresponding to the best description of the parent's child management practices in the boxes provided. If the child was asleep or not present during the interview, rate 9.

1. Parent is overly harsh and punitive in disciplining the child, or parent makes no attempts at monitoring and guiding the child's behaviour. The harsh and punitive parent frequently loses her temper. She may frequently yell, criticise, demean, or reject the child, or use physical punishment varying in severity from a controlled smack on the hand to out of control bashing. In contrast, the lax or uninterested parent makes no attempts to direct the child's behaviour, even when the child is hurting someone else or is in danger of hurting him/herself.
 2. Parent occasionally uses harsh and punitive discipline strategies or frequently fails to monitor the child and intervene when this is required. Ineffective management strategies, such as relying on verbal instructions only, or inconsistent responses to child's problem behaviours are common. The parent occasionally uses appropriate child management strategies.
 3. The parent shows low grade irritability, but physical punishment or criticism is used no more than once. Or failure to monitor the child is seen on no more than one occasion when such monitoring was required. The parent uses appropriate child management strategies at least half the time.
 4. The parent shows frequent use of appropriate child management strategies, and only occasional instances of inconsistent responses, irritability, or use of ineffective management practises. There are no instances of physical punishment. The parent monitors the child's behaviours consistently.
 5. The parent monitors the child's behaviour consistently and makes use of effective child management strategies. Such strategies include: distraction, physically removing child from dangerous objects or child proofing the home, preventing problem behaviours by keeping child occupied, recognising signs of physical needs such as tiredness and hunger and meeting these needs promptly, and praising the child. Instances of inconsistencies, irritability, or use of ineffective management practices are very rare.
9. Child asleep or not present during interview.

Appendix B: Regression Coefficient Values

Table 23: Supplementary Table With Regression Coefficient Values for the Effect of Physical Abuse on Parenting Outcomes on Three Models.

Regression Coefficient Values for Childhood Physical Punishment												
Outcome	Model One – Childhood physical abuse and Parenting Outcomes				Model Two – After adjustment for family structure and composition				Model Three – After adjustment for family adversity, and sample selection bias			
	B	SE	t	p	B	SE	T	P	B	SE	t	p
<u>Parenting styles</u>												
Authoritative	.313	.803	.39	.697	.221	.78	.285	.776				
Authoritarian	.293	.398	.74	.462	.057	.398	.143	.886				
Permissive	.448	.282	1.59	.114	.183	.28	.656	.512				
<u>Parent-Child Relationship (Dunn)</u>												
Positivity	-.092	.047	-1.97	.050	-.057	.046	-1.24	.217				
Negativity	.389	.118	3.29	.001	.394	.119	3.32	.001	.373	.140	2.67	.008
<u>Parent-Child Conflict Tactics Scale</u>												
Psychological Aggression	.006	.023	.28	.782	.413	.083	24.59	.781				
Severe or very severe assault	.025	.019	1.33	.183	.201	.176	1.29	.225				
Any assault	-.043	.028	-1.56	.120	.118	.046	64.44	.249				
<u>HOME</u>												
Responsivity	-.142	.342	-.42	.680	-.217	.388	-.558	.580				
Avoidance of punishment	-.501	.250	-2.01	.050	-.464	.261	-1.78	.081	-.565	.326	-1.74	.089
<u>Global ratings</u>												
Parental warmth	-.299	.096	-3.11	.002	-.278	.099	-2.81	.006	-.287	.112	-2.57	.012
Parental sensitivity	-.344	.093	-3.59	.000	-.285	.096	-2.96	.004	-.277	.111	-2.49	.014
Child management	-.361	.087	-4.05	.000	-.328	.094	-3.50	.001	-.295	.106	-2.79	.006

