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# Parenting and families in Australia

STEPHEN R ZUBRICK, CENTRE FOR DEVELOPMENTAL HEALTH, CURTIN UNIVERSITY OF TECHNOLOGY

GRANT J SMITH, TELETHON INSTITUTE FOR CHILD HEALTH RESEARCH

JAN M NICHOLSON, GRIFFITH PSYCHOLOGICAL HEALTH RESEARCH CENTRE, GRIFFITH UNIVERSITY

ANN V SANSON, DEPARTMENT OF PAEDIATRICS, THE UNIVERSITY OF MELBOURNE

TANYANA A JACKIEWICZ, TELETHON INSTITUTE FOR CHILD HEALTH RESEARCH

AND

THE LSAC RESEARCH CONSORTIUM

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### **For more information**

Research Publications Unit

Research and Analysis Branch

Australian Government Department of Families, Housing, Community Services and Indigenous Affairs

Box 7576

Canberra Business Centre ACT 2610

Phone: (02) 6244 5458

Fax: (02) 6244 6589

Email: [publications.research@fahcsia.gov.au](mailto:publications.research@fahcsia.gov.au)

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# Executive summary

This report presents findings from Wave 1 of the Longitudinal Study of Australian Children (LSAC) on 5,107 infants (aged between 3 months and 12 months) and 4,983 children (aged 4 to 5 years) and explores a number of topic areas in relation to infants and children in Australian families. The report contains specific findings on the following:

- parental feelings of stress and sources of social support
- parenting styles and family functioning
- factors influencing parents' feelings and perceptions about the way they parent their children
- the roles and contributions of parents who do not live with their children
- the relationship of parenting practices to child outcomes.

The executive summary provides a brief holistic overview of the key emergent themes.

## Emergent themes

### **The quality of parenting 'matters' for children**

- The findings give a clear indication that family and parenting characteristics are significantly related to a child's development, with parenting practices having a particularly prominent role.
- The study found that parenting measures such as parental warmth, hostility, consistency and self-efficacy were the strongest predictors of negative outcomes for infants.
- Hostile parenting was a particularly strong predictor of negative outcomes for 4 to 5 year-old children.
- Although not significant when examining infant outcomes, secondary carer characteristics were related to outcomes for 4 to 5 year-old children.
- Very few parents reported parenting behaviour that could be classified as 'abnormal' or 'abusive'; however, even variations within the 'normal' range acted as predictors for child outcomes.

### **Australian parents feel they are doing a good job**

- The vast majority of parents (approximately 98 per cent) felt they are good parents. Given that self-efficacy has the potential to influence child outcomes, this finding is very encouraging.

### **There is a need for a continued policy focus on increasing capacity for improved social support**

- A large proportion of primary carers (approximately one in four) reported receiving low levels of social support.
- In addition to being an important outcome measure in itself, social support was an important predictor in the mental health of parents: carers who reported low levels of support were more likely to report clinically significant psychological distress.
- Contact with parents was a strong predictor of primary carer feelings of enough support (particularly in the infant sample). For carers with 4 to 5 year-old children, contact with friends and strong feelings of 'connection' with their community were strong predictors of feelings of support.
- Policy generally needs to consider how opportunities for parents who do not have extended family at all, or lack family in the immediate vicinity, can be supported in the practical ways that families allow.

- Given the significant relationship between contact with friends and community connectedness with feelings of support (for families with 4 to 5 year-old children), the continued policy concern to create communities that encourage connection and participation, that involve families and widen their contact and opportunity, and that lessen social isolation and invite opportunities for children, remains an important focus.

### **Levels of parent education are important**

- In general within the LSAC data, relationships between parental education and parent and child variables were stronger than relationships with income.
- This is seen in the LSAC data where income effects weaken when models include education (a form of human capital) and more direct measures of psychological distress and coping (forms of psychological capital).
- This does not eliminate the importance of income to the development of children nor does it discount poverty of income as a basis of material disadvantage, inequality and a cause of stress. Rather, for a significant proportion of families, very low income is part of a more general exposure to low resource levels in other capital domains—that is, human (such as education), psychological and social capital domains—that increase risks of poor developmental outcomes.

### **For parents living in couple relationships, work is a two-edged sword**

- With respect to work, the highest risks in terms of poorer child outcomes and poorer parental wellbeing were clearly associated with unemployment.
- There are, however, clear trade-offs between parental abilities to provide levels of reciprocal support for each other in parenting children and to achieve a good level of relationship satisfaction. These were balanced differently in the infant and child cohorts.
- For families with infants, having both parents working part time was related to higher reported levels of reciprocal support for parenting; however this was also related to secondary carers reporting low relationship satisfaction. Both parents being employed full time was predictive of higher reported relationship satisfaction.
- For families with 4 to 5 year-old children, employment of both parents (either part-time or full-time) was related to higher levels of reciprocal support, but at the expense of relationship satisfaction: primary carers who were employed were more likely to report low relationship satisfaction; additionally, when both parents were employed part time, secondary carers were more likely to report higher levels of arguments.

### **Future waves will provide invaluable information**

Subsequent waves of LSAC data will offer the opportunity to refine the preliminary observations made here and identify potentially modifiable causal mechanisms and pathways to allow us to better support the development of all children.

# 1 Parenting and families in Australia

## 1.1 Introduction

In opening their monograph on the wellbeing of Australia's children, Richardson and Prior (2005) reflect:

Whatever the social construction of childhood and the allocation of care responsibilities, contemporary research makes it quite clear that the experience of childhood has a powerful and lasting impact on adult outcomes. We all have a deep interest in the quality of contemporary childhood, for at least the reason that from there will come the adults who comprise our future society. We also emphasise that the experience of childhood is important for its own sake. Children are a substantial part of our society, and their ill-being or wellbeing matters as much or more than does the wellbeing of adults: children are **beings** as well as **becomings**. (p. 4)

While it is still the case that, throughout time, families have remained uniquely placed to bring children into the world and raise them, the contexts in which families do this are substantially different from those of 50 or even 20 years ago.

Australian families are smaller. The specialisation of households, with mothers caring for children and fathers 'winning the bread', has changed with the entry of increasing numbers of women into paid work. Labour markets have changed too, with substantial demands for greater levels of skill and the rise of part-time and casual work. Marriages, when they form, do so later and significant numbers of these end with periods of lone parentage followed by family re-formation. As the two-parent working household has emerged, so too has the demand for child care outside of the home. Previously unpaid because it was provided by women at home, the real cost of this care has now been transferred to families and governments as parents seek alternative care to enable participation in the labour force. This has given rise to concerns about the quality of care as it relates to child development. Amid this, the population is both living longer and the Australian demography ageing as the large proportion of baby boomers prepares to retire. Concurrently, the government is encouraging their retention in the workforce in the face of workforce skill shortages. Clearly there are competing demands outside of the family that now shape how families manage the task of raising children.

The impact of these changes on the capacities of growing children is uncertain. Some of this uncertainty stems from the absence of evidence of these effects upon families and on the outcomes for child development—a situation which has begun to change with the advent of 'Growing Up in Australia'—the Longitudinal Study of Australian Children (LSAC).

LSAC offers the first large-scale opportunity to study the development of families and children in this period of unprecedented change. This report uses the data from the first wave of data collection of LSAC to examine how parents are faring in the tasks of parenting their children and how this relates to their day-to-day circumstances at home, with their partners, with family and friends, and in the local community.

## 1.2 Report overview

This report presents findings on parenting and family data from Wave 1 of LSAC, describes parenting practices and styles in different family contexts and investigates the level and type of support Australian parents receive in raising their children. The study of parenting touches on several of the key research questions that underpin the development of the LSAC methods and measures (Sanson et al. 2002). Primary among these are:

- What are the impacts of family relationships, composition and dynamics on child outcomes, and how do these change over time?
- What can be detected of the impacts and influences of fathers on their children?
- Do beliefs and expectations of children impact on child outcomes, and how do these change over time?

- How important are family and child social connections to child outcomes? How do these connections change over time and according to the child's age? Does their importance vary across childhood?

While the content of this report is not designed to comprehensively address each of these questions, the report's general objectives inform selected aspects of the questions. The report describes the relationships between factors that influence carers' feelings and perceptions about the way they parent their children, about the way their families function and about the supports they use as parents. These in turn may affect developmental outcomes for children and the relationship of parenting practices to these outcomes as summarised in the LSAC Outcome Index.<sup>1</sup> Five specific topic areas are explored in relation to all children in both cohorts, as well as in relation to children in couple and lone-parent families:

- parenting styles and family functioning
- factors influencing parents' feelings and perceptions about the way they parent their children
- the roles and contributions of parents who do not live with their children
- feelings of stress and sources of social support for parents
- the relationship of parenting practices to child outcomes.

This report begins with a literature review that draws heavily on the previous publications of the authors and their colleagues. In particular, Nicholson et al. (2004), Nicholson et al. (2006b), Sanders, Gooley and Nicholson (2000), Sanders, Nicholson and Floyd (1997), Sanson et al. (2002), and Spence (1996). Interested readers are referred to these sources for more detail.

Sections 2 to 6 are constructed around the five specific topic areas. Readers are referred to the Appendix section of this report for additional information in the form of tables and figures that relate to specific topic areas. For instance, additional tables and figures for Section 2 can be found in Appendix B. A technical appendix (Appendix A) explains in detail analyses undertaken for each section.

### 1.3 Section summary

This section provides an overview of the conceptual model and research literature underpinning the measurement of parenting and family functioning for LSAC. The methods of sample selection, recruitment and data collection are summarised and a brief overview is presented of the characteristics of the infant and child participants, their primary carers (P1s), secondary carers (P2s) and the structure of their families.

### 1.4 Background to LSAC

LSAC is the first comprehensive national study to examine the lives of Australian children at regular intervals across infancy and early and middle childhood. LSAC aims to contribute to an understanding of children's development in Australia's current social, economic and cultural environment. The study is funded as part of the Australian Government's *Stronger Families and Communities Strategy* by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA).

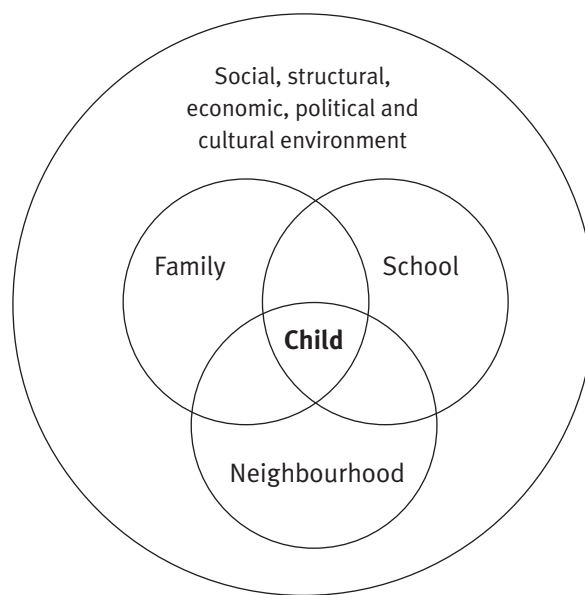
LSAC was announced in the 2000–01 Budget and work commenced on its development shortly thereafter. Sample recruitment and Wave 1 data collection were undertaken in 2004 and the data were released for analysis and research in May 2005. The study is being undertaken in partnership with the Australian Institute of Family Studies. Study design and implementation are supported by a nation-wide consortium of expert advisors (Sanson et al. 2002).

The broad intent of LSAC is to assist governments to develop effective policies on early childhood issues, particularly on early intervention and prevention strategies in the areas of health, parenting, family relationships, early childhood education, child care and family support.

## 1.5 Brief review of the literature

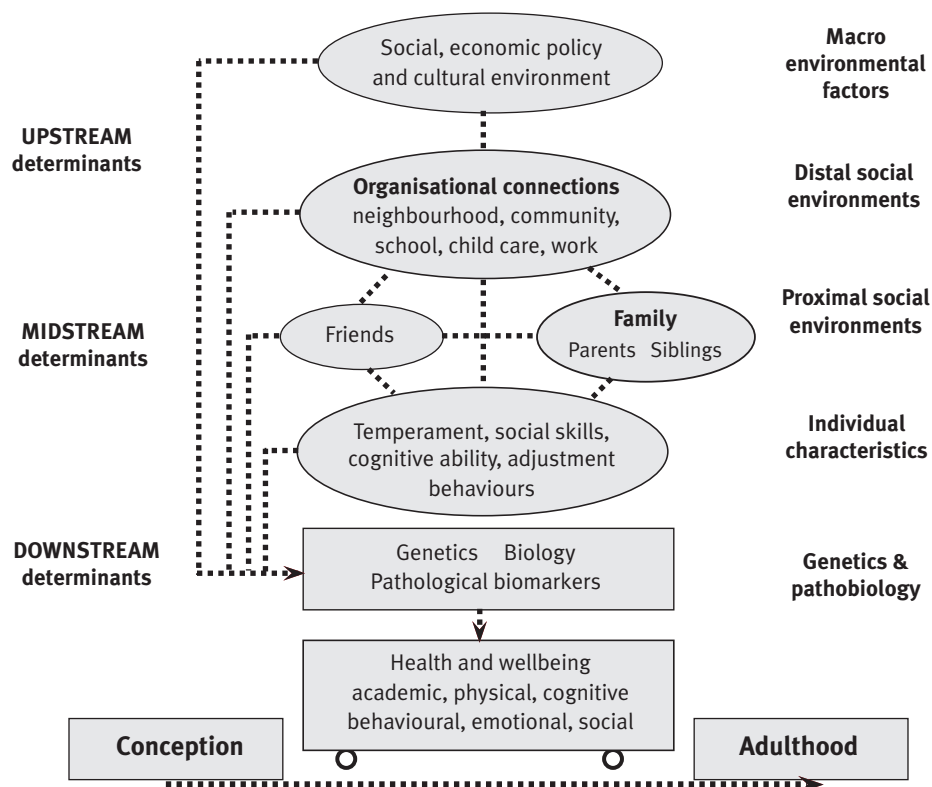
The conceptual framework underpinning the study design and measurement selection for LSAC is a pathways socio-ecological model of children's health and development (Nicholson et al. 2006b; Sanson et al. 2002). Socio-ecological models acknowledge that the health of an individual arises from the complex interactions that occur between the individual and the environments in which he or she lives. As shown in Figure 1, the child's health and development occur within the context of the family, school and community environments, each of which are influenced by broader socioeconomic, structural, cultural and political factors.

**Figure 1: Socio-ecological contexts shaping children's development**



Source: Bronfenbrenner (1979).

This model has been further elaborated by social epidemiologists to elucidate the interacting pathways of influence between various contexts, and how these in turn interact with the inherited risks and resiliencies of the individual to determine life course health outcomes. The socio-ecological model shown in Figure 2 depicts the direct and indirect pathways of influence from more distal to proximal settings, highlighting the central role of parents, family and peers in influencing health and development, especially in early childhood. The family context, which includes factors such as parent–child attachment, parenting practices, couple relationships, family conflict, and parental risk and protective factors (including parental substance use, mental health and health behaviours) has been widely recognised as having a significant direct influence on children's health, as well as moderating the influence of the more distal or macro social determinants. The model also identifies the potential for key institutions such as child care settings and schools to influence health and development.

**Figure 2: Pathways socio-ecological model of health and development**

Source: Modified by Nicholson et al. (2004) from Lynch (2000).

For simplicity, feedback processes have not been represented in the pathways model. However, it is recognised that these occur at all levels. Individuals interact with their environments and influence the circumstances to which they are exposed. For example, the influence of children's antisocial behaviours on their relationships with parents and peers contribute to and maintain adverse interactions and add to the risks for poor psychosocial adjustment (Sanders, Gooley & Nicholson 2000). Conversely, some circumstances (for example, harmonious family relationships, social support), individual behaviours (for example, parental engagement with services and schools), and individual characteristics (for example, social skills) can have a protective effect that moderates the impact of other adverse circumstances and disrupts the pathways to poor outcomes.

The following literature review highlights the key measurement areas included in LSAC relevant to this report on parenting and family functioning. As such, it is selective and sets out the broad research paradigms on parenting, relating these to the specific topic areas. Particular attention is paid to relationships between, and links among, constructs of parenting and family functioning (Sanson et al. 2002).

### Research approaches to the study of parenting effects

There is increasing evidence that parenting behaviours are instrumental in achieving many child behavioural and developmental outcomes (Collins et al. 2000). Broad research paradigms that support this assertion have included longitudinal studies, genetically informative research designs, and ecological designs that test multilevel effects of contexts outside of the family. In addition to these broad approaches, there has also been a long tradition of experimental studies based on observational techniques, as well as increasing examples of real world implementations of programs that seek to change the repertoire of parenting behaviours.

Quite powerful effects of parenting have been observed in longitudinal studies of child outcomes, where these effects can be differentially observed in families of varying composition and type (Lipman et al. 1998; Steinberg



et al. 1994). In addition to longitudinal studies, research efforts that examine the nature and effects of parenting on children have widened considerably in the past decade. Formerly, the prevailing view in the ‘nature–nurture’ debate placed the basic mechanisms that linked parenting behaviours to child outcomes almost entirely in the domain of nurture—that is, as effects in the social environment of the child, and specifically in the behaviour of the parent(s). Now, there is a vigorous research effort using genetically informative research designs—studies and methods that include all or most family members, genetically related siblings (including twin studies) and step and adoptive children in which elements of biology and environment have been manipulated in ‘natural experiments’ or through the careful combination of specific observations to better disentangle effects (Plomin & Rutter 1998; Reise et al. 2000; Rowe 1994; Rutter et al. 2001). In addition to studies that seek to examine biological mechanisms that link parenting to child outcomes, researchers have also examined the way that other contexts mediate or moderate parenting and the effects of parenting. These contexts include those of the immediate neighbourhood (Brooks-Gunn, Duncan & Aber 1997; Brooks-Gunn et al. 1993; Leventhal & Brooks-Gunn 2000, 2004) and peer-group influences (Dishion et al. 1991; Mounts & Steinberg 1995).

Much of this research would suggest that the child is the passive object of parenting and that the flow of effect is from the parent to the child. However, studies of temperament and parenting (for example, Collins et al. 2000; Sanson, Smart & Hemphill 2002) show a wider range of bidirectional and interactive effects between characteristics of the child and parenting behaviour. For example, parents respond differently to children with different temperament characteristics, and children with different temperament profiles respond differently to the same parenting practices (Putnam, Sanson & Rothbart 2002). Quite apart from parenting behaviour being close to the child, being fairly regular and occurring over extended periods of time, parenting behaviour entails **reciprocal** actions between the parent and child (Bronfenbrenner 1979). It is important to remember that parenting is not one thing—it is multifaceted or a ‘package’ of effects (Parke 2002). Parenting influences the child’s development of: emotional regulation, exploratory behaviour, communication, self-direction, intellectual flexibility, introspection, self-efficacy in meeting life’s challenges, moral values, expectations, and motivation. In all likelihood, some of these effects undoubtedly flow to the parent as well.

Whether findings on mechanisms that link parenting to child outcomes are from longitudinal samples of children followed over time, from genetically informative designs, or from data that are contextually enriched, they suggest a set of causal mechanisms that are not only within families (both biological and environmental mechanisms), but in the wider community context as well. While the causal pathways including many of these effects are yet to be fully understood, the current evidence has been compelling enough for many agencies to implement programs that seek to support and develop better parenting practices or directly intervene to change the repertoire of parenting behaviour (Spoth, Cleve & Chin 1998; Zubrick et al. 2005). Government agencies charged with the responsibility of developing policies, as well as funding and delivering services, are also interested in assessing the various impacts of these on families and their ability to parent their children. It is in this context that the findings from LSAC have a particular relevance as they are the first comprehensive, national view in Australia of how families, and parents particularly, are meeting the challenges of raising a family.

## Parenting

Previous research shows strong associations between parenting quality and child outcomes. Specifically, the lack of a warm, positive relationship with parents, insecure attachment, harsh, inflexible, rigid or inconsistent discipline practices, and inadequate supervision of and involvement with children, increase the risk that children will develop major behavioural and emotional problems. These include conduct problems, substance abuse, antisocial behaviour, and participation in delinquent activities (Coie 1996; Loeber & Farrington 1998; Patterson 1982).

However, adding complexity to this field of inquiry, what is regarded as ‘optimal’ or ‘quality’ parenting, varies with the age and competencies of the child. Parenting behaviours that are appropriate and effective with younger children may not be so with older children. As children become more developmentally competent in terms of self-regulation, communication, comprehension, introspection and autonomy, so too must parenting behaviours change to best meet the needs and extend the competencies of the child.

For the parents of children in the early years of life, three dimensions of parenting emerge from past research as having a significant impact on children's subsequent health and development. These are parental warmth, hostile parenting and consistency.

Parental warmth refers to interactions between the parent and child that are characterised by affectionate behaviours, a high degree of positive regard, expression of enjoyment of the child's company, interest and involvement in the child's interests and activities, responsiveness to the child's moods and feelings, and positive expressions of approval and support (Pettit & Bates 1989; Rothbaum & Weisz 1994). Warm, affectionate and responsive parenting has been consistently related to positive developmental outcomes for children (Pettit & Bates 1989; Rothbaum & Weisz 1994; Teti & Candelaria 2002; Zubrick et al. 1995), with good predictive power over periods of up to 10 years. For example, lack of parental warmth during infancy predicts subsequent child aggressive behaviour during preschool (Pettit & Bates 1989) and at age 10 (Bradley, Caldwell & Rock 1988). Low parental warmth during the preschool years is associated with a three-fold increased risk of problems such as conduct disorder, depression, substance use and other health risk behaviours by age 15 (Fergusson, Horwood & Lynskey 1994). Low parental warmth occurs more frequently in families characterised by adversity and conflict, lone-parent families and parents with depression (Patterson & Forgatch 1990; Webster-Stratton 1990).

However, parental warmth alone does not constitute developmentally effective parenting. The ways in which parents manage challenging or problematic child behaviours is also important. There has been extensive documentation of the types of discipline strategies that are associated with poor outcomes for children, notably in the development of disruptive, aggressive or conduct-disordered behaviours. Clear causal pathways to these outcomes have been established for parenting that is angry, irritable, physically punitive and marked by elevated levels of criticism, negativity and emotional reactivity. These hostile, angry or coercive patterns of parenting have been linked to the subsequent development of conduct-related behaviour problems, and to the maintenance and exacerbation of these problems over time (Kazdin 1987; Loeber 1990; Patterson 1982; Patterson, De Baryshe & Ramsey 1989; Snyder & Patterson 1995; Teti & Candelaria 2002).

The third dimension of parenting that becomes increasingly important after infancy is parental consistency. This reflects the extent to which parents are firm and consistent in their interactions with children. It includes setting clear, developmentally appropriate boundaries and expectations for children's behaviours and following through on stated intentions. Consistency is necessary for establishing child prosocial behaviours and, in combination with high warmth and low hostility, is regarded as providing an optimal foundation for healthy child development (Baumrind 1973; Patterson 1982; Rothbaum & Weisz 1994). In a large Australian population study, the combination of inconsistent and hostile parenting was found to be associated with elevated rates of child and adolescent delinquency, attention problems, social problems and somatic complaints (Silburn et al. 1996).

Additionally, parents' attitudes and beliefs about their competence as parents are closely related to parenting quality. The extent to which parents perceive themselves as competent, being as good as or better than other parents, is highly correlated with parenting behaviours (warmth, hostility and consistency), parent psychosocial wellbeing, family conflict and children's outcomes (Sanders et al. 1999; Silburn et al. 1996). An advantage of assessing parenting self-efficacy as a determinant of children's outcomes is that it can be measured in a relatively simple and consistent way for parents of children of all ages—thereby providing one of the few measures of parenting that does not require developmental changes when used in a longitudinal study design (Nicholson et al. 2006b). For these reasons, a brief measure of parenting self-efficacy was included in LSAC.

### **Parent wellbeing and family functioning**

Parent-child interactions occur within the context of the family. Parenting quality is influenced by a range of characteristics of individual family members (most notably, those of the primary carer), the social interactions between family members, the internal and external resources and supports available to the family, and sources of stress. These factors have been termed 'disruptors' (Patterson, De Baryshe & Ramsey 1989) as they 'disrupt' the parenting process, in either a positive or negative way which, in turn, impacts on children's health and development (Sanders, Gooley & Nicholson 2000). For example, low parental warmth, high hostility and inconsistent parenting have been found to occur more frequently in families characterised by parental

psychopathology (particularly maternal depression), high family conflict, socioeconomic disadvantage (for example, low income, young maternal age, lone-parent status), lack of social support, inadequate use of preventive health services, high levels of exposure to adverse life events, and family transitions (for example, parental separation, frequent relocation) (Patterson, De Baryshe & Ramsey 1989; Sanders, Gooley & Nicholson 2000). Such families have been identified as placing children at increased risk for a range of poor socio-emotional, behavioural, physical and learning outcomes (Sanders, Gooley & Nicholson 2000; Spence 1996).

LSAC was designed to assess children's exposures to risk and protective factors within each of these key domains as described below.

### **Individual parent wellbeing**

Parents of children with socio-emotional problems are more likely to have significant mental health problems themselves than parents of non-problem children (Sanders, Gooley & Nicholson 2000). In particular, depression, anxiety or antisocial behaviour in mothers, and antisocial behaviour and substance use in fathers are associated with increased rates of depression, anxiety and conduct problems in children (Gelfand & Teti 1990; Reeves et al. 1996). Parental psychosocial disorders may impact on children directly through the genetic transmission of personal risk characteristics, by the modelling of inappropriate behaviours, or via disruptions to parent-child interactions (Patterson, De Baryshe & Ramsey 1989; Spence 1996). For example, parental depression is associated with higher rates of parent-child negativity and physical punishment, lack of warm, affectionate behaviours, and inconsistent parenting (Gelfand & Teti 1990).

In a population sample of children, a relatively small proportion of parents at any given assessment point will display clinically significant disorders such as depression or antisocial personality disorders. Consequently, it is more appropriate in population studies to assess for the presence of psychosocial symptoms rather than clinical disorders (Nicholson et al. 2006b). This approach was adopted in LSAC. It has the advantage of increasing the proportions of parents likely to be identified as having psychosocial problems, but has the disadvantage of being more weakly associated with children's outcomes than clinical measures.

To supplement the measurement of psychosocial problems, two other aspects of parental affective wellbeing were included in LSAC. These were parents' perceptions of the extent to which they were currently experiencing life difficulties and how well they felt they were coping with life in general. Inclusion of these types of broad subjective measures of stress and coping have been found in other Australian population samples to be associated with parent physical and mental health and family conflict (Silburn et al. 1996).

### **Couple relationship quality**

For children in the early years of life who live in two-parent families, the quality of the family environment largely reflects the quality of the relationship between parents. For example, as is reported later in this section, 40 per cent of all infant cohort members were the only child in the household. For this reason, LSAC has focused on assessing the quality of couple relationships rather than employing measures of broader family functioning (Nicholson et al. 2006b).

Conflict between parents has long been recognised as a significant predictor of children's socio-emotional wellbeing (Loeber & Stouthamer-Loeber 1986; Sanders, Nicholson & Floyd 1997; Spence 1996). Children exposed to conflict that is more frequent, intense and overt show higher rates of aggression, anxiety, depression and physical health problems. Conflict may impact directly on children through the modelling of interpersonal aggression and the physiological effects of exposure to threatening situations. However, inter-parental conflict is also associated with disrupted parenting—in particular, lack of parental responsiveness, and increased parental irritability and negativity (Sanders, Nicholson & Floyd 1997).

Additionally, conflict that is specifically related to parenting and children's behaviour has been found to be associated with socio-emotional problems in children. Independent of the effects of marital distress, higher levels of conflict over parenting have been found to be associated with clinically significant levels of behavioural disorders and anxiety in early and middle childhood (Dadds & Powell 1991). In couple step-families, families

presenting for clinical interventions were found to have elevated rates of parenting conflict despite an absence of couple relationship distress (Nicholson & Sanders 1999).

Conversely, couple relationships that are characterised by a high degree of warmth, happiness and mutual support are believed to promote child wellbeing and act as a buffer against other adverse risk exposures (Sanders, Gooley & Nicholson 2000). Positive couple relationships consistently predict warm parenting behaviours and are associated concurrently and prospectively with reduced risks for behavioural problems in preschool and adolescence (Howes & Markman 1989; Miller et al. 1993).

Three aspects of the couple relationship were assessed in LSAC: overall relationship happiness, level of conflict (argumentativeness) and partner support for parenting. A Queensland population survey of parents found that adverse scores on each of these three aspects of the couple relationship were significantly associated with having a child with significant behavioural or emotional problems (Sanders et al. 1999).

### **External stressors and supports**

High rates of exposure to adverse life events are associated with poorer outcomes for children, including anxiety and conduct problems. An accumulation of parental exposures to adverse events—such as a death or illness in the family, job loss, victimisation—is associated with increased parental irritability, and a deterioration in parenting practices (Wahler & Dumas 1987). Adverse life events have been found to prospectively predict childhood infections, accidents, and admissions to hospital, under-utilisation of preventive preschool services, and conduct and poor educational outcomes in later childhood (Fergusson, Horwood & Lawton 1990; Fergusson et al. 1989).

Social support for parents acts as a protective factor against a range of poor outcomes for adults and children, and may buffer the effects of other risk factors (Sanders, Gooley & Nicholson 2000). For example, the children of depressed mothers who receive a high degree of social support show fewer behavioural problems than children of depressed, unsupported mothers. In contrast, parental isolation and lack of support is associated with parental depression, irritable and ineffective parenting (Billings & Moos 1983; Patterson & Forgatch 1990).

### **Socioeconomic, structural and demographic characteristics of families**

One of the family factors that has been most consistently associated with poor physical health, socio-emotional health and learning outcomes for children is low family socioeconomic status (Fergusson, Horwood & Lawton 1990; Nicholson et al. 2004; Spence 1996). Low socioeconomic status is typically defined on the basis of a range of parent characteristics such as poor parental education, low income, young age at first parenthood, unemployment or low occupational prestige and minority ethnic status. Socioeconomic factors are inextricably linked to family structural factors. For example, when compared to Australian children living in two-parent families, children in lone-parent families are two to five times more likely to be in the low income quintile, to live in a household where the main source of income is from government benefits and to live in overcrowded conditions (Nicholson et al. 2004).

When considered in combination with exposure to adverse life events, family socioeconomic status across childhood has been found to account for a significant proportion of adverse outcomes in late childhood, middle adolescence and early adulthood. These poor outcomes span physical health (illness, infections, injuries, cardiovascular health, oral health), mental health (conduct problems, delinquency, depression, suicidal ideation), poor academic achievement (early school leaving, lack of school qualifications), risky health behaviours (substance use, unsafe sexual activity), poor employment history and adult relationship difficulties (Fergusson, Horwood & Lawton 1990; Fergusson, Horwood & Lynskey 1994; Poulton et al. 2002).

Socioeconomic adversity is associated with a range of other risk factors including increased parental psychopathology, lack of education and financial resources, low social support, inadequate housing and residence in underresourced and unsafe neighbourhoods (Spence 1996). The impact of socioeconomic disadvantage and lone parenthood on children's outcomes is thought to be mediated by disruptions to parenting and family functioning, with positive parental mental health, quality parenting and positive partner and external supports protecting against negative impacts for children (Spence 1996).

## Parents living elsewhere

Finally, it is important to consider the impact on children of parents who reside outside the child's current household. In Australia, by ages 12 to 18 years, between 21 per cent and 27 per cent of all children have lived some portion of their childhood years in a lone-parent family (de Vaus & Gray 2003). In the majority of these families (around 93 per cent), children have a biological parent living elsewhere (de Vaus 2004), who may or may not provide care for the child. Past research has shown that a substantial proportion of non-resident parents have little or no contact with their children and that, over time, the frequency of contact declines for many non-resident parents and their children (Smyth & Fehlberg 2002). Frequency of contact also varies with the child's age at the time of parental separation and with the child's current age, and is greater for non-resident parents who live closer to their child's home. Post-divorce parenting arrangements are also closely related to the post-divorce financial arrangements and the level of conflict that occurs between the separated parents (Smyth, Sheehan & Fehlberg 2001). Demographic differences abound in these arrangements.

Relatively little is known about the impact non-resident parents have on their children's health and development, or what determines effective family functioning when parents live apart from one another. LSAC represents a unique opportunity to examine these associations within the context of a population-based sample, for which a wide range of other measures of parenting and family functioning are also being collected (Nicholson et al. 2006a).

## 1.6 Description of method

### Sample selection and recruitment

With facilitation by FaHCSIA, the Health Insurance Commission agreed that the Medicare database, the most comprehensive database of Australia's population, could be used as a sampling frame for LSAC. Children in the scope of the survey were those infants aged 3 to 12 months and children aged 4 years 3 months to 5 years at the time of sample selection. A target sample of 10,000 was sought, equally divided between these two cohorts.

A two-stage clustered design, based on postcodes, was chosen to permit community-level effects to be measured and analysed, and to allow cost effective face-to-face interviewing. Every effort was made to ensure that the sample chosen would be as representative as possible of Australia's infants and 4 to 5 year olds. The first stage of sampling entailed selecting postcodes and the second stage sampled children within these, allowing analysis of children within communities. Children in both cohorts were selected from the same 311 postcodes. An average of 40 children per postcode in the larger states and 20 children per postcode in the smaller states and territories were selected for the study.

Stratification was used to ensure proportional geographic representation for states/territories and capital city statistical division/rest of state areas. Postcodes were randomly selected with probability proportional to size selection where possible, and with equal probability for small population postcodes. Children were randomly selected with approximately equal chance of selection for each child (about one in 25). Due to excessive data collection costs, some remote postcodes were excluded from the design, and the population estimates have been adjusted accordingly.

The selection of children and corresponding fieldwork occurred in four phases. This was done to enable sample selection of children born across all months of the calendar year, to attempt to reduce the age range of children at interview, and also because some of the target infant population had not been born at the time of the first phase selection.

The final Wave 1 sample represents 53 per cent of all families who were sent a letter by the Health Insurance Commission. After excluding non-contact the achieved response rate was 64 per cent for the infants and 57 per cent for the child cohort. Children with mothers or fathers who have completed Year 12 are a little overrepresented in the final sample. Infants with no siblings are underrepresented (by 3 percentage points), while 4 to 5 year olds in couple families are overrepresented and those in lone-parent families underrepresented (by 4 percentage points each). Broadly the LSAC sample is representative of the Australian population with no

large differences from Australian Bureau of Statistics (ABS) census data on most characteristics. Comprehensive details on the design and sample are available elsewhere (Soloff et al. 2006).

To compensate for the differences between the final LSAC sample and the national population, weights were developed (see Soloff et al. 2006 for details). Analyses in this theme report entail the use of sample weights, and multivariable analyses are fully adjusted for the sample design (see Appendix A for more detail).

## 1.7 Methods of data collection

Study informants for Wave 1 include:

- the primary carer (P1)
- secondary carer, other resident parent or step-parent (P2)
- child care providers (formal or informal)
- pre-school or school teachers
- the child her/himself (physical markers and direct assessment tasks)
- some interviewer observation of the external environment.

The primary respondent is the child's 'primary carer' (P1), defined as the person who knows most about the child and their birth, history and current routines. Parents were asked to nominate who was the primary carer for this purpose, and typically this was the child's biological mother. The 'secondary carer' (P2) refers to anyone else resident in the household with a parental relationship to the child or the partner of the primary carer. It should be noted that the terms 'primary carer' and 'secondary carer' are used in this report to identify the carers who completed different aspects of data collection as described below. The terms should not be interpreted as implying that the primary carer has a greater attachment to the child than the secondary carer.

For the first wave of the study, the base design data collection entailed an interviewer spending one to two hours in the home to:

- obtain detailed information about the child, plus some information on the parent, from the primary carer—this covered the key areas of health, family functioning, parenting, education, child care and social support
- obtain sociodemographic information on the family (such as household structure and parental labour force status, educational attainment and income)—this was obtained from either the primary carer or the secondary carer
- leave behind self-complete modules for both primary carer and secondary carer covering other aspects of family functioning, health and support, which took about 20 minutes to complete—where time permitted, these were completed while the interviewer was in the home
- undertake physical measurement of the child (such as height, weight, girth and head circumference)
- administer the 'Who am I?' school readiness test and Peabody Picture Vocabulary Test of receptive language to the 4 to 5 year-old children
- obtain consent to contact any child care provider or teacher, plus contact details for the parents so they can be located for future waves.

For full information about the interviews and content, see Soloff et al. (2003).



## Measurement of parenting and family functioning

The reliable and valid measurement of parenting and family functioning within large longitudinal studies presents a number of challenges. As described earlier, parenting is a complex, multi-dimensional construct, the quality of which may be assessed by examining the emotional or affective tone of the interactions between parent and child, the frequency of specific behaviours (positive and negative), and the relative patterning of interactions and activities undertaken by parents with their children. Measurement protocols that use independent observers to code parent–child interactions under naturalistic or experimental conditions are considered the gold standard in studies of parenting and its effects on children (Webster-Stratton & Lindsay 1999). However, the time and burden costs of such approaches generally preclude their use in population studies. As an alternative, a number of parent self-report instruments developed and refined over time have proven to be valid proxies for direct observation methods (Lovejoy 1991; Lovejoy et al. 1999; Webster-Stratton & Lindsay 1999).

However, participant burden can still remain an issue for parent self-report measures, with multiple items being required to provide valid assessments for each dimension of parenting. This raises the dilemma for researchers of the need to balance data collection burden (by using a reduced set of items) with the goals of data collection validity (generally requiring longer, more comprehensive measures). Additionally, the validity and appropriateness of self-report measures may be culturally specific. Even within westernised societies, self-report instruments developed in one country or culture may not translate well to another country or culture. These measurement challenges apply equally to the measurement of parenting and to the measurement of indicators of family functioning (Nicholson et al. 2006b).

Finally, it is important to comment on the measurement challenges that arise when assessing general population samples as opposed to clinical samples of parents or families presenting for the treatment of an identified problem (for example, child conduct problems, child depression, marital distress, family conflict or violence). Many of the self-report tools available for assessing parenting and family functioning have been developed through research conducted with families experiencing significant problems. Such measures may discriminate well for those with high rates of problems, but show restricted or skewed distributions when applied to general population samples (Nicholson et al. 2006b).

Taking these considerations into account, a number of parent self-report measurement tools were selected for assessing parenting within the two LSAC cohorts, which:

- aimed to provide reliable and valid measurement at a population level
- comprised a relatively small number of items
- assessed key parenting dimensions that were developmentally relevant and broadly culturally appropriate for both age cohorts.

Similar criteria were applied to the selection of measures of family functioning, including the measurement of:

- parenting self-efficacy, parental mental health, stress and coping
- inter-parental conflict, support and relationship quality
- the supports provided by external family members.

Additionally, where possible, measures were selected that would enable comparisons between the LSAC cohorts and other relevant (preferably Australian) data sets (Nicholson et al. 2006b; Sanson et al. 2002).

Details of the specific measures employed (including actual items where appropriate) are provided in subsequent sections.

## 1.8 Description of the LSAC sample

This section describes the LSAC sample used for the data analyses in this paper. The data were from data release 2.4 for Wave 1, which included 5,107 infants and 4,983 children.

### Families with infants (infant cohort)

#### *Infant characteristics*

The average age of the infant cohort at the time of interview was 8.8 months (range: 3 to 19 months) and 51 per cent were male. The age of infants at interview extended beyond the upper limit for the target age range (that is, 12 months) due to the time lags between the selection of the sample and when contact was achieved and interviews conducted.

#### *Carer characteristics*

The primary carer (P1), the most knowledgeable person about the child, was almost always the child's biological parent (99.8 per cent) and female (98.6 per cent). Table 1 summarises their characteristics. Just over 60 per cent were in the age range 25 to 34 years at the time of the birth of the child. Only 16.3 per cent of primary carers were 24 years of age or less. Over three-quarters of primary carers were born in Australia. About 30 per cent had obtained some level of university education, 10.4 per cent had completed education to Year 10, with another 18.4 per cent completing Years 11 and 12. A small proportion of primary carers (4.8 per cent) had Year 9 or less education. Half of all primary carers were not in the labour force, another 13 per cent were employed full time and 34 per cent were employed part time, while 3.4 per cent reported being unemployed.

Over half (55.3 per cent) of secondary carers (P2) were in the age range 25 to 34 years at the time of the birth of the child and another 37.7 per cent were 35 years or older (Table 2). As with the primary carer, secondary carers were predominately born in Australia (76.4 per cent), just over one in four (27.7 per cent) had obtained some level of university education and 7.6 per cent and 13.6 per cent had achieved Year 10 education or completed Years 11 and 12 respectively. Most secondary carers (85.6 per cent) were in full-time employment while 3.2 per cent reported that they were unemployed.

#### *Family characteristics*

Families of infants were distributed across Australia with sampling in proportion to population. About one-third of families lived in New South Wales, a one-quarter in Victoria and about one-fifth in Queensland (refer to Table 3). About 81 per cent of families with infants were intact couple families (that is, all children in the family being biological offspring of both parents), 10.5 per cent were lone-parent families, while 6.8 per cent were step-families (that is, at least one child in the family being a step-child of either parent). One-fifth of families earned less than \$600 per week and about 13 per cent earned more than \$2,000 per week. Three-quarters of the infants were either the only child in the family (39.1 per cent) or had one sibling (36.4 per cent).



**Table 1: Infant cohort, primary carer (P1) characteristics**

<b>n=5,107</b>	<b>Estimated %</b>	<b>Mean</b>	<b>Standard error</b>
Gender			
Male	1.4		
Female	98.6		
Age at child's birth (years)		30.3	0.130
Less than 25	16.3		
25–34	61.5		
35 and above	22.2		
Primary carer place of birth			
Australia	78.6		
Asia	7.4		
United Kingdom	4.1		
New Zealand	3.3		
Africa or Middle East	3.1		
Other Europe	1.6		
Other Oceania	1.2		
North or South America	0.7		
Education			
Year 9 or less	4.8		
Year 10	10.4		
Years 11–12	18.4		
Trade certificate or diploma	37.2		
University	29.2		
Employment classification			
Full time	13.0		
Part time	34.4		
Unemployed	3.4		
Not in labour force	49.1		

**Table 2: Infant cohort, secondary carer (P2) characteristics**

<b>n=4,571</b>	<b>Estimated %</b>	<b>Mean</b>	<b>Standard error</b>
Gender			
Male	98.3		
Female	1.7		
Age at child's birth (years)		33.1	0.121
Less than 25	7.0		
25–34	55.3		
35 and above	37.7		
Primary carer place of birth			
Australia	76.4		
Asia	7.1		
United Kingdom	6.0		
New Zealand	3.4		
Africa or Middle East	3.0		
Other Europe	2.1		
Other Oceania	1.2		
North or South America	0.7		
Education			
Year 9 or less	3.4		
Year 10	7.6		
Years 11–12	13.6		
Trade certificate or diploma	47.7		
University	27.7		
Employment classification			
Full time	85.6		
Part time	7.0		
Unemployed	3.2		
Not in labour force	4.3		

**Table 3: Infant cohort, family characteristics**

<b>n=5,107</b>	<b>Estimated %</b>
State of residence	
New South Wales	33.7
Victoria	25.4
Queensland	19.1
Western Australia	9.6
South Australia	7.0
Tasmania	2.4
Australian Capital Territory	1.7
Northern Territory	1.1
Family type	
Lone parent	10.5
Married, intact	66.5
De facto, intact	15.0
Married, step	4.0
De facto, step	2.8
Other	1.2
Number of children <sup>(a)</sup>	
1	39.1
2	36.4
3	16.4
4 or more	8.1
Weekly household income (combined P1 and P2) <sup>(a)</sup>	
Less than \$600	20.2
\$600–\$999	27.6
\$1,000–\$1,499	25.9
\$1,500–\$1,999	13.4
More than \$2,000	12.8

(a) Refer to Appendix A for more details.

## Families with children (child cohort)

### *Child characteristics*

The average age of the child cohort was 57 months (range: 51 to 67 months) and 51 per cent were male. Again, the age of children at interview extended beyond the upper limit for the target age range (that is, 60 months) due to time lags between the selection of the sample and when contact was achieved and interviews conducted.

### *Carer characteristics*

As with the infant cohort, in the child cohort the primary carer was the most knowledgeable person about the child, of which almost all were the child's biological parent (99.4 per cent) and female (97.3 per cent). Table 4 summarises their characteristics. Almost 65 per cent (64.5 per cent) were in the age range 25 to 34 years at the time of the birth of the child and 15.9 per cent of primary carers were 24 years of age or less. Over three-quarters of primary carers were born in Australia. About 24 per cent had obtained some level of university education, 12.4 per cent had completed education to Year 10, with another 20.1 per cent completing Years 11 to 12. A small proportion of primary carers (6.1 per cent) had Year 9 or less education. Of all primary carers, 41 per cent were not in the labour force, another 15.4 per cent were employed full time, and 39.8 per cent were employed part-time, while 4.3 per cent reported being unemployed. Where primary carers reported being employed, this was for an average of 24.3 hours per week.

Over half (58.1 per cent) of secondary carers were in the age range 25 to 34 years at the time of the birth of the child and another 34.6 per cent were 35 years or older (Table 5). As with primary carers, secondary carers were predominately born in Australia (73.8 per cent), just over one in four (27.3 per cent) had obtained some level of university education and 8.4 per cent and 13.3 per cent respectively had achieved Year 10 education or completed Years 11 to 12. Most secondary carers (86.1 per cent) were in full-time employment while 2.1 per cent reported that they were unemployed.

### *Family characteristics*

Families of children were distributed across Australia with sampling in proportion to population. About one-third of families lived in New South Wales, a one-quarter in Victoria and about one-fifth in Queensland (Table 6). Intact couple families made up 75 per cent of families with children, 15 per cent were lone-parent families, while 8.3 per cent were step-families. One-fifth of families earned less than \$600 per week and about 15 per cent earned more than \$2,000 per week.

Compared to the infant cohort, a smaller proportion of the child cohort were only children (11.5 per cent compared to 39.1 per cent). Nearly half of the households contained two children (47.5 per cent), 26.8 per cent had three children and 14.2 per cent had four or more children.

**Table 4: Child cohort, primary carer characteristics**

<b>n=4,983</b>	<b>Estimated %</b>	<b>Mean</b>	<b>Standard error</b>
Gender			
Male	2.7		
Female	97.3		
Age at child's birth (years)		29.9	0.117
Less than 25	15.9		
25–34	64.5		
35 and above	19.6		
Primary carer place of birth			
Australia	76.4		
Asia	8.2		
United Kingdom	5.6		
New Zealand	2.6		
Africa or Middle East	3.2		
Other Europe	2.1		
Other Oceania	1.3		
North or South America	0.5		
Education			
Year 9 or less	6.1		
Year 10	12.4		
Years 11–12	20.1		
Trade certificate or diploma	37.2		
University	24.1		
Employment classification			
Full time	15.4		
Part time	39.8		
Unemployed	4.3		
Not in labour force	40.5		

**Table 5: Child cohort, secondary carer characteristics**

<b>n=4,238</b>	<b>Estimated %</b>	<b>Mean</b>	<b>Standard error</b>
Gender			
Male	97.4		
Female	2.6		
Age at child's birth (years)		36.6	0.130
Less than 25	7.3		
25–34	58.1		
35 and above	34.6		
Primary carer place of birth			
Australia	73.8		
Asia	7.4		
United Kingdom	6.6		
New Zealand	3.0		
Africa or Middle East	4.0		
Other Europe	3.2		
Other Oceania	1.5		
North or South America	0.6		
Education			
Year 9 or less	4.0		
Year 10	8.4		
Years 11–12	13.3		
Trade certificate or diploma	47.0		
University	27.3		
Employment classification			
Full time	86.1		
Part time	6.6		
Unemployed	2.1		
Not in labour force	5.1		

**Table 6: Child cohort, family characteristics**

<b>n=4,983</b>	<b>Estimated %</b>
State of residence	
New South Wales	34.2
Victoria	24.5
Queensland	19.6
Western Australia	9.6
South Australia	7.1
Tasmania	2.5
Australian Capital Territory	1.6
Northern Territory	0.9
Family type	
Lone parent	15.0
Married, intact	67.6
De facto, intact	7.4
Married, step	5.1
De facto, step	3.2
Other	1.7
Number of children <sup>(a)</sup>	
1	11.5
2	47.5
3	26.8
4 or more	14.2
Weekly household income (combined P1 and P2) <sup>(a)</sup>	
Less than \$600	19.3
\$600–\$999	24.8
\$1,000–\$1,499	24.7
\$1,500–\$1,999	16.5
More than \$2,000	14.7

(a) Refer to Appendix A for more details.

## 1.9 Discussion

The study children and their families were similar across both cohorts in several respects. Between the two cohorts the proportions of study children who were male or female were similar (51 per cent male), as were the proportions of primary and secondary carers who were female and male respectively (approximately 98 per cent), and Australian born (approximately 76 per cent). Similar distributions were obtained for each cohort in terms of primary and secondary carer age at the time of the child's birth, and highest levels of educational attainment. The households were also similar across the two cohorts in geographical location (measured at the level of state or territory) and distributions for total household income.

As expected for cohorts of different ages, there were also a number of demographic differences between the cohorts. Compared to the infant cohort the total number of children in the families of the child cohort was greater. For the infant cohort 39.1 per cent of infants were the only child in the household, while this was the case for only 11.5 per cent of the child cohort. Workforce participation was also different between the cohorts for the primary carer. While 47.4 per cent of primary carers for the infant cohort were currently in employment, 55.2 per cent of primary carers for the child cohort were currently employed, although the proportion of those employed who were full time was similar for both (around 27.5 per cent). Workforce participation for secondary carers was similar for both cohorts, with around 86 per cent in current full-time employment. It is likely that these demographic differences are due to the age of the child, and hence the stage of family life cycle at the time of interview. The extent to which this is the case will become more apparent once subsequent waves of longitudinal data have been collected.

Finally, as was noted in the methods section, response rates for the cohorts were 64 per cent for the infants and 57 per cent for the 4 to 5 year olds. This introduces the potential for sampling biases. Indeed cohort members with primary carers who had completed Year 12 were overrepresented in the final sample, infants with no siblings were underrepresented, and children in couple families were overrepresented, while those in lone-parent families were underrepresented. These differences were addressed through sample weighting (Soloff et al. 2006). However, on a wide range of other demographic data the LSAC cohorts were found to be similar to the age-matched Australian population.



## 2 Stress, support and parental wellbeing

### 2.1 Introduction

What do parents report about their own sense of wellbeing and how is this related to their experiences of stress, community connectedness, and the support they receive from family and friends? How do these reports differ for families with infants and families with young children? This section details findings from interviews and data gathered from primary carers (mostly mothers) and secondary carers (mostly fathers) as they pertain to these measures. There is a specific focus on parental wellbeing as measured by psychological distress. How do experiences of stress, coping abilities, support from family and friends and a sense of community connectedness contribute to patterns of wellbeing as measured by psychological distress in the parents of infants and young children? Associations with individual parent, family, and sociodemographic factors are reported here with specific emphasis on the wellbeing of parents.

### 2.2 Section summary

Parental reports of life stress events, subjective stress (that is, life difficulties and coping), support from family and friends, community connectedness and psychological distress are the focus of this section. Selected findings highlighted in this section include the following.

#### **Life stress events**

- About 7 per cent of primary carers with infants and about 14 per cent of primary carers with young children reported four or more serious life stress events in the previous year.
- For both cohorts, the two most commonly reported stresses were the death of a relative or close friend and the serious illness, injury or assault of a close relative.

#### **Support from family and friends**

- Over two-thirds of primary carers reported getting enough help from family and friends living elsewhere while about 8 per cent reported not needing any help at all.
- Almost one-quarter of primary care givers from both cohorts reported feeling a lack of support from family and friends living elsewhere.
- For primary carers with infants, contact with their immediate family (including maternal grandparents) was associated with feelings of social support. These associations were strongest for support from the mother's own family and weaker, but nonetheless significant, for in-laws. For primary carers with young children, contact with friends became a significant association.
- In both cohorts, as life stress events increased, the proportion of primary carers reporting lower support from family and friends increased.
- Family demographic and socioeconomic characteristics in both cohorts were associated with maternal reports of social support. For both cohorts, as numbers of children increased, so did maternal reports of lower feelings of support (this relationship was stronger in families with an infant).
- Full-time employment of the primary carers in the child cohort was associated with higher levels of support —that is, a smaller proportion of employed mothers reported low levels of support from family and friends relative to those not in the labour force.

### Community connectedness

- For both cohorts low levels of community connectedness were associated with younger primary carer age at the time of the birth of the study child, lone-parent status, and those carers born outside Australia.
- Higher levels of community connectedness were associated with increasing income, higher education and increasing SEIFA (Socio-Economic Indexes For Areas)<sup>2</sup> ratings indicative of lower levels of area disadvantage. Employed primary carers generally reported higher levels of community connectedness and married intact families reported the highest levels.

### Parental psychological distress

- In the infant cohort, 2.7 per cent and 2.0 per cent of the primary and secondary carers respectively reported clinically significant levels of psychological distress. In the child cohort these proportions were 3.9 per cent and 2.3 per cent.
- For parents with infants, substantially smaller proportions of primary carers in full-time employment were psychologically distressed relative to those not in the labour force.
- Strong associations were observed between primary carer reports of clinically significant psychological distress and having many life difficulties. Those with four or more life stress events in the past year were nearly four times more likely to report clinical levels of psychological distress.
- Those primary carers with poorer self-reported coping were about nine times more likely to have clinically significant psychological distress relative to those who reported that they were coping well or extremely well.
- Having adequate social support showed weaker, but nonetheless significant, associations with clinically significant psychological distress: relative to those primary carers reporting that they received enough support from family and friends, those who did not were 2.5 times more likely to report clinically significant psychological distress.
- In the child cohort, stronger community connectedness was associated with lower proportions of primary carers with psychological distress: almost twice as many carers with low community connectedness reported psychological distress relative to those with higher community connectedness.

## 2.3 Overview of analytical approach

This section is predominately descriptive in its intent and focus. Six specific measures are presented: life stress events, subjective stress (that is, life difficulties and coping), support from family and friends, community connectedness and psychological distress.

Several steps were taken in preparing and analysing the data. Univariate distributions of all variables were assessed for their suitability for modelling. Extensive bivariate analyses were undertaken comparing many of the measures in this section to specific socioeconomic and demographic characteristics of the parents and families.

Where appropriate, steps were taken to assess construct validity and internal reliability of multi-item measures (see Appendix A for more information). Where composite measures are created, or categories created for comparison purposes, these are described. All of these measures are used in subsequent sections of this report.

Life stress events are studied categorically (that is, families with four or more life stress events) for each of the infant and child cohorts. Specific associations between life stress events and the measures of subjective stress are assessed to establish their general concurrent validity. Descriptive analysis is undertaken for each cohort with respect to the measure of community connectedness and comparisons of low community connectedness across child, parent, and family measures.



In contrast, support from family and friends, as reported by the primary carer, is more extensively examined with multivariable analysis. Parental measures of psychological distress are also similarly studied with respect to measures of stress, support, community connectedness and parent and family variables.

Multivariable analyses proceeded in two stages to prevent the presentation from becoming unwieldy. First, bivariate relationships were studied for selected parent, child, and family variables where these were available for all family types. (These bivariate tables are extensive and not reported here.) Multivariable analysis within each cohort and for all families was then undertaken. These multivariable analyses are the principal focus of this section. However, where there were critical bivariate relationships that were obscured or modified in the multivariable analysis, comment is made.

## 2.4 Measures

### Life stress events

Primary carers were asked whether they had experienced any of a number of various life stresses within the last year. These items were a modification of the List of Threatening Experiences (LTE) (Brugha & Cragg 1990). The LTE is a brief questionnaire that examines the incidence of 12 categories of negative life events over the previous 12 months. The LTE assesses life stressors involving moderate or long-term threat, such as illness or injury, death of a close friend or relative, unemployment, financial loss, and loss of important relationships.

Eleven of the LTE items (denoted below with asterisks) were used along with four other items. Respondents were asked if any of these events happened to them in the last year:

- ▮ You suffered a serious illness, injury or assault.\*
- ▮ A serious illness, injury or assault happened to a close relative.\*
- ▮ Your parent, partner or child died.\*
- ▮ A close family friend or another relative (aunt, cousin, grandparent) died.\*
- ▮ You broke off a steady romantic relationship.\*
- ▮ You had a serious problem with a close friend, neighbour or relative.\*
- ▮ You had a crisis or serious disappointment in your work or career.
- ▮ You thought you would soon lose your job.
- ▮ You lost your job, but not from choice (sacked/redundant, contract ended).\*
- ▮ You were seeking work unsuccessfully for more than one month.\*
- ▮ You had a major financial crisis.\*
- ▮ You had problems with the police and a court appearance.\*
- ▮ Something you valued was lost or stolen.\*
- ▮ Someone in your household had an alcohol problem.
- ▮ Someone in your household had a drug-use problem.

Primary carers reporting four or more of these life stress events were classified as having ‘high’ levels of life stress events.

## Subjective stress

Two items providing an indication of subjective stress were included in the LSAC survey: one item on life difficulty and another on coping. These items come from the Australian Temperament Project (Prior et al. 2000). Previous studies have indicated that these two items measure different constructs. Each of the following items was asked of both primary and secondary carers from both cohorts.

### *Life difficulty*

Life difficulty was measured by the item: 'How difficult do you feel your life is at present?'

This item was scored on a 5-point Likert scale (1='no problems or stresses'; 5='very many problems or stresses').

The distribution of scores for primary and secondary reports of life difficulty and coping were highly negatively skewed indicating that parents on average reported that they had relatively few life difficulties and that they were coping well.

The life difficulties item was transformed into a binomial variable with responses of 'many problems' and 'very many problems' forming the 'many' category (infant cohort=6.9 per cent; child cohort=9.9 per cent), and 'no problems', 'few problems' and 'some problems' forming the 'fewer' category (infant cohort=93.1 per cent; child cohort=90.1 per cent)

### *Coping*

Coping was measured by the item: 'How well do you think you are coping?'

This item is scored on a 5-point Likert scale (1='not at all'; 5='extremely well').

The coping item was transformed into a binomial variable with responses of 'not at all' and 'a little' forming the 'poorly' category (infant cohort=3.4 per cent; child cohort=4.7 per cent), and 'fairly well', 'very well', and 'extremely well' forming the 'well' category (infant cohort=96.6 per cent; child cohort=95.3 per cent).

## Support from family and friends

Primary carers (that is, mostly mothers) in each cohort were asked if they received enough support from sources external to their immediate family: 'Overall, how do you feel about the amount of support or help you get from family or friends living elsewhere?' Response categories were:

- ▮ I get enough help.
- ▮ I don't get enough help.
- ▮ I don't get any help at all.
- ▮ I don't need any help.

Distributions were examined and the responses were classified into two groups: those primary carers who reported 'I get enough help' and those primary carers who reported 'I don't get enough help' or 'I don't get any help at all'. Those who responded with 'I don't need any help' (6.9 per cent infant sample; 7.9 per cent child sample) were omitted from further analyses.

## Community connectedness

Primary carers from both cohorts were asked: 'How much do you agree that:

- ▮ If you need information about local services, you know where to find that information?
- ▮ You feel a strong sense of identity with your neighbourhood?
- ▮ Most people in your neighbourhood can be trusted?
- ▮ You are well informed about local affairs?'

Responses were on a 5-point Likert scale and ranged from 1='strongly agree' to 5='strongly disagree'. The items were reverse coded and summed to form a total score ranging from 4 (low) to 20 (high). Missing items were replaced with the mean of completed items for one missing item. If two or more items were missing, respondents were coded as missing for the composite variable (0.2 per cent of the sample). Respondents in the lowest quintile (20<sup>th</sup> percentile) were classified as having low community connectedness.

### **Psychological distress**

Parent psychological distress was measured using the 6-item version of the Kessler scale of non-specific psychological distress (K-6) (Kessler et al. 2002). The K-6 is an abbreviated version of the 10-item Kessler scale (K-10). Both scales have good validity and reliability, and the K-6 is an effective tool for predicting the presence of a mood or anxiety disorder (Furukawa et al. 2003; Kessler et al. 2003). The scale includes the following six items.

In the past four weeks, how often did you feel:

- nervous?
- hopeless?
- restless or fidgety?
- that everything was an effort?
- so sad that nothing could cheer you up?
- worthless?

The items are scored on a 5-point Likert scale (in the LSAC dataset: 1='none of the time'; 5='all of the time') with the total score being a sum of the responses. This provides an overall score of 6 to 30, with higher scores indicating a higher level of psychological distress. If one item was missing, it was given the average value of the other five items. If more than one item was missing, the K-6 was not valid and hence was coded as a missing value.

As recommended by the authors of the scale, respondents were identified as having clinically significant levels of psychological distress where their scores were 19 or greater (Kessler et al. 2003).

## **2.5 Life difficulties and coping**

### **Results**

#### *Life stress events*

Primary carers were asked whether they had experienced any of 15 life stress events within the last year. As explained earlier, these items were a modification of the List of Threatening Experiences (Brugha & Cragg 1990). The percentage of the population experiencing each of the various stresses can be found in Appendix B, along with more information relevant to this section.

For both cohorts, the two most commonly reported stresses were the death of a relative or close friend (25.1 per cent, 27.0 per cent) and the serious illness, injury or assault of a close relative (21.7 per cent, 25.3 per cent). A major financial crisis (15.9 per cent, 19.3 per cent) and having a problem with a close friend, relative or neighbour (14.6 per cent, 18.8 per cent) were also reported by a large number in both cohorts. Having a crisis/disappointment at work (10.1 per cent) was relatively common in families with 4 to 5 year-old children.

The total number of life stress events reported by primary carers were summed, and divided into categories of 0, 1, 2, 3, and 4 or more stresses in the last year. Of parents with infants, 38.2 per cent of the population reported that they experienced none of these stresses in the previous 12 months. About 30 per cent reported experiencing one, 16 per cent two stresses, 8 per cent three, and 7 per cent experienced four or more stresses.

Of parents with 4 to 5 year-old children, about 31 per cent of primary carers reported that they experienced none of these stresses, 26 per cent reported experiencing one, 18 per cent reported two stresses, 10 per cent three, and 14 per cent four or more stresses.

### **Families that experience high stress**

In both cohorts, families with four or more stress events were compared to families with lower levels of stress (refer to Table 7).

There were significant associations of experiences of high stress with sociodemographic variables. These included significant bivariate associations with the primary carer's age at birth, primary carer employment status, family type, household weekly income and community rating on the SEIFA Disadvantage Index. Additionally, primary carer education and number of children in the household were significantly associated with the number of life stresses in the child cohort. Primary carer's country of birth was the only indicator that was not significant in both cohorts.

In both cohorts, parents who were younger (under 25 years) at the time of the birth of the study child were more likely to have experienced four or more life stress events in the previous 12 months than parents who were 25 years or older. Parents who were unemployed were far more likely to report four or more stresses than parents working part time, full time or those classified as 'not in the labour force'. Lone parents were significantly more likely to report four or more stresses than parents who were married, or in a de facto, intact relationship. Additionally, primary carers from de facto step-families were more likely to report more stresses than primary carers living in married intact families.

Income was clearly related to the number of life stresses experienced, with a trend for lower income to result in higher proportions of families experiencing four or more stresses in the previous year. The same linear trend was observed with reference to the SEIFA Disadvantage Index: the proportion of primary carers experiencing four or more stressful events increased with rising disadvantage (lower scores on the SEIFA Index indicate more disadvantaged communities).

In the child cohort, primary carer education and family size were associated with more life stress events. Primary carers who had university education were slightly less likely to experience four or more stressful events than parents who had lower levels of education. Furthermore, primary carers who had one child were more likely to report four or more life stresses than parents with more than one child.

**Table 7: Percentage of primary carers experiencing four or more life stress events examined by selected sociodemographic indicators**

	Infant cohort		Child cohort	
	Estimated %	95% confidence interval (low–high)	Estimated %	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Less than 25	19.4	(16.3–22.8)	25.4	(21.8–29.3)
25–34	8.0	(7.0–9.2)	12.0	(10.7–13.5)
35 and above	10.0	(8.6–13.1)	11.3	(9.1–13.9)
P1 Country of birth				
Australia	10.7	(9.6–11.9)	13.9	(12.6–15.4)
Outside Australia	8.7	(6.7–11.2)	13.8	(11.3–16.6)
P1 Highest level of education				
Year 9 or less	13.2	(8.2–20.5)	15.9	(11.0–22.4)
Year 10	11.9	(8.7–16.1)	14.4	(11.1–18.4)
Year 11 or 12	8.8	(6.9–11.1)	13.7	(11.4–16.3)
Trade certificate or diploma	11.3	(9.6–13.3)	17.2	(15.1–19.5)
University	8.9	(7.5–10.5)	8.5	(6.9–10.4)
P1 Employment classification				
Full time	9.5	(7.2–12.4)	13.0	(11.0–16.6)
Part time	7.9	(6.5–9.6)	12.5	(10.9–14.3)
Unemployed	29.9	(22.3–38.8)	28.9	(21.5–37.5)
Not in labour force	10.8	(9.4–12.5)	13.7	(11.9–15.7)
Family structure				
Lone parent	28.6	(24.0–33.7)	32.5	(28.7–36.6)
Married, intact	6.7	(5.8–7.6)	9.2	(8.1–10.4)
De facto, intact	13.6	(11.2–16.6)	14.0	(9.6–20.0)
Married, step	10.1	(6.3–16.1)	16.2	(11.6–22.2)
De facto, step	20.2	(13.4–29.3)	23.5	(16.6–32.1)
Number of children in household				
1	11.2	(9.7–13.0)	22.5	(18.8–26.6)
2	9.0	(7.4–10.8)	11.6	(10.1–13.2)
3	9.8	(7.6–12.6)	14.3	(12.3–16.6)
4 or more	12.4	(8.9–16.9)	14.2	(11.2–17.9)
Weekly income category				
Less than \$600	23.6	(20.4–27.1)	29.8	(26.2–33.8)
\$600–\$999	9.9	(8.2–11.9)	16.8	(14.1–19.7)
\$1,000–\$1,499	6.6	(5.3–8.3)	11.0	(9.1–13.2)
\$1,500–\$1,999	6.0	(4.3–8.2)	6.9	(5.2–9.0)
More than \$2,000	4.4	(3.0–6.5)	3.9	(2.7–5.7)
SEIFA disadvantage categories				
650–950	13.5	(11.0–16.4)	19.2	(15.8–23.1)
960–980	10.1	(8.2–12.5)	16.6	(14.3–19.2)
990–1,010	9.6	(7.4–12.4)	12.0	(9.7–14.9)
1,020–1,060	7.2	(7.2–11.6)	12.0	(9.9–14.3)
1,070–1,150	7.6	(7.6–10.8)	8.8	(7.1–10.7)

Note: Sample sizes for the above bivariate analyses range from 4,092 to 4,289 for the infant cohort and 3,981 to 4,212 for the child cohort.

## Stressful life events and their relationship with life difficulties and coping

The following section examines the relationship between specific life stress events that occurred in the last year and measures of how a person feels about the difficulty of their life and how well they are coping.

The number of life stress events was significantly related to primary carer reports of life difficulty and of coping. Primary carers who reported four or more life stresses were significantly more likely to fall within the category of 'high' life difficulty than those who experienced zero, one, two, or three stresses (see Table 8). A similar pattern was seen with coping (Table 9), with primary carers in the infant sample reporting four or more stresses significantly more likely to report 'poor' coping than those who reported zero or one life stresses. The relationship appeared stronger in the child cohort, where parents who reported four or more life stresses were significantly more likely to report 'poor' coping than parents who reported zero, one, two, or three life stresses.

**Table 8: Percentage of cases with high life difficulty by total number of stresses**

Total number of stresses	Infant cohort est n=4,145		Child cohort est n=4,175	
	%	95% confidence interval	%	95% confidence interval
0	1.8	(1.3–2.7)	2.4	(1.7–3.3)
1	4.7	(3.5–6.3)	6.6	(5.3–8.3)
2	7.5	(5.7–9.8)	8.5	(6.5–11.1)
3	14.5	(11.0–18.9)	15.4	(12.1–19.4)
4 or more	28.7	(23.5–34.5)	30.4	(26.4–34.8)

**Table 9: Percentage of cases with poor coping by total number of stresses**

Total number of stresses	Infant cohort est n=4,143		Child cohort est n=4,174	
	%	95% confidence interval	%	95% confidence interval
0	2.2	(1.6–3.1)	3.4	(2.3–4.9)
1	2.9	(2.0–4.1)	3.4	(2.5–4.7)
2	3.8	(2.5–5.7)	4.4	(3.2–6.2)
3	5.2	(3.3–8.2)	6.4	(4.3–9.5)
4 or more	7.8	(5.2–11.7)	12.4	(9.8–15.4)

## Discussion on life difficulties and coping

Broadly speaking, there is good correspondence between the number of life stresses experienced by carers in a given year and their subjective reports of life difficulties and their ability to cope. As the number of life stress events increases, so too do the proportions of primary carers who report many life difficulties and poor coping.

## 2.6 Support from family and friends

Lynch (2000) and Bronfenbrenner (1979) indicate that the environments in which parents are living can have a strong impact on their wellbeing and on the development of children. This section of the report examines some aspects of the social and community environment in which Australian parents find themselves. Social support is an important determinant of many outcomes, for both parents and children. Parents with higher levels of social support have been found to have better psychological health outcomes, and have important sources for parenting support allowing for more effective child-raising.

The following analyses examine the relative importance of a number of sources of support to a parent's feeling that they receive enough support.

Multivariate logistic regression was used to assess the extent to which parent age at birth, parental education, family structure, employment status, family size, income, number of life stresses, frequency of contact with parents, siblings, in-laws, other family, friends and neighbours were independently related to the likelihood of reporting not enough support. Where findings in the multivariate analysis showed a different pattern of results from the bivariate comparisons, these are discussed.

## Interpreting odds ratios

The results of logistic regression models are expressed in terms of odds ratios.

The odds ratios are calculated relative to an index category for each variable. For example, in the model predicting primary carer feelings of receiving enough external support (in the infant cohort), single child families have been used as the index category in the variable measuring family size. The odds ratio (OR) (adjusted) for families with two children was 1.39 (CI: 1.14–1.71). This can be interpreted as saying that primary carers in families with two children were 1.39 times more likely to feel as if they didn't receive enough support than primary carers in families with one child only. The statistical significance of an odds ratio can be judged by whether the 95 per cent confidence interval includes the reference value of 1.00. Where this occurs, the effect is not significant. Here the confidence interval is from 1.14 to 1.71 and does not contain 1.00—thus the effect is considered statistically significant.

Where an odds ratio is less than one, it indicates a reduced level of risk. For example, 'university education' was chosen as the reference category for the primary carer level of education variable. For primary carers who had received a 'Year 9 or lower' education, the odds ratio was 0.33 (CI: 0.15–0.72), indicating that these primary carers had less than one-third of the likelihood of reporting inadequate levels of external support than primary carers who had received a university degree. Since the confidence interval ranges from 0.15 to 0.72 and does not contain 1.00, the effect is considered statistically significant.

## Results

### *Infant sample*

In the infant cohort, mothers who reported not getting enough support from family and friends living elsewhere were more highly educated, had higher incomes, larger families, and less contact with parents and in-laws (refer to Table 20).

Specifically, primary carers who were more educated were more likely to report that they did not receive enough support. In other words, higher proportions of university-educated mothers reported that they did not receive enough support from family and friends living elsewhere (27.6 per cent). This figure was 14.3 per cent for mothers with Year 9 or less education ( $OR_{adj}=0.331$ ). The general trend in the data was for higher educational levels to be associated with a higher proportion of primary carers reporting lower levels of support from family and friends.

Lower levels of perceived support were associated with larger family size. For example, families with four or more children were significantly more likely to report that they did not have enough support relative to families with one child (32.5 per cent compared to 19.8 per cent;  $OR_{adj}=3.24$ ).

Lack of contact specifically with parents and in-laws was significantly related to maternal reports of not having enough support whereas no significant relationship was found with respect to contact with other family, friends and neighbours.

Relative to primary carers who reported regular (daily) contact with parents, those that reported less frequent contact were significantly more likely to report that they did not have enough support. There was a linear association observed: as maternal contact with parents decreased from daily to less frequent contact (weekly, monthly, yearly, not at all), the odds of reporting that they did not have enough support increased in the range from 2.5 to 7.0.

Lack of contact with in-laws also exhibited the same association with primary carer reports of not having enough support. However, these associations were weaker and with odds ratios in the range from 1.9 to 3.1.

Primary carer-reported contact with siblings was very variable. Only when sibling contact dropped below a few times a year did the odds of primary carers reporting not receiving enough support increase—to 2.2 relative to those primary carers who had daily sibling contact.

### *Child sample*

The same variables were assessed in the child cohort. While there were some similarities with the infant cohort, there were also some significant differences (refer to Table 10).

Variables that were significantly associated with maternal reports of not having enough support included employment arrangements, number of children in the family, life stress events, and frequency of contact with parents, in-laws, other family members, and friends.

Larger family size was associated with higher proportions of carers who reported not receiving enough support from family and friends. This reached significance in families with four children relative to one (29.5 per cent compared to 22.2 per cent;  $OR_{adj}=2.8$ ). Primary carers in families where two or more life stress events had occurred were significantly more likely to report not receiving enough support from family and friends.

Contact with family and friends showed a more variable pattern relative to the one found in the infant cohort. Maternal contact with family and in-laws generally showed a differing strength of association. Contact with parents at any level less than daily was associated with greater proportions of mothers who reported not feeling that they had adequate support ( $OR_{adj}$  range: 1.7–4.5).

In contrast, contact with in-laws showed fewer significant associations and those that did showed weaker associations ( $OR_{adj}$  range: 1.8–2.1). For primary carers in the child cohort, not having any contact with other family members, relative to daily contact, was associated with a greater likelihood of reports of not having enough support (36.7 per cent compared to 18.6 per cent;  $OR_{adj}=2.05$ ).

Unlike the infant cohort, for primary carers of children aged 4 to 5 years, contact with friends less than weekly was associated with significant increases in proportions reporting not receiving enough support from family and friends. Relative to those primary carers who were in daily contact with friends, those who reported that they did not have friends were 6.3 times more likely to report that they did not have enough support (19.6 per cent compared to 60.8 per cent).

No significant association was observed between maternal reports of not having enough support and level of contact with neighbours.



**Table 10: Primary carer (P1) feelings of enough external support, likelihood of P1 feeling they do not receive enough support**

	Infant cohort n=3,440		Child cohort n=3,331	
	OR <sub>adj</sub>	95% confidence interval (low-high)	OR <sub>adj</sub>	95% confidence interval (low-high)
P1 Age at child's birth (years)				
Less than 25	0.741	(0.521–1.054)	0.978	(0.719–1.330)
25–34	Ref		Ref	
35 and above	1.120	(0.881–1.424)	1.166	(0.907–1.498)
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.079	(0.864–1.347)	1.129	(0.898–1.418)
P1 Highest level of education				
Year 9 or less	<b>0.331</b>	<b>(0.152–0.719)</b>	0.692	(0.417–1.151)
Year 10	<b>0.601</b>	<b>(0.392–0.919)</b>	0.787	(0.550–1.126)
Year 11 or 12	0.916	(0.700–1.198)	0.878	(0.669–1.150)
Trade certificate or diploma	0.849	(0.678–1.063)	0.854	(0.673–1.083)
University	Ref		Ref	
P1 Employment classification				
Full time	Ref		Ref	
Part time	0.856	(0.633–1.158)	1.165	(0.859–1.579)
Unemployed	0.951	(0.493–1.834)	1.364	(0.810–2.296)
Not in labour force	1.051	(0.765–1.443)	<b>1.390</b>	<b>(1.011–1.911)</b>
Family structure				
Lone parent	0.688	(0.431–1.098)	1.090	(0.756–1.570)
Married, intact	Ref		Ref	
De facto, intact	1.131	(0.877–1.460)	0.941	(0.655–1.351)
Married, step	<b>0.514</b>	<b>(0.305–0.867)</b>	1.160	(0.789–1.704)
De facto, step	0.514	(0.260–1.013)	0.732	(0.388–1.383)
Number of children in household				
1	Ref		Ref	
2	<b>1.394</b>	<b>(1.135–1.711)</b>	1.284	(0.940–1.755)
3	<b>1.830</b>	<b>(1.383–2.420)</b>	1.377	(0.971–1.953)
<b>4 or more</b>	<b>1.703</b>	<b>(1.136–2.554)</b>	<b>1.535</b>	<b>(1.056–2.232)</b>
Weekly income category				
Less than \$600	Ref		Ref	
\$600–\$999	0.927	(0.653–1.317)	1.028	(0.762–1.387)
\$1,000–\$1,499	0.947	(0.666–1.346)	1.243	(0.864–1.788)
\$1,500–\$1,999	0.838	(0.579–1.213)	1.189	(0.805–1.757)
More than \$2,000	1.405	(0.939–2.102)	1.366	(0.916–2.039)
Total number of life stresses				
0	Ref			
<b>1</b>	<b>1.547</b>	<b>(1.247–1.919)</b>	1.227	(0.947–1.589)
<b>2</b>	<b>2.052</b>	<b>(1.589–2.651)</b>	<b>1.372</b>	<b>(1.031–1.824)</b>
<b>3</b>	<b>2.298</b>	<b>(1.652–3.195)</b>	<b>2.027</b>	<b>(1.471–2.792)</b>
<b>4 or more</b>	<b>3.242</b>	<b>(2.225–4.723)</b>	<b>2.803</b>	<b>(2.120–3.707)</b>
Frequency of contact with parents				
<b>Do not have</b>	<b>7.074</b>	<b>(3.119–16.046)</b>	<b>2.314</b>	<b>(1.302–4.114)</b>
<b>Less than a few times per year</b>	<b>5.933</b>	<b>(3.823–9.207)</b>	<b>4.491</b>	<b>(3.082–6.542)</b>
<b>At least every month</b>	<b>4.708</b>	<b>(3.306–6.704)</b>	<b>2.936</b>	<b>(2.122–4.062)</b>

<b>At least every week</b>	<b>2.569</b>	<b>(1.977–3.338)</b>	<b>1.763</b>	<b>(1.369–2.269)</b>
At least every day	Ref		Ref	
Frequency of contact with siblings				
Do not have	1.427	(0.710–2.868)	1.212	(0.641–2.294)
<b>Less than a few times per year</b>	<b>2.271</b>	<b>(1.469–3.512)</b>	<b>1.576</b>	<b>(1.027–2.418)</b>
At least every month	1.309	(0.873–1.962)	0.991	(0.662–1.483)
At least every week	1.272	(0.870–1.861)	0.777	(0.527–1.144)
At least every day	Ref		Ref	
Frequency of contact with in-laws				
<b>Do not have</b>	<b>3.117</b>	<b>(1.467–6.621)</b>	1.778	(0.990–3.193)
<b>Less than a few times per year</b>	<b>3.502</b>	<b>(1.890–6.489)</b>	<b>2.107</b>	<b>(1.324–3.354)</b>
<b>At least every month</b>	<b>2.750</b>	<b>(1.565–4.833)</b>	<b>1.874</b>	<b>(1.209–2.904)</b>
<b>At least every week</b>	<b>1.922</b>	<b>(1.084–3.408)</b>	1.543	(0.977–2.436)
At least every day	Ref		Ref	
Frequency of contact with other family members				
<b>Do not have</b>	1.413	(0.634–3.147)	<b>2.058</b>	<b>(1.094–3.870)</b>
Less than a few times per year	1.009	(0.524–1.943)	1.443	(0.832–2.502)
At least every month	0.874	(0.449–1.700)	1.005	(0.568–1.777)
At least every week	0.544	(0.272–1.086)	0.984	(0.568–1.707)
At least every day	Ref		Ref	
Frequency of contact with friends				
<b>Do not have</b>	0.914	(0.279–2.993)	<b>6.297</b>	<b>(2.180–18.196)</b>
<b>Less than a few times per year</b>	1.072	(0.666–1.725)	<b>1.948</b>	<b>(1.305–2.907)</b>
<b>At least every month</b>	1.083	(0.798–1.470)	<b>1.421</b>	<b>(1.038–1.943)</b>
At least every week	0.894	(0.673–1.188)	1.218	(0.957–1.551)
At least every day	Ref		Ref	
Frequency of contact with neighbours				
Do not have	0.556	(0.205–1.504)	1.081	(0.435–2.688)
Less than a few times per year	1.037	(0.738–1.456)	1.150	(0.844–1.566)
At least every month	0.958	(0.667–1.376)	1.229	(0.891–1.694)
At least every week	0.939	(0.662–1.332)	1.144	(0.864–1.516)
At least every day	Ref		Ref	

## Discussion on support from family and friends

Over two-thirds of primary carers reported getting enough help from family and friends living elsewhere while about 8 per cent reported not needing any help at all. Almost one-quarter of primary carers from both cohorts reported feeling a lack of support from family and friends living elsewhere.

The multivariable analyses showed – after controlling for sociodemographic factors and number of life stresses experienced – contact with the primary carer’s parents, siblings and in-laws were all associated with the primary carer’s feelings of support. Increased contact with each of these sources resulted in parental feelings of enough support. The strongest relationship was seen between feelings of support and contact with the primary carer’s own parent(s).

For primary carers (mostly mothers) with infants, support from immediate family (including maternal grandparents) was associated with greater social support. These associations were strongest for support from the primary carer’s own family and weaker, but nonetheless significant, for in-laws. For mothers with young children, support from friends became a significant association, presumably reflecting the child’s development, play and social requirements and early pre-school experiences.

Primary carers who reported they did not have any other family members (other than parents, siblings and in-laws) were more likely to feel less support. Additionally, primary carers who reported having no friends

were much more likely to report low levels of support, and those who had contact with their friends frequently reported higher feelings of support than those who saw their friends less frequently.

The only variable that did not significantly predict feelings of support in either cohort was frequency of contact with neighbours.

In both cohorts, as life stress events increased, the proportion of primary carers reporting lower support from family and friends increased.

Family demographic and socioeconomic characteristics in both cohorts were independently associated with maternal reports of social support. For both cohorts, as numbers of children increased, so did maternal reports of lower feelings of support (this relationship was stronger in families with an infant).

In the infant sample, parents with lower levels of education were more likely to report adequate support from family and friends than those with higher education. This association was not observed in the child cohort.

Finally, full-time employment of the mothers in the child cohort was associated with higher levels of support—that is, a smaller proportion of employed mothers reported low levels of support from family and friends relative to those not in the labour force.

## **2.7 Indicators of community connectedness**

Over the past decade the concept of social capital has been given prominence through its association with the strength of communities and their economic wellbeing (Putnam 1995). Social capital refers to the quality and depth of relationships between people in a family or community. It can be defined as the processes and conditions among people and organisations that lead to accomplishing a goal of mutual benefit. Those processes and conditions are manifested by four interrelated constructs: trust, cooperation, civic engagement, and reciprocity (Green & Kreuter 1999).

Specific measures of all of these concepts were not gathered during Wave 1 of LSAC. Instead, general indicators of community connectedness were used and respondents were asked questions about their knowledge of local services, identification with and trust of the local neighbourhood, and knowledge of local affairs. Particular emphasis here is directed towards parent and family associations with low levels of community connectedness (see Section 2.4).

Similarities between the cohorts were more evident than differences (see Table 11). For both cohorts low levels of community connectedness were associated with younger primary carer age at the time of the birth of the study child, lone-parent status, and carers born outside Australia. Higher levels of community connectedness were associated with increasing income, increasing education and increasing SEIFA ratings indicative of lower levels of area disadvantage. Employed primary carers generally reported higher levels of community connectedness and married intact families reported the highest levels.

Notable differences between the cohorts were observed with respect to maternal age at the time of the birth of the study child and maternal education. In the infant cohort particularly, large proportions of younger, more poorly educated primary carers reported lower community connectedness.

**Table 11: Percentage of population falling beneath the ‘low’ community connectedness cut-off examined by selected sociodemographic indicators**

	Infant cohort		Child cohort	
	Estimated %	95% confidence interval	Estimated %	95% confidence interval
P1 Age at child's birth (years)				
Less than 25	36.2	(32.0–40.5)	29.3	(25.3–33.5)
25–34	21.9	(20.1–23.8)	17.7	(16.1–19.5)
35 and above	19.7	(17.0–22.6)	14.9	(12.5–17.6)
P1 Country of birth				
Australia	22.4	(20.6–24.2)	17.7	(16.3–19.3)
Outside Australia	27.2	(23.9–30.7)	22.9	(19.9–26.2)
P1 Highest level of education				
Year 9 or less	40.4	(32.6–48.7)	24.6	(18.7–31.5)
Year 10	27.6	(23.0–32.8)	25.4	(20.9–30.3)
Year 11 or 12	24.1	(21.4–27.1)	20.1	(17.2–23.4)
Trade certificate or diploma	25.2	(22.8–27.8)	19.0	(16.9–21.3)
University	17.5	(15.5–19.8)	13.2	(11.2–15.3)
P1 Employment classification				
Full time	20.6	(17.1–24.5)	18.1	(15.1–21.6)
Part time	19.9	(17.7–22.2)	13.8	(12.3–15.6)
Unemployed	34.7	(27.3–43.0)	25.5	(19.2–33.0)
Not in labour force	26.0	(24.0–28.2)	23.7	(21.3–26.2)
Family Structure				
Single	36.9	(31.3–42.8)	31.7	(27.4–36.4)
Married, intact	20.2	(18.5–22.0)	15.1	(13.6–16.8)
De facto, intact	27.7	(24.2–31.5)	21.4	(16.8–27.0)
Married, step	24.4	(18.3–31.9)	24.4	(18.4–31.5)
De facto, step	35.3	(26.3–45.5)	24.0	(17.3–32.3)
Number of children in household				
1	25.8	(23.4–28.3)	22.9	(19.1–27.1)
2	22.1	(19.8–24.6)	17.3	(15.5–19.2)
3	19.2	(16.2–22.7)	18.8	(16.2–21.7)
4 or more	26.7	(21.6–32.4)	21.4	(17.6–25.7)
Weekly income category				
Less than \$600	34.3	(30.7–38.2)	30.0	(26.0–34.3)
\$600–\$999	25.2	(22.6–28.0)	21.2	(18.3–24.4)
\$1,000–\$1,499	21.0	(18.5–23.8)	14.9	(12.6–17.6)
\$1,500–\$1,999	16.8	(13.7–20.4)	16.1	(13.5–19.2)
More than \$2,000	15.2	(12.3–18.7)	11.3	(9.1–14.1)
SEIFA disadvantage categories				
650–950	32.0	(28.5–35.7)	26.6	(23.0–30.6)
960–980	23.8	(20.4–27.6)	19.6	(16.9–22.7)
990–1,010	24.9	(21.4–28.7)	17.7	(14.8–21.0)
1,020–1,060	20.1	(17.4–23.0)	17.3	(14.8–20.1)
1,070–1,150	16.8	(14.2–19.8)	12.1	(9.5–15.2)

Note: Sample sizes for the above bivariate analyses range from 4,050 to 4,244 for the infant cohort and 3,197 to 3,376 for the child cohort.

## 2.8 Parent psychological distress

Respondents were identified as having clinically significant levels of psychological distress where their scores were 19 or greater on the K-6 (see Section 2.4). In the infant cohort, 2.7 per cent and 2.0 per cent of the primary and secondary carers respectively reported clinically significant levels of psychological distress. In the child cohort these proportions were 3.9 per cent and 2.3 per cent.

Multivariate logistic regression was used to assess the extent to which parent age at birth of the study infant, parent's country of birth, parental education, employment status, family structure, family size, income, life difficulties, perceived ability to cope, social support, life stress events, community connectedness and SEIFA area disadvantage were independently related to the likelihood of having clinically significant psychological distress. Where findings in the multivariate analysis showed a different pattern of results from the bivariate comparisons, these are discussed.

### Results

#### *All families*

##### Infant sample

Individual bivariate associations showed some modest effects with respect to changes in the proportion of primary carers reporting clinically significant psychological distress. Larger proportions of primary carers were psychologically distressed where they had low levels of education and larger families. Lone-parent status and step-family status were associated with higher levels of psychological distress. Thus, proportions of primary carers in lone-parent status (5.3 per cent) and married or de facto step-families (5.3 per cent and 7.1 per cent respectively) reporting psychological distress were at least double those of intact married status (2.4 per cent) and de facto family status (2.3 per cent) families.

In the multivariate model, many of these bivariate effects were either not significant or were moderated by the presence of measures of higher levels of life difficulties, life stress events, poor levels of coping and lower levels of social support.

Specific findings merit note here. Substantially larger proportions of primary carers not in the labour force were psychologically distressed relative to those working full time (4.1 per cent compared to 1.2 per cent;  $OR_{adj}=6.514$ ).

Strong associations were observed between primary carer reports of clinically significant psychological distress and having many life difficulties. Relative to primary carers reporting fewer life difficulties, those reporting many were more than six times more likely to have clinically significant psychological distress (1.6 per cent compared to 20.0 per cent;  $OR_{adj}=6.08$ ). Those with four or more life events in the past year were nearly four times more likely to report clinical levels of psychological distress (9.5 per cent compared to 2.0 per cent;  $OR_{adj}=3.97$ ).

Having difficulties coping was strongly associated with parental psychological distress. Those primary carers with poorer self-reported coping were about ten times more likely to have clinically significant psychological distress relative to those who reported that they were coping well or extremely well (39.3 per cent compared to 2.0 per cent;  $OR_{adj}=10.08$ ). Having adequate social support showed weaker, but nonetheless significant, associations with clinically significant psychological distress: relative to those primary carers reporting that they received enough support from family and friends, those who did not were 2.5 times more likely to report clinically significant psychological distress (1.8 per cent compared to 6.4 per cent;  $OR_{adj}=2.51$ ).

For primary carers with infants, these findings suggest that a smaller set of circumstances (when compared with primary carers in the child cohort) are associated with reports of mental health distress. Low levels of education and non-participation in the labour force were significant factors in reports of mental health distress. As with the primary carers in the child cohort, strong associations were observed between psychological distress and life difficulties, life stress events, poor coping, and lower levels of social support.

Area disadvantage as measured by SEIFA and community connectedness were not significantly associated with primary carer reports of psychological distress.

### Child sample

In the child sample, individual bivariate associations showed strong gradients with respect to changes in the proportion of primary carers reporting clinically significant psychological distress. Significant proportions of primary carers reported clinically significant psychological distress where they were younger at the time of the birth of the study child, more poorly educated, unemployed, financially poorer, and of lone-parent status. Significant bivariate associations were also observed between clinically significant psychological distress and measures of life difficulties, life stress events, poorer coping, lower community connectedness and lower levels of social support.

As with the infant cohort, in the multivariate model many of these bivariate effects are either not significant or are moderated by the presence of measures of higher levels of life difficulties, life stress events, poor levels of coping and lower levels of social support.

Strong associations were observed between primary carer reports of clinically significant psychological distress and life difficulties. Relative to those reporting fewer life difficulties, those reporting many were nearly nine times more likely to have clinically significant psychological distress (1.7 per cent compared to 25.9 per cent). Those primary carers with poorer self-reported coping were 6.2 times more likely to have clinically significant psychological distress relative to those who reported that they were coping well or extremely well (32.9 per cent compared to 2.7 per cent). Concurrently, those reporting four or more life stresses in the past year were 2.3 times more likely to report psychological distress. This finding was also seen in the infant sample.

Having adequate social support showed weaker, but nonetheless significant associations with clinically significant psychological distress: relative to those primary carers reporting that they receive enough social support, those that did not were 2.1 times more likely to report clinically significant psychological distress (2.6 per cent compared to 9.3 per cent). In the child cohort, better community connectedness was associated with lower proportions of primary carers with psychological distress: almost twice as many carers with low community connectedness reported psychological distress relative to those with higher community connectedness.

The association of SEIFA disadvantage with psychological distress was not significant.

These findings suggest that many of the circumstances associated with young age, lower education, lone parenting, and lower levels of income are likely to directly translate into effects measured as life difficulties and coping and that, while social support is significant, its association with psychological distress is modest in comparison to more directly related human and financial capital.

### *Couple families*

Both primary and secondary carers were asked identical questions with respect to their experience of psychological distress.

Additional analyses were undertaken to assess whether any of the relationships observed in the entire sample were differently expressed in the sub-sample of couples. This afforded the opportunity of adding factors that measured relationship status (see Section 3) — including measures of argumentative relationships and partner support — to those factors assessed for the entire sample. These variables were all significant at the bivariate level.

### Infant sample

Primary carer reports were assessed using multivariable modelling. Similar to the analysis of all families, many of the modelled family and socioeconomic variables did not significantly predict primary carer clinical levels of psychological distress in the presence of significant associations with measures of life difficulties, stressful life events, community connectedness, coping, and social support. Further, the association of psychological distress with area disadvantage as measured by SEIFA was not significant.

Of the socioeconomic variables that remained significant, primary carers in the couple sample who had nine years or less of education were significantly more likely to report psychological distress than were their university-educated counterparts (11.4 per cent compared to 2.4 per cent;  $OR_{adj}=4.26$ ). Those not in the labour force were more likely to report psychological distress than those working full time (3.8 per cent compared to 1.2 per cent;  $OR_{adj}=5.187$ ). Those with four or more life stress events were nearly three times more likely to report psychological distress relative to those with fewer stress events. With respect to relationship functioning, those with an argumentative partner relationship were more likely to report clinically significant levels of psychological distress than were those in relationships that had lower levels of arguments (7.3 per cent compared to 1.4 per cent;  $OR_{adj}=2.72$ ).

For secondary carers, preliminary bivariate analyses revealed significant associations between their educational level, employment arrangements, income, relationship satisfaction, argumentative relationships, support from partner, life difficulties and levels of coping and their reports of clinically significant psychological distress.

These bivariate results showed a linear trend in secondary carer psychological distress, with distress increasing as income decreased from \$2,000 per week to \$600 per week (0.5 per cent to 5.4 per cent). This gradient was also observed as education level declined from university level to Year 9 or below (1.3 per cent to 4.0 per cent). Higher levels of psychological distress were noted where secondary carers were not in the labour force compared to those who were employed full time or part time or unemployed (8.8 per cent compared to 1.5 per cent, 3.8 per cent and 4.3 per cent respectively).

In the multivariate models most variables showed non-significant associations with secondary carer psychological distress. These included age at the birth of the study child, country of birth, education, number of children in the household, relationship satisfaction, and level of support from the partner.

Instead, significant multivariate effects included employment arrangements, family structure, income, argumentative relationships, life difficulties and level of coping.

Relative to secondary carers who were working full time, those who were employed part time were significantly more likely to report clinical levels of psychological distress (1.5 per cent compared to 3.8 per cent;  $OR_{adj}=3.05$ ). This was also observed for those who were not in the labour force (1.5 per cent compared to 8.8 per cent;  $OR_{adj}=4.31$ ). Relative to secondary carers earning \$2,000 or more per week, those earning less than \$600 per week were more likely to report clinical levels of psychological distress (0.5 per cent compared to 5.4 per cent;  $OR_{adj}=5.25$ ).

In the infant cohort, secondary carer psychological distress was associated with family structure. Relative to married intact families, those in married step-families were 5.2 times more likely to report clinical levels of psychological distress (1.8 per cent compared to 4.7 per cent). Argumentative relationships and life difficulties were also associated with their reports of psychological distress. They were 2.2 times and 6.8 times more likely to report clinical levels of psychological distress where they were in argumentative relationships or had many life difficulties.

Finally, where P2s reported that they were coping poorly, they were 11.6 times more likely to report that they had significant levels of psychological distress relative to P2s who reported that they were coping well to extremely well (1.1 per cent compared to 23.4 per cent).

### Child sample

Once again in the multivariate model many of the modelled family and socioeconomic variables did not significantly predict primary carer clinical levels of psychological distress in the presence of significant associations with measures of life difficulties, stressful life events, community connectedness, coping, and social support; and the general pattern of results was comparable to the pattern reported for the entire sample.

There were, however, some important differences: primary carers in couple families in the child cohort who reported low community connectedness were nearly twice as likely to report psychological distress. External



support from family and friends living away was no longer significant and carers who had experienced four or more life stress events were more than twice as likely to report psychological distress.

There was no significant association of psychological distress with SEIFA disadvantage.

In contrast to reports from the primary carer, the pattern of results for secondary carers in the child sample was notable for differences in both the strength of associations observed and their level of significance. Readers again should be cautioned that the sample is relatively small and that confidence intervals around point estimates are wide and that, in some circumstances, there is insufficient power to estimate statistically significant differences.

In the bivariate tables there was no significant association of secondary carer psychological distress and their age at the birth of the study infant, country of birth, family structure, and number of children in the family.

Significant bivariate effects were observed with the education level of secondary carers. Higher educational levels were associated with lower levels of psychological distress. For example, 1.8 per cent of secondary carers with a university-level education reported clinically significant levels of psychological distress compared with 5.6 per cent and 6.0 per cent respectively of those with Year 9 or less education or Year 10 certificates. Being out of the labour force was associated with significantly higher rates of psychological distress (6.7 per cent) relative to those employed full time (2.0 per cent).

Bivariate associations between psychological distress and relationship satisfaction, argumentative relationship status, support from a partner, life difficulties, and perceived ability to cope were all significant. All bivariate findings were in the expected direction. Thus, secondary carer psychological distress was associated with lower relationship satisfaction, argumentative relationships, lower level of partner support, many life difficulties and poorer perceived coping.

Multivariate results revealed that most of the bivariate observations were moderated by measures of life difficulties and perceived coping. All other variables were not significant.

Thus, relative to secondary carers who reported fewer life difficulties, those with many were 11.7 times more likely to report clinical levels of psychological distress (0.9 per cent compared to 16.4 per cent). Similarly, relative to secondary carers who reported that they were coping well or extremely well, those who were coping poorly were 4.5 times more likely to have clinical levels of psychological distress (1.5 per cent compared to 20.0 per cent).

### *Lone parent sample*

#### **Infant sample**

Sample size for the infant cohort primary carer lone parent was too small to generate reliable model estimates at the bivariate and multivariate levels.

#### **Child sample**

Analyses were undertaken to assess whether any of the relationships observed in the entire sample were differently expressed in the sub-sample of lone parents with respect to primary carer reports of psychological distress. The bivariate associations in the lone parent sample were largely non-significant.

In the multivariate results the strongest predictor of clinically significant psychological distress in lone-parent primary carers was with poor coping, relative to those who reported that they were coping well or extremely well (61.8 per cent compared to 6.0 per cent;  $OR_{adj}=16.0$ ). Significant associations were also observed with higher levels of life difficulties and lower levels of social support.



## Discussion on psychological distress

Parental wellbeing was assessed with specific reference to psychological distress in parents of infants and in parents of young children.

Broadly, across both cohorts the occurrence of life stress events, lower levels of support from family and friends and higher subjective stress in the form of poor coping and life difficulties were consistently associated with psychological distress in primary and secondary carers. Being out of the labour force was associated with higher levels of psychological distress. For primary carers in couple families with infants, low education, many life stress events and more arguments with a partner were associated with psychological distress in the primary carer. For secondary carers, lower income, step-family status, more arguments with a partner, and higher levels of subjective stress were associated with psychological distress.

In families with children aged 4 to 5 years, many of these same associations appeared. In addition, both low support from family and friends and low community connectedness for primary carers were also associated with their reports of psychological distress.

It is important to note that many of the bivariate relationships between psychological distress and carer income, education, and employment were weakened or became non-significant in models that include measures of stress and coping. Certainly to the extent that low income, low education and unemployment are on the causal pathway of stress and wellbeing, many of these effects will be moderated in multivariate models.

**Table 12: Primary carer (P1) psychological distress, entire sample likelihood of clinically significant psychological distress**

	Infant cohort est n=3,602		Child cohort est n=3,411	
	OR <sub>adj</sub>	95% confidence interval (low-high)	OR <sub>adj</sub>	95% confidence interval (low-high)
P1 Age at child's birth (years)				
Less than 25	1.130	(0.515–2.479)	1.110	(0.631–1.952)
25–34	Ref		Ref	
35 and above	1.104	(0.581–2.098)	0.832	(0.421–1.645)
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.377	(0.784–2.419)	0.608	(0.321–1.151)
P1 Highest level of education				
<b>Year 9 or less</b>	<b>4.289</b>	<b>(1.342–13.706)</b>	2.112	(0.808–5.525)
Year 10	0.633	(0.171–2.344)	1.000	(0.433–2.309)
Year 11 or 12	0.956	(0.455–2.009)	0.982	(0.490–1.967)
Trade certificate or diploma	1.221	(0.589–2.304)	1.088	(0.588–2.011)
University	Ref		Ref	
P1 Employment classification				
Full time	Ref		Ref	
Part time	3.332	(0.988–11.245)	0.759	(0.314–1.833)
Unemployed	2.313	(0.262–20.424)	2.657	(0.839–8.415)
Not in labour force	<b>6.514</b>	<b>(1.976–21.466)</b>	1.934	(0.848–4.407)
Family structure				
Lone parent	1.257	(0.522–3.026)	0.986	(0.516–1.883)
Married, intact	Ref		Ref	
De facto, intact	0.582	(0.245–1.383)	1.446	(0.639–3.026)
Married, step	1.483	(0.539–4.080)	0.775	(0.239–2.003)
De facto, step	1.387	(0.463–4.150)	0.476	(0.087–1.649)

Number of children in household				
1	Ref		Ref	
2	1.786	(0.907–3.518)	1.506	(0.700–3.239)
3	0.681	(0.310–1.500)	1.286	(0.590–3.100)
4 or more	1.741	(0.688–4.402)	1.056	(0.457–2.642)
Weekly income category				
Less than \$600	Ref		Ref	
<b>\$600–\$999</b>	<b>2.434</b>	<b>(1.075–5.514)</b>	0.829	(0.437–1.572)
\$1,000–\$1,499	1.721	(0.657–4.510)	0.828	(0.371–1.845)
\$1,500–\$1,999	2.081	(0.639–6.782)	0.470	(0.168–1.311)
More than \$2,000	2.549	(0.585–11.104)	0.535	(0.184–1.550)
Life stress events				
3 or less	Ref		Ref	
<b>4 or more</b>	<b>3.970</b>	<b>(2.168–7.0273)</b>	<b>2.303</b>	<b>(1.369–3.872)</b>
P1 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>6.078</b>	<b>(3.435–10.756)</b>	<b>8.808</b>	<b>(5.447–14.242)</b>
P1 Coping				
Well to extremely well	Ref			
<b>Poor</b>	<b>10.080</b>	<b>(5.446–18.657)</b>	<b>6.209</b>	<b>(3.490–11.044)</b>
P1 External support				
Enough	Ref		Ref	
<b>Not enough</b>	<b>2.508</b>	<b>(1.568–4.013)</b>	<b>2.102</b>	<b>(1.313–3.365)</b>
SEIFA disadvantage categories				
650–950	Ref		Ref	
960–980	1.393	(0.641–3.029)	0.814	(0.443–1.496)
990–1,010	1.854	(0.831–4.134)	1.034	(0.564–1.894)
1,020–1,060	1.714	(0.808–3.638)	0.921	(0.503–1.686)
1,070–1,150	1.174	(0.482–2.860)	0.735	(0.326–1.660)
Community connectedness				
Higher	Ref		Ref	
<b>Lower</b>	<b>1.180</b>	<b>(0.683–2.038)</b>	<b>1.954</b>	<b>(1.231–3.102)</b>

## 3 Relationship functioning

### 3.1 Introduction

This section is about couple families and the nature of their relationship functioning with respect to three characteristics: arguments, reciprocal support for parenting, and the level of overall relationship satisfaction that each partner reports. Important questions are addressed, including questions for which information is rarely gathered:

- What is the general level of relationship satisfaction that couples report?
- How does this differ for families of infants and for families with young children?
- What level of support is there within the partnership for reciprocal support in raising children?
- What are the associations between parental levels of disagreements about basic child-rearing issues, arguments generally, and factors such as the age of the parent, family income, work arrangements, and levels of coping, external support from family and friends, life difficulties and psychological wellbeing?

### 3.2 Section summary

Parental reports of their relationship functioning revealed several broad findings. These include patterns of association of relationship functioning with work arrangements, socioeconomic and family characteristics, and levels of coping, wellbeing and life difficulties.

The association of work arrangements and relationship functioning varies according to the age of the child, work arrangement within the family, and who is asked (that is, mother or father) about the nature of the relationship. There are clear trade-offs between parental abilities to provide levels of reciprocal support for each other in parenting children and to achieve a good level of relationship satisfaction. These are juggled differently for primary carers (that is, mostly mothers) and secondary carers (mostly fathers) of infants and children:

- Primary carers (mostly mothers) of infants reported higher levels of reciprocal support for parenting in the relationship when their partner worked part time. However, mothers in families with infants also reported higher relationship satisfaction where both partners were working.
- For secondary carers (mostly fathers) of infants, part-time work of both parents was associated with their reports of significantly lower relationship satisfaction.
- For primary carers (mostly mothers) of children 4 to 5 years of age, employment of both partners (either part-time or full-time) was associated with higher levels of reciprocal support for parenting; however, this was at the expense of their relationship satisfaction.
- For secondary carers (mostly fathers) of children 4 to 5 years of age, joint part-time work of each partner was associated with their reports of a higher likelihood of arguments in the relationship.

In terms of socioeconomic and family characteristics:

- Across both infant and child cohorts, de facto family status was independently associated with larger proportions of both carers reporting lower relationship satisfaction, lower levels of reciprocal support for parenting, and higher levels of arguments.
- In the infant sample, lower parental educational level was associated with higher proportions of both carers reporting low reciprocal support for parenting.

- Older parental age at the time of the birth of the study infant was associated with a larger proportion of primary and secondary carers reporting higher levels of arguments in their relationship. Larger proportions of older parents of children aged 4 to 5 reported having lower relationship satisfaction than younger parents with 4 to 5 year-old children.

With respect to parental wellbeing:

- Across both infant and child cohorts, higher levels of psychological distress, lower levels of coping, and life difficulties were consistently associated with reports from both carers of lower relationship satisfaction, lower reciprocal support for parenting, lower levels of coping and higher levels of arguments.

The measure of relationship satisfaction was strongly associated with measures of reciprocal support for parenting and levels of arguments within the relationship.

### 3.3 Overview of analytical approach

The samples for these analyses were the infants and children who at the time of interview were living in couple families. Analyses were conducted on the couple samples for which the relevant primary carer or secondary carer self-complete data were available.

The extent to which factors including child gender, individual parent characteristics (parent age, country of birth), socioeconomic status (parent education, employment status, family weekly income), family characteristics (family structure, number of children), and parent wellbeing (psychological distress, life difficulties, coping and external supports) were independently related to levels of arguments, reciprocal support for parenting and relationship satisfaction, was examined using multivariate logistic regression analysis. The same procedure was carried out with relationship satisfaction. However, in addition to the variables mentioned above, argumentative relationship and partner support were included as predictors into the analysis. (Refer to Appendix A for more information on the analytical approach used in this section.)

In the first instance, the relationship of each of these groups of factors to the three relationship measures was assessed in individual bivariate tables prior to their entry into multivariate models. The major focus here is on the multivariable findings.

Because both primary and secondary carers were asked the same sets of questions, results for each cohort are presented separately and, within each cohort, findings for primary carers and secondary carers are presented.

### 3.4 Measures

The self-completion questionnaires left for both the primary carer (P1) and secondary carer (P2) in each of the infant and child cohort samples contained identical items assessing three aspects of relationship functioning:

- argumentative relationship, that is, the frequency of arguments in the relationship
- reciprocal support for parenting, that is, the perception of each parent of the degree of shared support between parents in caring for their infant or child
- relationship satisfaction, that is, how satisfied each parent is in their current relationship.

#### **Argumentative relationship**

The primary carer and secondary carer were each asked:

- How often do you and your partner disagree about basic child-rearing issues?
- How often is your conversation awkward or stressful?

- How often do you argue?
- How often is there anger or hostility between you?

Responses were on a 5-point Likert scale, and ranged from 1='never' to 5='always'. Items were summed to form a total argumentative relationship score ranging from 4 (low) to 20 (high). If one item was missing it was given the mean of the other responses. If two or more items were missing, respondents were coded as missing for the argumentative relationship variable (<0.2 per cent in both cohorts for both primary and secondary carers).

### Reciprocal support for parenting

The primary carer and secondary carer were each asked:

- How often is your partner a resource or support to you in raising your child(ren)?
- How often are you a resource or support to your partner in raising your child(ren)?
- How often do you feel your partner understands and is supportive of your needs as a parent?

Responses were on a 5-point Likert scale, and ranged from 1='never' to 5='always'. Items were summed to form a total 'reciprocal support' score ranging from 3 (lower reciprocal support) to 15 (higher reciprocal support). If any items were missing, respondents were coded as missing for this variable (<1 per cent in both cohorts for both primary and secondary carers).

### Relationship satisfaction

The primary and secondary carers were each asked:

- How well does your partner meet your needs?
- How good is your relationship compared to most?
- How often do you wish you hadn't married or lived together?
- To what extent has your marriage or relationship met your original expectations?
- How much do you love your partner?
- How many problems are there in your relationship?

Responses were on a 5-point Likert scale, with slightly different response categories depending on the wording of the item. Following reverse coding where required, items were summed to form a total relationship satisfaction score ranging from 6 (lower relationship satisfaction) to 30 (higher relationship satisfaction). If one or two items were missing they were given the mean of the other responses. If three or more items were missing, respondents were coded as missing for the relationship satisfaction variable (<0.1 per cent in both cohorts for both primary and secondary carers).

## 3.5 Descriptive statistics

### Argumentative relationship

The distribution of scores for primary and secondary parental argumentative relationship for both infant and child cohorts was positively skewed indicating that parents on average reported that they 'rarely' had arguments. Primary and secondary carers reported similar mean levels of argumentative relationship within cohort; however, both parents reported higher mean levels of argumentative relationship in the child cohort (mean<sub>p1</sub>=8.97, SE<sub>p1</sub>=0.044; mean<sub>p2</sub>=8.89, SE<sub>p2</sub>=0.044) when compared with the infant cohort (mean<sub>p1</sub>=8.65, SE<sub>p1</sub>=0.034; mean<sub>p2</sub>=8.52, SE<sub>p2</sub>=0.043).

### Reciprocal support for parenting

The scores for primary and secondary carer reports of partner support for both infant and child cohorts all had a strong negative skew indicating that parents on average reported that they ‘often’ or ‘always’ felt reciprocal support from their partner.

Primary carers in the infant sample had a higher mean score (mean=13.26, SE=0.031) than secondary carers (mean=13.14, SE=0.027), a pattern that was also seen in the child cohort (mean<sub>p1</sub>=13.28, SE<sub>p1</sub>=0.034; mean<sub>p2</sub>=13.10, SE<sub>p2</sub>=0.033). There was no difference in the mean level of this measure across cohorts.

### Relationship satisfaction

The relationship satisfaction scores all had a strong negative skew indicating that parents on average reported they were in a satisfying relationship. Primary carers in the infant sample had a slightly higher mean score (mean<sub>p1</sub>=26.17, SE<sub>p1</sub>=0.071) than secondary carers (mean<sub>p2</sub>=26.64, SE<sub>p2</sub>=0.057). The same pattern was also seen in the child cohort (mean<sub>p1</sub>=25.72, SE<sub>p1</sub>=0.081; mean<sub>p2</sub>=26.27, SE<sub>p2</sub>=0.067). Primary carer reports differed slightly across cohorts, indicating slightly lower levels of relationship satisfaction for the child cohort. This difference was not found for secondary carers.

## 3.6 Results

The results section reports results separately for primary carer and secondary carer for both the infant and child cohorts for each of the three relationship functioning measures:

- argumentative relationship
- support from partner in parenting
- relationship satisfaction.

### Argumentative relationship

#### *Primary carer reports of argumentative relationship*

Refer to Table 13 for information in relation to the following section.

#### Infant

After all variables were entered into the multivariable model, primary carer age at the birth of the infant, marital status and family size were significantly associated with the likelihood of an argumentative relationship.

Relative to primary carers aged 25 to 34, primary carers aged 35 and above were more likely to report being in a relationship characterised by high levels of arguments (20.0 per cent compared to 27.2 per cent, OR<sub>adj</sub>=1.34).

Relative to married intact families, the proportion of primary carers in de facto intact families reporting high argumentative relationships was significantly greater (20.1 per cent compared to 27.4 per cent; OR<sub>adj</sub>=1.59).

Relative to families with one child, primary carers in families with two, three or four or more children were significantly more likely to report high argumentative relationship status with odds ratios in the range 1.7 to 1.9.

The presence of life difficulties and clinical levels of psychological distress were significantly associated with the likelihood of reporting argumentative relationships. Relative to primary carers with fewer life difficulties, those reporting many life difficulties were more than four times more likely to report argumentative relationships (20.0 per cent compared to 58.2 per cent, OR<sub>adj</sub>=4.15). Similarly, relative to primary carers with lower levels of psychological distress, those reporting clinical levels of psychological distress were more than three times more likely to report argumentative relationships (21.2 per cent compared to 59.8 per cent, OR<sub>adj</sub>=3.05).

In families with infants, factors that were not associated with the likelihood of the primary carer reporting high argumentative relationship status included primary carer country of birth, primary carer level of education, employment arrangements, household income and levels of coping.

## Child

The age of the primary carer at birth of child, marital status and income were significantly related to the likelihood of a relationship with high levels of arguments. Primary carers who were younger, that is, under the age of 25 years at the time of the birth of the child, were less likely to report high argumentative relationship status relative to primary carers who were aged 25 to 34 years (10.9 per cent compared to 16.2 per cent;  $OR_{adj}=0.46$ ). Significantly higher levels of argumentative relationships were reported by primary carers in intact de facto families relative to married intact families (23.9 per cent compared to 15.0 per cent;  $OR_{adj}=1.83$ ).

There was a clear linear relationship between income and the likelihood of the primary carer reporting high argumentative relationship status. As income declined the likelihood of primary carer reported high levels of arguments increased. Those families where the primary carer reported income less than \$600 per week were almost twice as likely to report high argumentative relationships as those families earning \$2,000 per week (19.0 per cent compared to 11.7 per cent;  $OR_{adj}=0.52$ ).

Life difficulties, clinical levels of psychological distress, and poorer coping were all independently associated with a greater likelihood of the primary carer reporting a high level of argumentative relationship. The variable most strongly related to argumentative relationship status was the report of many life difficulties. Primary carers experiencing many life difficulties were more than three times more likely to report high argumentative relationship status relative to those reporting fewer life difficulties (41.1 per cent compared to 13.7 per cent;  $OR_{adj}=3.32$ ). Those reporting psychological distress in the clinical range were more than twice as likely to report high argumentative relationship status relative to those not in the clinical range (46.0 per cent compared to 15.0 per cent;  $OR_{adj}=2.35$ ). As well, those reporting poor coping were almost twice as likely to report high argumentative relationship status as those reporting that they coped well or extremely well (37.9 per cent compared to 14.9 per cent;  $OR_{adj}=1.70$ ).

Primary carer country of birth and education were not related to the likelihood of high argumentative relationship status; nor were combined employment status or number of children in the family.

**Table 13: Primary carer (P1) argumentative relationship, infant and child cohorts**

	Infant cohort n=3,437		Child cohort n=3,144	
	Odds of argumentative relationship OR <sub>adj</sub>	95% confidence interval (low–high)	Odds of argumentative relationship OR <sub>adj</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Under 25	1.216	(0.913–1.621)	0.457	(0.309–0.674)
25–34	Ref		Ref	
<b>35 and above</b>	<b>1.349</b>	<b>(1.079–1.686)</b>	<b>1.175</b>	<b>(0.926–1.491)</b>
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	0.916	(0.729–1.150)	1.271	(0.975–1.656)
P1 Education				
Year 9 or less	1.043	(0.590–1.843)	0.753	(0.379–1.497)
Year 10	1.102	(0.784–1.549)	0.903	(0.589–1.383)
Year 11 or 12	0.924	(0.714–1.195)	0.954	(0.683–1.332)
Trade certificate or diploma	0.934	(0.742–1.176)	0.986	(0.755–1.289)
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	<b>1.590</b>	<b>(1.243–2.034)</b>	<b>1.831</b>	<b>(1.293–2.593)</b>
<b>Married, step</b>	<b>1.177</b>	<b>(0.810–1.711)</b>	1.008	(0.632–1.605)
<b>De facto, step</b>	<b>1.473</b>	<b>(0.827–2.623)</b>	1.367	(0.704–2.653)
Combined employment status				
2 full time	1.130	(0.823–1.552)	1.158	(0.794–1.690)
1 full time, 1 part time	1.053	(0.843–1.315)	1.139	(0.889–1.458)
2 part time	0.835	(0.440–1.582)	0.821	(0.409–1.648)
1 full time, 1 not working	Ref		Ref	
1 part time, 1 not working	0.940	(0.605–1.459)	0.911	(0.486–1.705)
2 not working	1.149	(0.699–1.887)	0.819	(0.455–1.474)
Number of children in household				
1	Ref		Ref	
<b>2</b>	<b>1.734</b>	<b>(1.405–2.141)</b>	0.872	(0.587–1.297)
<b>3</b>	<b>1.753</b>	<b>(1.329–2.312)</b>	0.814	(0.525–1.261)
<b>4 or more</b>	<b>1.999</b>	<b>(1.392–2.871)</b>	0.960	(0.588–1.569)
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	0.993	(0.711–1.387)	0.868	(0.578–1.304)
\$1,000–\$1,499	0.922	(0.653–1.303)	0.752	(0.503–1.125)
\$1,500–\$1,999	1.138	(0.775–1.671)	0.719	(0.462–1.117)
More than \$2,000	0.791	(0.526–1.188)	<b>0.516</b>	<b>(0.328–0.813)</b>
P1 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>4.154</b>	<b>(3.003–5.748)</b>	<b>3.318</b>	<b>(2.360–4.664)</b>
P1 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	<b>1.485</b>	<b>(0.913–2.417)</b>	<b>1.702</b>	<b>(1.018–2.845)</b>
P1 Psychological distress				
Non-clinical range	Ref		Ref	
<b>Clinical range</b>	<b>3.054</b>	<b>(1.819–5.126)</b>	<b>2.347</b>	<b>(1.336–4.123)</b>



### *Secondary carer reports of argumentative relationship*

Refer to Table 14 for information in relation to the following section.

#### Infant

The variables assessed for the primary carer were also assessed for the secondary carer.

Findings on secondary carer reports of high argumentative relationships mostly paralleled those of the primary carer.

High argumentative relationships were reported by secondary carers where they were older at the birth of the child, in de facto intact relationships, had lower incomes, had more than one child, and reported many life difficulties, poorer coping and clinical levels of psychological distress.

Secondary carer country of birth, level of education and employment arrangements were not associated with secondary carer reports of argumentative relationships.

#### Child

The same variables were also assessed as reported by the secondary carer.

Relative to secondary carers with university education, those secondary carers who studied to Year 11 or 12 were more likely to report higher levels of arguments (21.0 per cent compared to 27.6 per cent;  $OR_{adj}=1.77$ ). Joint part-time employment status of primary carer and secondary carer was associated with a two-fold increase in the likelihood of the secondary carer reporting high argumentative relationship status (36.8 per cent compared to 23.3 per cent;  $OR_{adj}=2.01$ ).

Similar to the primary carer, the likelihood of secondary carer-reported argumentative relationship status increased two-fold when the secondary carer reported many life difficulties, poorer perceived coping or clinical levels of psychological distress.

Secondary carer age at the birth of the child, income, country of birth, and number of children in the household were not related to the likelihood of secondary carer reporting high argumentative relationship status.

**Table 14: Secondary carer (P2) argumentative relationship, infant and child cohorts**

	Infant cohort n=3,011		Child cohort n=2,811	
	Odds of argumentative relationship OR <sub>adj</sub>	95% confidence interval (low–high)	Odds of argumentative relationship OR <sub>adj</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Under 25	1.154	(0.760–1.753)	0.828	(0.532–1.289)
25–34	Ref		Ref	
<b>35 and above</b>	<b>1.387</b>	<b>(1.102–1.747)</b>	1.121	(0.915–1.374)
P2 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.271	(0.988–1.634)	1.090	(0.884–1.344)
P2 Education				
Year 9 or less	0.935	(0.421–2.077)	1.145	(0.568–2.307)
Year 10	0.830	(0.501–1.373)	1.403	(0.952–2.067)
<b>Year 11 or 12</b>	1.124	(0.814–1.551)	<b>1.582</b>	<b>(1.179–2.123)</b>
Trade certificate or diploma	1.200	(0.911–1.581)	1.217	(0.971–1.524)
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	<b>1.904</b>	<b>(1.452–2.497)</b>	<b>1.772</b>	<b>(1.247–2.520)</b>
Married, step	0.969	(0.580–1.620)	1.072	(0.720–1.597)
De facto, step	1.408	(0.752–2.636)	1.451	(0.799–2.634)
Combined employment status				
2 full time	0.957	(0.685–1.337)	1.095	(0.776–1.544)
1 full time, 1 part time	1.080	(0.868–1.343)	1.003	(0.803–3.408)
2 part time	0.910	(0.457–1.811)	2.014	(1.190–3.408)
1 full time, 1 not working	Ref		Ref	
1 part time, 1 not working	1.301	(0.825–2.051)	1.137	(0.662–1.952)
2 not working	1.254	(0.702–2.238)	0.600	(0.277–1.299)
Number of children in household				
1	Ref		Ref	
<b>2</b>	<b>1.601</b>	<b>(1.249–2.052)</b>	0.746	(0.532–1.048)
<b>3</b>	<b>1.722</b>	<b>(1.252–2.368)</b>	0.717	(0.492–1.044)
<b>4 or more</b>	<b>1.790</b>	<b>(1.170–2.740)</b>	0.818	(0.548–1.220)
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	1.546	(1.046–2.285)	0.902	(0.595–1.368)
\$1,000–\$1,499	1.596	(1.050–2.427)	1.148	(0.772–1.707)
\$1,500–\$1,999	2.030	(1.297–3.178)	1.093	(0.717–1.669)
More than \$2,000	1.528	(0.957–2.441)	1.161	(0.763–1.767)
P2 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>2.815</b>	<b>(2.102–3.768)</b>	<b>2.216</b>	<b>(1.667–2.944)</b>
P2 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	<b>2.464</b>	<b>(1.599–3.797)</b>	<b>2.280</b>	<b>(1.465–3.550)</b>
P2 Psychological distress				
Non-clinical range	Ref		Ref	
<b>Clinical range</b>	<b>2.173</b>	<b>(1.115–4.236)</b>	<b>1.931</b>	<b>(1.046–3.566)</b>

## Reciprocal support for parenting

### *Primary carer reports of reciprocal support for parenting*

Refer to Table 15 for information in relation to the following section.

#### Infant

In the multivariable model, primary carers' level of education, marital status, combined employment arrangements, family size and income were significantly associated with reported reciprocal support for parenting.

Relative to those primary carers who had achieved a university qualification, a higher proportion of primary carers with a Year 10 certificate reported lower levels of partner support (13.0 per cent compared to 21.9 per cent;  $OR_{adj}=1.68$ ). Primary carers in de facto intact families were more likely than primary carers in married intact families to report being in a relationship characterised by lower levels of support (19.9 per cent compared to 14.2 per cent;  $OR_{adj}=1.51$ ). Where the primary carer's partner worked part time, this was associated with a significant reduction in the likelihood of the primary carer reporting low levels of partner support relative to households where one partner worked full time and the other did not work (10.7 per cent compared to 16.7 per cent;  $OR_{adj}=0.395$ ).

Relative to having just one child, having another child in addition to the study infant was associated with a greater likelihood of the primary carer reporting low support from a partner ( $OR_{adj}=1.42$ ). Finally, the primary carer was more likely to report lower support from a partner if weekly income was low (less than \$600) relative to weekly incomes of \$1,000 to \$1,499 and of more than \$2,000 (21.0 per cent compared to 13.2 and 13.3 per cent;  $OR_{adj}=0.68$  and  $0.62$ ).

As with previous findings, higher levels of life difficulties and poorer coping were significantly associated with the likelihood of the primary carer reporting lower support from a partner ( $OR_{adj}=2.98$  and  $2.05$  respectively).

Lower perceived reciprocal support was not significantly associated with primary carer age at the birth of the study infant, country of birth, or their level of psychological distress.

#### Child

Primary carers' marital status and combined employment arrangements were significantly associated with reported reciprocal support for parenting. Relative to married intact families, low partner support was significantly more likely to be reported by primary carers in both de facto intact (14.8 per cent compared to 21.9 per cent;  $OR_{adj}=1.47$ ) and de facto step-families (14.8 per cent compared to 24.6 per cent;  $OR_{adj}=1.84$ ).

Where both primary carers and secondary carers were working, primary carers were more likely to report higher perceived support from their partner relative to working arrangements where one partner worked full time and one stayed at home. Generally speaking, when both primary carers and secondary carers were working part time, primary carers were significantly less likely to report low levels of perceived support from their partner relative to work arrangements where one partner worked full time and the other did not work at all (7.2 per cent compared to 18.4 per cent;  $OR_{adj}=0.355$ ). A similar pattern was observed where both primary carers and secondary carers were employed full time. This reduced the proportion of primary carers reporting low relationship support by 41 per cent (11.6 per cent compared to 18.4 per cent;  $OR_{adj}=0.588$ ).

Primary carers experiencing many life difficulties were more than twice as likely to report low support from their partner relative to those reporting fewer life difficulties (33.2 per cent compared to 14.3 per cent;  $OR_{adj}=2.43$ ). Those reporting psychological distress in the clinical range were almost twice as likely to report low support from their partner relative to those not in the clinical range (37.4 per cent compared to 15.2 per cent;  $OR_{adj}=1.94$ ).

Factors not related to primary carer-perceived support from partner included primary carer age at birth of study child, country of birth of primary carer, education, number of children in the family, income and level of coping.

**Table 15: Primary carer (P1) reciprocal support for parenting, infant and child cohorts**

	Infant cohort n=3,434		Child cohort n=3,146	
	Odds of low partner support OR <sub>adj</sub>	95% confidence interval (low–high)	Odds of low partner support OR <sub>adj</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Under 25	0.905	(0.633–1.295)	0.936	(0.673–1.301)
25–34	Ref		Ref	
35 and above	1.078	(0.839–1.385)	1.059	(0.815–1.375)
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	0.861	(0.649–1.143)	1.034	(0.798–1.340)
P1 Education				
Year 9 or less	1.042	(0.495–2.190)	1.168	(0.627–2.175)
<b>Year 10</b>	<b>1.686</b>	<b>(1.129–2.518)</b>	1.015	(0.657–1.569)
Year 11 or 12	1.205	(0.906–1.602)	1.238	(0.915–1.674)
Trade certificate or diploma	1.167	(0.912–1.491)	1.134	(0.856–1.502)
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	<b>1.506</b>	<b>(1.136–1.997)</b>	<b>1.474</b>	<b>(1.012–2.146)</b>
Married, step	0.868	(0.549–1.374)	1.191	(0.780–1.818)
De facto, step	1.567	(0.876–2.805)	1.836	(1.033–3.260)
Combined employment status				
<b>2 full time</b>	0.857	(0.616–1.193)	<b>0.588</b>	<b>(0.387–0.893)</b>
1 full time, 1 part time	0.921	(0.717–1.183)	0.890	(0.696–1.137)
<b>2 part time</b>	1.686	(0.951–2.988)	<b>0.355</b>	<b>(0.149–0.846)</b>
1 full time, 1 not working	Ref		Ref	
<b>1 part time, 1 not working</b>	<b>0.395</b>	<b>(0.213–0.736)</b>	0.812	(0.435–1.517)
2 not working	0.625	(0.329–1.187)	0.700	(0.347–1.409)
Number of children in household				
1	Ref		Ref	
<b>2</b>	<b>1.422</b>	<b>(1.129–1.790)</b>	0.799	(0.548–1.166)
3	1.230	(0.897–1.688)	0.808	(0.539–1.212)
4 or more	1.452	(0.950–2.218)	0.627	(0.383–1.028)
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	0.697	(0.467–1.040)	1.118	(0.674–1.857)
<b>\$1,000–\$1,499</b>	<b>0.547</b>	<b>(0.361–0.828)</b>	1.048	(0.639–1.718)
\$1,500–\$1,999	0.751	(0.487–1.158)	1.149	(0.669–1.974)
<b>More than \$2,000</b>	<b>0.618</b>	<b>(0.397–0.963)</b>	0.849	(0.486–1.485)
P1 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>2.980</b>	<b>(2.115–4.199)</b>	<b>2.427</b>	<b>(1.720–3.425)</b>
P1 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	<b>2.058</b>	<b>(1.272–3.331)</b>	1.105	(0.654–1.869)
P1 Psychological distress				
Non-clinical range	Ref		Ref	
<b>Clinical range</b>	1.569	(0.938–2.626)	<b>1.943</b>	<b>(1.151–3.278)</b>

*Secondary carer reports for reciprocal support for parenting*

Refer to Table 16 for information in relation to the following section.

**Infant**

The variables assessed for the primary carer-perceived support from partner were also assessed for secondary carer support.

Secondary carer reports of low support from a partner showed mostly non-significant associations with predictor variables. There were no significant associations of secondary carer-perceived low support from a partner and secondary carer age at the birth of the study infant, their country of birth, family structure, combined employment status, number of children, income and coping.

Secondary carers with nine years or less of education were more likely to report low support from a partner than secondary carers with university education (21.6 per cent compared to 11.1 per cent;  $OR_{adj}=2.20$ ). Secondary carers were also more likely to report low support from a partner if they had many rather than fewer life difficulties (28.9 per cent compared to 11.8 per cent;  $OR_{adj}=2.51$ ) and clinical levels of psychological distress rather than lower levels of distress (36.1 per cent compared to 12.9 per cent;  $OR_{adj}=2.32$ ).

**Child**

The variables assessed for the primary carer-perceived support from partner were also assessed for the secondary carer.

Education, family structure, life difficulties and poor coping were significantly associated with the increased likelihood of the secondary carer reporting low support from their partner.

Broadly speaking, an inverse linear trend was observed, with lower levels of secondary carer education being associated with higher levels of secondary carer-reported low support from their partner. However, this reached significance for only one group: relative to secondary carers with university education, secondary carers with a trade certificate or diploma level education were more likely to report low support from their partner (11.9 per cent compared to 15.2 per cent;  $OR_{adj}=1.344$ ).

Secondary carers in de facto families were between two and three times more likely to report low support from their partner relative to married intact families—this was true for de facto intact families (12.6 per cent compared to 26.6 per cent;  $OR_{adj}=2.34$ ) and de facto step-families (12.6 per cent compared to 34.5 per cent;  $OR_{adj}=3.21$ ).

Secondary carer age at the birth of the study child, country of birth, their education, combined employment status, income, number of children in the household and secondary carers' psychological distress were not significantly related to the secondary carers' perceptions of low support from their partner.

**Table 16: Secondary carer (P2) reciprocal support for parenting, infant and child cohorts**

	Infant cohort n=3,011		Child cohort n=2,807	
	Odds of low partner support OR <sub>adj</sub>	95% confidence interval (low-high)	Odds of low partner support OR <sub>adj</sub>	95% confidence interval (low-high)
P2 Age at child's birth (years)				
Under 25	1.301	(0.768–2.205)	1.138	(0.714–1.815)
25–34	Ref		Ref	
35 and above	1.142	(0.883–1.477)	0.905	(0.711–1.153)
P2 Country of birth				
Australia	Ref		Ref	
Outside Australia	0.893	(0.674–1.184)	1.109	(0.851–1.446)
P2 Education				
<b>Year 9 or less</b>	<b>2.206</b>	<b>(1.141–4.266)</b>	1.647	(0.773–3.511)
Year 10	1.466	(0.871–2.469)	1.405	(0.898–2.201)
Year 11 or 12	1.208	(0.828–1.763)	1.269	(0.885–1.821)
<b>Trade certificate or diploma</b>	1.337	(0.983–1.817)	<b>1.399</b>	<b>(1.064–1.841)</b>
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	1.282	(0.932–1.763)	<b>2.340</b>	<b>(1.560–3.510)</b>
Married, step	0.789	(0.424–1.466)	1.279	(0.760–2.153)
<b>De facto, step</b>	1.176	(0.583–2.371)	<b>3.211</b>	<b>(1.860–5.541)</b>
Combined employment status				
2 full time	0.886	(0.600–1.310)	0.969	(0.681–1.378)
1 full time, 1 part time	1.025	(0.799–1.314)	1.034	(0.789–1.355)
2 part time	1.091	(0.515–2.310)	0.754	(0.337–1.689)
1 full time, 1 not working	Ref		Ref	
1 part time, 1 not working	0.624	(0.344–1.133)	0.811	(0.425–1.546)
2 not working	0.655	(0.293–1.465)	0.795	(0.376–1.683)
Number of children in household				
1	Ref		Ref	
2	1.272	(0.985–1.643)	0.929	(0.602–1.434)
3	1.369	(0.982–1.909)	0.789	(0.509–1.222)
4 or more	0.935	(0.543–1.612)	0.822	(0.493–1.372)
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	0.928	(0.597–1.445)	0.775	(0.474–1.267)
\$1,000–\$1,499	1.052	(0.655–1.691)	0.862	(0.513–1.449)
\$1,500–\$1,999	1.064	(0.655–1.729)	0.773	(0.466–1.282)
More than \$2,000	1.038	(0.595–1.811)	1.171	(0.699–1.960)
P2 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>2.510</b>	<b>(1.769–3.559)</b>	<b>2.202</b>	<b>(1.542–3.143)</b>
P2 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	1.517	(0.930–2.475)	<b>2.976</b>	<b>(1.863–4.754)</b>
P2 Psychological distress				
Non-clinical range	Ref		Ref	
<b>Clinical range</b>	<b>2.327</b>	<b>(1.160–4.672)</b>	1.627	(0.880–3.009)

## Relationship satisfaction

### *Primary carer reports of relationship satisfaction*

Refer to Table 17 for information in relation to the following section.

#### Infant

Significant associations with primary carer reports of relationship satisfaction were observed with family structure, combined employment status, argumentative relationship status, low support from partner, life difficulties and primary carer coping.

Relative to married intact families, primary carers in de facto intact and de facto step-families were more than two and three times more likely to report low relationship satisfaction ( $OR_{adj}=2.25$  and  $3.60$  respectively).

Where both primary carer and secondary carer were employed full time, there was a significant reduction in the likelihood of primary carer reporting low relationship satisfaction. In other words, full-time employment of both partners was associated with improved relationship satisfaction relative to work arrangements where one partner was working full time and the other was not working ( $15.7$  per cent compared to  $20.3$  per cent;  $OR_{adj}=0.69$ ).

Those primary carers in high argumentative relationships compared to low argumentative relationships were 10 times more likely to have low relationship satisfaction ( $OR_{adj}=10.1$ ). Further, those primary carers with low levels of partner support were more than five times as likely to report low relationship satisfaction compared to those with higher levels of partner support ( $OR_{adj}=5.7$ ).

Relative to those primary carers who reported they were coping well or extremely well, those who were coping poorly were more than twice as likely to report low relationship satisfaction ( $19.2$  per cent compared to  $51.3$  per cent).

Finally, primary carer relationship satisfaction was not related to their age at birth of infant, country of birth, their level of education, number of children, income, and their levels of psychological distress.

#### Child

Relative to those aged 25 to 34 years at the time of the study child's birth, primary carers who were 35 years or older were more likely to report lower relationship satisfaction ( $18.0$  per cent compared to  $22.6$  per cent;  $OR_{adj}=1.44$ ). Relative to intact married families, those intact families where parents were not married were more than twice as likely to report low relationship satisfaction ( $17.2$  per cent compared to  $34.0$  per cent). Compared to arrangements where one partner worked full time and the other was not working, joint full-time or joint part-time work of the primary and secondary carers was associated with increased odds of low relationship satisfaction ( $OR_{adj}=1.71$  and  $2.78$  respectively).

There was a trend for relationship satisfaction to improve where families had more children, this reaching significance in families that had four or more children relative to only one child ( $16.2$  per cent compared to  $26.0$  per cent;  $OR_{adj}=0.54$ ).

There was a 10-fold increase in the risk of low relationship quality if the primary carer had high levels of arguments relative to those with low levels of arguments ( $62.4$  per cent compared to  $10.5$  per cent;  $OR_{adj}=10.3$ ). In addition, those primary carers who reported low levels of support from their partner were more than six times more likely to have low relationship satisfaction compared to those with higher levels of support ( $53.9$  per cent compared to  $12.2$  per cent;  $OR_{adj}=6.34$ ). Further, those primary carers who reported many life difficulties compared to those with fewer were almost four times more likely to report low relationship satisfaction ( $53.0$  per cent compared to  $15.7$  per cent;  $OR_{adj}=3.60$ ). Those primary carers with clinical levels of psychological distress relative to those with lower levels ( $54.6$  per cent compared to  $17.7$  per cent;  $OR_{adj}=1.87$ ) were also more likely to report low relationship satisfaction. Readers should keep in mind that the measure of high argumentative relationship status and the measure of low relationship quality were highly collinear.

Three factors were not significantly related to the increased likelihood of a primary carer reporting low relationship satisfaction: their level of education, income, and perceived coping.

**Table 17: Primary carer (P1) relationship satisfaction, infant and child cohorts**

	Infant cohort n=3,491		Child cohort n=3,158	
	Odds of low satisfaction OR <sub>ad</sub>	95% confidence interval (low–high)	Odds of low satisfaction OR <sub>ad</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Under 25	1.028	(0.698–1.514)	0.769	(0.518–1.142)
25–34	Ref		Ref	
35 and above	1.183	(0.910–1.538)	<b>1.439</b>	<b>(1.064–1.945)</b>
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.146	(0.873–1.504)	1.048	(0.777–1.415)
P1 Education				
Year 9 or less	1.213	(0.598–2.458)	1.467	(0.708–3.043)
Year 10	0.926	(0.564–1.521)	1.360	(0.884–2.094)
Year 11 or 12	0.967	(0.698–1.338)	1.207	(0.857–1.700)
Trade certificate or diploma	1.028	(0.771–1.370)	1.183	(0.885–1.583)
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	<b>2.253</b>	<b>(1.611–3.151)</b>	<b>2.145</b>	<b>(1.397–3.293)</b>
Married, step	1.529	(0.919–2.545)	0.951	(0.557–1.624)
<b>De facto, step</b>	<b>3.600</b>	<b>(1.997–6.488)</b>	0.995	(0.572–1.734)
Combined employment status				
<b>2 full time</b>	<b>0.690</b>	<b>(0.479–0.995)</b>	<b>1.709</b>	<b>(1.180–2.476)</b>
1 full time, 1 part time	1.229	(0.941–1.605)	0.979	(0.751–1.277)
2 part time	0.977	(0.434–2.198)	<b>2.781</b>	<b>(1.393–5.550)</b>
1 full time, 1 not working	Ref		Ref	
1 part time, 1 not working	0.996	(0.576–1.720)	1.795	(0.950–3.390)
2 not working	0.668	(0.349–1.276)	0.928	(0.391–2.202)
Number of children in household				
1	Ref		Ref	
2	1.273	(0.991–1.636)	0.912	(0.608–1.369)
3	1.305	(0.913–1.865)	0.771	(0.501–1.185)
4 or more	0.756	(0.441–1.295)	<b>0.543</b>	<b>(0.305–0.967)</b>
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	0.854	(0.601–1.213)	1.171	(0.777–1.763)
\$1,000–\$1,499	0.755	(0.526–1.085)	0.970	(0.625–1.504)
\$1,500–\$1,999	0.898	(0.594–1.359)	1.092	(0.708–1.686)
More than \$2,000	0.800	(0.521–1.229)	0.931	(0.575–1.506)
P1 Argumentative relationship				
Lower	Ref			
<b>Higher</b>	<b>10.161</b>	<b>(8.261–12.499)</b>	<b>10.297</b>	<b>(7.904–13.414)</b>
Partner support				
Higher	Ref			
<b>Lower</b>	<b>5.740</b>	<b>(4.398–7.493)</b>	<b>6.339</b>	<b>(4.817–8.342)</b>
P1 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>2.360</b>	<b>(1.501–3.710)</b>	<b>3.603</b>	<b>(2.463–5.271)</b>
P1 Coping				
Well to extremely well	Ref		Ref	
Poor	<b>2.177</b>	<b>(1.239–3.823)</b>	1.153	(0.704–1.886)
P1 Psychological distress				
Non-clinical range	Ref		Ref	
Clinical range	1.567	(0.724–3.393)	<b>1.875</b>	<b>(1.085–3.240)</b>



### *Secondary carer reports of relationship satisfaction*

Refer to Table 18 for information in relation to the following section.

#### **Infant**

Relationship satisfaction as reported by secondary carers was assessed using the same variables as for primary carers.

Many of the same variables that predicted relationship status for the primary carers also predicted relationship status for secondary carers.

Relative to secondary carers with university education, those secondary carers with Year 10 certificates were more likely to report low relationship satisfaction (18.6 per cent compared to 28.7 per cent;  $OR_{adj}=1.81$ ). As with the primary carer reports, relative to secondary carers in married intact families, secondary carers in de facto intact and de facto step-families were more likely to report low relationship satisfaction ( $OR_{adj}=1.38$  and 2.60 respectively).

The proportion of secondary carers with low relationship satisfaction increased where both partners worked part time (note that primary carer-reported low relationship status decreased where both partners worked full time). Thus, where secondary carers reported that they and their partner were working part time, they were more than twice as likely to report low relationship satisfaction relative to secondary carers where one partner was working full time and the other was staying at home.

In families with infants, secondary carers reported lower relationship satisfaction where there were two children (including the study infant) relative to secondary carers in families with one child. This effect was small ( $OR_{adj}=1.26$ ).

Finally, secondary carers' low relationship satisfaction was significantly associated with secondary carers' argumentative relationship status ( $OR_{adj}=7.28$ ), low support from a partner ( $OR_{adj}=3.52$ ) and many—rather than fewer—life difficulties ( $OR_{adj}=2.46$ ).

Several variables were not related to secondary carer reports of relationship satisfaction. These included secondary carer age at the birth of the study infant, their country of birth, income, coping and psychological distress.

#### **Child**

Relationship satisfaction as reported by secondary carers was assessed using the same variables as for primary carers.

Broadly, relationship satisfaction for secondary carers in the child cohort showed fewer significant associations than were found for secondary carers in the infant cohort.

There was no relationship between secondary carers' reported low relationship satisfaction and their educational level, family structure, employment of either secondary carer or primary carer, secondary carer coping, and levels of secondary carer psychological distress.

A significantly higher proportion of secondary carers were likely to report low relationship satisfaction if they were 35 years or older at the birth of the study child relative to secondary carers aged 25 to 34 (22.4 per cent compared to 17.7 per cent;  $OR_{adj}=1.44$ ), or earned less than \$600 per week relative to those earning \$600 to \$999 (25 per cent compared to 19 per cent;  $OR_{adj}=0.640$ ). Secondary carers were also much more likely to report low relationship satisfaction if they were in a relationship where they reported higher levels of arguments relative to those who reported lower levels (51.8 per cent compared to 9.6 per cent;  $OR_{adj}=7.97$ ), or lower support from their partner relative to those reporting higher partner support (53.9 per cent compared to 13.5 per cent;  $OR_{adj}=5.14$ ). They were also twice as likely to report low relationship satisfaction if they reported many life difficulties rather than fewer (43.0 per cent compared to 17.1 per cent;  $OR_{adj}=1.99$ ).

**Table 18: Secondary carer (P2) relationship satisfaction, infant and child cohorts**

	Infant cohort n=3,028		Child cohort n=2,823	
	Odds of low satisfaction OR <sub>adj</sub>	95% confidence interval (low–high)	Odds of low satisfaction OR <sub>adj</sub>	95% confidence interval (low–high)
P2 Age at child's birth (years)				
Under 25	1.593	(0.924–2.745)	0.779	(0.488–1.244)
25–34	Ref		Ref	
35 and above	1.217	(0.961–1.540)	<b>1.438</b>	<b>(1.113–1.858)</b>
P2 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.179	(0.893–1.555)	0.950	(0.720–1.255)
P2 Education				
Year 9 or less	1.458	(0.745–2.852)	0.761	(0.315–1.840)
Year 10	<b>1.819</b>	<b>(1.073–3.085)</b>	0.957	(0.556–1.648)
Year 11 or 12	1.003	(0.698–1.443)	1.163	(0.784–1.727)
Trade certificate or diploma	1.108	(0.845–1.453)	1.196	(0.873–1.638)
University	Ref		Ref	
Family structure				
Married, intact	Ref		Ref	
<b>De facto, intact</b>	<b>1.388</b>	<b>(1.015–1.899)</b>	1.393	(0.919–2.114)
Married, step	1.358	(0.823–2.239)	1.297	(0.779–2.159)
<b>De facto, step</b>	<b>2.607</b>	<b>(1.377–4.935)</b>	1.778	(0.853–3.704)
Combined employment status				
<b>2 full time</b>	<b>1.036</b>	<b>(0.744–1.440)</b>	0.786	(0.519–1.191)
<b>1 full time, 1 part time</b>	<b>1.021</b>	<b>(0.780–1.336)</b>	0.769	(0.585–1.011)
<b>2 part time</b>	<b>2.391</b>	<b>(1.327–4.307)</b>	0.595	(0.287–1.233)
1 full time, 1 not working	Ref		Ref	
1 part time, 1 not working	1.246	(0.739–2.101)	1.149	(0.578–2.287)
2 not working	1.131	(0.543–2.357)	0.639	(0.290–1.407)
Number of children in household				
1	Ref		Ref	
<b>2</b>	<b>1.266</b>	<b>(1.002–1.599)</b>	0.744	(0.484–1.143)
3	1.165	(0.855–1.588)	<b>0.631</b>	<b>(0.398–0.999)</b>
4 or more	0.994	(0.613–1.613)	<b>0.313</b>	<b>(0.173–0.567)</b>
Income categories				
Less than \$600	Ref		Ref	
<b>\$600–\$999</b>	1.215	(0.813–1.815)	<b>0.640</b>	<b>(0.423–0.967)</b>
\$1,000–\$1,499	1.400	(0.951–2.060)	0.727	(0.472–1.118)
\$1,500–\$1,999	1.386	(0.892–2.154)	0.768	(0.498–1.187)
More than \$2,000	1.472	(0.898–2.414)	0.783	(0.494–1.240)
P1 Argumentative relationship				
Lower	Ref			
<b>Higher</b>	<b>7.287</b>	<b>(5.700–9.315)</b>	<b>7.973</b>	<b>(6.231–10.200)</b>
Partner support				
Higher	Ref			
<b>Lower</b>	<b>3.528</b>	<b>(2.642–4.712)</b>	<b>5.140</b>	<b>(3.852–6.858)</b>
P2 Life difficulties				
Fewer	Ref			
<b>Many</b>	<b>2.466</b>	<b>(1.718–3.540)</b>	<b>1.996</b>	<b>(1.390–2.868)</b>
P2 Coping				
Well to extremely well	Ref		Ref	
Poor	1.627	(0.912–2.901)	1.416	(0.852–2.353)
P2 Psychological distress				
Non-clinical range	Ref		Ref	
Clinical range	1.230	(0.511–2.959)	1.336	(0.602–2.964)

### 3.7 Discussion

It is important to acknowledge that this section is largely descriptive. Australian population data on parental relationship functioning is scarce, and many of the associations reported here are first attempts at such descriptions. While many of the effects are in expected directions, all of the effects are measures of associations rather than causes. Indeed, some of the findings here invite formal causal tests of hypotheses when later waves of longitudinal data become available.

In reviewing the extensive findings on the associations between, on the one hand, measures of relationship functioning and, on the other, individual parent characteristics, socioeconomic status, family characteristics, and parent wellbeing, a few things are particularly evident.

First, all reported relationship variables showed moderate levels of skew in their distributions. This means that most parents reported good levels of relationship satisfaction, relatively low levels of arguments, and good levels of reciprocal support for parenting. The effects under observation are relative effects—not absolute. There are no normative data for what constitutes an ‘average’ level on these measures.

Second, the reported measures of relationship functioning used here are self-reports from the parents themselves and are not corroborated by independent observation. As a result it is not possible to assess the concurrent validity of these self-report measures against independent observation (or any other ‘gold standard’).

Third, notwithstanding these cautions, the results reveal that there is more in common in the pattern of associations between the cohorts than there are in the patterns of associations between the informants within the cohorts (that is, primary and secondary carers). Patterns of associations between the infant and child cohorts are more similar than the pattern of associations between primary carers and secondary carers within the cohorts.

#### **Similarity across cohorts and across parental reports of relationship functioning**

Two general observations of similarity between parents of infants and parents of young children emerge when findings from both cohorts are compared.

Parental wellbeing was strongly associated with relationship functioning. Across both infant and child cohorts, higher levels of psychological distress, lower levels of coping, and more life difficulties were consistently associated with reports from both partners of lower relationship satisfaction, lower reciprocal support for parenting, lower levels of coping and higher levels of arguments. The extent to which relationship functioning and parental wellbeing are causally related cannot be tested with a single wave of data, although this will certainly be possible in future waves.

It is important to remember that in some multivariable analyses the presence of measures of wellbeing (that is, life difficulties, coping, psychological distress) were more strongly associated with parental reports of relationship functioning and that, as a result, associations with measures of income, education, and employment were weakened or became non-significant in the multivariable analyses. Several of the bivariate analyses revealed linear relationships between education and income on the one hand and relationship functioning on the other, that were moderated in multivariable analyses when wellbeing measures were present. Clearly, better coping and fewer life difficulties can be strongly associated with income, education and employment—indeed, some measures of life difficulties include unemployment or loss of a job as indicators. Additionally, measures of difficulties in coping often include relationship problems. The point here is that parents across both cohorts reported better relationship functioning where they also reported better levels of coping, fewer life difficulties, and better psychological wellbeing. Just how relationship functioning influences parenting practices will be a focus of the next section.

Another similarity across both infant and child cohorts was in the observation that de facto family status was associated with larger proportions of both partners reporting lower relationship satisfaction, lower levels of reciprocal support for parenting, and a higher level of arguments. Why this should be so is a matter for particular investigation over time as study families undergo change and reformation.

**Differences across cohorts and across parental reports of relationship functioning**

There were many differences between cohorts and parents in the pattern of associations between relationship functioning and individual parent characteristics, socioeconomic status, family characteristics, and parent wellbeing.

Of the many socioeconomic variables associated with relationship functioning, two appear with enough regularity to merit mention here: low levels of parental education and family work arrangements (that is, employment).

A lower level of parental education (particularly, low levels of education in the fathers) was associated with a lower level of reciprocal support for parenting and lower relationship satisfaction, particularly in the infant cohort. This association was not as apparent in the child cohort where only lower education of the father was associated with more arguments in the relationship.

Family work arrangements showed consistent and numerous associations with parental reports of their relationship functioning. The results showed that the association of work arrangements and relationship functioning varied according to the age of the child, work arrangement within the family, and who was asked (mother or father) about the nature of the relationship.

There are clear trade-offs between parental abilities to provide levels of reciprocal support for each other in parenting children and to achieve a good level of relationship satisfaction. These appear to be juggled differently for mothers and fathers of infants and children.

For example, mothers of infants reported higher levels of reciprocal support for parenting in the relationship when their partner worked part time. However, mothers in families with infants also reported higher relationship satisfaction where both partners were working. It would appear that reciprocal support for parenting is assisted by having partners more available for the role (part-time work allows this) but relationship satisfaction is higher where parents are both involved in employment. For fathers of infants, part-time work of both parents was associated with significantly lower relationship satisfaction.

For mothers of children 4 to 5 years of age, employment of both partners (either part-time or full-time) was associated with higher levels of reciprocal support for parenting; however, this was at the expense of their relationship satisfaction. More employed mothers reported lower relationship satisfaction. For fathers of children 4 to 5 years of age, joint part-time work of each partner was associated with a higher likelihood of arguments in the relationship.

## 4 Parenting practices

### 4.1 Introduction

To what extent are the social and economic circumstances of a family, along with levels of stress, support and relationship quality, associated with parental reports of the quality of their parenting? Moreover, how do parents themselves judge the quality of their parenting? This section presents findings from the infant and child cohorts with respect to parental reports of parenting quality and parenting self-efficacy. Parenting quality as it relates to the infant cohort refers to levels of reported warmth and hostility directed toward the study child. In terms of the child cohort, it also refers to reported consistency in parenting. Responses of both primary carers (mostly mothers) and secondary carers (mostly fathers) are reported. Parents were also asked how they felt about their ability as parents (that is, their parenting self-efficacy).

### 4.2 Section summary

Reports from carers about their parenting styles differed in the magnitude and pattern of associations between the infant and child cohorts and within the contexts in which the data were observed (that is, across all families, within couple or lone-parent families), and by primary carers (mostly mothers) and secondary carers (mostly fathers). Broad generalisations about these associations are relatively scant:

- In general, larger family size appears to be consistently associated with lower parental warmth and higher hostility across both cohorts. Further, secondary carers reported lower mean levels of parenting warmth compared to primary carers in both the infant and child cohort.
- Across both the infant and child cohorts, for all families, higher parenting hostility was associated with higher levels of psychological distress in the primary carer.
- For primary and secondary carers in the infant cohort, lower parental warmth was associated with older parental age at the time of the birth of the study child, higher levels of parental education and lower levels of participation in the labour force. In contrast, for primary and secondary carers in the child cohort, lower parental warmth was associated with lower levels of external support from family and friends living elsewhere.
- For couple families only, comparisons across the two cohorts regarding parental warmth and hostility are considerably more complex. Low relationship satisfaction and lower levels of perceived reciprocal support for parenting were consistently associated with lower parenting warmth across both cohorts. For mothers (that is, primary carers), psychological distress and life difficulties were associated with higher hostile parenting in the infant cohort; and poor coping and psychological distress of the mother were associated with higher parental hostility in the child cohort.
- Reports by fathers (that is, secondary carers) across both infant and child cohorts add a new perspective on parenting styles within families. Far fewer associations among the many variables studied were observed in their reports of parental warmth relative to those observed for the measure of parental hostility. Across the two cohorts, lower perceived reciprocal support for parenting and lower relationship satisfaction were associated with lower parental warmth as reported by secondary carers. In contrast, across both cohorts, higher parental hostility in secondary carers was associated with most relationship variables and poor coping in this group. Finally, there is some suggestion in comparisons between the infant and child cohorts that de facto status may be associated with lower parental warmth and higher parenting hostility as reported by secondary carers.
- Parenting consistency, which was measured in the child cohort only, was lower where the primary carer had been born overseas, had lower levels of education and income, de facto status, poor coping and clinical levels of psychological distress. For lone parents, lower levels of education were strongly associated with lower reported parenting consistency. So too were low income and psychological distress.

- Less than 2 per cent of primary and secondary carers with infants and young children reported either having some trouble being a parent or not being very good as a parent (that is, low parenting self-efficacy).
- Across all families in both cohorts low parental self-efficacy was associated with a greater likelihood of a hostile parenting style, more life difficulties and poorer levels of coping. Psychological distress in the primary carer was associated with lower parental self-efficacy in the child cohort.

## 4.3 Overview of analytical approach

Throughout this section results are presented separately for each cohort.

Several considerations influenced the way the results are presented. Within each cohort there are differing types of families (that is, couple and lone-parent families) and within some types of families, the possibility of more than one respondent (that is, a primary carer and a secondary carer). In addition to this, couple families offered an opportunity to collect some information that was not necessarily appropriate to collect from lone-parent families; for example, information about the nature of the couple relationship is most appropriately gathered from couple families. As a result, only in these families can the effects of relationship characteristics upon parenting practices be assessed.

Analyses proceeded in two stages to prevent the presentation from becoming unwieldy. First, bivariate relationships were studied for selected parent, child, and family variables where these were available for all family types. These bivariate tables are extensive and not reported here. Multivariable analysis within each cohort and for all families was then undertaken. These multivariable analyses are the principal focus of this section. However, where there were critical bivariate relationships that were obscured or modified in the multivariable analysis, comment is made.

Following the results for all families, analyses were then undertaken for each family type (that is, couple families and lone-parent families) and within the couple families for each of the primary and secondary carers. These results were reviewed and where they extend or qualify the findings for all families, the results are reported.

## 4.4 Parenting practices—infant cohort

### Measures

Parental warmth and hostility were two of the dimensions of parenting that were assessed in the infant cohort. The interview conducted with the primary carer (P1) contained six items regarding the frequency with which they displayed warm affectionate behaviours towards their infant child (parental warmth), and five items regarding the frequency with which their interactions with the infant were irritable and angry (hostile parenting). The self-administered questionnaire for the secondary carer (P2) contained the same items.

### Parental warmth

The primary and secondary carers were each asked:

- How often do you express affection by hugging, kissing and holding this child?
- How often do you hug or hold this child for no particular reason?
- How often do you tell this child how happy he/she makes you?
- How often do you have warm, close times together with this child?
- How often do you enjoy doing things with this child?
- How often do you feel close to this child both when he/she is happy and when he/she is upset?

Responses were on a 5-point Likert scale, and ranged from 1='never/almost never' to 5='always/almost always'. Items were summed to form a total warmth score ranging from 6 (low warmth) to 30 (high warmth). Missing items were replaced with the mean of completed items for up to two missing items. If three or more items were missing, respondents were coded as missing for the warmth variable (<0.1 per cent in both cohorts for both primary and secondary carer).

### Hostile parenting

The primary and secondary carers were each asked:

- ▀ I have been angry with this child?
- ▀ I have raised my voice with or shouted at this child?
- ▀ When this child cries, he/she gets on my nerves?
- ▀ I have lost my temper with this child?
- ▀ I have left this child alone in his/her bedroom when he/she was particularly irritable or upset?

Responses were on a 10-point Likert scale and ranged from 1='not at all' to 10='all the time'. The items were summed to form a total hostility score ranging from 5 (low hostility) to 50 (high hostility). Missing items were replaced with the mean of completed items for one missing item. If two or more items were missing, respondents were coded as missing for the hostile parenting variable (<0.1 per cent in both cohorts for both primary and secondary carers).

### Descriptive statistics

#### *Parental warmth*

The distribution of scores for primary and secondary carer reports of parental warmth are shown in Figures D1 and D2 in Appendix D. These distributions were negatively skewed indicating that parents on average reported that they 'often' or 'always/almost always' displayed warmth towards their child. Primary carers reported slightly higher mean warmth (mean=27.3, range=13–30) relative to secondary carers (mean=25.5, range=10–30). For each of these distributions the lower quintile (20 per cent) range was classified to indicate 'lower warmth' and this was used in the multivariable analysis.

Readers should note that the definition of lower warmth is a **relative** definition. The lower warmth classification is not equivalent to 'cold' parenting. Indeed the vast majority of parents reported predominately higher levels of parental warmth and many of those in the 'lower warmth' group were still showing considerable warmth—just less than the other 80 per cent.

#### *Hostile parenting*

As with parental warmth, the distribution of scores for primary and secondary carer reports of parental hostility are shown in Figures D5 and D6 in Appendix D. These distributions were negatively skewed, indicating that parents on average reported that they 'never' or 'almost/always never' displayed hostility. Mean parental hostility scores for primary and secondary carers were very similar (primary carers mean=9.7, range=5–50; secondary carers mean=9.8, range=5–50). Practically speaking, these scores show that carers were typically scoring 2 out of a possible 10 for each item in the scale. For each of these distributions the upper quintile (20 per cent) range was classified to indicate 'higher hostility' and this was used in the multivariable analysis.

Again, as with the measure of parental warmth, the definition of 'higher hostility' is a relative definition, not an absolute one, and those classified as displaying 'higher hostility' generally did not report extreme hostility.



## Results

### *Parental warmth*

#### All families

In the multivariable analyses of the infant cohort, several primary carer variables were significantly associated with lower parental warmth. These included the primary carer's age, highest level of education, and employment status. Broadly speaking, primary carers were more likely to report lower levels of parental warmth where they were older, more highly educated, and were either not participating in the labour force or were in part-time work. In addition to this, both measures of family characteristics (family structure and number of children in the household) showed statistically significant associations with primary carer parental warmth in the multivariable model. Primary carers with more than one child were more likely to report lower levels of warm parenting, and primary carers from married step-families were more likely to show higher warmth than parents from married intact families.

Table 19 provides details of the associations found between specific variables and parental warmth. Older primary carers (>35 years) were more likely to report lower parental warmth relative to primary carers aged 25 to 34 years (29.5 per cent compared to 23.3 per cent;  $OR_{adj}=1.27$ ). Compared with primary carers who had a university education, carers with Year 9 or less, Year 11 or 12 or trade certificates/diplomas reported higher levels of parental warmth (that is, there was a reduction in the proportion reporting lower warmth as levels of education decreased). Relative to primary carers who were working full time, those who were working part time or who were not in the labour force were significantly more likely to report lower levels of warmth (19.8 per cent compared to 24.9 per cent;  $OR_{adj}=1.34$  and 19.8 per cent compared to 24.7 per cent;  $OR_{adj}=1.47$  respectively).

Compared to parents living in married intact families, a smaller proportion of parents living in married step-families reported lower parental warmth (25.5 per cent compared to 16.6 per cent;  $OR_{adj}=0.52$ ); that is, primary carers of infants in step-families were more likely to report higher levels of parental warmth than primary carers in intact married families. Compared to families with one child, a greater proportion of parents in families with two children (19.5 per cent compared to 28.2 per cent;  $OR_{adj}=1.569$ ), or three children (26.0 per cent;  $OR_{adj}=1.46$ ) reported lower parental warmth.

Family income, child gender and the four measures of parent wellbeing and support (psychological distress, life difficulties, coping and external support) were not significantly related to the primary carer's level of parental warmth for their infant in the multivariable analysis.

#### Couple families

Analysis of parental warmth was separately undertaken for couple families. This entailed the same predictor variables used in the above analysis and also permitted the addition of three relationship-specific measures (that is, relationship satisfaction, level of arguments, and perception of reciprocal support for parenting). When relationship-specific measures were added to the multivariable analyses, the results changed slightly.

Primary carer age was no longer statistically significant, and income became statistically significant (with higher incomes relating to lower parental warmth). Relative to families earning less than \$600 per week, primary carers in families earning more than \$1,500 per week were more likely to report lower warmth (19.8 per cent compared to 28.1 per cent;  $OR_{adj}=1.51$ ). All other variables that were significant in the full sample model remained significant.

Of the three relationship-specific variables added, low relationship satisfaction and lower adequacy of partner support were associated with lower parental warmth. Compared to those satisfied with their relationships, a greater proportion of primary carers with low relationship satisfaction reported lower parental warmth (23.2 per cent compared to 30.5 per cent;  $OR_{adj}=1.42$ ). Similarly, compared to those who perceived higher levels of reciprocal support, those who perceived low reciprocal support reported lower parental warmth (23.5 per cent compared to 31.4 per cent;  $OR_{adj}=1.33$ ). For primary carers in couple families, the presence or absence of arguments with a partner, primary carer psychological distress, higher levels of life difficulties,



poor coping and low levels of external support were not related to parental warmth. These factors were more consistently related to hostility which is discussed subsequently.

Analysis of the secondary carer reports revealed associations similar to those found for primary carers in the couple sample. For family structure, family size and partner support, the relationships were in the same direction, but were stronger. For one variable—secondary carer employment status—significant associations were found with reports of secondary carer parental warmth that were different from the findings in the primary carer model. For secondary carers, those who were not in the labour force were half as likely to show low warmth as those working full time (10.2 per cent compared to 17.8 per cent;  $OR_{adj}=0.43$ ). That is, they were twice as likely to report higher parental warmth as those who were in the labour force. This association is in the opposite direction to that found for primary carers. This may reflect the characteristics of the secondary carers (who are mostly fathers) who were not in the labour force and who were at home more with their infants.

### Lone-parent families

Analysis of parental warmth was separately undertaken for lone-parent families. Due to the small size of this sample the predictor variable categories were modified to improve categorical distributions and reduce small or empty cells. Despite this, the high degree of variability within the data combined with the smaller sample size generally precluded measures from achieving statistical significance in the multivariable model, and for most measures in the bivariate analyses. As a result, findings must be interpreted with caution.

In lone-parent families there was a strong association between income and parental warmth. Greater income was associated with higher levels of parental warmth: far fewer lone care givers in higher income families reported lower warmth when compared to families earning less than \$600 per week (8.1 per cent compared to 21.9 per cent;  $OR_{adj}=0.26$ ). This relationship is in the opposite direction to that found in the analysis using the entire sample. That is, for the entire sample, an increase in income was found to be related to a decrease in reported parental warmth. However, when looking at lone parents, an increase in income was associated with an increase in parental warmth.

**Table 19: Infant cohort, primary carer (P1) reports of lower parenting warmth, all families**

<b>n=3,605</b>	<b>Odds of lower parenting warmth OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	
Male	0.998	(0.848–1.173)
P1 Age at child's birth (years)		
Under 25	1.009	(0.759–1.342)
25–34	Ref	
<b>35 and above</b>	<b>1.266</b>	<b>(1.022–1.568)</b>
P1 Country of birth		
Australia	Ref	
Outside Australia	1.031	(0.850–1.251)
P1 Education		
<b>Year 9 or less</b>	<b>0.411</b>	<b>(0.207–0.818)</b>
Year 10	0.792	(0.552–1.136)
<b>Year 11 or 12</b>	<b>0.687</b>	<b>(0.542–0.871)</b>
<b>Trade certificate or diploma</b>	<b>0.760</b>	<b>(0.614–0.942)</b>
University	Ref	
Family structure		
Married, intact	Ref	
Single	0.907	(0.613–1.344)
De facto, intact	0.993	(0.760–1.298)
<b>Married, step</b>	<b>0.521</b>	<b>(0.322–0.842)</b>
De facto, step	0.873	(0.482–1.581)
P1 Employment classification		
Full time	Ref	
<b>Part time</b>	<b>1.336</b>	<b>(1.032–1.728)</b>
Unemployed	1.473	(0.858–2.530)
<b>Not in labour force</b>	<b>1.467</b>	<b>(1.114–1.931)</b>
Number of children in household		
1	Ref	
2	1.569	(1.311–1.878)
3	1.458	(1.117–1.904)
4 or more	1.373	(0.939–2.009)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.026	(0.771–1.366)
\$1,000–\$1,499	1.027	(0.757–1.393)
\$1,500–\$1,999	1.338	(0.964–1.857)
More than \$2,000	1.352	(0.949–1.924)
P1 Life difficulties		
Fewer	Ref	
Many	1.228	(0.941–1.762)
P1 Coping		
Well to extremely well	Ref	
Poor	0.999	(0.600–1.664)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.226	(0.744–2.021)
P1 gets enough external support		
Gets enough	Ref	
Does not get enough	1.162	(0.965–1.398)

### *Hostile parenting*

#### All families

In the multivariable analysis, child gender, parent country of birth, primary carer level of education, family income, family structure, primary carer level of coping and perception of external support were not significantly related to the primary carer's report of hostile parenting in the infant cohort. However, two primary carer variables were significantly associated with higher levels of hostile parenting. These were the primary carer's age and employment status (refer to Table 20).

Broadly speaking, in the infant cohort primary carers were more likely to report lower levels of hostile parenting where they were older and working. Additionally, larger family size was associated with a lower likelihood of parental hostility as were the parent wellbeing and support measures. Primary carers with higher psychological distress and more life difficulties were more likely to report higher levels of hostile parenting.

At a more detailed level, primary carer age was significantly related to hostile parenting, with older age appearing to be protective against hostile parenting. Compared to those aged 24 to 35 years, a smaller proportion of primary carers aged 35 years and older reported higher levels of hostile parenting (20.5 per cent compared to 15.1 per cent;  $OR_{adj}=0.69$ ). In terms of employment status, when compared to primary carers who were employed full time, higher hostile parenting was reported more often by those who were unemployed (16.5 per cent compared to 26.0 per cent;  $OR_{adj}=1.83$ ) and those not in the labour force (16.5 per cent compared to 21.5 per cent;  $OR_{adj}=1.43$ ). Increases in family size tended to be associated with decreases in reported parental hostility. Compared to parents with a single child, a smaller proportion of primary carers with four or more children reported higher hostile parenting (21.6 per cent compared to 15.0 per cent;  $OR_{adj}=0.59$ ).

For the parent wellbeing and support variables, higher levels of primary carer psychological distress and life difficulties were significantly related to an increased risk of hostile parenting. Compared to those in the non-clinical range, primary carers with clinically significant levels of psychological distress were twice as likely to report higher hostile parenting (19.4 per cent compared to 41.6 per cent;  $OR_{adj}=2.20$ ). Similarly, compared to those with fewer life difficulties, a greater proportion of primary carers with many life difficulties reported higher hostile parenting (19.3 per cent compared to 30.9 per cent;  $OR_{adj}=1.53$ ).

It should be noted that in the unadjusted bivariate associations a greater proportion of primary carers who reported they were coping poorly also reported higher hostile parenting when compared with those who were coping well (34.0 per cent compared to 19.6 per cent). This association was not significant when the effects of the other variables were taken into account.

**Table 20: Infant cohort, primary carer (P1) reports of hostile parenting, all families**

<b>n=3,598</b>	<b>Odds of higher hostile parenting OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Gender of study child		
Female	Ref	
Male	1.071	(0.895–1.282)
P1 Age at child's birth (years)		
Under 25	1.278	(0.972–1.679)
25–34	Ref	
<b>35 and above</b>	<b>0.690</b>	<b>(0.547–0.872)</b>
P1 Country of birth		
Australia	Ref	
Outside Australia	0.975	(0.758–1.254)
P1 Education		
Year 9 or less	1.161	(0.657–2.051)
Year 10	1.035	(0.726–1.476)
Year 11 or 12	0.687	(0.825–1.367)
Trade certificate or diploma	0.760	(0.994–1.511)
University	Ref	
Family structure		
Married, intact	Ref	
Single	0.812	(0.554–1.192)
De facto, intact	0.900	(0.680–1.192)
Married, step	1.126	(0.644–1.969)
De facto, step	0.893	(0.489–1.633)
P1 Employment classification		
Full time	Ref	
Part time	1.226	(0.910–1.651)
<b>Unemployed</b>	<b>1.830</b>	<b>(1.053–3.182)</b>
<b>Not in labour force</b>	<b>1.426</b>	<b>(1.072–1.895)</b>
Number of children in household		
1	Ref	
2	0.897	(0.745–1.079)
3	0.797	(0.611–1.038)
<b>4 or more</b>	<b>0.589</b>	<b>(0.391–0.886)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	0.966	(0.711–1.313)
\$1,000–\$1,499	1.045	(0.757–1.443)
\$1,500–\$1,999	1.191	(0.829–1.711)
More than \$2,000	1.092	(0.766–1.557)
P1 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>1.530</b>	<b>(1.095–2.137)</b>
P1 Coping		
Well to extremely well	Ref	
Poor	1.419	(0.859–2.342)
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>2.200</b>	<b>(1.353–3.579)</b>
P1 gets enough external support		
Gets enough	Ref	
Does not get enough	1.235	(0.992–1.537)

### Couple families

When analysis was restricted to couple families and the primary carer's reports of couple relationship factors (primary carer's relationship satisfaction, level of arguments with partner and perception of reciprocal support in parenting) were added to the multivariable analyses, the results were largely unchanged.

All variables that were significant in the full sample model remained significant, added to which the primary carer's report of arguments with their partner made an independent contribution to levels of parental hostility. Compared to those primary carers who reported low levels of arguments with their partners, a greater proportion of primary carers with high levels of partner arguments also reported higher hostile parenting (18.2 per cent compared to 26.1 per cent;  $OR_{adj}=1.38$ ).

Similar to the primary carer, secondary carers in couple families were also asked questions on parental hostility. In this case, the analysis of their reported parenting hostility resulted in considerable differences when compared to the results of the primary carer.

For secondary carers, family structure and family size were associated with hostile parenting. Compared to those secondary carers living in intact married families, a smaller proportion of secondary carers living in intact de facto families reported higher hostile parenting (19.5 per cent compared to 16.6 per cent;  $OR_{adj}=0.72$ ). Compared to those living in a family with one child, a greater proportion of secondary carers living in a household with two children reported higher hostile parenting (16.3 per cent compared to 22.9 per cent;  $OR_{adj}=1.46$ ).

For the parent wellbeing and support variables, those secondary carers who were coping poorly were almost twice as likely to report higher hostile parenting (18.3 per cent compared to 36.1 per cent;  $OR_{adj}=1.94$ ) when compared to those who reported that they were coping well to extremely well. Secondary carer psychological distress and life difficulties both had similarly strong associations with their reports of hostile parenting at the bivariate level (18.8 per cent compared to 31.8 per cent for psychological distress and 18.2 per cent compared to 27.8 per cent for life difficulties), suggesting an increased risk for hostile parenting among secondary carers who were experiencing more psychological distress and greater life difficulties. However, these variables were non-significant in the multivariable model.

For secondary carers, reports of their couple relationship were associated with their reports of hostile parenting. A poorer couple relationship increased the risk of hostile parenting. Compared to those secondary carers who were satisfied with their relationships, a greater proportion with low relationship satisfaction reported higher hostile parenting (28.4 per cent compared to 16.6 per cent;  $OR_{adj}=1.44$ ). Compared to those with lower levels of relationship arguments, a greater proportion of those who reported higher levels of arguments also reported higher hostile parenting (16.7 per cent compared to 29.0 per cent;  $OR_{adj}=1.51$ ). Finally, compared to those who received adequate support from their partner for parenting, a greater proportion of those who received low support reported higher hostile parenting (17.4 per cent compared to 29.9 per cent;  $OR_{adj}=1.53$ ).

### Lone-parent families

Lone parents who reported clinical levels of psychological distress were more than four times as likely to report higher parenting hostility when compared with lone parents who had lower levels of psychological distress (51.6 per cent compared to 18.8 per cent;  $OR_{adj}=4.33$ ). Broadly though, the remainder of the individual/socioeconomic, family and wellbeing factors were not significantly associated with hostile parenting for lone parents.

Readers should note that while the proportions of lone carers reporting higher and lower levels of hostility appeared to be different across categories for a number of these measures, the high degree of variability within the data combined with the smaller sample size precluded them from achieving statistical significance in both the multivariable model and for most comparisons in the bivariate analyses.

### Discussion on parenting practices from infant cohort

The findings on parenting practices as measured by parent reports of warmth and hostility in the families of the infant cohort are surprisingly subtle. The data suggest that demographic variables (that is, parental age,

education, employment, and family size) have a more consistent association with parental warmth than do the psychological and interpersonal factors (stress, psychological distress, and coping). In contrast, though, in addition to associations with key demographic variables, parenting hostility has considerable associations with parental relationship quality, perceived levels of support, and levels of coping.

### **Factors associated with parental warmth**

The data suggest that for all families with an infant, lower warmth was associated with higher parental education, older parental age, higher family income and larger family size. Primary carers (mostly mothers) who were not in the labour force or who were working part time also reported lower levels of parental warmth relative to those working full time. However, secondary carers (mostly fathers) who were not in the labour force reported higher levels of parental warmth. This indicates that associations between parental warmth and participation in employment vary by gender and are undoubtedly linked to circumstances surrounding decisions about family work arrangements.

This picture is largely the same when confined to couple families only. It is, however, enriched by being able to ask couple families about their relationships and thus assess the associations between parental warmth on the one hand and couple relationship quality on the other. Here, while the broad set of associations that were found for all families with infants continued to apply, parental warmth declined for primary carers who also reported low relationship satisfaction and low levels of reciprocal support between partners with parenting. Again, these same factors were found to apply in the reports from secondary carers. Clearly, whether you are a mother or a father, having a good relationship with your partner is also associated with skills, attitudes and behaviours that translate to higher levels of reported parental warmth towards a child.

Finally, the association of family income and parental warmth merits comment. For the total sample, variation in family weekly income was not significantly associated with parental warmth. However, there were significant associations between family income and parental warmth when effects were studied in couple families and lone-parent families separately. In couple families, higher income was associated with lower parental warmth. In lone-parent families, higher income was associated with higher levels of parental warmth. This suggests that parental reports of their parenting warmth differ by context: where parents are better educated, older, and employed, parental warmth is more often lower—perhaps reflecting parents being busy, demands on them being high, and the general focus on parental warmth being lower. In contrast, for lone-parent families, higher income may be associated with greater parental warmth because financial wellbeing provides a greater range of choice, reduction in the stress associated with hardship, and social advantages derived from support through work.

### **Factors associated with hostile parenting**

For all families in the infant cohort, higher hostile parenting reported by mothers was associated with non-participation in the labour force or unemployment of the mother, smaller family size, the mother's psychological distress, and reports of more life difficulties. Older age of the mother was associated with lower levels of hostile parenting.

This pattern of results was similar to the analysis of mothers in couple families which, in addition to the factors above, also showed higher levels of parental hostility in association with higher levels of partner arguments. For secondary carers in couple families, in addition to an association between higher parenting hostility and higher levels of partner arguments, there were several more psychological and interpersonal factors associated with higher parental hostility. Secondary carers were more likely to report higher parental hostility where they said they were coping poorly, had low relationship satisfaction with their partner, and perceived reciprocal support to be low.

The sample of lone parents with infants was small and statistically underpowered. It is of note though that psychological distress in lone mothers was significantly associated with their reports of higher hostile parenting.

## 4.5 Parenting practices—child cohort

### Measures

Parental warmth, hostility, and consistency were the dimensions of parenting assessed in the child cohort. The interview conducted with the primary carer (P1) contained six items regarding the frequency with which they displayed warm affectionate behaviours towards their child (parental warmth), four items regarding the frequency with which their interactions with the child entailed behaviours such as disapproval, lack of praise, and anger (hostile parenting), and six items measuring consistency in parenting behaviour, particularly around discipline (consistency). The questionnaire left behind for the secondary carer (P2) to complete contained the same items.

### Parental warmth

The items used in this measure are identical to those used in the infant cohort. If more than two items were missing, respondents were coded as missing for the measure (<0.1 per cent in both cohorts for both primary and secondary carers).

### Hostile parenting

The primary and secondary carers were each asked:

- ▀ Of all the times that you talk to this child about his/her behaviour, how often is this praise?
- ▀ Of all the times that you talk to this child about his/her behaviour, how often is this disapproval?
- ▀ How often are you angry when you punish this child?
- ▀ How often do you feel you are having problems managing this child in general?

Responses were on a 5-point Likert scale and ranged from 1='never/almost never' to 5='all the time'. The items were summed to form a total hostility score ranging from 4 (low hostility) to 20 (high hostility) (with first item reversed). Missing items were replaced with the mean of completed items for one missing item. If two or more items were missing, respondents were coded as missing for the measure (<0.2 per cent in both cohorts for both primary and secondary carers).

### Consistency

The following items made up the consistency scale:

- ▀ When you give this child an instruction or make a request to do something, how often do you make sure that he/she does it?
- ▀ If you tell this child he/she will get punished if he/she doesn't stop doing something, but he/she keeps doing it, how often will you punish him/her?
- ▀ How often does this child get away with things that you feel should have been punished?
- ▀ How often is this child able to get out of punishment when he/she really sets his/her mind to it?
- ▀ When you discipline this child, how often does he/she ignore the punishment?

Responses were on a 5-point Likert scale and ranged from 1='never/almost never' to 5='all the time'. The items were summed to form a total consistency score ranging from 5 (low consistency) to 25 (high consistency) (with first two items reversed). Missing items were replaced with the mean of completed items for up to two missing items. If three or more items were missing, respondents were coded as missing for the consistency variable (primary carer=0.1 per cent; secondary carer=0.3 per cent of the sample).

## Descriptive statistics

### *Parental warmth*

The distribution of parental warmth was slightly negatively skewed indicating that parents on average reported that they ‘often’ or ‘always/almost always’ displayed warmth towards their child. Primary carers reported slightly higher mean warmth (mean=26.6, range=6–30) relative to secondary carers (mean=24.4, range=6–30). For each of these distributions the lower quintile (20 per cent) range was classified to indicate ‘lower warmth’ to use in multivariable analysis.

### *Hostile parenting*

Parents on average reported that they ‘never/almost never’ or ‘less than half of the time’ displayed hostility towards their child. Primary carers reported slightly lower mean hostility (mean=8.75, range=4–20) relative to secondary carers (mean=9.16, range=4–18). For each of these distributions the upper quintile (20 per cent) range was classified to indicate ‘higher hostility’ to use in multivariable analysis.

### *Parental consistency*

Parents on average reported that they were consistent with their child ‘all the time’ or ‘more than half of the time’. The means for primary carers (mean=20.10, range=6–25) and secondary carers (mean=23.75, range=5–25) differed slightly. For each of these distributions the lower quintile (20 per cent) range was classified to indicate ‘lower consistency’ to use in multivariable analysis.

## Results

Analyses are typically presented for the primary carers in the **entire sample**. However, separate analyses were also conducted within the lone-parent and couple families (**both** the primary and secondary carer reports) samples. Where the results of these analyses differed markedly from the analyses of the entire sample, these are also discussed within the text.

### *Parental warmth*

#### All families

Remarkably few of the individual parent characteristics, family characteristics, parent wellbeing and couple relationship factors were independently associated with primary carer reports of parental warmth in the child cohort. Of these, only the number of children in the household and the primary carer’s perceived support from sources external to the immediate family were found to influence warmth shown by the primary carer. Broadly speaking, primary carers were more likely to report lower levels of parental warmth where they had more children and reported that they were receiving lower levels of external support from family and friends living elsewhere (refer to Table 21).

More specifically, family size showed a linear relationship with primary carer reports of parental warmth. Compared to carers with one child only, a greater proportion of primary carers with two children (15.1 per cent compared to 20.8 per cent;  $OR_{adj}=1.46$ ), three children (23.0 per cent;  $OR_{adj}=1.64$ ), and four children (25.3 per cent;  $OR_{adj}=1.78$ ) reported lower parental warmth. Compared to those with adequate external support from family and friends, a greater proportion of primary carers with lower reported external support also reported lower parental warmth (19.3 per cent compared to 27.7 per cent;  $OR_{adj}=1.48$ ).

#### Couple families

Analysis of parental warmth was separately undertaken for couple families. This entailed many of the same predictor variables and also permitted the addition of three relationship-specific measures (relationship satisfaction, level of arguments, and perception of adequacy of partner support).



With regard to the primary carer, the multivariable results were very similar to those reported above. In addition, two of the relationship-specific measures were found to be related to primary carer parental warmth. In couple families, lower parental warmth was associated with primary carer reports of lower relationship satisfaction and lower perceived reciprocal support. Compared to those who were satisfied in their relationships, a greater proportion of primary carers with low relationship satisfaction reported lower parental warmth (19.8 per cent compared to 28.5 per cent;  $OR_{adj}=1.324$ ); and compared to those with adequate support from their partner for parenting, a greater proportion of primary carers with low support reported lower parental warmth (19.9 per cent compared to 30.0 per cent;  $OR_{adj}=1.44$ ).

The pattern of results associated with secondary carer reports of parental warmth was different from that for the primary carers. For secondary carers (mostly fathers), parental warmth was significantly related to their family structure, country of birth and partner support for parenting.

Compared to those in married intact families, secondary carers were almost twice as likely to report lower parental warmth compared to secondary carers living in de facto step-families (16.6 per cent compared to 33.8 per cent;  $OR_{adj}=1.87$ ).

Further, compared to Australian-born secondary carers, a greater proportion of those secondary carers who were born elsewhere reported lower parental warmth (16.3 per cent compared to 20.4 per cent;  $OR_{adj}=1.31$ ).

Secondary carers with low partner support for parenting were more than twice as likely to report lower parental warmth compared with secondary carers with adequate partner support for parenting (14.5 per cent compared to 33.5 per cent;  $OR_{adj}=2.45$ ).

### Lone-parent families

Only two variables—employment status and external support from family or friends living elsewhere—were related to parental warmth in reports by lone parents. However, once again, due to issues associated with the small sample size of lone parents, caution must be used when interpreting these results.

Lone parents who were not in the labour force were almost three times more likely to report lower parental warmth (9.0 per cent compared to 24.5 per cent;  $OR_{adj}=2.96$ ) compared to those working full time, and almost four times more likely to report lower parental warmth compared to those working part time (23.6 per cent;  $OR_{adj}=3.75$ ).

Lone parents who reported not having enough support from family and friends living elsewhere were twice as likely to report lower parental warmth compared with lone parents who reported having such support (16.7 per cent compared to 30.3 per cent;  $OR_{adj}=2.01$ ).

**Table 21: Child cohort, primary carer (P1) reports of lower parenting warmth, all families**

<b>n=3,414</b>	<b>Odds of lower parenting warmth OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	
Male	1.170	(0.990–1.382)
P1 Age at child's birth (years)		
Under 25	0.917	(0.684–1.229)
25–34	Ref	
35 and above	1.102	(0.881–1.377)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.200	(0.975–1.477)
P1 Education		
Year 9 or less	0.896	(0.534–1.505)
Year 10	1.100	(0.793–1.525)
Year 11 or 12	1.170	(0.911–1.501)
Trade certificate or diploma	0.951	(0.753–1.200)
University	Ref	
Family structure		
Married, intact	Ref	
Single	1.125	(0.805–1.573)
De facto, intact	1.207	(0.863–1.690)
Married, step	0.728	(0.472–1.124)
De facto, step	1.109	(0.619–1.986)
P1 Employment classification		
Full time	Ref	
Part time	1.251	(0.920–1.700)
Unemployed	0.685	(0.370–1.267)
Not in labour force	1.377	(1.000–1.895)
Number of children in household		
1	Ref	
2	<b>1.455</b>	<b>(1.038–2.038)</b>
3	<b>1.683</b>	<b>(1.124–2.386)</b>
4 or more	<b>1.784</b>	<b>(1.171–2.717)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	1.161	(0.839–1.607)
\$1,000–\$1,499	1.204	(0.838–1.730)
\$1,500–\$1,999	1.398	(0.948–2.063)
More than \$2,000	1.233	(0.841–1.808)
P1 Life difficulties		
Fewer	Ref	
Many	1.213	(0.891–1.652)
P1 Coping		
Well to extremely well	Ref	
Poor	1.236	(0.809–1.888)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.328	(0.800–2.206)
P1 gets enough external support		
<b>Gets enough</b>	<b>Ref</b>	
<b>Does not get enough</b>	<b>1.479</b>	<b>(1.199–1.825)</b>

## *Hostile parenting*

### All families

Primary carer parental education, family size and three of the parent wellbeing and support variables were significantly related to primary carer reports of higher hostile parenting in the child cohort. Child gender was also found to be significantly associated with primary carer hostile parenting.

Relative to university-educated mothers, those with Year 10 education were more likely to report higher parenting hostility (19.9 per cent compared to 30.3 per cent;  $OR_{adj}=1.53$ ) (refer to Table 22).

Compared to those in married intact families, a greater proportion of primary carers living in de facto intact families reported higher hostile parenting (21.9 per cent compared to 32.9 per cent;  $OR_{adj}=1.63$ ).

Compared to those with one child only, a slightly greater proportion of primary carers with two children reported higher hostile parenting. This association was statistically significant in the multivariable analysis only (20.5 per cent compared to 23.8;  $OR_{adj}=1.48$ ).

Those primary carers who had clinical levels of psychological distress were more likely to report higher hostile parenting (22.0 per cent compared to 52.4 per cent;  $OR_{adj}=1.82$ ) than those with low levels of psychological distress. Further, those who were coping poorly were more than three times as likely to report higher levels of hostile parenting (21.6 per cent compared to 56.8 per cent;  $OR_{adj}=3.20$ ) and those who were not receiving enough external support from family and friends living elsewhere were also more likely to report higher levels of hostile parenting (21.2 per cent compared to 29.9 per cent;  $OR_{adj}=1.33$ ) compared to those with positive wellbeing, adequate coping and adequate levels of external support from family and friends.

In the bivariate tables there was a clear linear trend, with significantly higher proportions of higher parental hostility associated with lower levels of education; however, these effects were moderated in the multivariable analysis.

### Couple families

When the analysis was confined to couple families only, and primary carer reports of couple relationship factors were included (that is, relationship satisfaction, argumentative relationship, support from partner) in the multivariable analyses, primary carer age at the time of the birth of the child, education, country of birth, and external support were no longer significant. None of the couple relationship measures was significantly associated with hostile parenting for this sample. The association with coping was significant and largely unchanged; however, psychological distress was not found to be significant.

The results were different for secondary carers, with many more significant associations. These included study child gender, father's age at the time of the birth of the child, income, family structure, family size and all three measures of couple relationship.

Specifically, a greater proportion of secondary carers of male study children reported higher hostile parenting (21.1 per cent compared to 16.9 per cent;  $OR_{adj}=1.32$ ). Older secondary carers aged 35 years and over at the time of the birth of the study child were less likely to report hostile parenting relative to those secondary carers aged 25 to 34 years (16.6 per cent compared to 20.2 per cent;  $OR_{adj}=0.75$ ).

Family size was associated with secondary carer reports of higher hostile parenting, with secondary carers being almost twice as likely to report higher hostile parenting if in families with two children relative to those families with one child.

Finally, compared to those with positive couple relationships, a greater proportion of fathers with low relationship satisfaction (16.2 per cent compared to 30.7 per cent;  $OR_{adj}=1.39$ ) who were in argumentative relationships (15.4 per cent compared to 30.9 per cent;  $OR_{adj}=1.92$ ) or perceived low reciprocal support with parenting (16.7 per cent compared to 32.5 per cent;  $OR_{adj}=1.61$ ) reported higher hostile parenting.

### Lone parents

Only income, employment and external support from friends and family living elsewhere were related to hostile parenting. Lone parents with low incomes were almost three times as likely to report higher hostile parenting compared to lone parents with incomes greater than \$600 per week (17.1 per cent compared to 30.4 per cent;  $OR_{adj}=2.65$ ). Further, those with inadequate external support from family and friends were also more than twice as likely to report higher hostile parenting (20.9 per cent compared to 40.9 per cent;  $OR_{adj}=2.14$ ) compared to those with adequate external support.

**Table 22: Child cohort, primary carer (P1) reports of hostile parenting, all families**

<b>n=3,406</b>	<b>Odds of higher hostile parenting OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Gender of study child		
Female	Ref	
<b>Male</b>	<b>1.246</b>	<b>(1.038–1.495)</b>
P1 Age at child's birth (years)		
Under 25	1.246	(0.960–1.616)
25–34	Ref	
35 and above	0.917	(0.726–1.159)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.181	(0.929–1.501)
P1 Education		
Year 9 or less	1.426	(0.904–2.249)
<b>Year 10</b>	<b>1.534</b>	<b>(1.138–2.067)</b>
Year 11 or 12	1.126	(0.862–1.470)
Trade certificate or diploma	0.988	(0.784–1.246)
University	Ref	
Family structure		
Married, intact	Ref	
Single	0.910	(0.663–1.248)
<b>De facto, intact</b>	<b>1.633</b>	<b>(1.183–2.255)</b>
Married, step	0.695	(0.431–1.120)
De facto, step	1.124	(0.625–2.022)
P1 Employment classification		
Full time	Ref	
Part time	0.935	(0.709–1.232)
Unemployed	0.943	(0.579–1.536)
Not in labour force	0.947	(0.710–1.263)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.476</b>	<b>(1.054–2.066)</b>
3	1.384	(0.955–2.007)
4 or more	1.258	(0.848–1.867)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.830	(0.622–1.108)
\$1,000–\$1,499	0.805	(0.573–1.131)
\$1,500–\$1,999	0.772	(0.544–1.094)
More than \$2,000	0.722	(0.485–1.076)
P1 Life difficulties		
Fewer	Ref	
Many	1.297	(0.942–1.787)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>3.196</b>	<b>(2.116–4.827)</b>
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>1.825</b>	<b>(1.159–2.874)</b>
P1 gets enough external support		
Gets enough	Ref	
<b>Does not get enough</b>	<b>1.331</b>	<b>(1.095–1.618)</b>

## Consistency

### All families

Parent country of birth, education, income, family structure, and two of the parent wellbeing and support variables were significantly related to primary carer reports of their parenting consistency in the child cohort.

Compared to those who were Australian born, a greater proportion of mothers (that is, primary carers) born elsewhere reported lower parenting consistency (18.2 per cent compared to 23.8 per cent;  $OR_{adj}=1.45$ ) (refer to Table 23).

Relative to primary carers (mostly mothers) with nine years of education or less, primary carers with university education were more consistent in their parenting practices with their child; that is, they were less likely to be inconsistent (31.5 per cent compared to 11.7 per cent;  $OR_{adj}=0.48$ ). As income increased, parenting consistency increased; that is, higher incomes were associated with 25 to 50 per cent reductions in inconsistent parenting. For example, relative to families earning less than \$600, a significantly smaller proportion of primary carers in families earning \$1,500 to \$1,999 reported inconsistent parenting (30.3 per cent compared to 12.7 per cent;  $OR_{adj}=0.44$ ).

Relative to those living in intact married families, a greater proportion of primary carers living in de facto intact families (16.3 per cent compared to 25.2 per cent;  $OR_{adj}=1.49$ ) or de facto step-families (32.4 per cent;  $OR_{adj}=1.95$ ) reported lower parenting consistency.

Primary carers with clinical levels of psychological distress were almost twice as likely to report lower parenting consistency compared to those primary carers who reported lower levels of psychological distress (42.3 per cent compared to 18.4 per cent;  $OR_{adj}=1.83$ ). Further, those primary carers with poor coping were almost three times as likely to report lower parenting consistency when compared to mothers who reported adequate coping (42.9 per cent compared to 18.2 per cent;  $OR_{adj}=2.84$  respectively).

### Couple families

For reports from primary carers, when couple relationship factors were added to the multivariable analyses, the significant results for parent country of birth, education, employment status, income, family structure and coping were largely unchanged from above. Parent psychological distress was no longer significant. Of the couple relationship measures, argumentativeness was significantly associated with parenting consistency for this sample. Compared to those with low argumentativeness, a greater proportion of those with high argumentativeness reported lower parenting consistency (15.7 per cent compared to 27.0 per cent;  $OR_{adj}=1.62$ ).

For reports by secondary carers, there was a strong linear association between their parenting consistency and their level of education, and significant associations with income and two of the couple relationship factors. Secondary carer reports of psychological distress was also associated with parenting consistency.

There were strong associations between secondary carer educational level and reports of parenting consistency. Secondary carers with Year 9 or less education were more than four times more likely to report lower parenting consistency compared to those with a university education (11.0 per cent compared to 40.2 per cent;  $OR_{adj}=4.29$ ). This association was also true for secondary carers with Year 10 education (24.0 per cent;  $OR_{adj}=2.25$ ), or a trade certificate (18.6 per cent;  $OR_{adj}=1.85$ ).

Compared to those in the highest family income category (>\$2,000 per week), a greater proportion of secondary carers with the lowest family income reported lower parenting consistency (13.4 compared to 29.1 per cent;  $OR_{adj}=1.97$ ).

Secondary carers who fell within the clinical range for level of psychological distress were less likely to report consistent parenting behaviour (40.2 per cent compared to 18.4 per cent;  $OR_{adj}=1.95$ ).

With regard to relationship-specific measures, secondary carers in argumentative relationships were more than twice as likely to report lower parenting consistency compared with those secondary carers who reported a non-argumentative couple relationship (13.3 per cent compared to 29.2 per cent;  $OR_{adj}=2.16$ ). In addition, compared to secondary carers who reported higher reciprocal support between themselves and their partner in raising children, those who received lower reciprocal support were more likely to report inconsistent parenting (14.7 per cent compared to 30.5 per cent;  $OR_{adj}=1.66$ ).

### Lone parents

There were significant associations between parenting consistency and lone-parent education, employment, income and psychological distress. Broadly speaking, lone parents were more inconsistent in their parenting where they had lower educational levels, lower income and more psychological distress. These associations were strong, and merit detailing here.

Compared with lone parents with a university education, those who had completed Year 10 education were almost three times as likely (11.9 per cent compared to 33.1 per cent;  $OR_{adj}=2.82$ ) and those who had Year 11 or 12 education were more than three times as likely to report inconsistent parenting (31.7 per cent;  $OR_{adj}=3.20$ ). Statistical power limited the test of the significance of those lone parents with Year 9 or less education who reported inconsistent parenting (43.9 per cent) although the odds ratio was in the expected direction. Additionally, lone parents working part time were more likely to show consistency than lone parents working full time (15.8 per cent compared to 23.3 per cent;  $OR_{adj}=0.398$ ).

Finally, compared to those with higher incomes, over twice as many lone parents with low incomes reported lower parenting consistency (15.0 per cent compared to 32.2 per cent;  $OR_{adj}=2.32$ ). As well, relative to those lone parents with higher reported wellbeing, twice as many of those with clinical levels of psychological distress reported lower parenting consistency (24.9 per cent compared to 49.4 per cent;  $OR_{adj}=4.13$ ).

**Table 23: Child cohort, primary carer (P1) likelihood of low consistency, all families**

<b>n=3,414</b>	<b>Odds of lower consistency OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	(0.707–1.013)
Male	0.846	
P1 Age at child's birth (years)		
Under 25	0.891	(0.671–1.181)
25–34	Ref	
35 and above	1.031	(0.801–1.327)
P1 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>1.507</b>	<b>(1.203–1.887)</b>
P1 Education		
<b>Year 9 or less</b>	<b>2.325</b>	<b>(1.413–3.826)</b>
<b>Year 10</b>	<b>2.244</b>	<b>(1.579–3.189)</b>
<b>Year 11 or 12</b>	<b>2.151</b>	<b>(1.580–2.928)</b>
<b>Trade certificate or diploma</b>	<b>1.862</b>	<b>(1.396–2.484)</b>
University	Ref	
Family structure		
Married, intact	Ref	
Single	0.975	(0.712–1.336)
<b>De facto, intact</b>	<b>1.618</b>	<b>(1.162–2.253)</b>
Married, step	1.205	(0.768–1.892)
<b>De facto, step</b>	<b>1.987</b>	<b>(1.164–3.393)</b>
P1 Employment classification		
Full time	Ref	
Part time	0.822	(0.612–1.103)
Unemployed	0.820	(0.521–1.290)
Not in labour force	1.014	(0.757–1.357)
Number of children in household		
1	Ref	
2	1.019	(0.732–1.418)
3	1.106	(0.774–1.580)
4 or more	1.427	(0.959–2.124)
Income categories		
Less than \$600	Ref	
<b>\$600–\$999</b>	<b>0.732</b>	<b>(0.543–0.988)</b>
<b>\$1,000–\$1,499</b>	<b>0.522</b>	<b>(0.375–0.727)</b>
<b>\$1,500–\$1,999</b>	<b>0.467</b>	<b>(0.324–0.674)</b>
<b>More than \$2,000</b>	<b>0.548</b>	<b>(0.369–0.813)</b>
P1 Life difficulties		
Fewer	Ref	
Many	0.965	(0.690–1.350)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>2.457</b>	<b>(1.645–3.670)</b>
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>1.846</b>	<b>(1.146–2.972)</b>
P1 gets enough external support		
Gets enough	Ref	
<b>Does not get enough</b>	<b>1.087</b>	<b>(0.867–1.364)</b>



### **Discussion on parenting practices from child cohort**

As with the findings in the infant cohort, there are evident associations among child, parent, family, and relationship factors and parent-reported measures of parental warmth, hostility and parenting consistency. A striking feature of the analyses in the child cohort is the difference and complexity in the number and pattern of these relationships among the entire sample and within couple and lone-parent family contexts. Broadly, there are far fewer associations observed between the many characteristics of the parent(s) and family with parental warmth, than between this same set of parent, family and relationship variables and levels of reported parental hostility and consistency.

### **Factors associated with parental warmth**

For all families with a young child, lower parental warmth was associated with larger family size and lower levels of external support from family and friends living elsewhere. Parental warmth was not significantly associated with income, employment status or education.

Within couple families this pattern of associations was largely the same when considering reports by primary carers. Significant associations between lower parental warmth and lower relationship satisfaction and lower levels of partner support for parenting were also observed. For secondary carers in couple families, lower parental warmth was associated with de facto step-family status, overseas birth of the father, and lower partner support for their role in parenting.

In lone-parent families higher parental warmth was associated with full-time work.

### **Factors associated with hostile parenting**

Far more associations were observed in relationship to hostile parenting. For the total sample, higher primary carer parenting hostility was associated with lower parental education, larger family size and psychological distress, poor coping and poor partner support in the role of parenting.

In reports of primary carers in couple families, associations with hostility were significant for poor primary carer coping.

In contrast, the reports of fathers in couple families revealed numerous associations with their reports of hostile parenting. Higher hostile parenting in fathers was associated with male gender of the study child, young age of the father, larger family size, and relationship status characterised by dissatisfaction, arguments and low partner support for the role of parenting.

In lone-parent families, higher hostile parenting was associated with low income, employment, and inadequate external support from family and friends living elsewhere. However, as mentioned previously, the definition of 'higher hostility' is a relative definition, not an absolute one, and those classified as displaying 'higher hostility' generally did not report extreme hostility

### **Factors associated with parenting consistency**

For primary carers in the total sample, parenting consistency was lower where the primary carer had been born overseas, had lower levels of education and income, de facto status, poor coping and clinical levels of psychological distress.

This pattern was similar in reports of both primary and secondary carers in couple families.

For lone parents, lower levels of education were strongly associated with lower reported parenting consistency. So too was low income, employment and psychological distress.

## 4.6 Parental self-efficacy—infant cohort

### Measures

Parental self-efficacy was assessed in both the infant and child cohorts. The interview conducted with the mother contained a single item measuring overall self-efficacy as a parent. The questionnaire left behind for the father (secondary carer) also contained the same item. It was: ‘Overall, which one of the following statements best describes how you feel about yourself as a parent?’

The response was on a 5-point Likert scale, and ranged from 1=‘not very good at being a parent’ to 5=‘a very good parent’.

The distribution of scores for primary and secondary parental self-efficacy for both infant and child cohorts was higher in parents with infants than with parents of 4 to 5 year-old children. Reports between primary and secondary carers within each cohort did not differ significantly.

The overwhelming majority (98 per cent) of parents rated themselves as being average or above average as a parent. Less than 2 per cent of parents rated themselves as ‘not very good at being a parent’ or as ‘a person who has some trouble being a parent’ (refer to Appendix D). These parents were classified as having ‘lower parenting self-efficacy.’

### Results

#### *All families*

In the multivariable analysis of the infant cohort, child gender, parent age, employment status, income, family structure and family size were not significantly related to the primary carer reports of their parenting self-efficacy.

Only two demographic variables were associated with parenting self-efficacy: overseas birth of the mother and educational level. Relative to Australian-born mothers, a lower proportion of mothers born overseas felt that they were not good at being a parent (2.3 per cent compared to 1.4 per cent;  $OR_{adj}=0.44$ ). Low education was associated with the likelihood of low parenting self-efficacy. Compared to parents with a university education, over four times the number of mothers with Year 9 education reported that they had low global parenting self-efficacy (1.3 per cent compared to 5.9 per cent;  $OR_{adj}=4.24$ ). Nonetheless, this is only about 6 per cent of mothers with Year 9 education (refer to Table 24).

**Table 24: Infant cohort, primary carer (P1) parenting self-efficacy, all families**

<b>n=3,593</b>	<b>Odds of P1 low self-efficacy <math>OR_{adj}</math></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	
Male	0.730	(0.414–1.289)
P1 Age at child’s birth (years)		
Under 25	1.753	(0.759–4.047)
25–34	Ref	
35 and above	1.700	(0.942–3.068)
P1 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>0.441</b>	<b>(0.202–0.962)</b>
P1 Education		
<b>Year 9 or less</b>	<b>4.242</b>	<b>(1.050–17.132)</b>
Year 10	1.269	(0.446–3.606)
Year 11 or 12	1.300	(0.560–3.017)

Trade certificate or diploma	1.964	(0.964–3.999)
University	Ref	
Family structure		
Married, intact	Ref	
Single	0.780	(0.283–2.152)
De facto, intact	0.446	(0.132–1.512)
Married, step	0.171	(0.018–1.662)
De facto, step	1.024	(0.354–2.959)
P1 Employment classification		
Full time	Ref	
Part time	1.253	(0.498–3.151)
Unemployed	1.074	(0.244–4.740)
Not in labour force	1.062	(0.400–2.826)
Number of children in household		
1	Ref	
2	0.689	(0.353–1.344)
3	1.643	(0.777–3.477)
4 or more	1.652	(0.577–4.724)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.760	0.309–1.873
\$1,000–\$1,499	0.873	0.327–2.325
\$1,500–\$1,999	0.436	0.139–1.370
More than \$2,000	0.649	0.195–2.152
P1 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>2.043</b>	<b>(1.056–3.952)</b>
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>4.054</b>	<b>(1.681–9.780)</b>
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.338	(0.547–3.273)
P1 gets enough external support		
Gets enough	Ref	
<b>Does not get enough</b>	<b>2.127</b>	<b>(1.180–3.832)</b>
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>3.838</b>	<b>(2.358–6.248)</b>
P1 Hostile parenting		
Non-high hostile parenting	Ref	
<b>High hostile parenting</b>	<b>2.803</b>	<b>(1.691–4.646)</b>

Parent wellbeing and support were strongly associated with parenting self-efficacy. Compared to those primary carers with few life difficulties, a greater proportion with many life difficulties reported low parenting self-efficacy (1.7 per cent compared to 8.2 per cent;  $OR_{adj}=2.043$ ). Similarly, relative to those who were coping well, a greater proportion of primary carers who were coping poorly reported low parenting self-efficacy (1.8 per cent compared to 13.1 per cent;  $OR_{adj}=4.054$ ). Compared to those who received adequate external support, a greater proportion of primary carers who received insufficient external support reported low parenting self-efficacy (1.5 per cent compared to 4.2 per cent;  $OR_{adj}=2.127$ ). It should be noted that in the bivariate analyses, a similar pattern was evident for primary carers who were not clinically distressed compared to those who were clinically distressed (1.9 per cent compared to 10.4 per cent), but this was no longer statistically significant when the other variables were taken into account in the multivariable model.

Primary carer ratings of parenting self-efficacy showed the expected relationships with the other parenting measures. Compared to those who reported high parenting warmth, a greater proportion of primary carers with lower parenting warmth also reported lower parenting self-efficacy (1.2 per cent compared to 4.9 per cent;  $OR_{adj}=3.838$ ). Additionally, compared to those who reported lower hostile parenting, a greater proportion of primary carers reporting higher hostile parenting reported that they felt they were below average as a parent (1.4 per cent compared to 5.1 per cent;  $OR_{adj}=2.803$ ).

### *Couple families*

When couple relationship factors (that is, relationship satisfaction, argumentative relationship, support from partner) as reported by the primary carer were added to the multivariable analyses, country of birth and level of education were no longer statistically significant. Patterns for the relationships between maternal parenting self-efficacy and measures of maternal wellbeing and support remained significant.

Low relationship satisfaction was associated with low parenting self-efficacy. Compared to those who were satisfied in their relationships, a greater proportion of mothers who reported low relationship satisfaction also reported low parenting self-efficacy (1.3 per cent compared to 4.9 per cent;  $OR_{adj}=2.899$ ).

Fathers (secondary carers) in couple families were also asked to rate their parenting self-efficacy. With the exception of income, other child, demographic, family, and couple factors were not significantly associated with paternal ratings of parenting self-efficacy.

Compared to fathers receiving the highest family income (>\$2,000 per week), a greater proportion of those receiving a family income of \$600 to \$999 per week reported lower parenting self-efficacy (0.9 per cent compared to 2.6 per cent;  $OR_{adj}=3.151$ ). There was a trend in the bivariate analyses indicating that lower family income was generally associated with higher proportions of fathers who reported having trouble or not being very good as a parent.

Coping was significantly associated with parenting self-efficacy for fathers. Fathers who reported 'poor' levels of coping were 3.7 times more likely to have poor parenting self-efficacy compared to those who were coping well.

Finally, the bivariate analyses indicated that all three measures of couple relationship were associated with secondary carer reports of their parenting self-efficacy, with less positive relationship functioning associated with a higher proportion of low self-efficacy. However, these did not remain statistically significant when other variables were taken into account in the multivariable model. This contrasts with the findings for mothers, where couple relationship satisfaction remained significant in the multivariable analysis.

### *Lone-parent families*

The high degree of variability within the data combined with the smaller sample size precluded measures from achieving statistical significance in the multivariable model and for most comparisons in the bivariate analyses.

## **Discussion on parenting self-efficacy from infant cohort**

At the outset it is important to recognize that 98 per cent of parents reported that they felt they were at least average or above in their parenting. Low self-efficacy in this report focuses upon a very small proportion of all parents who felt they had trouble or were not very good at being a parent.

Notwithstanding the small proportion of parents who reported low parenting efficacy, there are important associations between how they felt about their parenting abilities and their family, socioeconomic and personal circumstances.

In families with infants, lower education was likely to be associated with feelings of lower parenting self-efficacy. Aside from this, there were surprisingly few socioeconomic factors associated with lower parenting efficacy. Instead, there were strong associations of low parenting efficacy with life difficulties, poorer coping, and lower levels of external support from family and friends. Parents who reported lower levels of parental warmth and

higher levels of parenting hostility towards their infants were also more likely to report that they had trouble or were not very good at being a parent (suggesting they recognised that their parenting practices were not optimal). For primary carers (that is, mostly mothers), low relationship satisfaction was also associated with feelings of low parenting self-efficacy. For fathers, lower income and difficulties coping predominated in their association with lower parenting efficacy.

## 4.7 Parental self-efficacy—child cohort

### Measures

Parenting self-efficacy was assessed identically in both the infant and child cohorts. These measures and their distributions are discussed in the previous section.

#### *All families*

Variables measuring family characteristics and parent wellbeing were associated with parenting self-efficacy in the child cohort. In contrast, relatively few associations with parenting self-efficacy were observed among the socioeconomic characteristics of the parent.

Of the family characteristics, a higher proportion of primary carers in de facto step-families reported lower parenting self-efficacy relative to those women in intact married families (9.0 per cent compared to 2.3 per cent;  $OR_{adj}=4.469$ ). A linear trend was also observed between numbers of children in the family and parenting self-efficacy. Generally speaking primary carers with more children tended to report that they were at least average or better at being a parent. Lower self-efficacy was more frequently reported by primary carers with fewer children. However, none of the specific categories reached statistical significance (refer to Table 25).

In terms of socioeconomic factors, income was not consistently associated with parenting self-efficacy. Fewer primary carers with family incomes of \$600 to \$999 reported lower parenting self-efficacy (7.9 per cent compared to 1.6 per cent;  $OR_{adj}=0.263$ ) compared to those with the lowest family income (<\$600 per week).

Psychological distress and poor coping were strongly associated with reports of lower parenting self-efficacy. Compared to those mothers with positive wellbeing, a greater proportion of mothers with clinical levels of psychological distress (20.1 per cent compared to 2.5 per cent;  $OR_{adj}=3.002$ ) or who were coping poorly (19.3 per cent compared to 2.4 per cent;  $OR_{adj}=3.6727$ ) also reported that they had trouble or were not good at being a parent.

In addition, as was found for the infant cohort, there was a significant relationship with hostile parenting. Compared to those who reported low levels of hostile parenting, a greater proportion of parents with high hostile parenting also reported that they had trouble or were not good at being a parent (9.3 per cent compared to 1.5 per cent;  $OR_{adj}=4.346$ ).

**Table 25: Child cohort, primary carer (P1) parenting self-efficacy, all families**

<b>n=3,400</b>	<b>Odds of P1 low self-efficacy OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Gender of study child		
Female	Ref	
Male	1.390	(0.820–2.359)
P1 Age at child's birth (years)		
Under 25	1.753	(0.759–4.047)
25–34	Ref	
35 and above	0.921	(0.514–1.649)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.998	(0.585–1.704)
P1 Education		
Year 9 or less	0.925	(0.443–1.932)
Year 10	0.470	(0.113–1.951)
Year 11 or 12	0.965	(0.468–1.986)
Trade certificate or diploma	0.925	(0.443–1.932)
University	Ref	
Family structure		
Married, intact	Ref	
Single	1.451	(0.662–3.179)
De facto, intact	1.201	(0.484–2.982)
Married, step	1.016	(0.306–3.369)
<b>De facto, step</b>	<b>4.469</b>	<b>(1.652–12.087)</b>
P1 Employment classification		
Full time	Ref	
Part time	0.941	(0.354–2.503)
Unemployed	1.179	(0.640–2.173)
Not in labour force	1.011	(0.295–3.471)
Number of children in household		
1	Ref	
2	0.892	(0.435–1.828)
3	0.647	(0.300–1.392)
4 or more	0.356	(0.117–1.085)
Income categories		
Less than \$600	Ref	
<b>\$600–\$999</b>	<b>0.263</b>	<b>(0.106–0.651)</b>
\$1,000–\$1,499	0.571	(0.257–1.269)
\$1,500–\$1,999	0.748	(0.321–1.742)
More than \$2,000	0.812	(0.317–2.079)
P1 Life difficulties		
Fewer	Ref	
Many	1.107	(0.581–2.108)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>3.672</b>	<b>(1.984–6.799)</b>
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>3.002</b>	<b>(1.411–6.388)</b>
P1 gets enough external support		
Gets enough	Ref	
Does not get enough	1.572	(0.954–2.591)

P1 Parental warmth		
Non-low warmth	Ref	
Low warmth	1.444	(0.861–2.420)
P1 Hostile parenting		
Non-high hostile parenting	Ref	
<b>High hostile parenting</b>	<b>4.346</b>	<b>(2.549–7.412)</b>
P1 Consistent parenting		
Non-low consistent parenting		
Low consistent parenting	1.117	(0.633–1.970)

### *Couple families*

When couple relationship factors reported by the primary carer (that is, relationship satisfaction, argumentative relationship, support from partner) were added to the multivariable analyses, the relationships with parenting self-efficacy and family income, family size, family structure and hostile parenting remained essentially similar to those obtained for the full sample. None of the measures of parent wellbeing or couple relationship were statistically significant.

Fathers (secondary carers) were also asked about their parenting self-efficacy. Results of multivariable analysis for their parenting self-efficacy were different from those associated with maternal reports of parenting self-efficacy. For fathers, family size, life difficulties, coping and argumentative relationships were significant.

Larger proportions of fathers with more children reported higher levels of self-efficacy. For example, compared to fathers with one child, fewer fathers with two children reported low parenting self-efficacy (6.1 per cent compared to 3.0 per cent;  $OR_{adj}=0.46$ ).

Life difficulties and poor coping were related to secondary carer reports of lower parenting self-efficacy. Relative to those with fewer life difficulties, a greater proportion of secondary carers with many life difficulties (11.2 per cent compared to 2.6 per cent;  $OR_{adj}=2.29$ ) or who were coping poorly (14.2 per cent compared to 2.8 per cent;  $OR_{adj}=2.41$ ) reported low parenting self-efficacy.

In terms of the couple relationship, where fathers reported higher levels of arguments in the relationship, they were also more likely to report lower parenting self-efficacy (7.8 per cent compared to 2.0 per cent;  $OR_{adj}=2.589$ ) relative to those in relationships that were less argumentative.

Finally, reports by fathers of their parenting warmth and hostile parenting were related to their parenting self-efficacy. Where fathers reported a warmer parenting style or lower levels of hostility, they were significantly more likely to report higher parenting self-efficacy ( $OR_{adj}=3.05$  and  $OR_{adj}=4.00$  respectively).

### *Lone-parent families*

Only parent age, psychological distress and hostile parenting were associated with global parenting self-efficacy in lone-parent families. Younger lone parents, those with psychological distress and those with higher levels of parental hostility were more likely to report that they had trouble or were not good at being a parent.

Specifically, compared to parents aged 25 to 34 years, a greater proportion of lone parents who were younger than 25 years reported low parenting self-efficacy (11.1 per cent compared to 5.6 per cent;  $OR_{adj}=3.70$ ). Relative to those with non-clinical levels of psychological distress, a greater proportion of lone parents with clinical levels of psychological distress reported low parenting self-efficacy (33.7 per cent compared to 4.1 per cent;  $OR_{adj}=4.34$ ). As well, hostile parenting was strongly related to lone-parent self-efficacy: lower parenting self-efficacy was 6.6 times more likely to be reported where the parent also reported higher levels of hostile parenting.

### **Discussion on parenting self-efficacy in the child cohort**

As with the infant cohort, less than 2 per cent of parents of young children felt that they had trouble with or were not good at being a parent.

Across all families with young children, these feelings were more likely to occur with de facto step-family status, psychological distress, poor coping and hostile parenting practices in the primary carer. For secondary carers with low parenting efficacy there was a greater likelihood of concurrent life difficulties, poor coping and arguments with a partner.



## 5 Parents living elsewhere

### 5.1 Introduction

To what extent do biological parents who are living apart from their child provide regular contact and care for the child? What are the financial and other practical contributions made by these parents to their child's care? How is the relationship between the child's separated parents associated with contact, contributions and the child's health and wellbeing? This section presents findings from sub-samples of the infant and child cohorts where the study child has one biological parent living elsewhere. It examines, from the perspective of the study child's primary (residential) carer, the amount and nature of contact between the child and parent living elsewhere (PLE), and primary carer reports of the extent to which PLEs are making child support payments and other financial and practical contributions to the child's care. It also examines how a resident parent's perceptions of the relationship between themselves and the PLE is related to contact, contributions and the study child's health and wellbeing.

### 5.2 Section summary

The findings presented in this section illustrate the complexity and variety of care arrangements that exist between biological parents who do not live together. These results provide some initial insights into the caring arrangements provided for infants and children in the two cohorts who, at the time of interview, were living apart from one biological parent.

- The data here represent one of the few studies of parenting care provided by non-resident parents based on a population-representative sample of Australian children. However, some caution should be exercised in interpreting these findings as the data are based on one perspective only (that of the primary, resident, carer) and there is the possibility of some sampling and respondent biases.
- Eighty per cent of PLEs had contact with the study child, while one in five PLEs in both samples was reported to have no current contact. A range of factors appeared to facilitate regular contact and overnight care. These included factors associated with the nature of shared parenting (whether there was a formal shared care agreement and a set pattern to contact); geographical proximity; the extent to which PLEs were meeting their agreed financial contributions to the child; and the nature of the relationship between separated parents.
- While more than half of the PLEs were reported to have met their financial obligations in terms of child support payments for the month prior to the interview, a substantial proportion had paid only some or none of their agreed child support. There were clear patterns indicating that the extent of underpayment was more significant for the child sample compared to the infant sample. Lower levels of PLE contributions for the child sample compared to the infant sample were also evident when other areas of contribution were examined.
- To date, much policy interest has focused on the child support contributions of PLEs, but the data presented here indicate that up to one-third of non-resident parents make a number of other practical and financial contributions on at least an occasional basis.
- Levels of conflict between primary carer and PLE as reported by the primary carer were generally quite low. Despite this, conflict showed clear patterns of association with several aspects of care arrangements—being higher for those with no set pattern of contact, those living further away from the study child, and those who had paid a lower proportion of their agreed child support. Those with the lowest level of primary carer–PLE conflict had the most frequent contact with the study child in both samples, while the highest levels of conflict were for those in the medium frequency categories for infants and those with low frequency contact for children.

## 5.3 Overview of analytical approach

This section describes the proportions of study children in the LSAC infant and child cohorts who at the time of data collection were living apart from one of their parents, typically a biological parent. For this report we use the term parent living elsewhere, although such parents have also been referred to as non-resident or non-custodial parents. The frequency and amount of contact between the child and the PLE, the contribution of the PLE to the child's financial and material resources, the quality of the relationship between the child's residential and non-residential parents, and the associations between inter-parental conflict and the child's wellbeing are described.

The data examined here were collected during the interview with the child's primary carer, usually the study child's biological mother. No attempt was made at Wave 1 to collect data directly from PLEs. Feasibility testing revealed that consent and response rates for potential PLE data collection were going to be very low and the resulting sample was likely to be small and non-representative of PLEs. Thus, the data presented here (for example, reports on the quality of the relationship between the child's parents) represent the P1's perspective only, which may be different from that held by the PLE. The specific items and scales used in the PLE section of the primary carer interview are described within the following results section.

The reader is directed to Appendix E for additional information in the form of tables and figures relevant to this section.

## 5.4 Infant cohort

### Results

The point of reference for this section is the study child from the infant cohort (aged 0 to 1 years). Of a total sample of 5,097 infants, 485 (9.5 per cent) were living apart from one parent, with six (0.1 per cent) of these due to the death of the parent. Additionally, nine children (0.2 per cent) were living apart from two parents at the time of interview. This arrangement is likely to be due to children living in out-of-home care or adopted children, although it is possible that some of these children were, for example, living apart from a biological parent and a step-parent.

Male and female infants were equally likely to have one parent living elsewhere. Table 26 presents the numbers and proportions of male and female children in the infant cohort who had none, one or two parents living elsewhere according to the report of the primary carer.

**Table 26: Number (proportion) of infants with a parent or parents living elsewhere by child gender**

	Male children n (%)	Female children n (%)	All children n (%)
Both parents present	2,353 (90.2)	2,250 (90.5)	4,603 (90.3)
One non-resident parent			
Parent living elsewhere	249 (9.5)	230 (9.2)	479 (9.4)
Parent deceased	4 (0.2)	2 (0.1)	6 (0.1)
Two non-resident parents	4 (0.2)	5 (0.2)	9 (0.2)
<b>Total n</b>	<b>2,610</b>	<b>2,487</b>	<b>5,097</b>
Missing	4	6	10

The majority of PLEs were male (97.7 per cent) and were the biological parents of the study children (99.6 per cent).

In terms of the geographical proximity of the PLE to the residence of the study child, there was considerable variability, with 24.7 per cent of PLEs living within 5 kilometres of the child's home, 24.7 per cent within 5 to 19 kilometres, 19.2 per cent within 20 to 49 kilometres, and the remainder (31.5 per cent) living 50 kilometres or more away. Forty-nine primary carers were unsure how far away the PLE lived.

For analyses of patterns of contact and care, financial and other support, and conflict between primary carer and PLE, children living apart from a parent due to the parent's death ( $n=7$ ), children who were reported to be living apart from two parents ( $n=10$ ), and children for whom the PLE was not the child's biological parent ( $n=2$ ) were excluded. This provides a sample for analysis in which the infant was living apart from one biological parent for reasons other than death or removal of the child from both parents ( $n=479$ ). Ten primary carers declined to complete some or all of this section of the questionnaire.

While the majority of parents living apart from the study children had some contact with the child, this was not universally the case. For 85 of the infants (17.7 per cent), the primary carer reported that the PLE had never met the child. The most common reasons for having never met were: the PLE did not want to see child ( $n=28$ , 33.7 per cent); the identity of the PLE was unknown ( $n=16$ , 19.3 per cent); or distance ( $n=10$ , 12.0 per cent).

An additional 24 PLEs (5.0 per cent) were reported to have met the study child but to have had no contact in the last year. The reasons given by the primary carer for this non-contact were similar to the reasons given for PLEs who had never met the study child, with 13 (68.4 per cent) reporting the main reason for no contact being due to the PLE not wanting to see the child.

### Patterns of contact and care

The analyses for subsequent sections are further restricted to the sample of children who had one parent living elsewhere with whom the child had had some contact in the last year ( $n=358$ ).

Primary carers were asked whether they had a legal shared or joint parenting arrangement with the PLE for the care of the study child. For the majority of infants ( $n=338$ , 94.7 per cent) the primary carer reported themselves as being the main carer for the child. For 15 children (4.2 per cent) the parents had a shared care arrangement and one (0.3 per cent) indicated some other kind of care arrangement.

Two-thirds of PLEs had face-to-face contact with the child at least daily ( $n=90$ , 25.1 per cent) or weekly ( $n=153$ , 42.7 per cent). Forty-nine PLEs (13.7 per cent) were reported to have contact less frequently than once every three months.

Frequency of contact was unrelated to the gender of the study child, but was associated with the type of care arrangements, location where the contact occurred, and proximity of the PLE to the infant's home.

For the small number of study infants where the PLE had a shared or joint parenting arrangement ( $n=15$ ), the proportion having more frequent contact with the study infant was higher than for the rest of the sample. For those with shared care, 86.6 per cent of PLEs had daily (33.3 per cent) or weekly (53.3 per cent) contact compared with 67.2 per cent (24.9 per cent and 42.3 per cent respectively) for those without shared care. None of the PLEs with shared care had contact less frequent than once every three months compared to 14.2 per cent of those without shared care.

Contact arrangements with the PLE were reported to follow a set pattern for 64.1 per cent of the study infants. When compared with the rest of the sample, for PLEs whose contact did not follow a set pattern, a lower proportion had daily (37.6 per cent compared to 5.6 per cent) or weekly (47.1 per cent compared to 37.9 per cent) contact with the study infant, and a higher proportion had contact less frequent than once every three months (2.3 per cent compared to 28.2 per cent).

For the majority of infants (78.9 per cent), the PLE had contact with the study infant either exclusively in the home of the primary carer (39.9 per cent) or in the primary carer's home and elsewhere (39.0 per cent). For these PLEs, a slightly higher proportion had daily contact with the study infant, but otherwise the frequency of contact distributions were similar to the total sample. In contrast, very few of the 74 PLEs whose contact with the child only occurred away from the primary carer's home had daily contact with the study infant (2.7 per cent), and 23 per cent had contact less frequent than once every three months.

Proximity of the PLE's home to the study infant's home was associated with different frequency of contact patterns. For those who lived less than 5 kilometres or between 5 and 19 kilometres from the study infant, a higher proportion had daily contact (40.6 per cent and 37.6 per cent respectively) than for the rest of the sample. A small proportion of PLEs who lived more than 50 kilometres from the study infant had daily contact with the study infant (3.4 per cent) and a large proportion (40.2 per cent) had contact less frequent than once every three months.

In addition to direct contact during the day, the extent to which children are cared for overnight by their PLE is thought to be important. Overnight care may be qualitatively different from daytime contact due to the nature of activities undertaken by the parent. For example, overnight care is more likely to entail the parent undertaking routine activities with the child, such as shared meals or managing bath time and bedtime routines.

Overnight care by the PLE was relatively rare for the infant sample, received by only 86 infants (24.4 per cent). Of those infants receiving overnight care, half received this on a weekly basis ( $n=43$ ) while the remainder were evenly split between overnight care fortnightly ( $n=22$ ) or less often ( $n=21$ ).

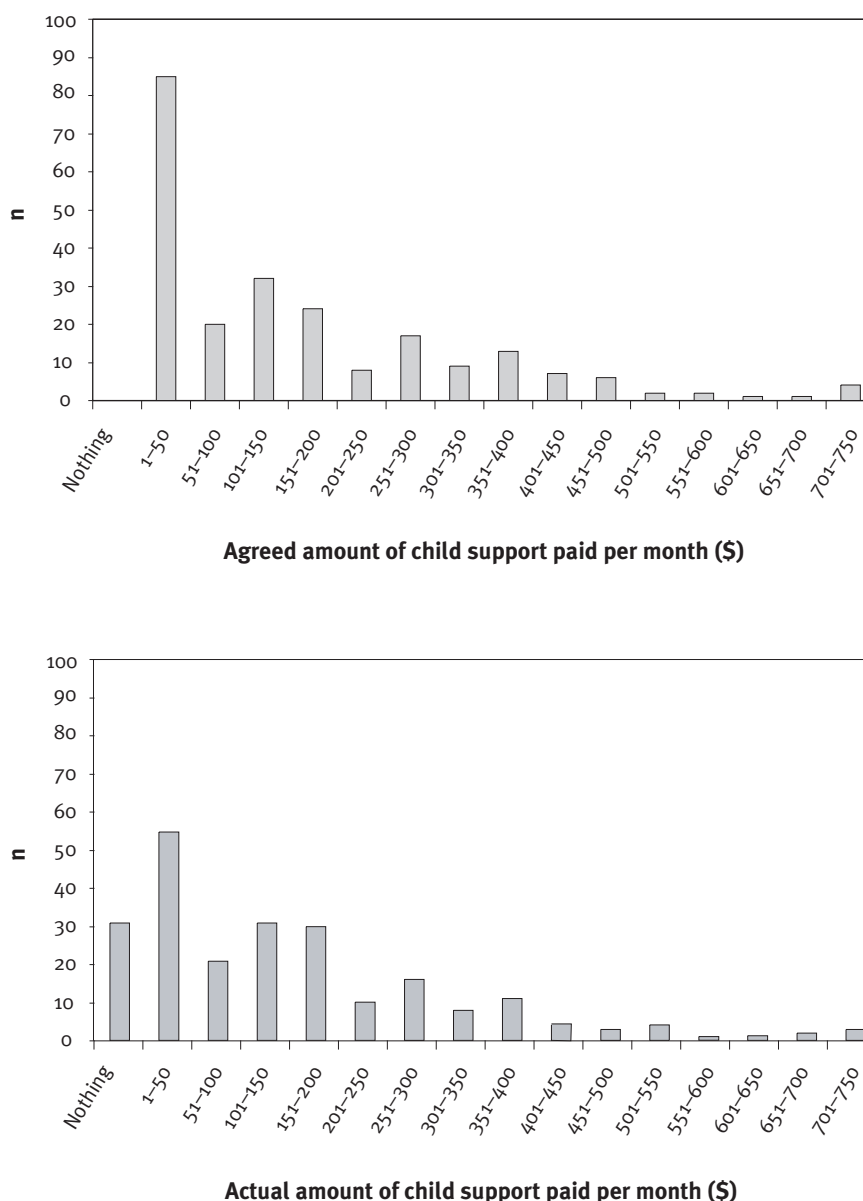
Overnight care by the PLE showed some variations according to child gender, pattern of care, proximity and frequency of daytime contact. More male infants (30.0 per cent) than female infants (18.6 per cent) received overnight care. Overnight care was more common for infants where the PLE's contact with the child followed a set pattern (29.0 per cent compared to 16.1 per cent), and for PLEs who had contact with the child either at the primary carer's home and elsewhere (43.8 per cent), or elsewhere only (24.3 per cent) compared to those who had contact only at the primary carer's home (5.7 per cent). Overnight contact was more common for PLEs who lived closer to the infant's home, and who had more frequent daytime contact.

### **Financial and other support**

For the infant sample, 278 families (78.5 per cent) had a formal agreement for the PLE to provide a financial contribution to the primary carer to meet child-rearing expenses (that is, child support payments). Primary carers were asked about the amount of money per month they were meant to receive from the PLE according to this agreement ('agreed amount', including a \$0 amount) and the actual amount of money they received from the PLE for the previous month ('actual amount') (refer to Figure 3). For the infant sample, 37 primary carers had no set amount, did not know how much they were meant to receive, refused to answer, or stated that this question was not applicable, and so are excluded from the following analyses. Additionally, as 'agreed amount' and 'actual amount' were to be compared, those who responded 'don't know' for 'actual amount' ( $n=10$ ) were also omitted from the following analyses.

While the median for child support was \$128 per month, 45.5 per cent of primary carers reported an agreed amount of \$100 per month or less, with nearly half of these reporting an agreed amount of \$20 per month or less (19.5 per cent of the sample). For 9.5 per cent of primary carers, the agreed amount was \$400 or more per month.

**Figure 3: Primary carer report of the agreed amount of child support per month and actual amount of child support received from PLE for the last month, infant cohort**



There was a stronger negative skew for the distribution for the actual amount paid for child support in the last month compared to the agreed amount. The median actual amount was \$120 per month, \$8 less than the median agreed amount (that is, 6.3 per cent of the agreed amount), and 13.4 per cent reported that no child support had been paid in the last month.

Excluding the cases in which the agreed amount was 'nothing', over half (n=145, 62.8 per cent) of the primary carers reported that for the previous month they had received the same amount of money from the PLE as was agreed to be paid to them. However, 48 parents (20.8 per cent) reported receiving less money than was agreed, the majority of these receiving no payment (n=31, 13.4 per cent). Four (1.7 per cent) received less than half of what was agreed, and 12 (5.2 per cent) received half or more of what was agreed for the last month.

A proportion of parents (n=39, 16.9 per cent) reported that the PLE had paid more in the last month than was agreed. Around half of these (n=18, 7.8 per cent) were paid half as much again, 15 (6.5 per cent) were paid up to four times as much, and six (2.6 per cent) were paid more than four times what was agreed for the last month.

These data should be interpreted with caution, as they reflect one month's payment of child support, and variations between what was paid and what was owed may reflect variations that adjust for differences in preceding months.

### Other financial and practical support

The amount of money that PLEs provide to primary parents in child support represents one way by which PLEs may contribute to the costs of raising their infant children. To assess the extent to which PLEs contributed to their infant children's material needs, one-off child or household expenses, or provided additional assistance with child care, the primary carer was asked a series of questions as summarised in Table 27. The table shows the frequency with which PLEs contributed in each of these ways on a 4-point scale ranging from 'never' to 'often'. The table also shows the proportion of PLEs who provided assistance 'sometimes' or 'often' on at least three of these five indicators of additional support.

**Table 27: Number (proportion) of PLEs providing additional material, financial or child care support to their infant child**

	Frequency of providing additional support			
	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)
Purchase clothes, nappies, toys, presents etc.	96 (27.1)	58 (16.4)	105 (29.3)	95 (26.8)
Pay for child's health-related expenses	232 (65.4)	30 (8.5)	56 (15.8)	37 (10.4)
Provide extra money for child care expenses	296 (82.9)	11 (3.1)	30 (8.4)	20 (5.6)
Provide extra money for household expenses	225 (62.8)	20 (5.6)	78 (21.9)	33 (9.3)
Care for child when needed by P1	168 (47.2)	30 (8.4)	83 (23.3)	75 (21.1)
Provided support for three or more of the above: 'often' or 'sometimes'	<b>No</b> 242 (68.8)		<b>Yes</b> 110 (31.3)	

The most common forms of additional support provided by PLEs sometimes or often were purchases for the infant (56.1 per cent) and caring for the infant when needed by P1 (44.4 per cent). Nearly one in three PLEs (31.3 per cent) provided three or more of these forms of support sometimes or often.

### Conflict between primary carer and PLE

#### Measure

Three items assessing the degree of conflict between the P1 and PLE were included in the LSAC survey from the conflict subscale of Ahrons' Quality of Co-parental Communication scale (Ahrons 1981). The internal reliability of these items was acceptable (Cronbach's  $\alpha=0.758$ ).

The following three questions made up the P1-PLE conflict scale:

- How well do you get along with the child's other parent?
- How often do you disagree with the child's other parent about basic child-rearing issues?
- How often is there anger or hostility between you and the child's other parent?

The items were scored on a 5-point Likert scale with 1 representing low levels of hostility/disagreement and 5 representing a high level. The overall score was gained through summing the responses on the three items. For items 2 and 3, a response of 'don't discuss' was included. If one of these items was answered 'don't discuss', this was substituted with the mean of the responses for the other two items. However, if both items were answered 'don't discuss' the scale was coded as missing.

## Results

Scores for primary carer–PLE conflict were negatively skewed with a mean of 7.13, indicating that primary carers on average reported ‘rarely’ having conflict with the PLE.

The extent to which the primary carer-reported conflict with the PLE varied by child gender, type of care arrangements, location where the contact occurred, and proximity of the PLE to the infant’s home support discrepancy between agreed and actual child care payments was examined. Child gender, whether primary carer had shared care or was the main carer, and whether the PLE had overnight care, were not significantly associated with conflict.

Parents who reported that the PLE’s contact with the child had a set pattern had a lower level of conflict with the PLE than those with non-set contact patterns (mean=6.55 compared to 8.16,  $t(340)=-5.16$ ,  $p<0.05$ ). Distance showed a positive linear relationship with conflict. P1s reported higher levels of conflict with PLEs who lived further away from the study child’s home ( $F(3,345)=3.34$ ,  $p<0.05$ ).

Further, there was an inverse-U relationship between frequency of PLE daytime contact with the child and conflict. Higher levels of conflict were reported with PLEs who had fortnightly contact compared to those with daily contact or those with contact less than once every three months ( $F(4,348)=12.07$ ,  $p<0.005$ ).

The discrepancy between the agreed and actual amount of child support paid showed a negative linear relationship with conflict. This indicated that the lower the proportion of child support payment that was received in the last month, the higher the level of conflict between P1 and PLE ( $F(2,229)=12.07$ ,  $p<0.001$ ).

The extent to which primary carers reported conflict with the PLE was associated with infant outcomes was also examined. P1-reported conflict with the PLE was not significantly related to infant physical health, socio-emotional behaviours or learning.

## 5.5 Child cohort

### Results

The point of reference for this section is the study child from the child cohort (aged 4 to 5 years). Of the total sample of 4,138 children in the child cohort, 809 (16.2 per cent) were living apart from one parent, with 27 (0.5 per cent) of these due to the death of the parent. Additionally, 22 children (0.4 per cent) were living apart from two parents at the time of interview. Compared to the infant cohort, a higher proportion of the child cohort had one parent living elsewhere (9.4 per cent compared to 15.7 per cent).

Male and female children aged 4 to 5 years were equally likely to have one parent living elsewhere. Table 28 presents the numbers and proportions of male and female children in the child cohort who had none, one or two parents living elsewhere, according to the report of the primary carer.

**Table 28: Number (proportion) of children with a parent or parents living elsewhere by child gender**

	Male children n (%)	Female children n (%)	All children n (%)
Both parents present	2,099 (83.0)	2,039 (83.6)	4,138 (83.6)
One non-resident parent			
Parent living elsewhere	410 (16.2)	372 (15.2)	782 (15.7)
Parent deceased	12 (0.5)	15 (0.6)	27 (0.5)
Two non-resident parents	8 (0.3)	14 (0.6)	22 (0.4)
<b>Total n</b>	<b>2,529</b>	<b>2,440</b>	<b>4,969</b>
Missing			14



Similar to the infant sample, the majority of PLEs for the child sample were male (94.0 per cent) and were the biological parents of the study children (99.1 per cent).

There was considerable variability in the geographical proximity of the PLE to the residence of the study child: 22.1 per cent of PLEs lived within 5 kilometres of the child's home; 23.0 per cent within 5 to 19 kilometres; 15.5 per cent within 20 to 49 kilometres and the remainder (39.4 per cent) lived 50 kilometres or more away. Sixty-seven P1s were unsure how far away the PLE lived. Compared to the infant sample, a greater proportion of the child sample had PLEs who lived more than 500 kilometres from the child's home, including overseas (13.4 per cent compared to 19.0 per cent).

For analyses of patterns of contact and care, financial and other support, and conflict between primary carer and PLE, children living apart from a parent due to the parent's death ( $n=27$ ), children who were reported to be living apart from two parents ( $n=22$ ), and children for whom the PLE was not the child's biological parent ( $n=7$ ) were excluded. This provides a sample for analysis in which the study child was living apart from one biological parent for reasons other than death or removal of the child from both parents ( $n=778$ ). Fourteen primary carers declined to complete some or all of this section of the questionnaire.

While the majority of parents living apart from the study children had some contact with their child, this was not universally the case. For 72 children (9.3 per cent), the primary carer reported that the PLE had never met the child. This was half the rate reported for the infant sample where 17.7 per cent had never met the child. As with the infant sample, the most common reason given by the primary carer for the PLE never having met the child was that the PLE did not want to see the child (32.8 per cent). The next most common reasons were that the PLE did not know about the child (14.9 per cent), the PLE lived too far away or overseas (13.4 per cent) and the identity of the PLE was unknown (9.0 per cent).

An additional 87 PLEs (11.2 per cent) were reported to have had no contact with the study child in the last year. The most common reasons for this non-contact were: the PLE did not want to see child ( $n=34$ , 45.3 per cent), the PLE was the subject of a restraint order or had a history of substance abuse or violence problems ( $n=15$ , 20.0 per cent) or lived too far away from the child ( $n=13$ , 17.3 per cent). Compared to the infant sample, protection orders, violence or drug use were twice as likely to be given as reasons for non-contact with the child. Other reasons for non-contact were cited for a few PLEs in the child sample which were not reported for the infant sample, including PLE illness, lack of time, and imprisonment.

### **Patterns of contact and care**

The analyses for subsequent sections are restricted to the sample of children who had one parent living elsewhere with whom the child had had some contact in the last year ( $n=616$ ).

Primary carers were asked whether they had a legal shared or joint parenting arrangement with the PLE for the care of the study child. For the majority of children ( $n=511$ , 83.2 per cent), the interviewed parents reported themselves as being the main carer for the child. For 83 children (13.5 per cent) the parents had a shared care arrangement, and contact followed a set pattern for 67.8 per cent of the sample.

For this sample of children, just under half of PLEs had contact with the child at least daily ( $n=77$ , 12.5 per cent) or weekly ( $n=222$ , 36.0 per cent). Seventy-two PLEs (11.7 per cent) were reported to have contact less frequently than once every three months. The frequency of daytime contact for the child sample was quite different from that observed for the infant sample, with a smaller proportion having more frequent contact. For example, 12.5 per cent of PLEs for the child sample had daily contact compared to 25.1 per cent for the infant sample.

Frequency of contact was unrelated to the gender of the study child, but was associated with the type of care arrangements, location where the contact occurred, and proximity of the PLE to the child's home. PLEs who had more frequent contact (daily or weekly) were more likely to: have shared care of the child; have a set pattern of care; have contact with the child wholly or partly in the home of the primary carer; and be living within 5 kilometres of the child's home. In comparison, PLEs who had contact every one to three months or less often were more likely to: have their children receiving main care from the primary carer; not have a set pattern of care; and be living further than 49 kilometres away from their child's home.



Compared to PLEs with infant children, those with 4 to 5 year-old children were more likely to have a shared parenting agreement (4.2 per cent compared to 14.0 per cent), to have contact visits not at the primary carer's home (21.1 compared to 52.2 per cent), and to live more than 49 kilometres from the child's home (24.7 per cent compared to 33.6 per cent).

Overnight care by the PLE was relatively common for the child sample, received by 422 children (70.8 per cent). This is a very significant contrast to the infant sample, where only 24.4 per cent received overnight care from their PLE.

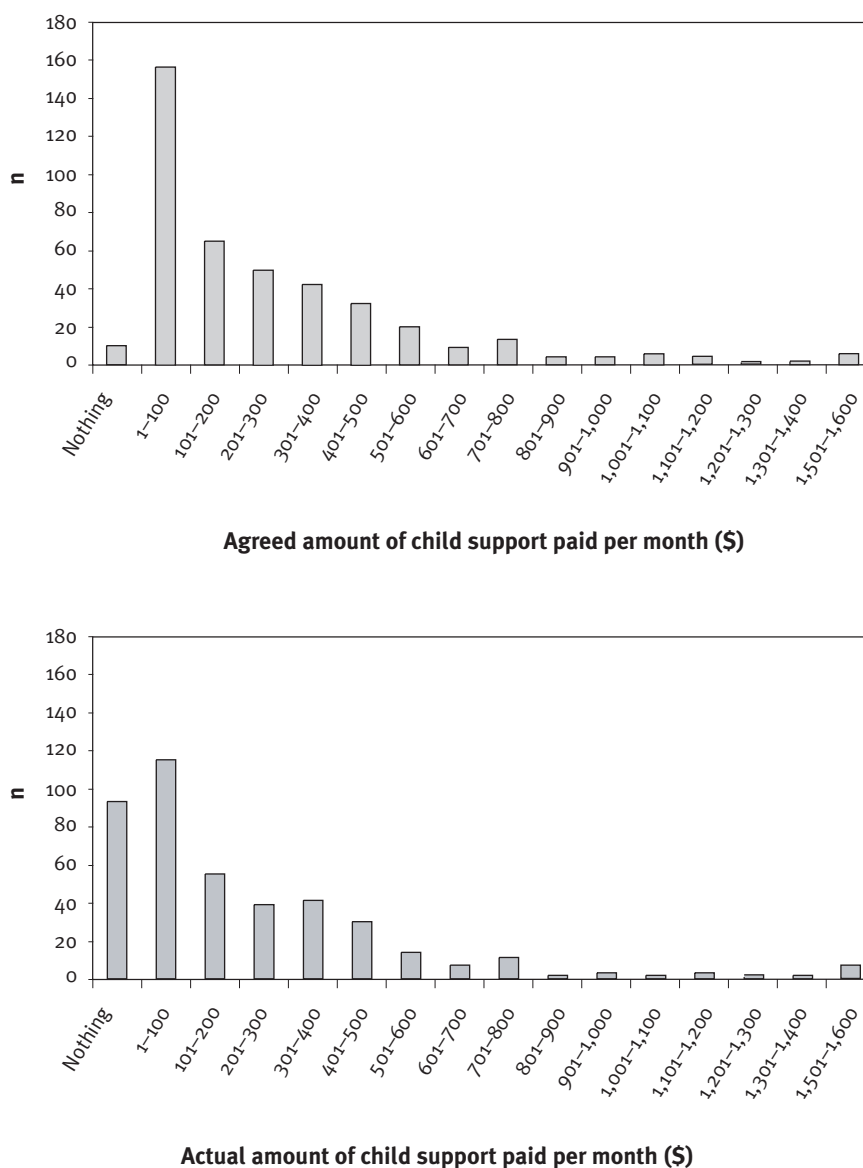
Children were more likely to receive overnight care from their PLE if they were male children, there was a shared parenting agreement, contact was not restricted to the primary carer's home only, and daytime contact was more frequent. PLE proximity to the child's home was not related to overnight contact.

### **Financial and other support**

For the child sample, 479 families (79.4 per cent) had a formal agreement for the PLE to provide a financial contribution to the primary carer to meet child-rearing expenses (that is, child support payments). Primary carers were asked about the amount of money per month they were meant to receive from the PLE according to this agreement ('agreed amount', including a \$0 amount) and the actual amount of money they received from the PLE for the previous month ('actual amount'). For the child sample, 43 primary carers had no set amount, did not know how much they were meant to receive, refused to answer, or stated that this question was not applicable, and so are excluded from the following analyses. Additionally, as 'agreed amount' and 'actual amount' were to be compared, those who responded 'don't know' or 'refused' for 'actual amount' (n=12) were also omitted from the following analyses. This left a final sample size of 424.

As shown in Figure 4, the agreed amount for child support varied considerably across the child sample. The most common agreed amount (the median) for child support was \$200 per month (compared to \$128 per month for the infant sample), although 18.2 per cent of primary carers reported an agreed amount of \$20 per month or less. In comparison, 28.1 per cent reported an agreed amount of \$400 per month or more, which was significantly greater than the proportion for the infant sample who reported this agreed amount (9.5 per cent).

**Figure 4: Primary carer report of the agreed amount of child support per month and actual amount of child support received from PLE for the last month, child cohort**



The median actual amount of child support received from the PLE in the last month was smaller than the median agreed amount by \$80, or 40 per cent of the agreed amount. This is a substantially greater discrepancy than was reported by primary carers for the infant sample, where the difference between the median agreed and paid was 6.3 per cent of the agreed amount. Excluding the cases in which the agreed amount was 'nothing', over half (n=251, 60.6 per cent) of the primary carers reported that for the previous month they had received the same amount of money from the PLE as was agreed to be paid to them. However, 135 parents (32.6 per cent) reported receiving less money than was agreed, the majority of these receiving no payment (n=84, 20.3 per cent), and a further 19 (4.6 per cent) receiving less than half of what was agreed.

A smaller proportion of parents (n=28, 6.8 per cent) reported that the PLE had paid more in the last month than was agreed. Around half of these (n=13, 3.1 per cent) were paid half as much again, 12 (2.9 per cent) were paid up to four times as much, and three (0.7 per cent) were paid more than four times what was agreed.

Compared to the infant sample, a similar proportion of primary carers in the child sample received the agreed amount of child support from the PLE (60.4 per cent compared to 60.8 per cent), but a greater proportion received less than the agreed amount (23.3 per cent compared to 32.4 per cent).

### Other financial and practical support

To assess the extent to which PLEs contributed to their children's material needs or one-off child or household expenses, or provided additional assistance with child care, the primary carer was asked a series of questions as summarised in Table 29. The most common forms of additional assistance (provided 'sometimes' or 'often') were purchases for the child (55.5 per cent) and needed child care (32.6 per cent). Across the five forms of additional assistance, 21.0 per cent of PLEs were reported to provide three or more of these sometimes or often. Compared to the infant sample, a smaller proportion of PLEs for the child sample were providing assistance with three or more areas (31.3 per cent compared to 21.0 per cent).

**Table 29: Number (proportion) of PLEs providing additional material, financial or child care support to their child**

	Frequency of providing additional support			
	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)
Purchase clothes, toys, presents etc.	96 (15.6)	156 (25.3)	205 (33.3)	143 (22.2)
Pay for child's health-related expenses	446 (72.1)	48 (7.8)	70 (11.4)	43 (7.0)
Provide extra money for child care or school expenses	456 (74.0)	36 (5.8)	60 (9.7)	59 (9.6)
Provide extra money for household expenses	483 (78.4)	34 (5.5)	57 (9.3)	35 (5.7)
Care for child when needed by P1	345 (56.0)	67 (10.9)	109 (17.7)	92 (14.9)
Provided support for three or more of the above 'often' or 'sometimes'	No 470 (79.0)		Yes 125 (21.0)	

### Conflict between primary carer and PLE

Primary carer-reported conflict with the PLE was assessed using the same items as for the infant sample. Scores for the primary carer–PLE conflict scale were negatively skewed with a mean of 8.14 indicating that on average P1s 'sometimes' experienced conflict with the PLE. This was higher than the mean conflict score for the infant sample (7.13).

The extent to which primary carer-reported conflict with the PLE varied by child gender, type of care arrangements, location where the contact occurred, proximity of the PLE to the child's home and support discrepancy between agreed and actual child care payments was examined. For the child sample—similar to the infant sample—child gender, whether the primary carer had shared care or was the main carer, and whether the PLE had overnight care were not significantly associated with conflict.

Parents who reported that the PLE's contact with the child had a set pattern had a lower level of conflict with the PLE than those with non-set contact patterns (mean=7.76 compared to 8.88,  $t(579)=-4.12$ ,  $p<0.05$ ). Distance showed a positive linear relationship with conflict. P1s tended to report higher levels of conflict with PLEs who lived further away from the study child's home ( $F(3,583)=3.20$ ,  $p<0.05$ ).

There was generally a linear relationship between frequency of PLE daytime contact with the child and conflict. Higher levels of conflict were reported with PLEs who had less frequent contact, with a slight drop in conflict for those with the least frequent contact ( $F(4,598)=14.56$ ,  $p<0.01$ ). This contrasted with the findings for the infant sample, where conflict was greatest for those with medium frequency contact and lowest for low and high frequency contact.

Conflict was highest between primary carers and PLEs for those families where the actual amount of child support paid in the last month was less than the amount agreed ( $F(2,447) = 4.82$ ,  $p<0.001$ ).

The extent to which the primary carer-reported conflict with the PLE was associated with child outcomes was also examined. Primary carer-reported conflict with the PLE was not significantly related to child physical health, socio-emotional behaviours or learning.

## 5.6 Discussion

The results presented in this section provide some initial insights into the care arrangements provided for infants and children in the two cohorts who, at the time of interview, were living apart from one biological parent. Some caution should be exercised in interpreting these findings as the data are based on primary carer reports only. Past research has shown that there may be considerable differences between resident and non-resident parents' perceptions of subjective measures (such as perceived conflict), as well as for those measures which might be regarded to be relatively objective (for example, frequency of contact).

In addition, 10 primary carers for the infant cohort and 14 primary carers for the child cohort declined to complete this section, introducing the possibility of a response bias. For the conflict questions, analyses were further restricted to exclude those sample members who reported that they did not discuss parenting with the PLE, which may have resulted in an exclusion of those with potentially the highest level of conflict and/or disengagement.

Despite these limitations, the data here represent one of the few studies of parental care provided by non-resident parents based on a population-representative sample of Australian children.

The findings presented here illustrate the complexity and variety of care arrangements that exist between biological parents who do not live together. While one in five PLEs in both samples was reported to have no current contact with the study child, the majority did have contact. A range of factors appeared to facilitate regular contact and overnight care. These included factors associated with the nature of shared parenting (whether there was a formal shared care agreement and a set pattern to contact); geographical proximity; the extent to which PLEs were meeting their agreed financial contributions to the child; and the nature of the relationship between separated parents.

While more than half of the PLEs were reported to have met their financial obligations in terms of child support payments for the month prior to the interview, a substantial proportion had paid only some or none of their agreed child support. There were clear patterns indicating that the extent of underpayment was more significant for the child sample compared to the infant sample. Lower levels of PLE contributions for the child sample compared to the infant sample were also evident when other areas of contribution were examined. To date, much policy interest has focused on the child support contributions of PLEs, but the data presented here indicate that up to one-third of non-resident parents make a number of other practical and financial contributions on at least an occasional basis.

Levels of conflict between the primary carer and PLE, as reported by primary carers, were generally quite low. Despite this, conflict showed clear patterns of association with several aspects of care arrangements, being higher for those with no set pattern of contact, those living further away from the study child, and those who had paid a lower proportion of their agreed child support. Those with the lowest level of primary carer–PLE conflict had the most frequent contact with the study child in both samples, while the highest levels of conflict were for those in the medium frequency categories for infants and those with low frequency contact for children.

Due to the cross-sectional nature of the data available from LSAC at this stage, it is not possible to make causal assumptions about the associations reported here. In addition, the differences between samples may arise from a variety of factors which will not be able to be differentiated until longitudinal data become available. For example, it is not clear whether differences in patterns of contact between the samples reflect the effects of child age, the increased likelihood that PLEs for the older sample are more likely than PLEs for the infant sample to have a history of ever having lived with the child and his/her residential parent, or whether the patterns reflect the effects of accumulated experiences in terms of contributions and inter-parent conflict.

The potential for LSAC to shed more light on these issues will grow over the duration of the study. With subsequent waves of data collection, changes over time will be able to be examined for individual children with a parent living elsewhere, and an increasing proportion of both cohorts will experience living apart from one parent due to parental separation. In addition, it is anticipated that future waves of LSAC will seek to collect data from PLEs to supplement that collected from primary carers. This will provide important opportunities for comparison of these alternative perspectives.

## 6 Child outcomes

### 6.1 Introduction

Perhaps the most central reason for interest in the analyses reported in previous sections rests on the assumption that family characteristics, family functioning and parenting ‘matter’ —in other words, that they have an impact on children’s development and wellbeing. As noted in Section 1, there is good evidence from existing research to suggest that they do, and that the dimensions of families and parenting considered here are among those of most critical importance. However, it is important to test this assumption with the LSAC cohorts by directly assessing the association of aspects of families and parenting with children’s developmental status. While the focus of this report is on parenting and families, and not on child outcomes, we include here a brief examination of relationships between family characteristics, parenting and child outcomes in the context of other potential contributors to these outcomes to verify that they do indeed ‘matter’ and to elucidate the nature and strength of the associations between them and child outcomes. No previous Australian studies of children’s development have had the capacity to examine these questions in such depth, nor with such a large representative sample.

From the various measures of infant and child developmental status which were collected in LSAC Wave 1, an Outcome Index has been derived which summarises this complex information into one overall index and three sub-domain scores (Sanson et al. 2005).

The overall Outcome Index is used here to address the following questions:

- To what extent are parental self-efficacy, warmth, hostility and (in the case of children) consistency associated with infant and child outcomes?
- Do they have similar relationships in each cohort?
- What other characteristics of the child, family and neighbourhood context also contribute to these outcomes?

### 6.2 Section summary

The findings on the association of family characteristics and parenting practices with the probability of an infant or child falling in the bottom 15 per cent of the distribution on the overall Outcome Index, give a clear indication that they ‘matter’ for children’s development, with parenting practices having a particularly prominent role.

- All three parenting measures were strongly related to negative outcomes in the infancy cohort, with the associated odds ratios often being higher than for any other variable.
- There was evidence of boys being more vulnerable to negative outcomes, even in infancy, but more clearly in childhood.
- The findings for the child cohort suggest that parental hostility is a particularly potent predictor of the probability of a child falling in the bottom 15 per cent of the distribution on the overall Outcome Index. It showed strong and consistent effects across all three samples (all families, couple families and lone-parent families).
- Consistency in parenting practices, particularly around discipline, also emerged as an important predictor of outcomes in the child cohort. Compared to the infant cohort, parental warmth and self-efficacy were less salient.
- Unlike the infant cohort, hostile parenting by the secondary parent made significant unique contributions to prediction, even after accounting for the primary parent’s parenting. This suggests that the secondary parent has an increased role in the development of 4 to 5 year olds in comparison to infants.

- In terms of parent and family characteristics, the primary parent's educational status made a consistent contribution to prediction of child outcomes, indicating that this is an important aspect of the psychological capital contributed by the parent. Older parents tended to be beneficial for the child cohort, while community connectedness had some role for infants. However, parental work status, country of birth, family type, family income, and neighbourhood disadvantage had little role in prediction for either cohort. Further, in the analyses of couple families, the relationship measures were not predictive of child outcomes.
- A number of caveats need to be borne in mind in interpreting these results: causal inferences cannot be made from the cross-sectional data available in Wave 1 of LSAC; the measure of outcome used here is a global one, and assesses only the 'problem' or 'negative' end of the spectrum of outcomes; and the same source (a parent) provided most of the data on both the predictors (for example, parenting practices) and the outcome, resulting in the possibility of respondent bias impacting upon results.

## 6.3 Measures

The Outcome Index is a composite measure designed to be an indicator of how children are developing. LSAC tracks the development of children across multiple domains, and the Outcome Index provides a means of summarising this complex information. In this context, an outcome is an attribute of the child at a particular point in time. In contrast to other indices which focus on problems, such as the Vulnerability Index developed in the Canadian National Longitudinal Study of Children and Youth (Willms 2002), the LSAC Outcome Index wherever possible incorporates both strengths and weaknesses, reflecting the fact that most children have good developmental outcomes. Thus the Outcome Index has the ability to identify groups of children developing poorly and those developing well.

The broad framework for the LSAC Outcome Index includes three domains which are proposed to be the major components of current wellbeing and the future capability to be a successful member of society: health and physical development; social and emotional functioning; and learning and academic competency. Summary scores for each of these domains are calculated, and they are combined into the overall Outcome Index. Since each of these domains is roughly equally important for a child's developmental wellbeing, they are equally weighted in the overall Outcome Index.

The set of variables selected for inclusion in the Outcome Index is given in Sanson et al. (2005), with full descriptions available in the LSAC Data Dictionary ([www.aifs.gov.au/growingup/data/datadictionary.html](http://www.aifs.gov.au/growingup/data/datadictionary.html)).

In brief, in infancy, the physical domain was tapped by two parent-reported measures of health: an overall rating of the infant's health, and an assessment of whether the infant had greater health care needs than the average infant. The socio-emotional domain was assessed via three scales on the parent-report Short Temperament Scale for Infants (Sanson et al. 1987): approach (which assesses the continuum from withdrawing/shy to approaching/sociable tendencies); irritability (assessing the degree to which the infant is calm or volatile, and irritable or not irritable); and cooperativeness (which assesses the adaptability and amenability of the infant). The learning domain was assessed by the parent-report Communication and Symbolic Behaviour Scale which taps the infant's emerging communication skills.

In the child cohort, the physical domain had two sub-domains: health, tapped by the same two items as for the infants' physical domain, with the addition of Body-Mass Index (BMI); and motor, assessed through the parent-report Peds QL (Varni, Seid & Rode 1999) Physical Health subscale which largely assesses motor coordination.

There were three sub-domains for the socio-emotional domain:

- social competence, assessed by the parent-report Strengths and Difficulties Questionnaire (Goodman 1999) Prosocial subscale (assessing the child's propensity to be considerate and helpful to others) and Peer Problems subscale (assessing the child's ability to form positive relationships with other children)

- internalising problems, tapped by the SDQ Emotional symptoms subscale (assessing the frequency of child displays of negative emotional states such as nervousness and worry); and externalising problems, tapped by the SDQ Hyperactivity subscale (assessing fidgetiness, concentration span and impulsiveness)
- SDQ Conduct subscale (assessing the child's tendency to display problem behaviours such as aggressiveness when interacting with others).

The learning domain consisted of four sub-domains:

- language, assessed from a directly administered, adapted form of the Peabody Picture Vocabulary Test
- literacy, derived from parent and teacher ratings of reading skills and teachers' rating of writing skills
- numeracy, assessed from teacher ratings of five numeracy skills
- approach to learning, tapped by 'Who Am I?' (Australian Council for Educational Research 1999), a direct assessment of the child's school readiness.

The calculation of the Outcome Index for the child cohort involved four stages:

- (a) standardising all the outcome variables (by age where necessary) and combining them into sub-domain scores
- (b) standardising the sub-domain scores and combining them in domain scores
- (c) standardising the domain scores
- (d) calculating a continuous overall Index score by averaging the three domain scores and identifying cut-offs to identify the top 15 per cent ('positive outcome') and bottom 15 per cent ('negative outcome') of the cohort.

Calculation of the Outcome Index for the infant cohort was a slightly simpler process since there were no sub-domains. First the outcome measures were standardised (by age where necessary) and combined into domain scores; followed by steps (c) and (d) above. Further details on the calculation of Index scores, including processes to account for missing data, are available in Sanson et al. (2005).

## 6.4 Overview of analytical approach

In the analyses which follow, for both cohorts, the 'negative cut-off' on the overall Outcome Index is used as the dependent variable, comparing those whose overall score fell in the bottom 15 per cent of the distribution with the remainder of the sample.

In the analyses reported below, most of the same predictor variables as in Section 4 (Parenting practices) were included, along with the measures of parenting described in Section 2. For infants, these included global parental self-efficacy, warmth and hostility; for children, consistency is an additional parenting dimension with a few exceptions. Psychological distress was used as the single measure of primary carer mental health (life difficulties and coping were excluded); community connectedness and external support was used to tap social capital; and SEIFA was included as a comprehensive measure of neighbourhood.

As for the analyses in previous sections, the relationship of each variable to negative outcomes was first assessed in individual bivariate analyses prior to their entry into the multivariable model. The major focus below is on the multivariable findings. Where findings in the multivariable analysis showed a different pattern of results from the bivariate comparisons for specific individual variables, they are discussed.

For each cohort, analyses are reported first for the entire sample, and then more briefly for couple families and lone-parent families, drawing attention to any marked differences. Primary carers' characteristics and reports of their parenting are used only in the analysis of the entire sample. This is because it has been established that they tend to have the most substantial impact on children's development and because there was considerable missing data from secondary parents. However, parenting as reported by secondary parents is included in the analysis of couple families.



## 6.5 Infant cohort

### Results

#### *All families*

In the multivariable analysis of the infant cohort data on the entire sample, nine of the 15 predictor variables made significant contributions. The infant's gender, two parental characteristics (country of birth and education level), two household measures (family type and number of children), community connectedness and feelings of support from sources external to the immediate family were significantly associated with more negative outcomes. Broadly speaking, infants were more likely to fall below the negative Outcome Index cut-off if they were male, their primary parent was born outside Australia, had higher education, reported lower community connectedness, poor feelings of support from sources outside their immediate family, and there were more children in the family. In addition, the three parenting measures of global self-efficacy, warmth and hostility each made quite strong unique contributions to the prediction of Outcome Index score, with lower self-efficacy, lower warmth and higher hostility being associated with a greater likelihood of having a negative outcome.

Table 30 provides details on the associations found between specific variables and negative outcomes. Boys were more likely to fall below the negative cut-off than girls, although the differences were quantitatively modest (16.1 per cent compared to 13.4 per cent;  $OR_{adj}=1.32$ ). Infants whose parents were born in Australia were more likely to fall below the negative cut-off than those with non-Australian born parents (13.4 per cent compared to 20.1 per cent;  $OR_{adj}=1.58$ ). Somewhat surprisingly, compared with primary carers with a trade certificate/diploma, carers who had a university education were **more** likely to have infants below the negative cut-off (16.3 per cent compared to 12.0 per cent;  $OR_{adj}=0.66$ ). Also, infants from 'married, step' families were **less** likely to fall below the negative cut-off than infants from 'married, intact' families (11.5 per cent compared to 14.9 per cent;  $OR_{adj}=0.53$ ). Infants who were the only child in the family were less likely to score below the negative cut-off than infants with other children in the household, with a linear trend for more negative outcomes as family size increased (11.1 per cent compared to 15.4 per cent, 17.7 per cent and 25.6 per cent, respectively;  $OR_{adj}=1.53$ , 1.93 and 3.08 respectively). Infants of primary carers reporting high community connectedness were less likely to have a negative outcome than those with lower connectedness (13.6 per cent compared to 18.7 per cent;  $OR_{adj}=1.39$ ), and this was true also of those reporting having enough external support (13.3 per cent compared to 19.1 per cent;  $OR_{adj}=1.28$ ).

Independent of these effects of sociodemographic characteristics, all three parenting dimensions contributed to the prediction of negative outcomes. Primary carers who reported average or above average parenting self-efficacy were much less likely to have an infant below the negative cut-off than those reporting lower self-efficacy (14.4 per cent compared to 33.9 per cent;  $OR_{adj}=2.18$ ). Those who reported high warmth were similarly much less likely to have an infant below the negative cut-off than those reporting lower warmth (12.1 per cent compared to 23.0 per cent;  $OR_{adj}=1.91$ ). Again, parents who reported low levels of hostility were less likely to have an infant below the negative cut-off than those reporting higher hostility (13.0 per cent compared to 21.4 per cent;  $OR_{adj}=1.70$ ). These data provide consistent evidence for the influence of parenting style on infant outcomes, independent of other parent, family and community factors.

The primary parent's age, employment status, and psychological distress, the family's income and the SEIFA quartile for the neighbourhood were not significantly related to the likelihood of negative outcomes for infants in the multivariable analysis.



**Table 30: Infant cohort, predictors of infants falling below the negative cut-off on the overall Outcome Index, all families**

<b>n=3,184</b>	<b>Odds of negative cut-off OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Gender of study child		
Female	Ref	
<b>Male</b>	<b>1.321</b>	<b>(1.079–1.645)</b>
P1 Age at child's birth (years)		
Under 25	1.260	(0.858–1.852)
25–34	Ref	
35 and above	0.912	(0.678–1.225)
P1 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>1.581</b>	<b>(1.212–2.062)</b>
P1 Education		
Year 9 or less	0.630	(0.296–1.339)
Year 10	1.410	(0.947–2.097)
Year 11 or 12	0.781	(0.579–1.054)
<b>Trade certificate or diploma</b>	<b>0.655</b>	<b>(0.493–0.871)</b>
University	Ref	
Family structure		
Married, intact	Ref	
Single	1.097	(0.662–1.819)
De facto, intact	0.824	(0.572–1.186)
<b>Married, step</b>	<b>0.533</b>	<b>(0.310–0.915)</b>
De facto, step	1.479	(0.710–3.081)
P1 Employment classification		
Full time	Ref	
Part time	0.911	(0.618–1.341)
Unemployed	0.935	(0.455–1.921)
Not in labour force	0.985	(0.681–1.424)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.534</b>	<b>(1.164–2.020)</b>
<b>3</b>	<b>1.928</b>	<b>(1.387–2.679)</b>
<b>4 or more</b>	<b>3.080</b>	<b>(1.961–4.839)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	1.175	(0.803–1.720)
\$1,000–\$1,499	1.131	(0.737–1.737)
\$1,500–\$1,999	1.161	(0.737–1.831)
More than \$2,000	0.943	(0.594–1.497)
P1 Community connectedness		
Higher	Ref	
<b>Low</b>	<b>1.393</b>	<b>(1.082–1.794)</b>
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.900	(0.637–1.272)
990–1,010	0.940	(0.665–1.329)
1,020–1,060	1.024	(0.742–1.411)
1,070–1,150	1.064	(0.730–1.550)

Parenting self-efficacy		
Average or above average	Ref	
<b>Low</b>	<b>2.176</b>	<b>(1.167–4.057)</b>
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>1.910</b>	<b>(1.500–2.432)</b>
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.296	(0.736–2.283)
P1 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>1.704</b>	<b>(1.334–2.177)</b>
Parent gets enough external support		
<b>Does not get enough</b>	<b>1.282</b>	<b>(1.003–1.638)</b>
Gets enough	Ref	

### *Couple families*

Analysis of predictors of being under the negative cut-off on the overall Outcome Index was undertaken separately for couple families. This entailed the same predictor variables and also permitted the addition of several variables: secondary parent characteristics (age, country of birth, education), their parenting (self-efficacy, warmth and hostility), and two relationship-specific measures (relationship satisfaction and level of arguments, as rated by primary carers). Despite these changes and the different sample being considered, results were in general similar to the analysis for the entire sample (refer to Table 31).

Seven of the nine measures which contributed to the analysis of the entire sample continued to make similar contributions to the couple family analysis (child gender, primary carer education, number of children in the household, community connectedness, and primary carer self-efficacy, warmth and hostility). The primary carer's country of birth, family type and adequacy of external support were no longer significantly associated with negative outcomes. None of the variables which were non-significant in the entire sample became significant in this analysis. Neither of the relationship measures contributed significantly. None of the secondary carer variables were significantly associated with negative child outcomes, although there were non-significant trends for both warmth and hostility, and it was notable that they both showed significant bivariate relationships with negative infant outcomes. It is plausible that they accounted for similar variance as the primary carer measures and hence did not contribute to the multivariable analysis which controls for all other variables.

**Table 31: Infant cohort, predictors of infants falling below the negative cut-off on the overall Outcome Index, couple sample**

<b>n=2,394</b>	<b>Odds of negative cut-off OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	
<b>Male</b>	<b>1.312</b>	<b>(1.017–1.692)</b>
P1 Age at child's birth (years)		
Under 25	1.026	(0.601–1.749)
25–34	Ref	
35 and above	0.866	(0.605–1.241)
P2 Age at child's birth (years)		
Under 25	0.556	(0.285–1.083)
25–34	Ref	
35 and above	1.025	(0.738–1.424)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.292	(0.932–1.793)

P2 Country of birth		
Australia	Ref	
Outside Australia	1.095	(0.785–1.527)
P1 Education		
Year 9 or less	0.527	(0.134–2.069)
Year 10	1.393	(0.837–2.319)
Year 11 or 12	0.712	(0.500–1.014)
<b>Trade certificate or diploma</b>	<b>0.659</b>	<b>(0.475–0.915)</b>
University	Ref	
P2 Education		
Year 9 or less	0.988	(0.328–2.969)
Year 10	1.202	(0.720–2.006)
Year 11 or 12	0.961	(0.617–1.498)
Trade certificate or diploma	0.904	(0.659–1.241)
University	Ref	
Family structure		
Married, intact	Ref	
De facto, intact	0.840	(0.560–1.258)
Married, step	0.625	(0.358–1.092)
De facto, step	1.817	(0.720–4.587)
Combined employment status		
2 Full time	0.933	(0.605–1.440)
1 Full time, 1 part time	0.950	(0.711–1.270)
2 Part time	0.901	(0.393–2.066)
1 Part time, 1 not working	0.755	(0.376–1.513)
2 Not working	1.027	(0.454–2.326)
1 Full time, 1 not working	Ref	
Number of children in household		
1	Ref	
2	1.215	(0.902–1.636)
<b>3</b>	<b>1.720</b>	<b>(1.152–2.569)</b>
<b>4 or more</b>	<b>2.973</b>	<b>(1.675–5.277)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	1.076	(0.668–1.732)
\$1,000–\$1,499	0.812	(0.492–1.340)
\$1,500–\$1,999	0.977	(0.577–1.654)
More than \$2,000	0.649	(0.385–1.094)
Community connectedness		
Low	Ref	
<b>Higher</b>	<b>1.569</b>	<b>(1.188–2.072)</b>
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.855	(0.557–1.311)
990–1,010	0.893	(0.615–1.298)
1,020–1,060	0.939	(0.640–1.377)
1,070–1,150	1.099	(0.727–1.661)
P1 Parenting self-efficacy		
Average or above average	Ref	
<b>Low</b>	<b>2.340</b>	<b>(1.063–5.151)</b>
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>1.717</b>	<b>(1.286–2.293)</b>
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	0.881	(0.438–1.772)

P1 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>1.491</b>	<b>(1.132–1.963)</b>
P1 Argumentative relationship		
High	1.313	(0.941–1.831)
Non-high	Ref	
Parent gets enough external support		
Does not get enough	1.321	(0.994–1.755)
Gets enough	Ref	
Relationship satisfaction		
Low	1.155	(0.818–1.631)
Non-low	Ref	
P2 Parenting self-efficacy		
Average or above average	Ref	
Low	1.450	(0.679–3.095)
P2 Parental warmth		
Non-low warmth	Ref	
Low warmth	1.327	(0.962–1.831)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	0.415	(0.128–1.3410)
P2 Hostile parenting		
Non-high	Ref	
High	1.263	(0.957–1.668)

### *Lone-parent families*

The predictors of negative outcomes were investigated separately for lone-parent families. The caveats made about interpretation of results for this small group in earlier sections apply here also, and the wide confidence intervals indicate a high degree of diversity within the sample. The same set of variables was used in the analysis as for the entire sample, with the exclusion of family type (refer to Appendix F for more information).

Few variables achieved statistical significance in the multivariable model. However, number of children in the household and parental warmth were both significantly associated with negative outcomes, as for the entire sample.

### **Discussion**

The findings on the association of parenting practices, along with other predictors, with the probability of an infant falling in the bottom 15 per cent of the distribution on the overall Outcome Index give a clear indication that parenting ‘matters’. In the ‘all families’ sample, all three primary carer parenting measures were strongly related to negative outcomes, with the associated odds ratios being higher than for any other variable except household size. They also made significant contributions in the couple family analysis. In the lone-parent analysis, parental warmth was one of only two significant predictors.

In the ‘all families’ and ‘couple families’ data, there was evidence of boys being more vulnerable to negative outcomes, even in infancy. Primary parent education and household size were also important, and the family’s connectedness to the community emerged as a predictor in the ‘all families’ and ‘couple’ data.

## 6.6 Child cohort

### Results

#### *All families*

In the multivariable analysis for all families in the child cohort, 16 variables were included — these were identical to the infant cohort variables, with the addition of parental consistency. Eight of these made significant contributions to the model. The child's gender, three parental characteristics (age, education level and psychological distress), family income, and three of the four parenting measures (hostility, consistency, and self-efficacy) were significantly associated with more negative outcomes. Broadly speaking, children were more likely to fall below the negative Outcome Index cut-off if they were male, their primary parent was younger, had less education, and was psychologically distressed, the family received less income (although trends here were non-linear), and the primary parent reported more hostility, less consistency and lower self-efficacy in their parenting. Some trends were close to significance: there was a trend towards more negative outcomes for children whose primary parents were not in the workforce (in comparison to those in full-time employment), for children in lone-parent families (in comparison to married intact families), for children whose primary parent reported not getting enough support, and for children receiving less parental warmth.

Table 32 provides details on the associations found between specific variables and negative outcomes. Compared to infants, the gender differences in numbers with negative outcomes were much more pronounced: 18.2 per cent of boys, compared to 9.9 per cent of girls, fell below the negative cut-off ( $OR_{adj}=2.15$ ). Parents aged 25 to 34 years at the birth of the child were less likely to have children below the negative cut-off than parents aged under 25 years (12.1 per cent compared to 24.3 per cent,  $OR_{adj}=1.55$ ). Primary parents with a university education were less likely to have children below the negative cut-off than those with Year 9 or less, Year 10 or a trade certificate (7.8 per cent compared to 27.7 per cent, 22.0 per cent, and 14.2 per cent respectively;  $OR_{adj}=2.24$ , 2.00 and 1.36 respectively). Families with incomes less than \$600 a week had more negative outcomes than those with incomes of \$1,500 to \$1,999 (24.6 per cent compared to 8.1 per cent;  $OR_{adj}=0.63$ ). Parental psychological distress was related to negative child outcomes, with a large proportion of those above the clinical cut-off on this measure (40.7 per cent) having children below the negative cut-off on the Outcome Index, compared to 13.0 per cent of non-distressed parents ( $OR_{adj}=1.92$ ).

In addition to these effects of parent characteristics, three of the four parenting dimensions contributed to the prediction of negative outcomes. Primary parents who reported low levels of hostility were less likely to have a child below the negative cut-off than those reporting higher hostility (9.9 per cent compared to 28.6 per cent;  $OR_{adj}=2.51$ ). Parents who reported they were more consistent in their discipline practices were also less likely to have a child below the negative cut-off than those reporting lower consistency (10.8 per cent compared to 27.3 per cent;  $OR_{adj}=2.04$ ). Self-efficacy was also significant, with more confident parents being less likely to have children with negative outcomes (13.3 per cent compared to 38.8 per cent;  $OR_{adj}=1.74$ ). As noted above, a similar trend for warmth was below significance in the multivariate model, but was significant in the bivariate analyses (high 12.7 per cent, lower 19.5 per cent). As Table 32 shows, in terms of size of odds ratios, hostility made the strongest individual contribution to the prediction of negative outcomes, followed by parental distress and consistency. These data provide strong evidence that the parenting style of the primary carer impacts on child outcomes, independent of other factors.

The primary carer's country of birth, employment status, community connectedness, the family's structure, household size and the SEIFA quartile for the neighbourhood were not significantly related to the likelihood of negative outcomes for children in the multivariable analysis.

**Table 32: Child cohort, predictors of 4 to 5 year olds falling below the negative cut-off on the overall Outcome Index, all families**

<b>n=3,405</b>	<b>Odds of negative cut-off OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Gender of study child		
Female	Ref	
<b>Male</b>	<b>2.146</b>	<b>(1.698–2.710)</b>
P1 Age at child's birth (years)		
<b>Under 25</b>	<b>1.554</b>	<b>(1.131–2.137)</b>
25–34	Ref	
35 and above	1.136	(0.837–1.542)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.282	(0.940–1.748)
P1 Education		
<b>Year 9 or less</b>	<b>2.236</b>	<b>(1.278–3.910)</b>
<b>Year 10</b>	<b>2.000</b>	<b>(1.345–2.973)</b>
Year 11 or 12	1.361	(0.962–1.924)
<b>Trade certificate or diploma</b>	<b>1.363</b>	<b>(1.020–1.823)</b>
University	Ref	
Family structure		
Married, intact	Ref	
Single	1.282	(0.852–1.928)
De facto, intact	1.053	(0.723–1.533)
Married, step	0.968	(0.548–1.711)
De facto, step	1.466	(0.726–2.960)
P1 Employment classification		
Full time	Ref	
Part time	1.135	(0.769–1.675)
Unemployed	1.066	(0.551–2.059)
Not in labour force	1.450	(0.990–2.125)
Number of children in household		
1	Ref	
2	0.852	(0.577–1.259)
3	0.835	(0.554–1.259)
4 or more	0.761	(0.475–1.220)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.040	(0.729–1.483)
\$1,000–\$1,499	0.859	(0.552–1.337)
\$1,500–\$1,999	0.626	(0.402–0.974)
More than \$2,000	0.636	(0.383–1.058)
P1 Community connectedness		
Higher	Ref	
Low	1.218	(0.912–1.627)
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.922	(0.644–1.321)
990–1,010	1.115	(0.792–1.568)
1,020–1,060	0.837	(0.566–1.238)
1,070–1,150	0.692	(0.459–1.043)

P1 Parenting self-efficacy		
Average or above average	Ref	
<b>Low</b>	<b>1.742</b>	<b>(1.051–2.888)</b>
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>1.145</b>	<b>(0.892–1.470)</b>
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>1.925</b>	<b>(1.185–3.128)</b>
P1 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>2.509</b>	<b>(2.000–3.146)</b>
Parent gets enough external support		
Does not get enough	1.228	(0.965–1.563)
Gets enough	Ref	
P1 Consistency		
Higher	Ref	
<b>Lower</b>	<b>2.041</b>	<b>(1.588–2.623)</b>

### *Couple families*

Analysis of predictors of being below the negative cut-off on the overall Outcome Index was undertaken separately for couple families. This entailed the same predictor variables and also permitted the addition of several variables: secondary parent characteristics (age, country of birth, education), their parenting (self-efficacy, warmth, hostility and consistency), and four relationship-specific measures (relationship satisfaction and level of arguments, by both primary and secondary carer report). Despite these changes and the different sample being considered, results were in general similar to the analysis for the entire sample (refer to Table 33).

Five of the eight variables that contributed to the analysis of the entire sample continued to make similar contributions to the couple family analysis (child gender, and primary carer age, education, hostility and consistency). The community rating on the SEIFA disadvantage index was also significant, with children from the most advantaged group being less likely to experience negative outcomes than children from the least advantaged (6.0 per cent compared to 16.8 per cent;  $OR_{adj}=0.61$ ). Primary carer self-efficacy and psychological distress no longer remained significant. Primary carer's warmth (which showed a strong trend in the entire sample analysis) became significant in this analysis (high warmth 10.0 per cent, lower warmth 17.6 per cent;  $OR_{adj}=1.38$ ). In addition, secondary carer reports of their parenting hostility was a significant predictor of negative outcomes. Secondary carers reporting higher levels of hostility were twice as likely to have children below the negative cut-off (9.2 per cent compared to 23.2 per cent;  $OR_{adj}=2.08$ ). Neither of the relationship-specific measures was significant in predicting negative outcomes. Overall, of the eight significant variables in this analysis, four were parenting variables, indicating the salience of parenting for prediction of negative outcomes in this sample.

**Table 33: Child cohort, predictors of 4 to 5 year olds falling below the negative cut-off on the overall Outcome Index, couple sample**

<b>n=2,440</b>	<b>Odds of negative cut-off OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Gender of study child		
Female	Ref	
<b>Male</b>	<b>2.058</b>	<b>(1.567–2.703)</b>
P1 Age at child's birth (years)		
<b>Under 25</b>	<b>1.601</b>	<b>(1.036–2.474)</b>
25–34	Ref	
<b>35 and above</b>	<b>1.610</b>	<b>(1.117–2.321)</b>
P2 Age at child's birth (years)		
Under 25	0.692	(0.372–1.288)
25–34	Ref	
35 and above	0.696	(0.478–1.012)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.133	(0.776–1.653)
P2 Country of birth		
Australia	Ref	
Outside Australia	1.115	(0.775–1.603)
P1 Education		
<b>Year 9 or less</b>	<b>2.963</b>	<b>(1.371–6.406)</b>
<b>Year 10</b>	<b>2.170</b>	<b>(1.274–3.693)</b>
Year 11 or 12	1.368	(0.858–2.181)
Trade certificate or diploma	1.436	(0.979–2.106)
University	Ref	
P2 Education		
Year 9 or less	1.467	(0.562–3.828)
Year 10	1.120	(0.583–2.152)
Year 11 or 12	1.071	(0.656–1.746)
Trade certificate or diploma	1.103	(0.716–1.697)
University	Ref	
Family structure		
Married, intact	Ref	
De facto, intact	0.830	(0.519–1.328)
Married, step	0.808	(0.413–1.582)
De facto, step	1.110	(0.462–2.668)
Combined employment status		
2 Full time	0.620	(0.366–1.050)
1 Full time, 1 part time	0.817	(0.568–1.176)
2 Part time	1.295	(0.488–3.436)
1 Part time, 1 not working	1.863	(0.871–3.989)
2 Not working	1.504	(0.653–3.464)
1 Full time, 1 not working	Ref	
Number of children in household		
1	Ref	
2	0.713	(0.421–1.206)
3	0.698	(0.391–1.245)
4 or more	0.546	(0.282–1.055)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.458	(0.768–2.770)



\$1,000–\$1,499	1.211	(0.594–2.470)
\$1,500–\$1,999	0.908	(0.447–1.844)
More than \$2,000	0.962	(0.443–2.091)
Community connectedness		
Low	Ref	
Higher	1.156	(0.810–1.650)
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.862	(0.541–1.375)
990–1,010	1.188	(0.785–1.797)
1,020–1,060	0.748	(0.460–1.216)
<b>1,070–1,150</b>	<b>0.607</b>	<b>(0.374–0.987)</b>
P1 Parenting self-efficacy		
Average or above average	Ref	
Low	1.519	(0.745–3.100)
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>1.378</b>	<b>(1.005–1.889)</b>
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.667	(0.784–3.547)
P1 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>2.104</b>	<b>(1.537–2.881)</b>
P1 Argumentative relationship		
High	1.454	(0.947–2.233)
Non-high	Ref	
Relationship satisfaction		
Low	1.022	(0.689–1.518)
Non-low	Ref	
P1 Consistency		
Higher	Ref	
<b>Lower</b>	<b>2.034</b>	<b>(1.448–2.857)</b>
P2 Parenting self-efficacy		
Average or above average	Ref	
Low	0.778	(0.380–1.592)
P2 Parental warmth		
Non-low warmth	Ref	
Low warmth	0.913	(0.625–1.335)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.226	(0.516–2.914)
P2 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>2.081</b>	<b>(1.538–2.817)</b>
P2 Consistency		
Higher	Ref	
Lower	1.361	(0.945–1.959)

### *Lone-parent families*

The predictors of negative outcomes were investigated separately for lone-parent families. The caveats about interpretation of results for this small and diverse group made earlier apply here also. The same variables as for the entire sample were used here, with the exclusion of family type (refer to Appendix F).

Only three variables achieved statistical significance in the multivariable model: child gender, primary parent education and parental hostility, which were also significant in the 'all families' and 'couple families' analyses. The nature and size of the associations of these variables with negative outcomes was also comparable with those found in these previous analyses. Notably, a large proportion of children of lone parents who reported higher levels of hostility fell below the negative cut-off (41.2 per cent), compared to children of lone parents reporting low hostility (17.8 per cent;  $OR_{adj}=2.32$ ).

### **Discussion**

The findings on the child cohort suggest that parental hostility is a particularly potent predictor of the probability of a child falling in the bottom 15 per cent of the distribution on the overall Outcome Index. It showed strong and consistent effects across all three samples (all families, couple families and lone-parent families). Consistency in parenting practices, particularly around discipline, also emerged as an important predictor. Compared to the infant cohort, parental warmth was less salient, and self-efficacy had little relationship to negative outcomes. Unlike the infant cohort, the levels of hostility reported by the secondary carer made significant unique contributions to prediction in the couple sample, even after accounting for the primary carer's parenting. This suggests that the secondary parent has an increased role in the development of 4 to 5 year olds in comparison to infants. The greater vulnerability of boys of this age to negative outcomes is also clearly evident in the data.

## **6.7 Overall discussion**

The findings on the association of family characteristics and parenting practices, with the probability of an infant or child falling in the bottom 15 per cent of the distribution on the overall Outcome Index, give a clear indication that they 'matter' for children's development, with parenting practices having a particularly prominent role.

In the infant cohort, all three parenting measures were strongly related to negative outcomes, with the associated odds ratios often being higher than for any other variable. As noted in Section 1, the importance of parental warmth for infant wellbeing is well established in the literature. A positive emotional tone in parent-child interactions and displays of affection confer a sense of security, self worth and trust to infants, and affection acts as a positive reinforcement of desirable behaviours (Baumrind 1971). Parental hostility is associated with a sense of rejection, failure and insecurity, and fails to provide an infant with guidance in effectively managing strong feelings (Teti & Candelaria 2002). Self-efficacy reflects a parent's confidence in their capacity to fulfil the parenting role, such as responding to an infant's signals appropriately and sensitively. Although these dimensions were assessed with a limited number of items (only one in the case of self-efficacy), the convergence between the findings from LSAC and other literature suggests that they are valid and reliable measures.

The findings for the child cohort suggest that parental hostility is a particularly potent predictor of 4 to 5 year olds falling in the bottom 15 per cent of the distribution on the overall Outcome Index. It showed strong and consistent effects across all three samples (all families, couple families and lone-parent families). Consistency in parenting practices, particularly around discipline, also emerged as an important predictor of outcomes in the child cohort. These findings support the literature reviewed in Section 1 on the salience of these dimensions and, again, support the validity of the measures used in the child cohort. Compared to the infant cohort, parental warmth and self-efficacy were less salient.

In the couple sample, the parenting of both primary and secondary carers was examined. In the infant cohort, none of the secondary carer measures was associated with infant outcomes. However, in the child cohort, the hostile parenting of the secondary parent also made a significant unique contribution to prediction, even after accounting for the primary parent's parenting. This suggests that the secondary parent has an increased role in the development of 4 to 5 year olds in comparison to infants.

While not a specific focus for this report, the consistent findings that boys were more likely to have negative outcomes than girls were notable. These differences were more marked in the child than the infant cohort. The greater vulnerability of boys in early childhood to difficulties, particularly in terms of social behaviour and learning, is a commonly found phenomenon (Halpern 2000; Ruble & Martin 1998).

In terms of parent characteristics, the primary carer's educational status made a consistent contribution to prediction of child outcomes, indicating that this is an important aspect of the psychological capital contributed by the parent. Older parents tended to be beneficial for the child cohort, while community connectedness had some role for infants. However, parental work status, country of birth, family type, family income, and neighbourhood disadvantage had little role in prediction for either cohort. Further, in the analyses of couple families, the relationship measures were not predictive of child outcomes.

The finding that the set of parenting measures were the strongest predictors of children's negative outcomes supports the conceptual model presented in Section 1. While other aspects of the child's family and community context played some part, it appears that parenting, as the most proximal influence on the child, played the stronger part. Especially in early childhood, many aspects of the family's functioning can be expected to be mediated through the way that they impact on the parents' ability to be warm, responsive, and consistent and to use non-punitive disciplinary techniques (Sanson & Lewis 2001).

The predictive importance of the parenting measures was evident despite the positive skew in the measures reported in Section 4. That is, almost all primary and secondary parents scored in a positive direction on the parenting measures. Among those who were classified for the current analyses as being 'high' in hostility or 'low' in warmth, consistency or self-efficacy, only a small proportion reported parenting behaviours that would be regarded as being clinically significant. Thus, the current findings suggest that even somewhat subtle variations occurring within the 'normal' range of parenting behaviours are potent predictors of children's outcomes.

The results in this section need to be interpreted with several caveats in mind. First, as for other sections in this report, causal inferences cannot be made on the basis of Wave 1 data—these must await the availability of longitudinal data from further waves of LSAC. Second, the measure of outcome used here is a global one, encompassing physical, socio-emotional and learning domains, and more differentiated results might be expected with more refined measures of outcome. Third, we have assessed relationships only with the 'problem' or 'negative' end of the spectrum of outcomes, and therefore are not able to make any inferences about aspects of parenting and family functioning which might be associated with particularly 'good' or 'positive' child outcomes. Finally, while the Outcome Index includes measures derived from direct assessment and teacher reports, it is largely based on parent reports. To the extent that the same source (a parent) provides data on both the predictors (for example, parenting practices) and the outcome, there is the possibility of respondent bias impacting upon results.



## 7 Overview and discussion

### 7.1 Introduction

This is the first Australian profile of parenting in families with infants and young children. It provides a rare glimpse into contemporary contexts that influence how parents parent their children and reveals some of the circumstances that are associated with parental confidence in their abilities as parents. As we stated at the outset, parenting is not inconsequential to child development. Nor is it ‘one’ thing. Parenting is one of the ‘engines’ of child development. Aspects of parenting include not only the provision of the necessary means to create safe, sustaining environments, but also parental expectations about the capacities of children and the provision of opportunities that prompt and facilitate their development. As Bronfenbrenner (1979) noted, parenting is a ‘proximal’ process—it is powerful because it occurs close to the developing child, fairly regularly, over extended periods of time, and is reciprocal (Bronfenbrenner & Evans 2000; Brooks-Gunn 1995). The reciprocal nature of parenting should not be underestimated. Parenting is a process that results in change for **both** the child and the parent, and highlights the active participation of the developing child in the process.

Here we briefly outline some of the emergent themes from the previous sections, highlighting points of convergence and divergence with existing research and suggesting opportunities or needs for future research.

### 7.2 Emergent themes

#### The quality of parenting ‘matters’ for children

Evidence from the first wave of data of LSAC reveals a clear link between parenting quality, parenting self-efficacy and the overall functioning of infants and children. Section 6 reported the associations of family characteristics and parenting practices with the probability of an infant or child falling in the bottom 15 per cent of the distribution on the overall Outcome Index which summarises children’s current developmental status across physical, socio-emotional and learning domains. The findings give a clear indication that these family and parenting characteristics ‘matter’ for children’s development, with parenting practices having a particularly prominent role. Even when adjusted for parental income, education, employment, family structure and parental wellbeing, the independent association of poorer parenting quality with poorer child development outcomes in both cohorts remains, with odds ratios in the range of 1.7 to 2.2. This finding is congruent with the existing evidence across a variety of studies throughout the world (Barlow & Stewart-Brown 2000; Collins et al. 2000; Serketich & Dumas 1996).

It is important to appreciate that these associations are apparent not only in the child cohort, where children are aged 4 to 5 years, but also in the infant cohort where children are in the age range of 3 to 19 months. Thus, parenting styles show clear associations with child development from very early in life and these associations are sizeable and, in all likelihood, persistent over time. An important feature of parenting is that there is no apparent ‘threshold’ for distinguishing ‘good parenting’ from ‘poor parenting’. In this study, the measures of parental warmth, hostility, and consistency are **relative** measures, and their predictive importance was evident despite their positive skew. That is, almost all primary and secondary carers scored in a positive direction on the parenting measures. Among those who were classified for the current analyses as being ‘higher’ in hostility or ‘lower’ in warmth, consistency or self-efficacy, only a small proportion reported parenting behaviours that would be regarded as being clearly worrisome or in the clinical range of ‘abnormal’ or ‘abusive’. Thus, the current findings suggest that even somewhat subtle variations occurring within the ‘normal’ range of parenting behaviours are potent predictors of children’s outcomes. This gives general support to universal initiatives that assist all parents in their parenting skills.

In the infancy cohort, all three parenting measures were strongly related to negative outcomes, with the associated odds ratios often being higher than for any other variable. As noted in Section 1, the importance of parental warmth for infant wellbeing is well-established in the literature. A positive emotional tone in parent–child

interactions and displays of affection confer a sense of security, self-worth and trust, and affection acts as a positive reinforcement of desirable behaviours (Baumrind 1973). Parental hostility is associated with a sense of rejection, failure and insecurity, and fails to provide the child with guidance in effectively managing strong feelings (Teti & Candelaria 2002). Self-efficacy reflects a parent's confidence in their capacity to fulfil the parenting role, such as responding to an infant's signals appropriately and sensitively. Although these dimensions were assessed with a limited number of items (only one in the case of parenting self-efficacy), the convergence between the findings from LSAC and other literature suggests that they are valid and reliable measures.

The findings for the child cohort suggest that parental hostility is a particularly potent predictor of poor developmental outcomes for 4 to 5 year olds. Consistency in parenting practices, particularly around discipline, also emerged as an important predictor of outcome in the child cohort. These findings support the literature reviewed in Section 1 on the salience of these dimensions and, again, support the validity of the measures used in the child cohort. Compared to the infant cohort, parental warmth and parenting self-efficacy were less salient.

The analyses of the parenting of both primary and secondary carers in the couple sample suggest that secondary carers (that is, fathers) may play an increased role in the development of 4 to 5 year olds in comparison to infants. While none of the secondary carer measures was associated with infant outcomes, the hostile parenting of the secondary carer made a significant and unique contribution to prediction of child outcomes.

While not a specific focus for this report, the consistent findings that boys were more likely to have negative outcomes than girls were notable. These differences were more marked in the child than the infant cohort. The greater vulnerability of boys in early childhood to difficulties, particularly in terms of social behaviour and learning, is a commonly found phenomenon (Halpern 2000; Ruble & Martin 1998). The finding that 4 to 5 year-old boys were more likely to receive hostile parenting than girls provides one possible clue to reasons for this greater vulnerability, which will need follow-up in later waves of LSAC.

The finding that the set of parenting measures were the strongest predictors of children's negative outcomes supports the conceptual model presented in Section 1. While other aspects of the child's family and community context played some part, it appears that parenting, as the most proximal influence on the child, played the stronger part. Especially in early childhood, many aspects of the family's functioning can be expected to be mediated through the way that they impact on the parents' ability to be warm, responsive, and consistent and to use non-punitive disciplinary techniques (Sanson & Lewis 2001).

The results on the association of family and parenting factors with child outcomes need to be interpreted with several caveats in mind. First, causal inferences cannot be made on the basis of Wave 1 data—these must await the availability of longitudinal data from further waves of LSAC. Second, the measure of child outcomes used in the modelling is a global one, and more differentiated results might be expected with more refined measures of outcome. Third, we have assessed relationships only with the 'problem' or 'negative' end of the spectrum of outcomes, and therefore are not able to make any inferences about aspects of parenting and family functioning which might be associated with particularly 'good' or 'positive' child outcomes. Finally, while the Outcome Index includes measures derived from direct assessment and teacher reports, it is largely based on parent reports. To the extent that the same source (a parent) provides data on both the predictors (for example, parenting practices) and the outcome, there is the possibility of respondent bias impacting upon results.

Finally, these early measured associations invite later formal testing of causal pathways that connect parenting to child outcomes. As this opportunity arises, fruitful questions to address include: How persistent are parental styles? Do they change, and if so, for whom and in what contexts? What are the direct and indirect effects among child, parent, family and community variables, parenting styles, and child outcomes? Which children appear less vulnerable to suboptimal parenting and sustain good outcomes despite them? Which children appear less susceptible to optimal parenting and develop problems and difficulties in later years despite them?

### Parenting and the contexts of parents

In the LSAC data there are a greater array of variables associated with parental hostility when compared to those associated with parental warmth. Parenting appears to ‘cool’ as parents become more educated, older, and have more children. It does not necessarily follow, however, that as parental warmth decreases, hostility increases.

For parents with infants, lower parental warmth was associated with older parental age at the time of the birth of the child, university education of the primary carer, larger family size, and non-participation of the primary carer in the labour force. For parents with children aged 4 to 5 years, lower parental warmth was associated with larger family size and also with lower levels of support from family and friends living elsewhere. The general context associated with lower parental warmth was one suggestive of greater demands on carer time on the one hand and, perhaps, lower levels of contact with others either in the form of work (as in the infant cohort) or family and friends (as in the child cohort), on the other. As noted above, ‘cooler’ parenting is not necessarily associated with increases in parenting hostility. Indeed, university education of the primary carer was also associated with decreases in parenting hostility.

In contrast to the relatively few associations of parental warmth with other variables, parental hostility was associated with several contexts. For families with infants, younger parental age at the time of the birth of the child, unemployment or non-participation in the labour force, many life difficulties and psychological distress were the principal associations observed. For families in the child cohort, the picture is broader and also encompasses family structure. Higher parental hostility was associated with de facto family status, male gender of the study child, single child families, lower primary carer education, lower support from families and friends and poorer coping and psychological distress in the primary carer.

Finally, there were subtle distinctions in the findings on lower parenting consistency in the child cohort. Observed associations were similar to those of hostile parenting; however, they also include overseas birth of the primary carer and lower income.

These, of course, are broad brush strokes from the detailed pictures available in the preceding sections. It needs to be acknowledged that less than 2 per cent of parents reported having some trouble being a parent (that is, low parental self-efficacy). However, distributions of other measures of parenting such as parental warmth, hostility and consistency in the LSAC data allowed identification of carers with **relatively** higher or lower levels of these parenting characteristics.

These measures (parental warmth, hostility and consistency) showed clear associations with the contexts in which parents and families find themselves. These findings are congruent with results from other studies (see above) and support the general direction of policies that seek to address the circumstances of families and, more specifically, parents’ parenting capacities specifically.

### Stress, social support, parents and parenting

Because psychological distress was so consistently associated with parenting practices in the LSAC data, the contexts for this merit particular attention. The data showed that psychological distress was strongly associated with life stress events and lower levels of social support.

Results from the LSAC Wave 1 data showed that psychological distress in parents was consistently associated with life stress events. Moreover, levels of reported life stresses were higher in the parents in the child cohort than they were in the infant cohort. While the arrival of a new child in the family is often cited as a stressful (albeit ‘happy’ for many) transition, there is a suggestion in comparing the cohorts that there are greater stresses ahead.

There is a long history of the study of stressful life events in the social sciences and, more recently, the health arena (Brown & Harris 1989; Brugha & Cragg 1990; Cohen 1988; Dohrenwend et al. 1978; Holmes & Rahe 1967; Sarason, Johnson & Siegel 1978; Wethington, Brown & Kessler 1995). Moreover, their association with poor mental health and psychiatric outcomes is well documented (Brown & Harris 1989; Stephens, Dulberg & Joubert 1999). Data from the 1994–95 Canadian National Population Health Survey found current stress to have the



strongest associations with adult mental health (Stephens, Dulberg & Joubert 1999). Additionally, life events show moderate correlation across related family members (that is, familiarity) and are associated with anxiety and depression in community samples (Rijsdijk et al. 2001).

Stress in the LSAC families was associated with clear social gradients in proportions of families who are unemployed, have lower incomes, and live in areas of disadvantage. Lone parents and younger parents were particularly vulnerable as were *de facto* step-families. From the standpoint of lowering stress, having a job is better than not having a job, intact families fare better and, within this distinction, marriage appears more protective against stress when compared with *de facto* status.

Broadly speaking, social support concepts concern three principal domains: the extent to which individuals are attached to significant others as measured by their social ties, participation in organisations, contact with friends and family and/or the complexity of their social network (for example, social embeddedness); the individual's cognitive appraisal (for example, perceived social support) of the availability and adequacy of support irrespective of the extent of the support; and the responses of others in the provision of emotional support, information, tangible care or material assistance (Barrera 1986; Ruehlman, Lanyon & Karoly 1999).

Social support is often conceptualised by human service agencies as an environmental variable; however, social support is influenced by genetic factors (Kendler 1997), correlated with personality, and relatively stable over time (Sarason, Sarason & Shearin 1986). Importantly, social support is not latent within the environment but rather is reciprocally maintained through the actions of individuals and the opportunities their community and neighbourhoods create. Its association with health and more particularly positive mental health has been documented in longitudinal work (Cederblad et al. 1995). Stephens, Dulberg and Joubert (1999), using data from the 1994–95 Canadian National Population Health Survey, found social support to be 'second only to current stress in its importance for mental health' (p. 123).

In terms of social support the adage 'blood is thicker than water' appears to apply, with LSAC primary carers of infants reporting higher levels of support from maternal parents (that is, grandparents), followed by support from in-laws. In the child cohort, the importance of support from immediate family lessened and support from friends became significant along with parental community connectedness. These changes in patterns of support were associated with reductions in the proportions of carers reporting psychological distress.

The associations observed in the LSAC data between social support measures, psychological distress and parenting are congruent with the broader findings from epidemiological and other population surveys in Australia and elsewhere (Silburn et al. 1996; Stephens, Dulberg & Joubert 1999). Relatively large proportions of Australian families are affected, with one in four reporting low levels of social support. The links within families are obviously important in ameliorating some of this effect—quite importantly so for families with infants. Policy generally needs to consider how opportunities for parents who do not have extended family at all, or lack family in the immediate vicinity, can be supported in the practical ways that families allow. Current employment practices and expectations of mobility may also impact upon the extended family capacity to socially support its members. So, too, will patterns of immigration where families arrive, or are formed, with most or all of their extended family living at a distance.

Finally, the continued policy concern to create communities that encourage connection and participation, that involve families and widen their contact and opportunity, and that lessen social isolation and invite opportunities for children, remains an important focus. This was seen most clearly in the observed associations in the LSAC data between parental wellbeing of primary carers and contact with friends along with community connectedness. There would appear to be opportunities for governments to consider how the skills and experiences of the rapidly ageing cohort of Australian 'baby boomers' could be better used within communities to support child developmental opportunities and mentoring of parents generally. This would also require creative solutions that widen the mix of housing opportunities and demographic characteristics of residents within neighbourhoods.



### Parenting, child outcomes and relationships with family income and parent education

So much of the contemporary narrative of Australian families has been through the lens of ‘time’ and ‘money’. Indeed, phrases such as ‘work–family balance’ are traded regularly in conversations along with comparisons such as ‘cash poor’ and ‘time poor’. In reality, the family provides much more than time and cash to the tasks of raising its children. It provides a setting in which a mix of human, psychological and social capital—along with time and income—influences child development (Becker & Tomes 1986; Brooks-Gunn 1995; Coleman 1990).

Studies increasingly show that income impacts on child developmental outcomes (Brooks-Gunn, Duncan & Aber 1997), and is more strongly related to child achievement (for example, educational and learning) outcomes than to emotional outcomes (Duncan et al. 1998). Very low income is also persistently associated with parenting practices that impair prosocial development (Macmillan, McMorris & Kruttschnitt 2004). Effects are stronger where exposure to low income starts early in life and is more prolonged. Research also shows that changes (that is, increases) in family income are most important for the very poorest families (Salkind & Haskins 1982), and provision of employment in the absence of an increase in income in this group does not improve child developmental outcomes (Brooks-Gunn, Duncan & Aber 1997). The early observation of lower income being associated with lower levels of parenting consistency in the LSAC child cohort merits scrutiny as the longitudinal data become available.

In general within the LSAC data, relationships between parental education and parent and child variables were stronger than relationships with income. This is congruent with longitudinal research over the last decade which has sought to tease out the direct and indirect impact of specific factors associated with poverty, and has highlighted the importance of parental human capital. Research generally shows that where information about **other** family resources (that is, human, social and psychological capital) is available, direct associations between child developmental measures or parent wellbeing measures and income per se substantially weaken (Duncan & Brooks-Gunn 1997; Silburn et al. 1996). This is seen in the LSAC data where income effects weaken when models include education (a form of human capital) and more direct measures of psychological distress and coping (forms of psychological capital). This does not eliminate the importance of income to the development of children nor does it discount poverty of income as a basis of material disadvantage, inequality and a cause of stress. Rather, for a significant proportion of families, very low income is part of a more general exposure to low resource levels in other capital domains (that is, human, psychological and social capital domains) that increase risks of poor developmental outcomes. Low income and financial hardship may then largely work indirectly, through more proximal factors such as parenting distress, hostility and consistency, in affecting children’s developmental pathways.

### Work, families and parenting

Richardson recently summarised the striking changes affecting the Australian labour market in the past quarter of a century (Richardson 2005). There has been a decline in male labour force participation, increases in participation by women, a general shift towards part-time work and larger proportions of men and women in casual work. For those in full-time work, more than one-quarter are working more than 48 hours a week.

Of course, much of the discussion of work and its impact upon children has been with reference to women returning to work and the necessity to place children into care other than that of the mother (Belsky & Eggebeen 1991; Harvey 1999). In the face of changes in levels of labour force participation, and in the presence of social policies that increasingly require work for social benefits and the demand to secure income through paid labour for use later in life, this past debate has now been overrun by an emergent reality: fewer families have a choice about whether a parent will stay at home to undertake child rearing, and fewer families are making such a choice. Indeed, the emergent skills shortage in Australia is being accompanied by an encouragement of **older** employed people to remain in the workforce so, at a population level, it is feasible to envisage fewer grandparent hours available across the generation gap to support younger families. As Richardson’s work highlights, if the past pattern in family life equated marriage and children to the presence of full-time steady work by one parent, then the emergence of larger proportions of part-time and casual labour (for both men and women) may represent a major driver of later marriage and fewer or no children, and a continuation of the demographic trend in which fertility falls below replacement levels.

For parents of LSAC children, work was a two-edged sword. With respect to work, the highest risks in terms of poorer child outcomes and poorer parental wellbeing were clearly associated with unemployment.

The LSAC data show, however, that employment in couple families has differing meanings and effects for each partner and these effects are expressed differently in families with infants compared to families with young children. Nowhere was this seen more clearly than in the findings on reciprocal support for parenting and parental relationship quality. As we previously observed, there are clear trade-offs between parental abilities to provide levels of reciprocal support for each other in parenting children and to achieve a good level of relationship satisfaction. These were balanced differently in the infant and child cohorts.

If the issue is defined around parents supporting one another in the tasks of parenting, then in the infant cohort, better levels of reciprocal support for parenting were reported by the primary carer (mostly mothers) where the other partner was working part time. However, larger proportions of the primary carers reported better relationship satisfaction where both partners were employed full time. Reciprocal support for parenting then was assisted by having partners more available for the parenting role (in the sense of part-time work allowing this) but relationship satisfaction was higher where parents were both involved in employment. For fathers of infants, part-time work of both parents was associated with substantially lower relationship satisfaction.

For primary carers of children aged 4 to 5 years, employment of both partners (either part-time or full-time) was associated with higher levels of reciprocal support for parenting; however, this was at the expense of their relationship satisfaction. More employed primary carers reported lower relationship satisfaction. For secondary carers of children aged 4 to 5 years, joint part-time work of each partner was associated with a higher likelihood of arguments in the relationship.

Other research findings on the effects of work arrangements on child development show that work can be a pathway out of income impoverishment with clear developmental benefits for children. Employment and preparation for work has been shown to improve parenting styles. Poor mothers who take up employment or work preparation are less controlling, less negative and more engaged, and their children show more enthusiasm and persistence (Brooks-Gunn et al. 1998). These findings are mirrored by findings that show declines in family poverty to be accompanied by declines in child antisocial behaviour (Macmillan, McMorris & Kruttschnitt 2004). However, it is salutary to note that replacing welfare benefits with work programs that do not alleviate income poverty is associated with continued harsh, controlling parenting and lower cognitive performances in children (Brooks-Gunn et al. 1998).

As we have noted throughout this report, we cannot draw causal conclusions from any of the associations found in the Wave 1 data without the support of longitudinal data. In anticipating future waves of LSAC data there are several opportunities for important policy research. First, it will be important to study the relationship between parental work in the presence of continued family poverty and its effects on child outcomes. Influential mechanisms to specifically track in the LSAC data should include identifying the early failure of the child's environment to supply experiences that enrich cognitive development—story telling and reading being particularly important—and then tracking parenting that remains coercive and harsh. Second, there is likely to be persistence of low developmental resources as children in families with low levels of resources move into poorer quality, less enriching child care. This needs careful documentation in the Australian data. Third, the attention paid to employment of parents needs to move beyond the mere participation in employment to an examination of the social demands and developmental benefits of work. This should take the form of measures of parental job complexity, demand flexibility, family-friendly work provisions, and supervisory responsibility; how these aspects change parental human and psychological capital; and the onward effects that these have in modifying coercive and harsh parenting.

Finally, work as a specific setting is a normative institution. Getting work and keeping it requires not only skill and expertise, but requires human, psychological and social capital in the form of knowledge about the world of work—finding it, securing it and adhering to its rules and regulations as these define expected relationships within work contexts (Zubrick, Silburn & Prior 2005). Relatively little research can be found on the study of child developmental resource dynamics and their relationship to parental work settings. Parents and carers

move between their families in homes and their work settings. The world of work shapes the local community. Historically, men have spent, and will spend, the larger proportion of their adult parental life in work. Work settings can be characterised by their physical environments and by the nature of their human, psychological and social capital. Aside from income derived from paid work, what do parents and carers take from work (both paid and unpaid) that is relevant to the development of their children?

## 7.3 Conclusion

In the opening years of the new century there has been a concerted focus on Australia's children. This has brought with it an attendant call for fidelity and coherence across government in the development of policies affecting the lives of children and young people, a need to broaden the context of current child care policy debate and a requirement to invest in early prevention (developmental prevention) opportunities (Richardson & Prior 2005). The importance of this should not be underestimated. At a fundamental level, a policy focus on children and their families is a policy focus about human development across the life course. The Longitudinal Study of Australian Children is now positioned to deliver evidence, along with other Australian studies, to inform this.

In concluding, we return to a general observation from the first wave of data: the vast majority of parents are doing well in the task of caring for their families and parenting their children. While the focus in this report has been on difficulties parents relate with respect to their parenting, to maintaining relationship satisfaction and wellbeing, and managing stress and coping, the vast majority report confidence in parenting. This is encouraging.

However, the data also show that there is no room for policy complacency in the face of the many demands on families, and parents particularly, that require them to simultaneously care for their children, for themselves and, increasingly, for older family members now and well into their future. Child outcomes are increasingly subject to influences well beyond the family. Subsequent waves of data will offer the opportunity to refine the preliminary observations made here and identify potential modifiable causal mechanisms and pathways to allow us to better support the development of all children.



# Appendix A: Technical appendix

## About the LSAC sample

Complete details of the sampling design for the Longitudinal Study of Australian Children (LSAC) are available elsewhere (Soloff, Lawrence & Johnstone 2005). The following is a summary table showing the major characteristics of the LSAC sample design and yield.

**Table A1: Sample design for the Longitudinal Study of Australian Children—Summary**

<b>Reference population: scope</b>	Cohort 1 infant: Australian children born between March 2003 and February 2004 Cohort 2 child: Australian children born between March 1999 and February 2000
<b>Sample size</b>	5,000 for each cohort intended; final sample recruited was 5,107 infant cohort and 4,983 child cohort.
<b>Sampling frame</b>	Medicare enrolment database
<b>Coverage</b>	Slight over-coverage of child cohort according to comparison with ABS population estimates (101.5 per cent); under-coverage of infant cohort compared with ABS (88.5 per cent), due to late registration of births with Medicare.
<b>Exclusions</b>	<p>The sample is broadly representative of all Australian children, with the exception of children living in remote areas. About 40 per cent of children in remote areas were not given a chance of selection and these children will not be estimated for in the population estimates produced.</p> <p>Other children who were not given a chance of selection, or who were excluded after selection, are not considered to impact on the representativeness of the sample, and therefore <b>are</b> included in the population estimates. These include:</p> <ul style="list-style-type: none"> <li>• children living in postcodes with fewer than six of the target population, where the postcode was not amalgamated with an adjacent postcode (about 1–2 per cent of children in each cohort)</li> <li>• children in families where another child in the family was selected for the main sample (less than 1 per cent)</li> <li>• children with the same (or similar) name to a child (born after 1 March 1999) listed on the National Death Index (approximately 3 per cent in each cohort).</li> </ul>
<b>Primary sample units</b>	Postcodes, or groups of postcodes, stratified by state/territory and by capital city statistical division/rest of state ('met'/'exmet') for the purposes of production of estimates. Postcodes were further stratified into two groups by size: postcodes that had at least the minimum number of children that needed to be selected (about 75 per cent of postcodes) and postcodes that had less than that amount.
<b>Selection process</b>	<p>A random selection of a number of postcodes, then a random selection of a number of in-scope children within each selected postcode.</p> <p>For postcodes with at least the minimum number of children, probability proportional to size selection was used; for the other postcodes, equal probability selection was used.</p> <p>Postcodes were selected by the Australian Institute of Family Studies and then divided into two groups for data collection purposes.</p> <p>Children were selected by the Health Insurance Commission in four phases, corresponding to the four data collection phases: children born March–August were selected for the first two phases, and children born September–February were selected for the second two phases.</p> <p>For postcodes with at least the minimum sample size, the children were listed in date of birth order within a postcode, with any children from the same multiple birth grouped together. The required number of children was selected by taking a random start and then applying a skip interval through the list.</p> <p>For postcodes with less than the minimum number of children, all children were selected. The sample selection for the infants was undertaken first.</p>

<b>Cluster size</b>	Over the four phases of sample selection, for postcodes with more than the minimum number of children, in New South Wales, Victoria, Queensland, Western Australia and exmet South Australia, 73 infants and 86 4–5 year olds were initially selected; and in met South Australia, Tasmania and the Australian Capital Territory, 37 infants and 44 4–5 year olds were selected.
<b>Families with more than one target child</b>	Only one child per family was included in the sample selection process. This includes cases of multiple birth, as well as families with both an infant and a 4–5 year old.
<b>Children on multiple Medicare cards</b>	Children were selected on the basis of the card where there was the most recent Medicare activity. If there was no recent activity, the card with an adult female was selected. If there was no adult female on either card, then the primary card was selected.

### Weighting, non-response adjustments, and analytic approach

Full details of the weighting and non-response adjustments are available elsewhere (Soloff et al. 2006).

Broadly, the use of weights in the LSAC analyses is to compensate for differences between the final sample and the national population. This process produced weights for the LSAC sample which can be used as expansion factors permitting the scaling of the sample to the population. LSAC weights reflect both the design of the study (to allow for unequal probabilities of inclusion in the study that may result in sampling biases) and likelihood of response (those less likely to respond are given a higher weight and those more likely to respond are given a lower weight). To allow for any non-response effects, a post-stratification weighting system was used.

Analyses used in the report entailed use of sample weights and multivariable analyses were fully adjusted for the sample design (that is, SPSS complex samples module).

Binomial logistic regression was principally used to assess relationships among sets of variables. Logistic regression allows the prediction of a discrete, binary outcome from a set of predictor variables (Hosmer & Lemeshow 1989). The predictor variables may be continuous, dichotomous, discrete or a mix of these types. Estimated effects of the predictor variables are multivariately adjusted for the effects of the other predictors. The association between the outcome variable and the predictor can be expressed as an odds ratio. Where predictors are categorical, these odds ratios are calculated with reference to a specific base or ‘reference’ category. Many of the composite variables created in LSAC entail essentially arbitrary units of measure. In fitting the logistic model, most of these continuous predictor variables were coded to be categorical in keeping with recommendations by Hosmer and Lemeshow (1989).

Prior to undertaking analyses, data were examined for errors and extreme outliers and multicollinearity was assessed (dummy variables were used for categorical variables) using strict criteria ( $VIF < 2.5$ ,  $tolerance > 0.2$ , condition index  $< 15$ ), with subsequent inclusion of relevant predictor variables. Estimates accounted for the sample design and listwise deletion was used.

### Treatment of composite measures and indicator variables

Many of the measures used in LSAC entailed construction of multi-item composite variables (that is, parental warmth) or, from time to time, use of a single item indicator variable (that is, parenting efficacy).

As the majority of measures included in LSAC did not provide cut-off scores<sup>3</sup>, these had to be created. Many of the measures were heavily skewed toward positive responses (resulting in poor discrimination between cases at the high end of the scale, but good discrimination at the lower ends of the scale), cut-off scores that separated those in the lower portion of the scale from the remaining distribution were used. To ensure that the sample size of the group that fell below the ‘negative’ cut-off was large enough to allow reasonable statistical power (while ensuring a meaningful difference between the two groups), quintiles were used, with those falling within the lowest 20 per cent classified as falling below the negative cut-off.

It should be noted that the above statistical method for determining these categories is largely arbitrary or relative. It merely provides a method of identifying those who reported lower scores **relative to the rest of the sample**. For example, the large proportion of parents who fell below the cut-off for 'lower' warmth still reported that they 'often' showed warmth to their child (however, most of the sample reported 'always').

## Construct validity of composite measures and their internal reliability

### Section 2: Measures

#### *Kessler-6 Scale of Psychological Distress (K-6)*

Previous studies indicate that this measure is reliable and valid. The internal reliability coefficients calculated based on LSAC data provide further evidence of the tool's reliability ( $\alpha$  range 0.807–0.840).

#### *Community connectedness*

Internal reliability was assessed and was found to be within acceptable range (infant  $\alpha$ =0.728, child  $\alpha$ =0.744).

### Section 3: Measures

#### *Argumentative relationship and relationship satisfaction*

Using Pearson product moment correlations as input, a principal components analysis using the nine items revealed good factorability ( $KMO=0.93$ ), communalities ranging from 0.527 to 0.743 with two factors accounting for 60.0 per cent of the common factor variance. The number of non-trivial factors was determined by using Cattell's scree plot in association with those Eigen values greater than or equal to 1.0. Following a varimax rotation two factors were revealed: one broadly representing argumentative relationship and the other representing relationship satisfaction. Minor instances of cross-loading were noted, but each item loaded most strongly onto its respective factor.

Internal reliability across parent type (primary and secondary) and cohort (infant and child) for each of the measures was assessed and was found to be within the acceptable range for both argumentative relationship ( $\alpha$  range 0.804–0.826) and relationship satisfaction ( $\alpha$  range 0.826–0.897).

#### *Reciprocal support from partner*

Internal reliability was assessed and was found to differ based on the sample which was being assessed ( $\alpha$  range 0.560–0.715). In one instance (that is, secondary carers in the infant sample) the reliability was very low. This should be considered when interpreting results.

### Section 4: Measures

#### *Parenting measures in the infant cohort*

Using Pearson product moment correlations as input, a principal components analysis using the 11 items revealed good factorability ( $KMO=0.84$ ), communalities ranging from 0.391 to 0.635 with two factors accounting for 54.1 per cent of the common factor variance. The number of non-trivial factors was determined by using Cattell's scree plot in association with those Eigen values greater than or equal to 1.0. Following a varimax rotation two factors were revealed: one broadly representing parental warmth and the other representing hostile parenting.

Internal reliability for each of the measures was assessed and was found to be within the acceptable range for both parental warmth ( $\alpha_{p1}=0.793$ ,  $\alpha_{p2}=0.825$ ) and hostile parenting ( $\alpha_{p1}=0.808$ ,  $\alpha_{p2}=0.780$ ).

*Parenting measures in the child cohort*

Using Pearson product moment correlations as input, a principal components analysis using the 15 items revealed good factorability ( $KMO=0.84$ ), communalities ranging from 0.310 to 0.629 with three factors accounting for 52.2 per cent of the common factor variance. The number of non-trivial factors was determined by using Cattell's scree plot in association with those Eigen values greater than or equal to 1.0. Following a varimax rotation three factors were revealed: one broadly representing parenting warmth, one representing hostile parenting and the other representing parenting consistency. Some cross-loading between factors was observed; however, this was for relatively few items.

Internal reliability for each of the measures was assessed and was found to be within the acceptable range for parental warmth (infant  $p1=0.827$ , infant  $p2=0.839$ ) and borderline acceptable for consistency (infant  $p1=0.698$ , infant  $p2=0.717$ ) and hostile parenting (infant  $p1=0.609$ , infant  $p2=0.618$ ).

**Section 5: Measures***Co-parental communication*

Internal reliability was assessed and was found to be within acceptable range (infant  $\alpha=0.719$ , child  $\alpha=0.761$ ).

**Socio-Economic Indexes for Areas**

The health care identification number was linked to census track data permitting each child's record to be populated with the Socio-Economic Indexes for Areas (SEIFA) (Australian Bureau of Statistics 1998). The SEIFA index used in this report is a measure of area disadvantage (Index of Relative Socio-Economic Disadvantage) which was derived through the combination of variables from the 1996 Population and Housing Census. Variables used to calculate the index of relative socioeconomic disadvantage include low income, low educational attainment, high unemployment and people with low skilled occupations. Lower scores are associated with greater area disadvantage.



# Appendix B

## Section 2: Stress, support and parental wellbeing

**Table B1: Estimated percentage of families who reported various stresses**

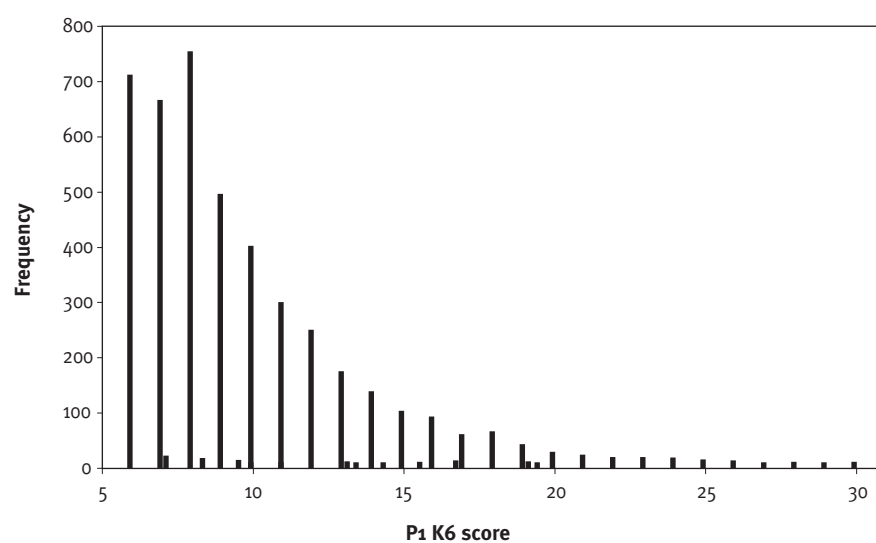
Reported stressor	Infant cohort		Child cohort	
	n	%	n	%
Close family friend or relative died	1,060	25.1	1,124	27.0
Serious illness, injury or assault (close relative)	918	21.7	1,051	25.3
Had a major financial crisis	673	15.9	800	19.3
Serious problem with close friend, relative or neighbour	616	14.6	782	18.8
Crisis or serious disappointment in job or career	335	7.9	422	10.1
Something valued was lost or stolen	322	7.6	373	9.0
Serious illness injury or assault (self)	239	5.6	333	8.0
Thought would soon lose job	213	5.0	265	6.4
Broke off steady romantic relationship	185	4.4	259	6.2
Sought work unsuccessfully for more than one month	159	3.8	226	5.5
Lost job (not by choice)	142	3.4	166	4.0
Member of household had alcohol problem	123	2.9	141	3.4
Parent, partner or child died	108	2.6	138	3.3
Member of household had drug-use problem	87	2.1	99	2.4
Had problems with police and a court appearance	80	1.9	95	2.3

**Table B2: Total number of stresses reported**

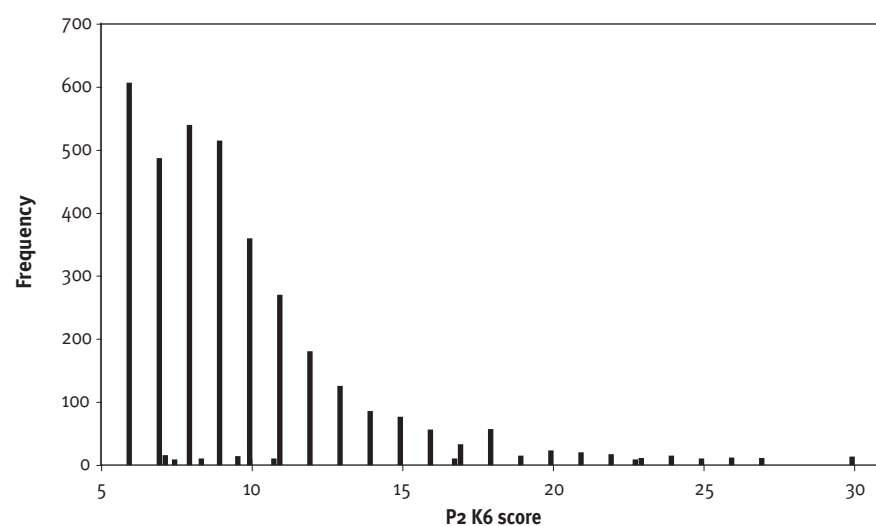
Total number of stresses	Infant cohort	Child cohort
	%	%
0	38.2	31.5
1	29.8	26.4
2	16.5	18.2
3	8.3	10.1
4 or more	7.2	13.9

**Table B3: Frequency of primary carers receiving enough support**

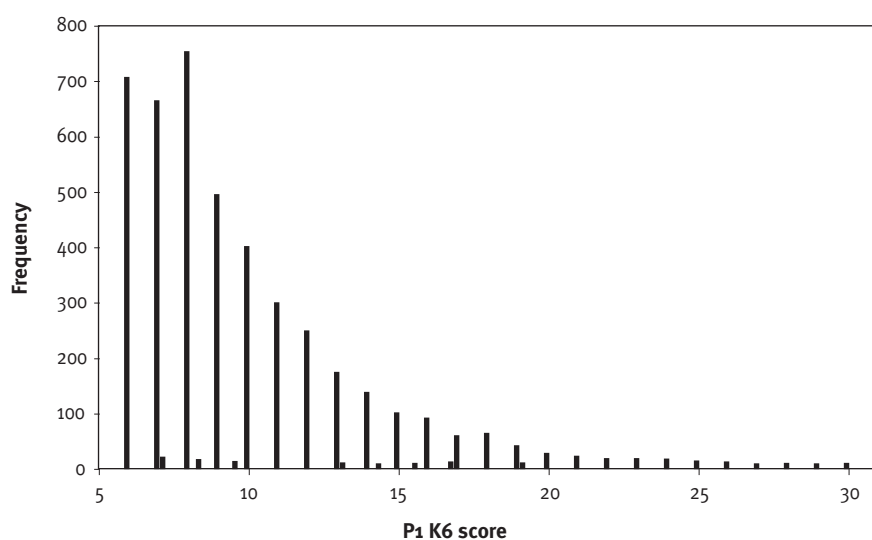
	Infant		Child	
	Estimate	%	Estimate	%
Gets enough support	2,966	75.2	2,891	75.7
Does not get enough support	977	24.8	926	24.3

*Psychological distress—infant cohort***Figure B1:** Distribution of primary carer (P1) psychological distress, infant cohort**Table B4:** Descriptive statistics for P1 psychological distress, infant cohort

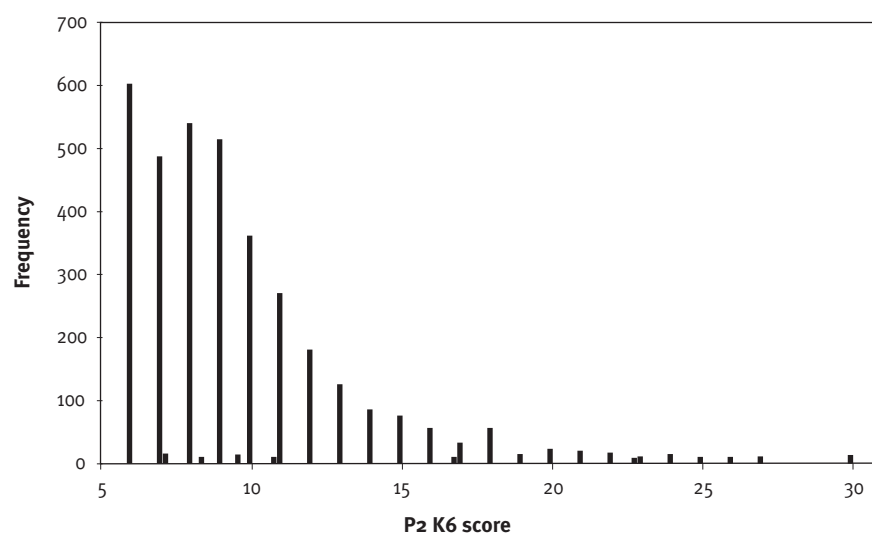
n	Minimum	Maximum	Mean	Standard error
4,243	6	26	9.56	0.069

**Figure B2:** Distribution of secondary carer (P2) psychological distress, infant cohort**Table B5:** Descriptive statistics for P2 psychological distress, infant cohort

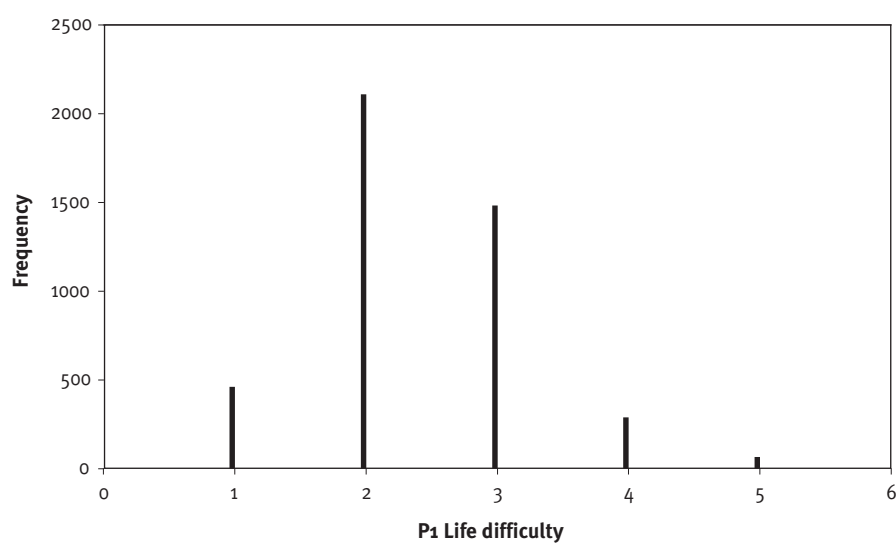
n	Minimum	Maximum	Mean	Standard error
3,367	6	30	9.38	0.063

*Psychological distress—child cohort***Figure B3:** Distribution of primary carer (P1) psychological distress, child cohort**Table B6:** Descriptive statistics for P1 psychological distress, child cohort

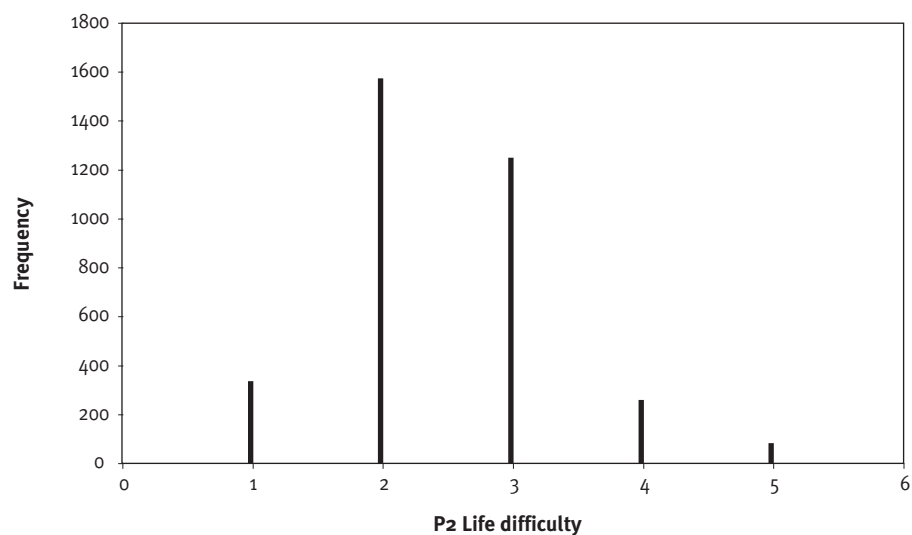
n	Minimum	Maximum	Mean	Standard error
4,167	6	30	10.19	0.072

**Figure B4:** Distribution of secondary carer (P2) psychological distress, child cohort**Table B7:** Descriptive statistics for P2 psychological distress, child cohort

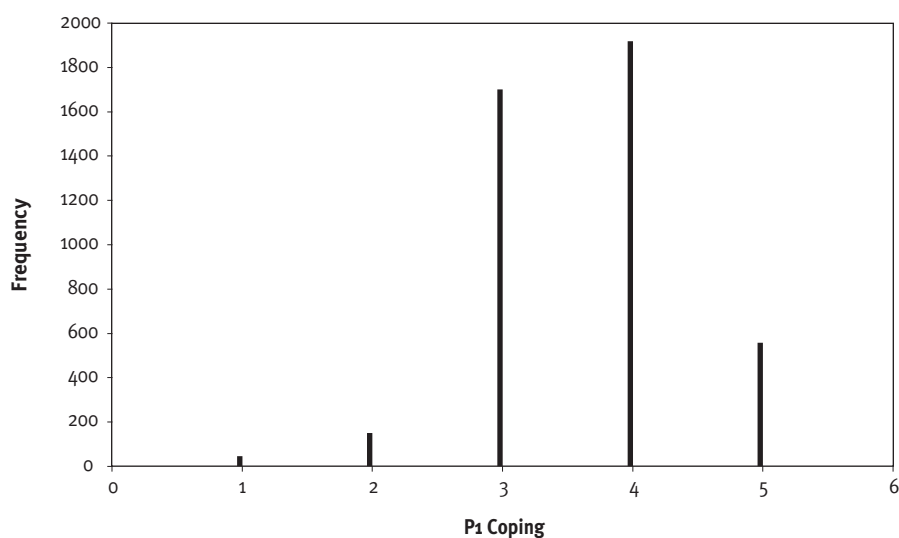
n	Minimum	Maximum	Mean	Standard error
3,165	6	30	9.35	0.064

*Life difficulty—infant cohort***Figure B5: Distribution of primary carer (P1) life difficulty, infant cohort****Table B8: Descriptive statistics for P1 life difficulty, infant cohort**

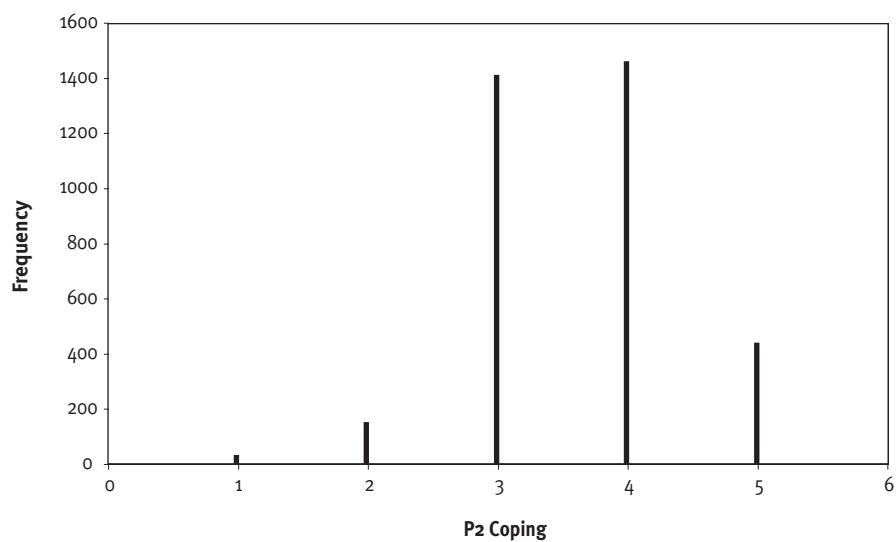
n	Minimum	Maximum	Mean	Standard error
4,251	1	5	2.39	0.015

**Figure B6: Distribution of secondary carer (P2) life difficulty, infant cohort****Table B9: Descriptive statistics for P2 life difficulty, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,395	1	5	2.46	0.015

*Carer coping—infant cohort***Figure B7: Distribution of primary carer (P1) coping, infant cohort****Table B10: Descriptive statistics for P1 coping, infant cohort**

n	Minimum	Maximum	Mean	Standard error
4,247	1	5	3.66	0.014

**Figure B8: Distribution of secondary carer (P2) coping, infant cohort****Table B11: Descriptive statistics for P2 coping, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,933	1	5	3.62	0.015

Life difficulty—child cohort

Figure B9: Distribution of primary carer (P1) life difficulty, child cohort

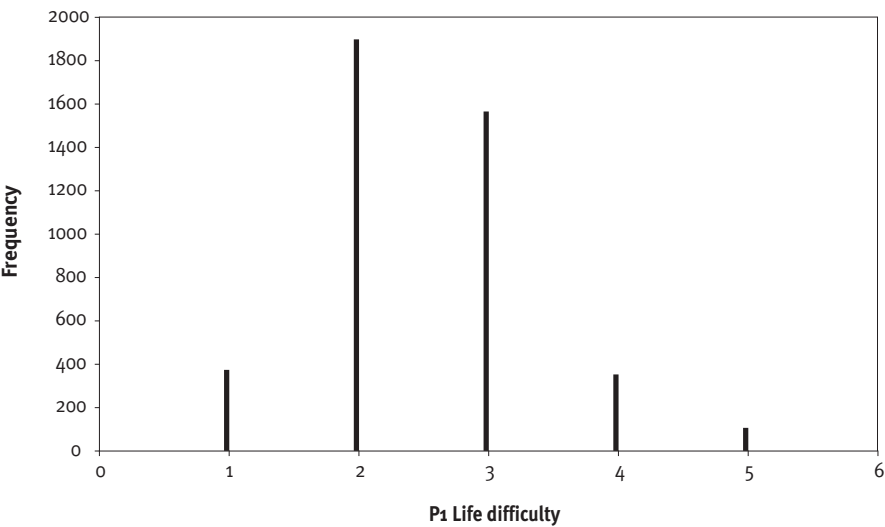


Table B12: Descriptive statistics for P1 life difficulty, child cohort

n	Minimum	Maximum	Mean	Standard error
4,175	1	5	2.50	0.014

Figure B10: Distribution of secondary carer (P2) life difficulty, child cohort

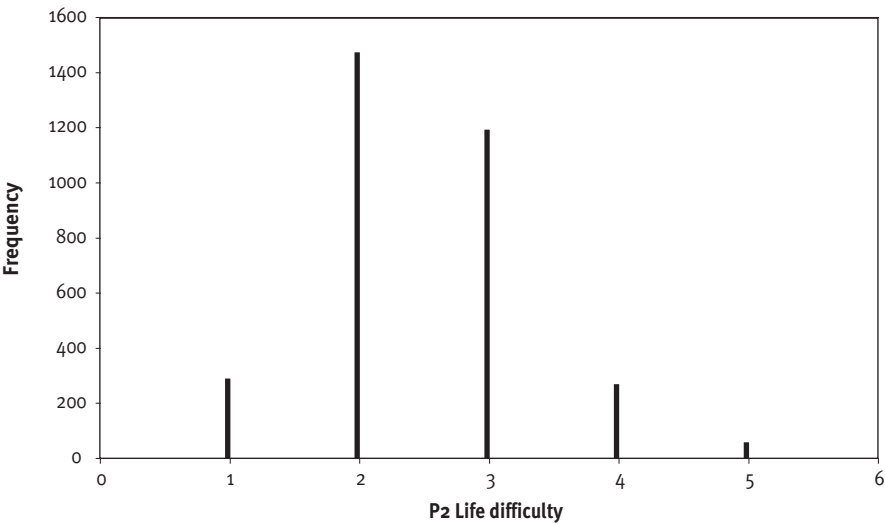
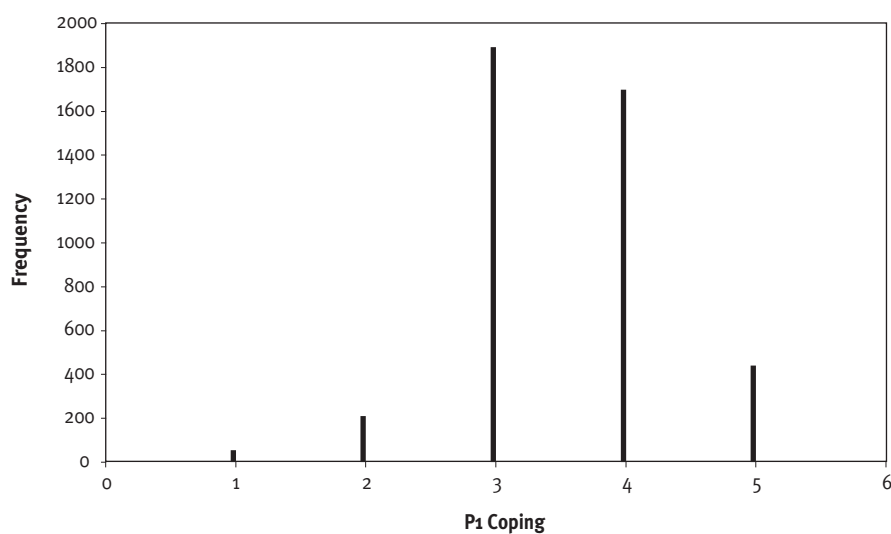
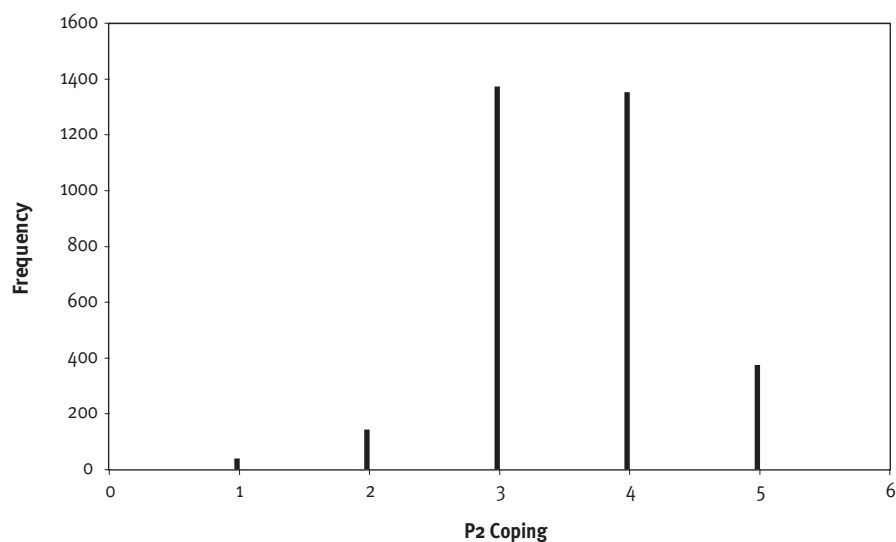


Table B13: Descriptive statistics for P2 life difficulty, child cohort

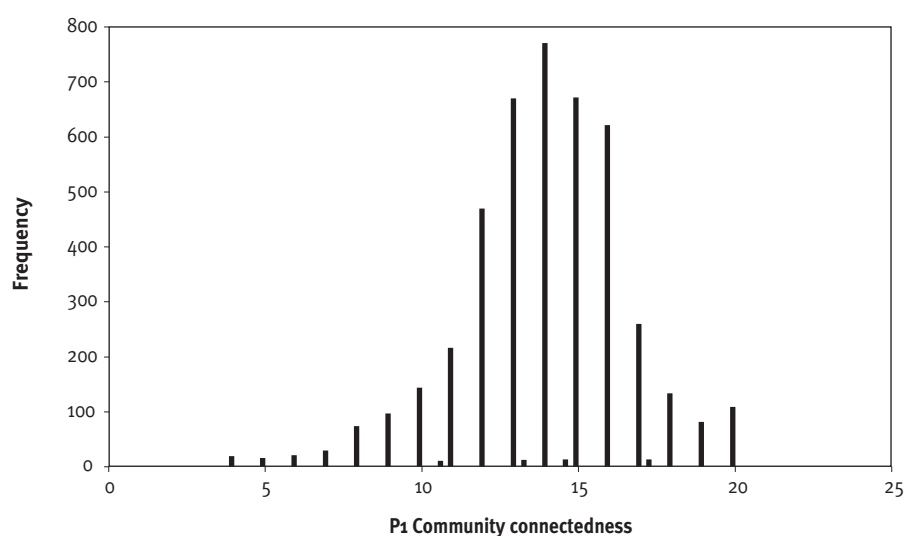
n	Minimum	Maximum	Mean	Standard error
3,185	1	5	2.48	0.016

*Coping—child cohort***Figure B11: Distribution of primary carer (P1) coping, child cohort****Table B14: Descriptive statistics for P1 coping, child cohort**

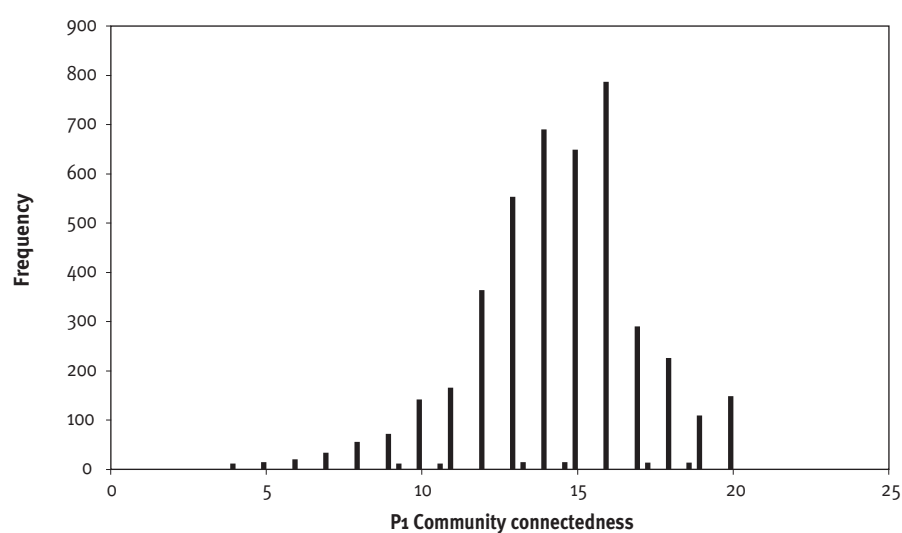
n	Minimum	Maximum	Mean	Standard error
4,174	1	5	3.54	0.012

**Figure B12: Distribution of secondary carer (P2) coping, child cohort****Table B15: Descriptive statistics for P2 coping, child cohort**

n	Minimum	Maximum	Mean	Standard error
3,184	1	5	3.59	0.014

*Community connectedness—infant cohort***Figure B13: Distribution of primary carer (P1) community connectedness, infant cohort****Table B16: Descriptive statistics for P1 community connectedness, infant cohort**

n	Minimum	Maximum	Mean	Standard error
4,244	4	20	14.04	0.049

*Community connectedness—child cohort***Figure B14: Distribution of primary carer (P1) community connectedness, child cohort****Table B17: Descriptive statistics for P1 community connectedness, child cohort**

n	Minimum	Maximum	Mean	Standard error
4,161	4	20	14.51	0.054



**Table B18: Primary carer (P1) psychological distress, couple sample, likelihood of clinically significant psychological distress**

	Infant cohort estimated n=3,162		Child cohort estimated n=2,852	
	OR <sub>adj</sub>	95% confidence interval (low–high)	OR <sub>adj</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)				
Under 25	1.258	(0.492–3.215)	1.104	(0.545–2.234)
25–34	Ref		Ref	
35 and above	0.949	(0.466–1.932)	0.697	(0.323–1.506)
P1 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.655	(0.861–3.183)	0.697	(0.325–1.495)
P1 Education				
<b>Year 9 or less</b>	<b>4.556</b>	<b>(1.140–18.203)</b>	<b>4.076</b>	<b>(1.188–13.986)</b>
Year 10	0.456	(0.083–2.507)	1.137	(0.385–3.360)
Year 11 or 12	0.897	(0.406–1.986)	1.149	(0.481–2.745)
Trade certificate or diploma	1.099	(0.513–2.353)	0.967	(0.476–1.962)
University	Ref		Ref	
P1 Employment status				
Full time	Ref		Ref	
Part time	2.968	(0.910–9.683)	0.632	(0.230–1.734)
Unemployed	1.906	(0.199–18.221)	2.628	(0.641–10.769)
Not in labour force	<b>5.187</b>	<b>(1.719–15.652)</b>	1.460	(0.555–3.841)
Family structure				
Married, intact	Ref		Ref	
De facto, intact	0.475	(0.177–1.277)	1.231	(0.516–2.934)
Married, step	1.468	(0.512–4.211)	0.605	(0.212–1.723)
De facto, step	1.749	(0.573–5.340)	0.306	(0.084–1.111)
Number of children in household				
1	Ref		Ref	
2	1.070	(0.517–2.214)	1.207	(0.447–3.258)
3	0.514	(0.225–1.175)	1.364	(0.451–4.125)
4 or more	1.271	(0.437–3.698)	1.810	(0.596–5.494)
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	2.596	(0.916–7.354)	0.806	(0.296–2.191)
\$1,000–\$1,499	1.671	(0.549–5.087)	0.932	(0.322–2.696)
\$1,500–\$1,999	1.938	(0.495–7.592)	0.499	(0.143–1.742)
More than \$2,000	2.062	(0.510–8.335)	0.687	(0.190–2.483)
Life stress events				
3 or less	Ref		Ref	
<b>4 or more</b>	<b>3.163</b>	<b>(1.478–6.769)</b>	<b>2.207</b>	<b>(1.153–4.224)</b>
P1 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>4.215</b>	<b>(2.225–7.988)</b>	<b>7.516</b>	<b>(4.127–13.688)</b>
P1 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	<b>8.434</b>	<b>(4.173–17.046)</b>	<b>5.573</b>	<b>(2.780–11.172)</b>
P1 External support				
Enough	Ref		Ref	
Not Enough	<b>2.526</b>	<b>(1.495–4.268)</b>	1.645	(0.928–2.917)
P1 Argumentative relationship				
Lower	Ref		Ref	
Higher	<b>2.708</b>	<b>(1.399–5.242)</b>	1.613	(0.817–3.184)

P1 Reciprocal support				
Lower	Ref		Ref	
Higher	0.921	(0.458–1.853)	1.599	(0.862–2.966)
P1 Relationship satisfaction				
Higher	Ref		Ref	
Lower	1.440	(0.628–3.300)	1.481	(0.751–2.920)
SEIFA disadvantage categories				
650–950	Ref		Ref	
960–980	1.547	(0.583–4.103)	0.742	(0.351–1.567)
990–1,010	2.027	(0.731–5.626)	0.826	(0.390–1.751)
1,020–1,060	2.093	(0.815–5.376)	0.797	(0.360–1.768)
1,070–1,150	1.555	(0.560–4.318)	0.753	(0.267–2.126)
Community connectedness				
Higher	Ref		Ref	
Lower	1.153	(0.656–2.027)	<b>1.986</b>	<b>(1.105–3.571)</b>

**Table B19: Primary carer (P1) psychological distress, lone parent sample, likelihood of clinically significant psychological distress**

	Child cohort estimated n=2,852	
	OR <sub>adj</sub>	95% confidence interval (low–high)
P1 Age at child's birth (years)		
Under 25	0.942	(0.322–2.751)
25–34	Ref	
35 and above	1.281	(0.328–5.006)
P1 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>0.274</b>	<b>(0.084–0.898)</b>
P1 Education		
Year 9 or less	1.750	(0.331–9.262)
Year 10	1.531	(0.338–6.938)
Year 11 or 12	0.677	(0.137–3.352)
Trade certificate or diploma	1.805	(0.413–7.894)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	2.901	(0.267–31.542)
Unemployed	9.781	(0.867–110.345)
Not in labour force	9.071	(0.931–88.368)
Number of children in household		
1	Ref	
2	2.994	(0.627–14.293)
3	1.625	(0.292–9.055)
4 or more	0.662	(0.107–4.086)
Income categories		
Less than \$600	Ref	
\$600 or more	0.807	(0.190–3.439)
Life stress events		
3 or less	Ref	
4 or more	1.280	(0.478–3.428)

P1 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>3.505</b>	<b>(1.276–9.626)</b>
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>15.980</b>	<b>(4.474–57.077)</b>
P1 External support		
Enough	Ref	
<b>Not enough</b>	<b>3.397</b>	<b>(1.272–9.070)</b>
SEIFA disadvantage categories		
650–950	Ref	
960–980	1.440	(0.444–4.663)
990–1,010	1.885	(0.527–6.737)
1,020–1,060	1.909	(0.538–6.779)
1,070–1,150	0.744	(0.192–2.879)
Community connectedness		
Higher	Ref	
Lower	1.818	(0.787–4.200)

**Table B20: Secondary carer (P2) psychological distress, likelihood of clinically significant psychological distress**

	Infant cohort estimated n=2,989		Child cohort estimated n=2,789	
	OR <sub>adj</sub>	95% confidence interval (low–high)	OR <sub>adj</sub>	95% confidence interval (low–high)
P2 Age at child's birth (years)				
Under 25	0.548	(0.171–1.756)	0.962	(0.278–3.330)
25–34	Ref		Ref	
35 and above	1.007	(0.527–1.926)	1.196	(0.664–2.156)
P2 Country of birth				
Australia	Ref		Ref	
Outside Australia	1.243	(0.538–2.875)	1.352	(0.634–2.887)
P2 Education				
Year 9 or less	0.507	(0.102–2.525)	1.641	(0.230–11.708)
Year 10	0.617	(0.164–2.328)	1.718	(0.679–4.349)
Year 11 or 12	0.946	(0.289–3.092)	0.907	(0.334–2.466)
Trade certificate or diploma	0.866	(0.370–2.023)	0.812	(0.350–1.880)
University	Ref		Ref	
P2 Employment status				
Full time	Ref		Ref	
Part time	<b>3.053</b>	<b>(1.044–8.929)</b>	0.663	(0.205–2.143)
Unemployed	1.217	(0.245–6.031)	1.064	(0.057–19.787)
Not in labour force	<b>4.306</b>	<b>(1.393–13.315)</b>	1.293	(0.213–7.855)
Family structure				
Married, intact	Ref		Ref	
De facto, intact	0.505	(0.155–1.645)	1.072	(0.317–3.623)
Married, step	<b>5.081</b>	<b>(1.418–18.207)</b>	2.772	(0.907–8.469)
De facto, step	1.545	(0.360–6.638)	0.702	(0.171–2.886)
Number of children in household				
1	Ref		Ref	
2	0.433	(0.179–1.047)	1.156	(0.471–2.837)
3	<b>0.086</b>	<b>(0.029–0.259)</b>	0.863	(0.279–2.668)
4 or more	0.321	(0.101–1.023)	1.306	(0.372–4.585)

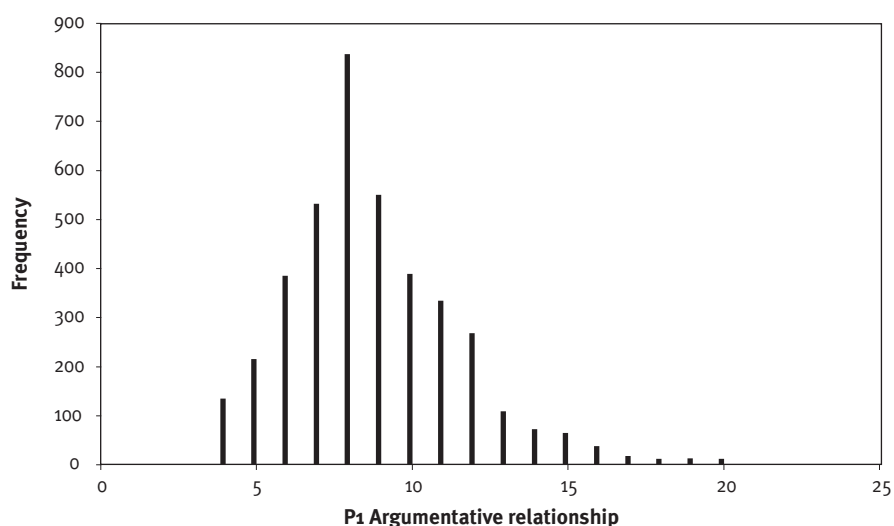
Income categories				
Less than \$600	Ref		Ref	
\$600–\$999	0.752	(0.316–1.786)	0.832	(0.236–2.937)
\$1,000–\$1,499	0.326	(0.100–1.063)	0.425	(0.111–1.621)
\$1,500–\$1,999	0.636	(0.190–2.128)	0.493	(0.123–1.971)
More than \$2,000	<b>0.190</b>	<b>(0.048–0.752)</b>	0.432	(0.105–1.781)
P2 Life difficulties				
Fewer	Ref		Ref	
<b>Many</b>	<b>6.883</b>	<b>(3.009–15.744)</b>	<b>11.757</b>	<b>(5.961–23.188)</b>
P2 Coping				
Well to extremely well	Ref		Ref	
<b>Poor</b>	<b>11.620</b>	<b>(4.893–27.592)</b>	<b>4.523</b>	<b>(2.148–9.523)</b>
P2 Argumentative relationship				
Lower	Ref		Ref	
Higher	<b>2.229</b>	<b>(1.008–4.928)</b>	1.786	(0.871–3.661)
P2 Reciprocal support				
Lower	Ref		Ref	
Higher	2.065	(0.921–4.626)	1.242	(0.596–2.588)
P2 Relationship satisfaction				
Higher	Ref		Ref	
Lower	1.132	(0.473–2.713)	1.277	(0.556–2.937)

# Appendix C

## Section 3: Relationship functioning

### *Argumentative relationship—infant cohort*

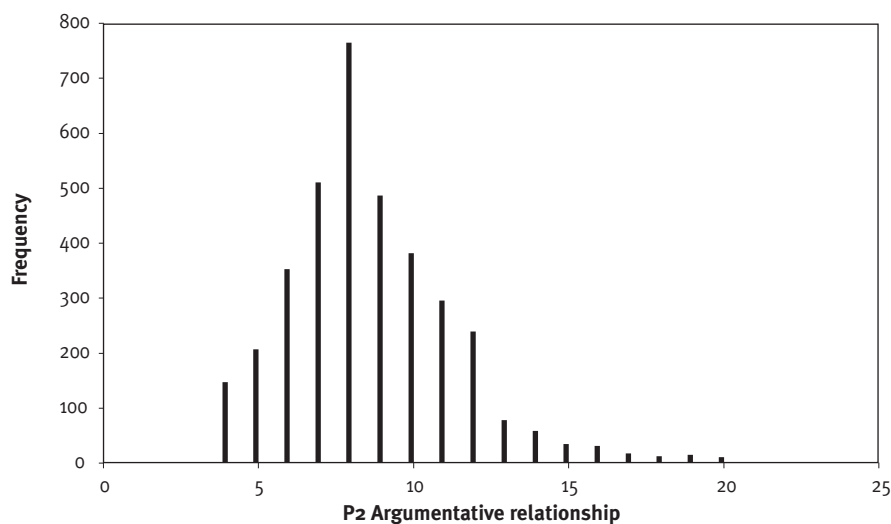
**Figure C1:** Distribution of primary carer (P1) argumentative relationship, infant cohort



**Table C1:** Descriptive statistics for P1 argumentative relationship, infant cohort

n	Minimum	Maximum	Mean	Standard error
3,828	4	20	8.65	0.044

**Figure C2:** Distribution of secondary carer (P2) argumentative relationship, infant cohort



**Table C2:** Descriptive statistics for P2 argumentative relationship, infant cohort

n	Minimum	Maximum	Mean	Standard error
3,503	4	18.4	7.70	0.036

Argumentative relationship—child cohort

Figure C3: Distribution of primary carer (P1) argumentative relationship, child cohort

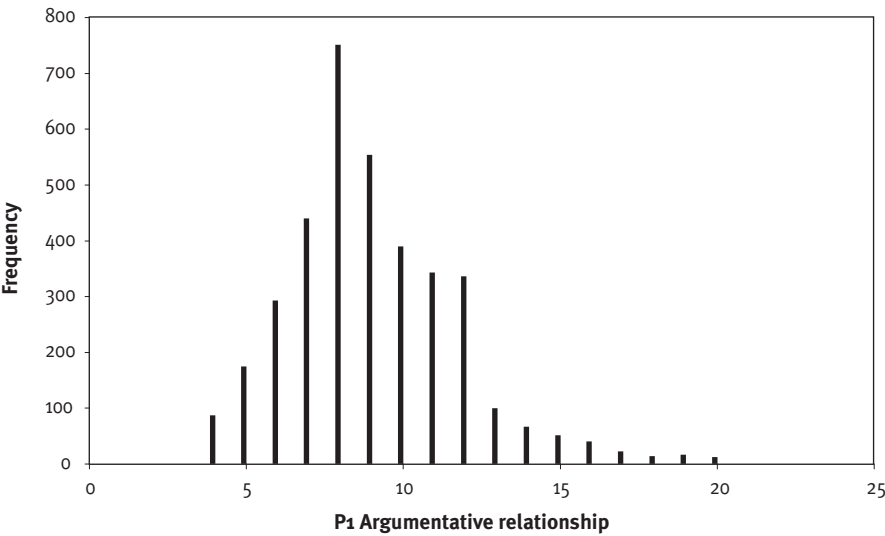


Table C3: Descriptive statistics for P1 argumentative relationship, child cohort

n	Minimum	Maximum	Mean	Standard error
3,527	4	20	8.97	0.044

Figure C4: Distribution of secondary carer (P2) argumentative relationship, child cohort

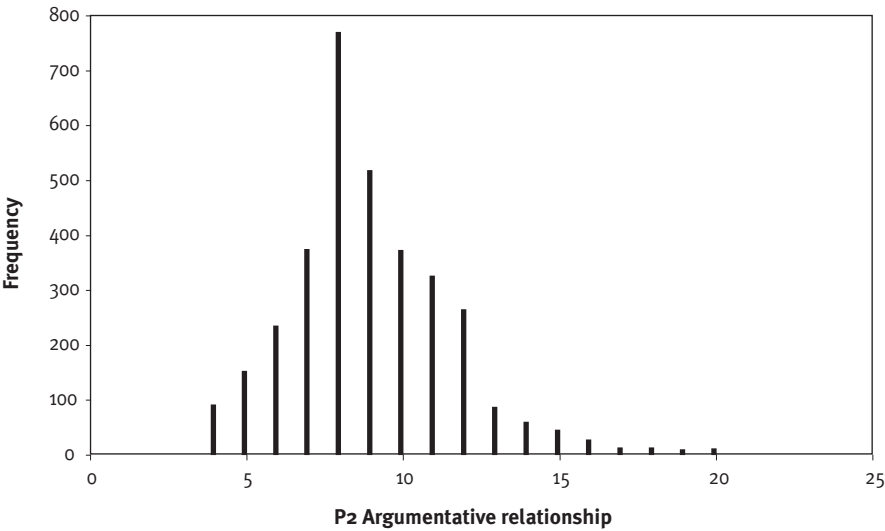
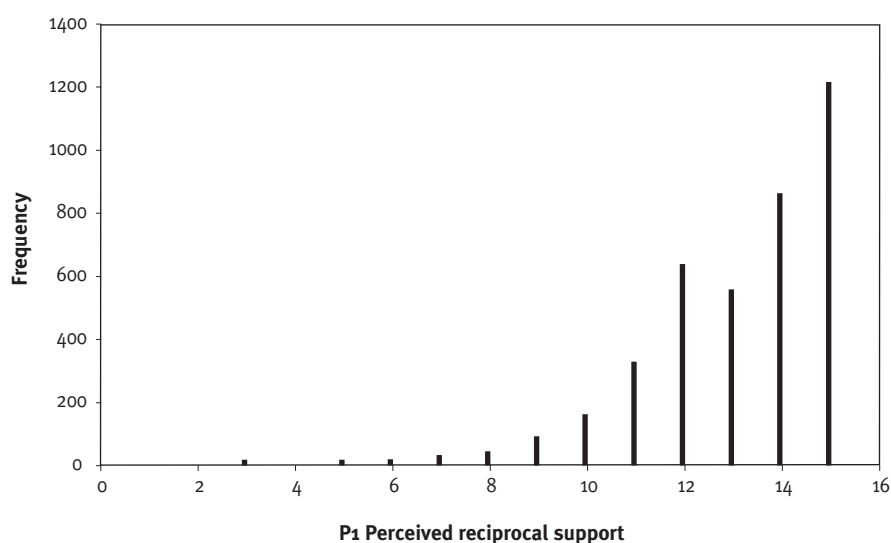


Table C4: Descriptive statistics for P2 argumentative relationship, child cohort

n	Minimum	Maximum	Mean	Standard error
3,223	4	20	8.89	0.044

*Perceived support from partner—infant cohort*

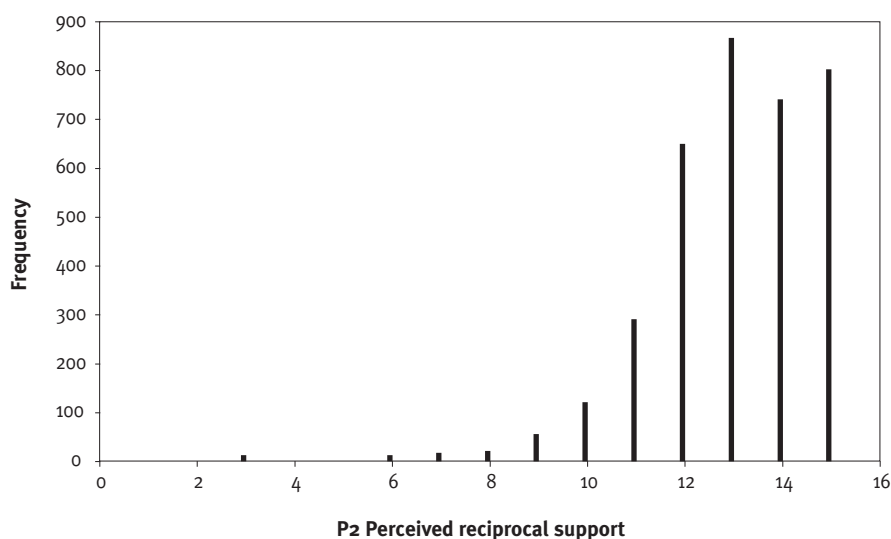
**Figure C5: Distribution of primary carer (P1) perceived reciprocal support for parenting, infant cohort**



**Table C5: Descriptive statistics for P1 perceived reciprocal support for parenting, infant cohort**

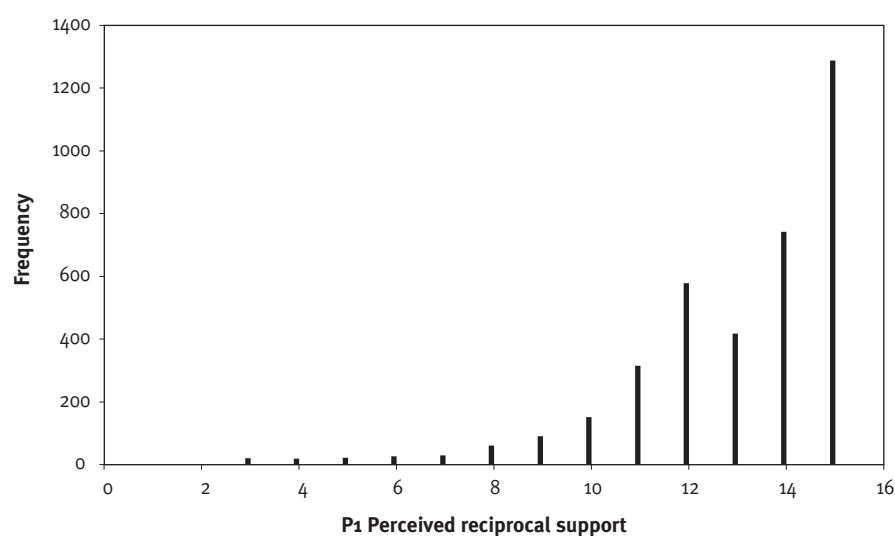
n	Minimum	Maximum	Mean	Standard error
3,793	3	15	13.26	0.031

**Figure C6: Distribution of secondary carer (P2) perceived reciprocal support for parenting, infant cohort**

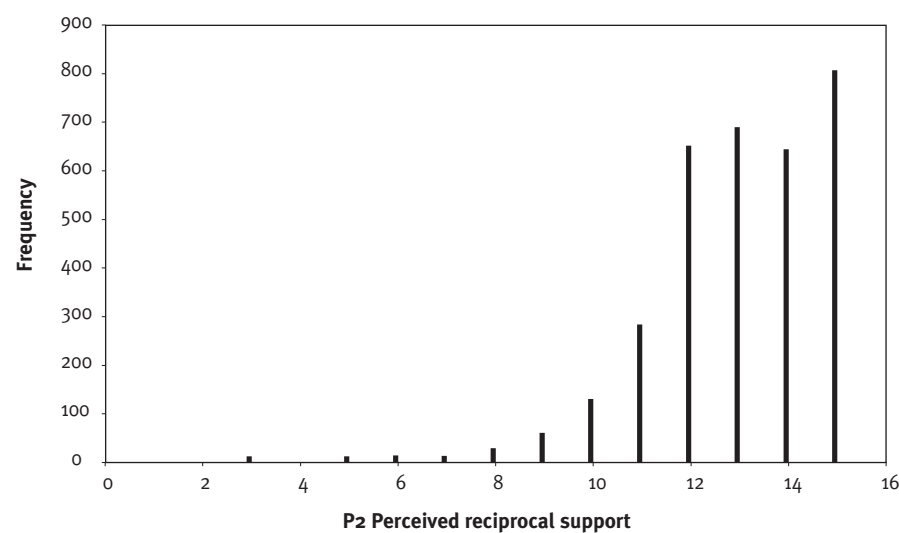


**Table C6: Descriptive statistics for P2 perceived reciprocal support for parenting, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,474	3	11	13.14	0.027

*Perceived reciprocal support for parenting—child cohort***Figure C7: Distribution of primary carer (P1) perceived reciprocal support for parenting, child cohort****Table C7: Descriptive statistics for P1 perceived reciprocal support for parenting, child cohort**

n	Minimum	Maximum	Mean	Standard error
3,531	3	15	13.28	0.034

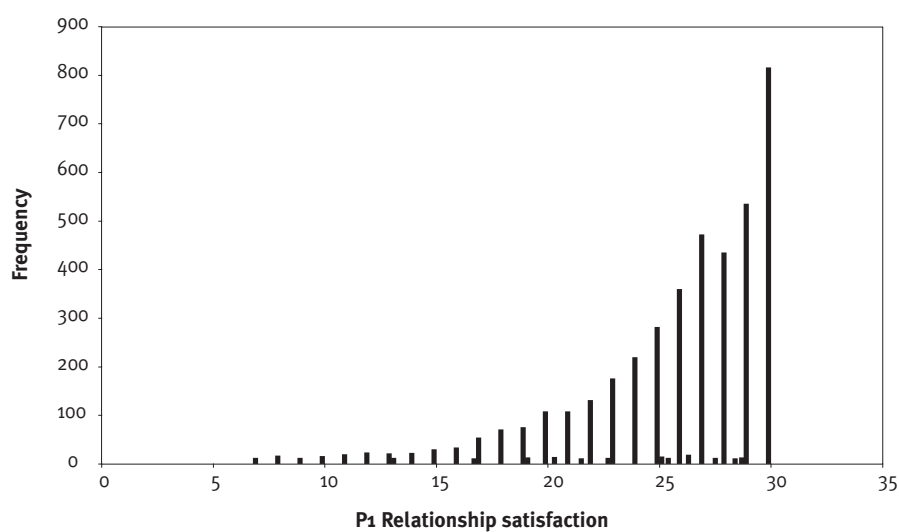
**Figure C8: Distribution of secondary carer (P2) perceived reciprocal support for parenting, child cohort****Table C8: Descriptive statistics for P2 perceived reciprocal support for parenting, child cohort**

n	Minimum	Maximum	Mean	Standard error
3,220	3	15	13.10	0.033



*Relationship satisfaction—infant cohort*

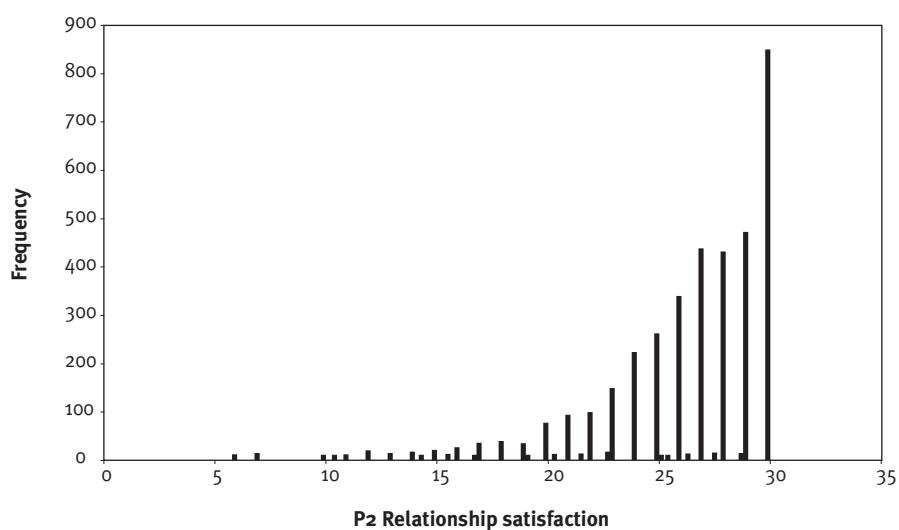
**Figure C9: Distribution of primary carer (P1) relationship satisfaction, infant cohort**



**Table C9: Descriptive statistics for P1 relationship satisfaction, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,830	6	30	26.17	0.071

**Figure C10: Distribution of secondary carer (P2) relationship satisfaction, infant cohort**



**Table C10: Descriptive statistics for P2 relationship satisfaction, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,500	6	30	26.64	0.057

Relationship satisfaction—child cohort

Figure C11: Distribution of primary carer (P1) relationship satisfaction, child cohort

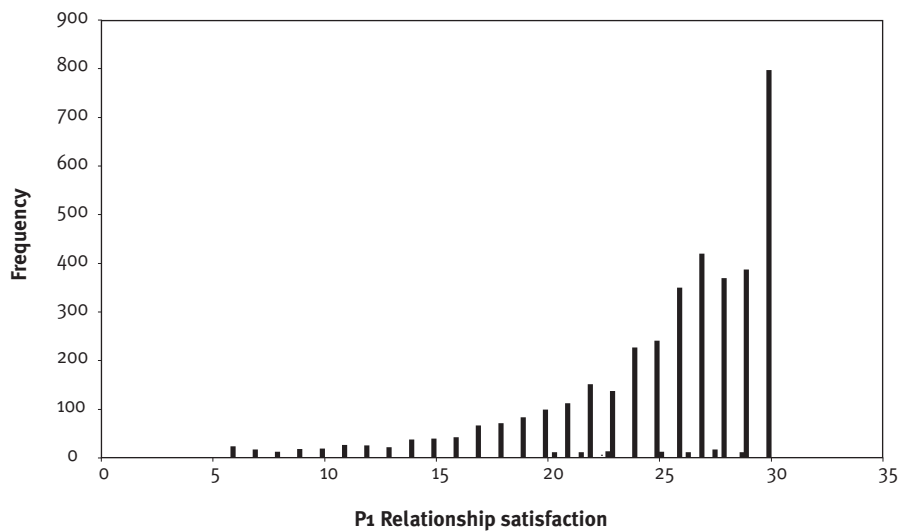


Table C11: Descriptive statistics for P1 relationship satisfaction, child cohort

n	Minimum	Maximum	Mean	Standard error
3,547	6	30	25.72	0.081

Figure C12: Distribution of secondary carer (P2) relationship satisfaction, child cohort

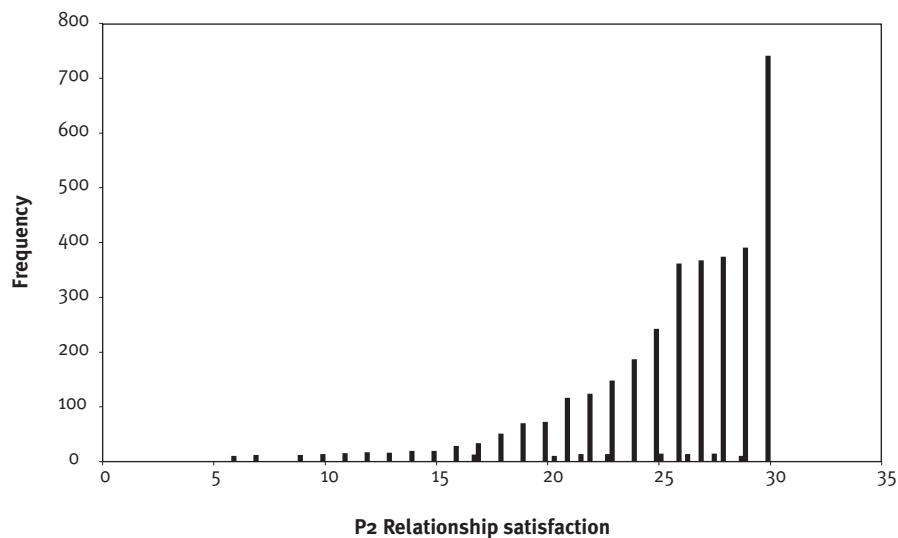


Table C12: Descriptive statistics for P2 relationship satisfaction, child cohort

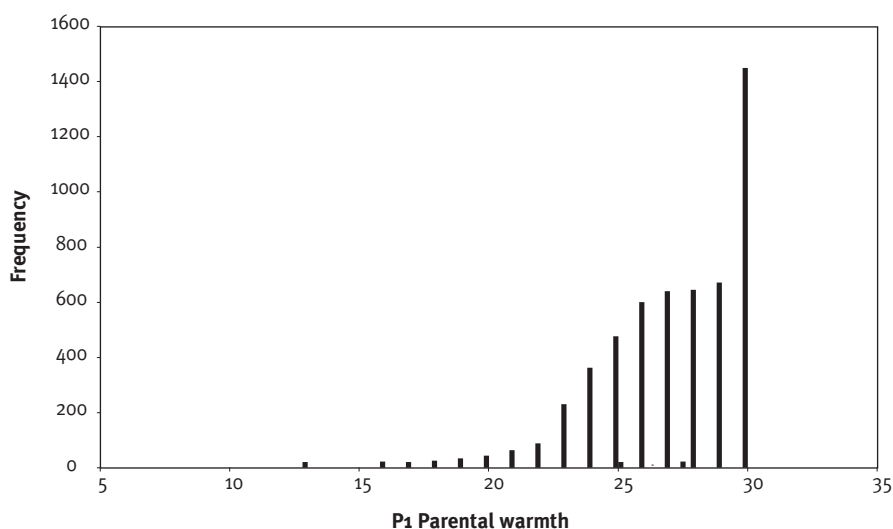
n	Minimum	Maximum	Mean	Standard error
3,241	6	30	26.27	0.067

# Appendix D

## Section 4: Parenting practices

*Parental warmth—infant cohort*

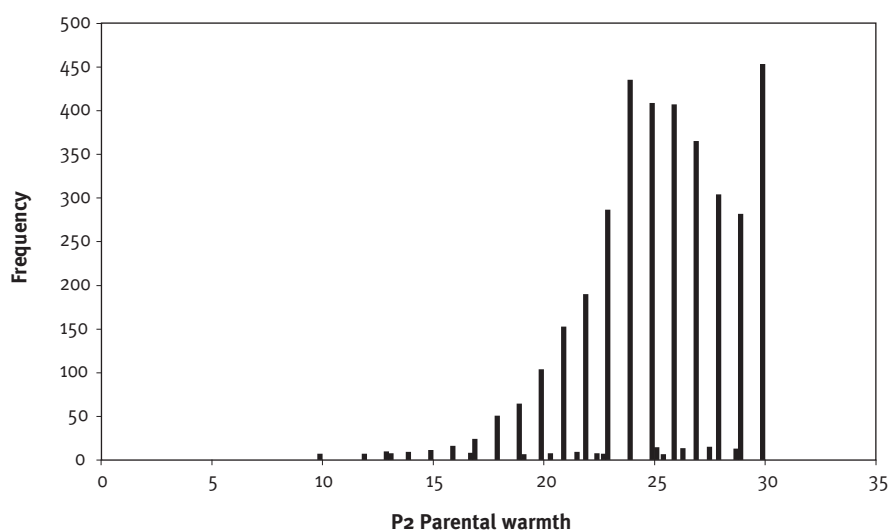
**Figure D1:** Distribution of parental warmth for primary carer (P1), infant cohort



**Table D1:** Descriptive statistics for P1 parental warmth, infant cohort

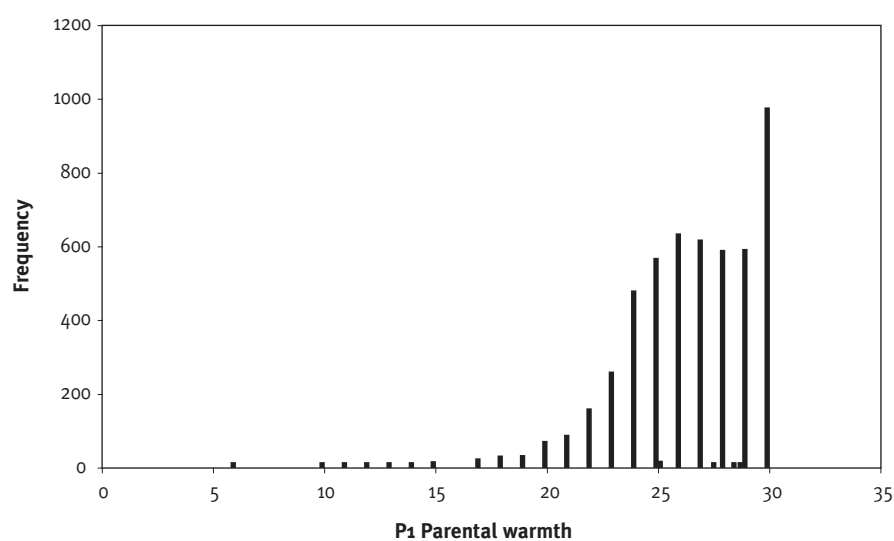
n	Minimum	Maximum	Mean	Standard error
5,094	13	30	27.35	0.044

**Figure D2:** Distribution of secondary carer (P2) parental warmth, infant cohort

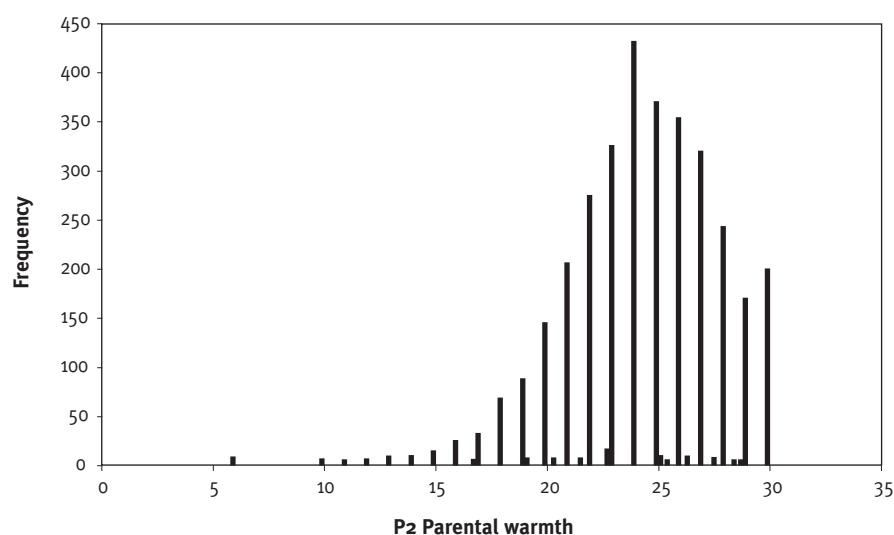


**Table D2:** Descriptive statistics for P2 parental warmth, infant cohort

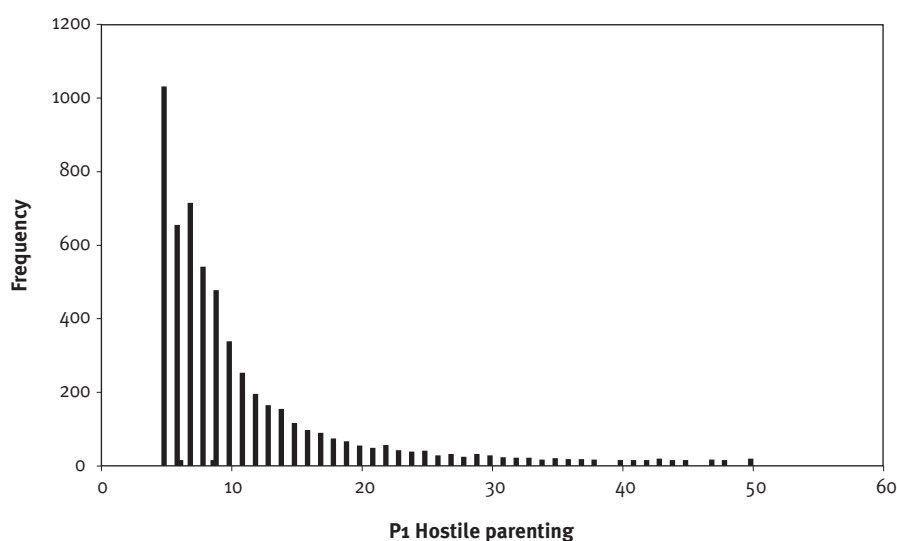
n	Minimum	Maximum	Mean	Standard error
3,513	10	30	25.48	0.059

*Parental warmth—child cohort***Figure D3: Distribution of primary carer (P1) parental warmth, child cohort****Table D3: Descriptive statistics for P1 parental warmth, child cohort**

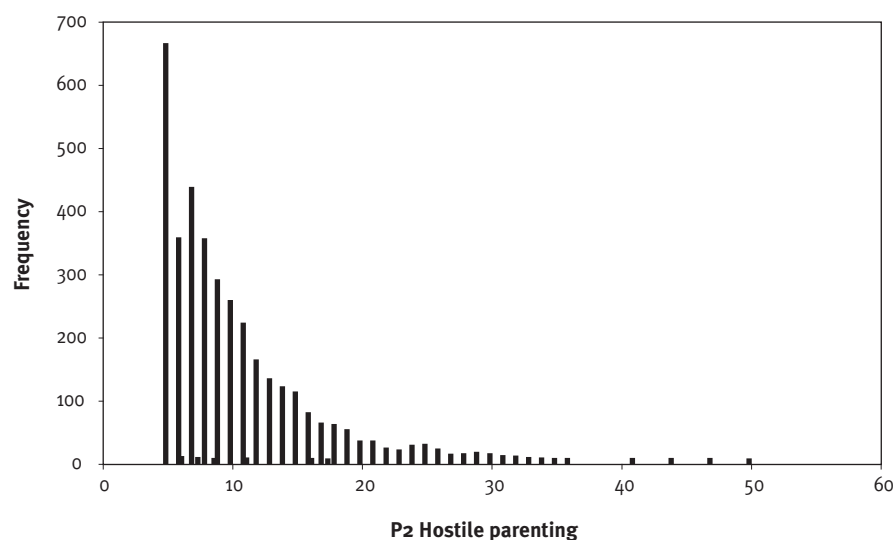
n	Minimum	Maximum	Mean	Standard error
4,962	6	30	26.65	0.044

**Figure D4: Distribution of secondary carer (P2) parental warmth, child cohort****Table D4: Descriptive statistics for P2 parental warmth, child cohort**

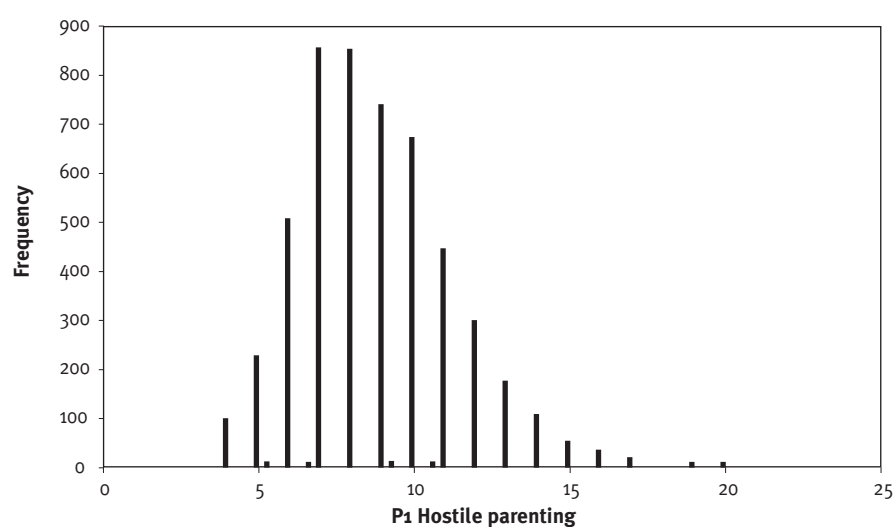
n	Minimum	Maximum	Mean	Standard error
3,204	6	30	24.44	0.067

*Hostile parenting—infant cohort***Figure D5: Distribution of primary carer (P1) hostile parenting, infant cohort****Table D5: Descriptive statistics for P1 hostile parenting, infant cohort**

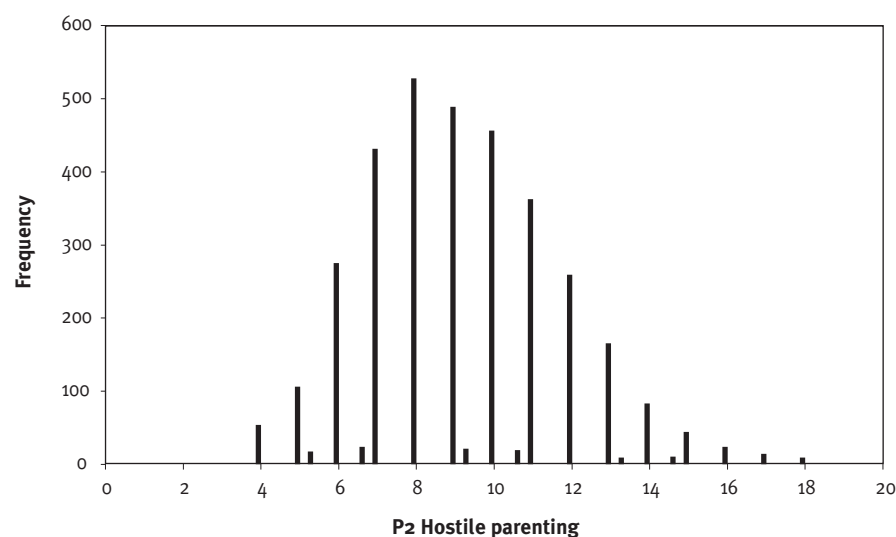
n	Minimum	Maximum	Mean	Standard error
5,087	5	50	9.66	0.095

**Figure D6: Distribution of secondary carer (P2) hostile parenting, infant cohort****Table D6: Descriptive statistics for P2 hostile parenting, infant cohort**

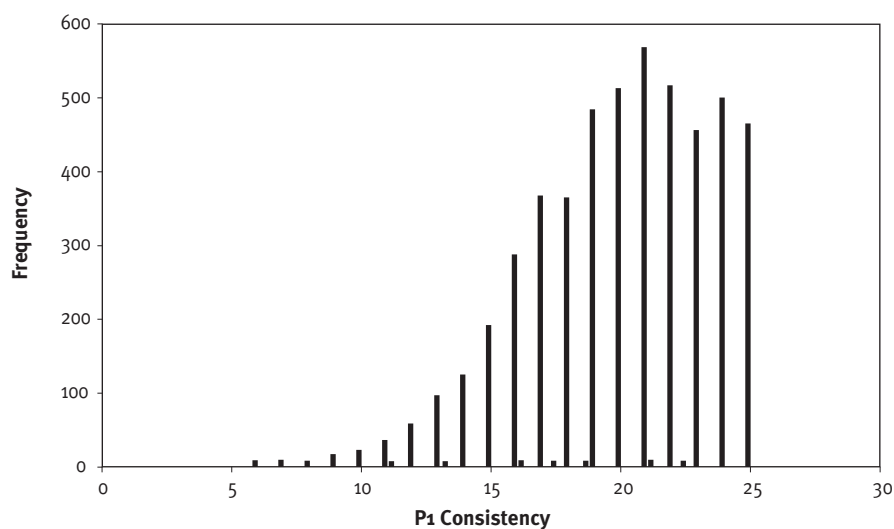
n	Minimum	Maximum	Mean	Standard error
3,509	5	50	9.97	0.102

*Hostile parenting—child cohort***Figure D7: Distribution of primary carer (P1) hostile parenting, child cohort****Table D7: Descriptive statistics for P1 hostile parenting, child cohort**

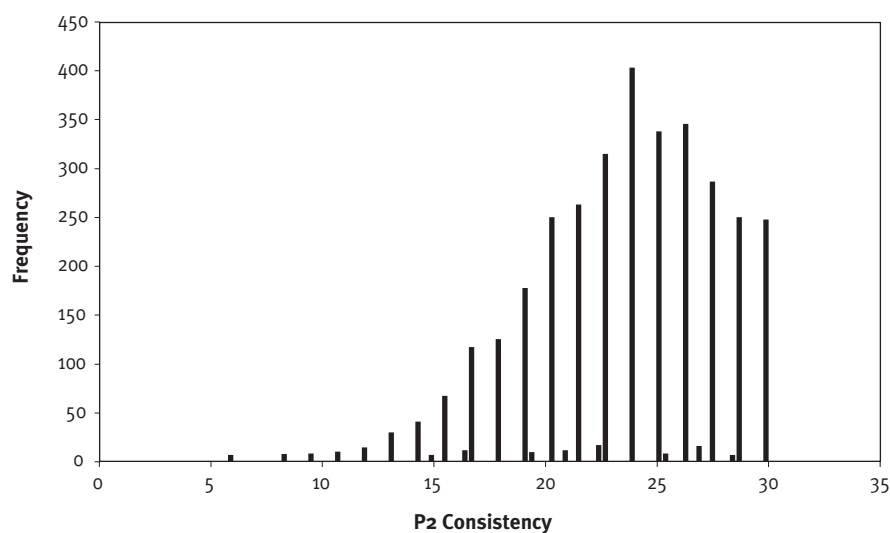
n	Minimum	Maximum	Mean	Standard error
4,958	4	20	8.81	0.039

**Figure D8: Distribution of secondary carer (P2) hostile parenting, child cohort****Table D8: Descriptive statistics for P2 hostile parenting, child cohort**

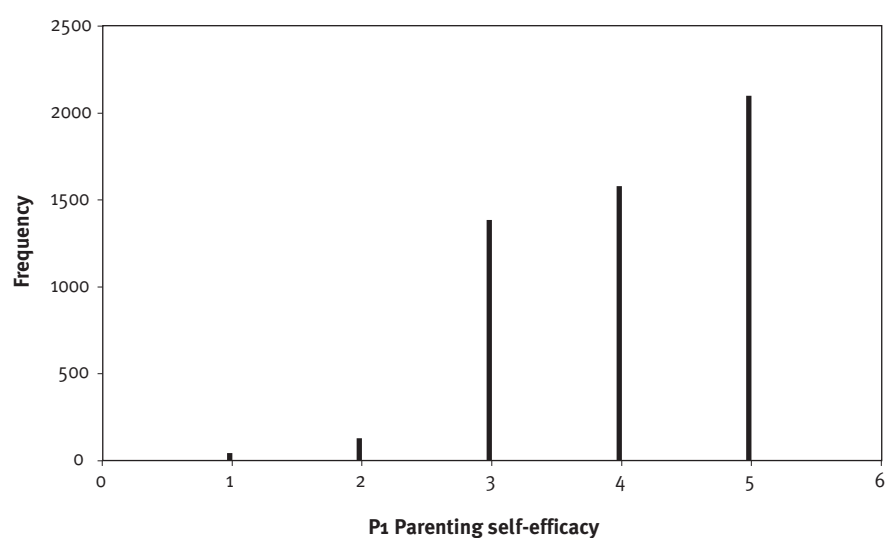
n	Minimum	Maximum	Mean	Standard error
3,166	4	20	9.28	0.051

*Parental consistency—child cohort only***Figure D9: Distribution of primary carer (P1) consistency****Table D9: Descriptive statistics for P1 parenting consistency**

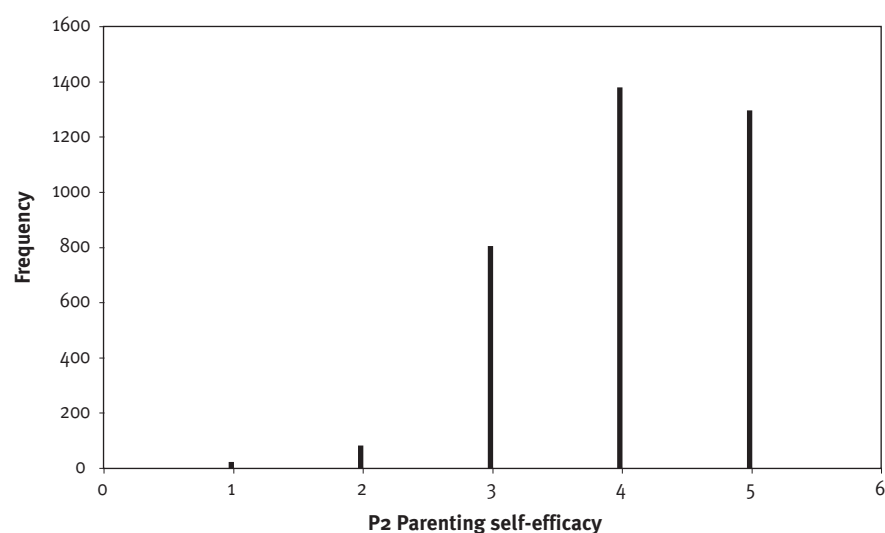
n	Minimum	Maximum	Mean	Standard error
4,966	6	25	21.11	0.068

**Figure D10: Distribution of secondary carer (P2) consistency****Table D10: Descriptive statistics for P2 parenting consistency**

n	Minimum	Maximum	Mean	Standard error
3,241	5	25	20.89	0.070

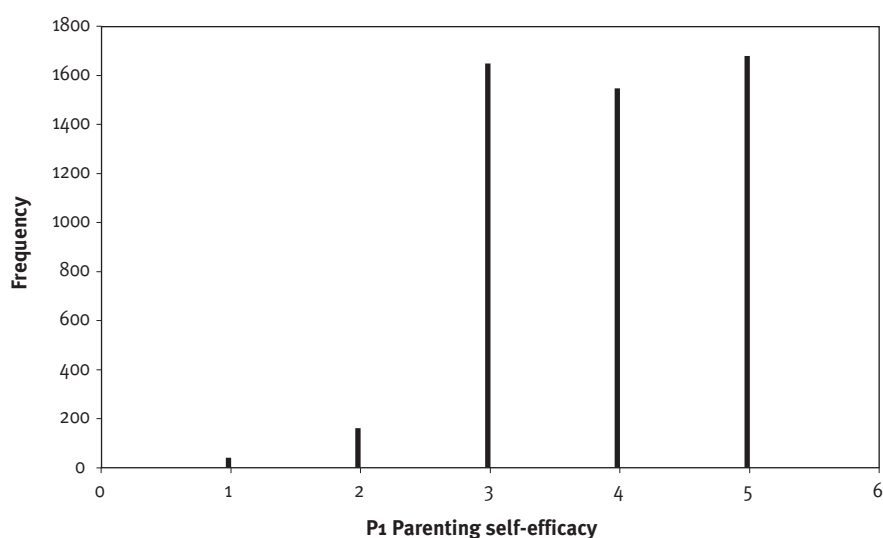
*Parenting self-efficacy—infant cohort***Figure D11: Distribution of primary carer (P1) parenting self-efficacy, infant cohort****Table D11: Descriptive statistics for P1 parenting self-efficacy, infant cohort**

n	Minimum	Maximum	Mean	Standard error
5,012	1	5	4.10	0.014

**Figure D12: Distribution of secondary carer (P2) parenting self-efficacy, infant cohort****Table D12: Descriptive statistics for P2 parenting self-efficacy, infant cohort**

n	Minimum	Maximum	Mean	Standard error
3,491	1	5	4.10	0.013



*Parenting self-efficacy—child cohort***Figure D13: Distribution of primary carer (P1) parenting self-efficacy, child cohort****Table D13: Descriptive statistics for P1 parenting self-efficacy, child cohort**

n	Minimum	Maximum	Mean	Standard error
3,231	1	5	3.91	0.017

**Figure D14: Distribution of secondary carer (P2) parenting self-efficacy, child cohort****Table D14: Descriptive statistics for P2 parenting self-efficacy, child cohort**

n	Minimum	Maximum	Mean	Standard error
3,234	1	5	3.88	0.017

**Table D15: Primary carer (P1) warm parenting, infant cohort, couple sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=3,194</b>		
Sex of study child		
Male	Ref	
Female	0.981	(0.829–1.161)
P1 Age at child's birth (years)		
Under 25	0.926	(0.683–1.254)
25–34	Ref	
35 and above	1.250	(0.997–1.568)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.076	(0.877–1.319)
P1 Education		
<b>Year 9 or less</b>	<b>0.305</b>	<b>(0.123–0.758)</b>
Year 10	0.778	(0.526–1.152)
<b>Year 11 or 12</b>	<b>0.641</b>	<b>(0.498–0.825)</b>
<b>Trade certificate or diploma</b>	<b>0.741</b>	<b>(0.593–0.927)</b>
University	Ref	
P1 Employment status		
Full time	Ref	
<b>Part time</b>	<b>1.336</b>	<b>(1.032–1.728)</b>
Unemployed	1.473	(0.858–2.530)
<b>Not in labour force</b>	<b>1.467</b>	<b>(1.114–1.931)</b>
Family structure		
Married, intact	Ref	
De facto, intact	1.007	(0.765–1.324)
Married, step	<b>0.514</b>	<b>(0.317–0.836)</b>
De facto, step	0.933	(0.517–1.682)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.587</b>	<b>(1.310–1.923)</b>
<b>3</b>	<b>1.424</b>	<b>(1.070–1.896)</b>
4 or more	1.430	(0.942–2.172)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.026	(0.771–1.366)
\$1,000–\$1,499	1.027	(0.757–1.366)
\$1,500–\$1,999	1.338	(0.964–1.393)
More than \$2,000	1.352	(0.949–1.924)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.396	(0.835–2.333)
P1 Life difficulties		
Fewer	Ref	
Many	1.167	(0.804–1.693)
P1 Coping		
Well to extremely well	Ref	
Poor	0.822	(0.477–1.415)
P1 External support		
Enough	Ref	
Not enough	1.128	(0.926–1.375)
P1 Argumentative relationship		
Lower	Ref	
Higher	0.778	(0.600–1.010)
P1 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>1.332</b>	<b>(1.066–1.664)</b>
P1 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>1.424</b>	<b>(1.095–1.851)</b>

**Table D16: Secondary carer (P2) warm parenting, infant cohort, couple sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=2,973</b>		
Sex of study child		
Male	Ref	
Female	1.001	(0.809–1.237)
P2 Age at child's birth (years)		
Under 25	0.847	(0.495–1.450)
25–34	Ref	
35 and above	1.097	(0.865–1.392)
P2 Country of birth		
Australia	Ref	
Outside Australia	1.014	(0.786–1.308)
P2 Education		
Year 9 or less	1.029	(0.466–2.274)
Year 10	0.666	(0.431–1.030)
<b>Year 11 or 12</b>	<b>0.697</b>	<b>(0.495–0.981)</b>
Trade certificate or diploma	0.814	(0.631–1.051)
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	0.620	(0.376–1.023)
Unemployed	0.549	(0.229–1.315)
<b>Not in labour force</b>	<b>0.433</b>	<b>(0.198–0.946)</b>
Family structure		
Married, intact	Ref	
De facto, intact	1.025	(0.737–1.427)
<b>Married, step</b>	<b>0.385</b>	<b>(0.212–0.700)</b>
De facto, step	0.584	(0.275–1.241)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.859</b>	<b>(1.472–2.349)</b>
<b>3</b>	<b>2.274</b>	<b>(1.679–3.080)</b>
<b>4 or more</b>	<b>2.982</b>	<b>(1.894–4.695)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	0.946	(0.586–1.529)
\$1,000–\$1,499	0.902	(0.562–1.449)
\$1,500–\$1,999	0.851	(0.515–1.408)
More than \$2,000	1.118	(0.679–1.843)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	0.643	(0.263–1.574)
P2 Life difficulties		
Fewer	Ref	
Many	1.083	(0.747–1.570)
P2 Coping		
Well to extremely well	Ref	
Poor	1.197	(0.701–2.045)
P2 Argumentative relationship		
Lower	Ref	
Higher	1.026	(0.762–1.380)
P2 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>2.653</b>	<b>(2.071–3.399)</b>
P2 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>1.710</b>	<b>(1.284–2.277)</b>

**Table D17: Primary carer (P1) warm parenting, infant cohort, lone parent sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
<b>n=337</b>		
Sex of study child		
Male	1.193	(0.659–2.156)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	1.391	(0.651–2.968)
25–34	Ref	
35 and above	1.961	(0.804–4.784)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.820	(0.288–2.336)
P1 Education		
Year 9 or less	0.609	(0.168–2.205)
Year 10	0.971	(0.384–2.458)
Trade certificate or diploma	1.145	(0.556–2.357)
Year 11 or 12 or university	Ref	
P1 Employment status		
Full time	Ref	
Part time	3.494	(0.360–33.896)
Unemployed	2.685	(0.235–30.692)
Not in labour force	2.920	(0.306–17.902)
Number of children in household		
1	Ref	
2	1.479	(0.683–3.204)
<b>3</b>	<b>2.829</b>	<b>(1.176–6.803)</b>
4 or more	1.766	(0.507–6.144)
Income categories		
Less than \$600	Ref	
<b>\$600 or more</b>	<b>0.257</b>	<b>(0.080–0.826)</b>
Psychological distress		
Non-clinical range	Ref	
Clinical range	1.193	(0.659–2.156)
P1 Life difficulties		
Fewer	Ref	
Many	1.585	(0.609–4.122)
P1 Coping		
Well to extremely well	Ref	
Poor	2.411	(0.558–10.425)
P1 External support		
Enough	Ref	
Not enough	0.947	(0.446–2.011)

**Table D18: Primary carer (P1) hostile parenting, infant cohort, couple sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=3,188</b>		
Sex of study child		
Male	Ref	
Female	1.156	(0.959–1.392)
P1 Age at child's birth (years)		
Under 25	1.313	(0.975–1.767)
25–34	Ref	
<b>35 and above</b>	<b>0.695</b>	<b>(0.545–0.887)</b>
P1 Country of birth		
Australia	Ref	
Outside Australia	1.055	(0.812–1.371)
P1 Education		
Year 9 or less	1.107	(0.540–2.268)
Year 10	1.055	(0.727–1.531)
Year 11 or 12	1.050	(0.804–1.373)
Trade certificate or diploma	1.174	(0.949–1.454)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	1.197	(0.878–1.632)
<b>Unemployed</b>	<b>1.996</b>	<b>(1.098–3.627)</b>
<b>Not in labour force</b>	<b>1.445</b>	<b>(1.074–1.944)</b>
Family structure		
Married, intact	Ref	
De facto, intact	0.856	(0.638–1.148)
Married, step	1.128	(0.645–1.971)
De facto, step	0.785	(0.399–1.544)
Number of children in household		
1	Ref	
2	0.881	(0.725–1.071)
3	0.768	(0.577–1.023)
<b>4 or more</b>	<b>0.524</b>	<b>(0.333–0.822)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	1.035	(0.726–1.475)
\$1,000–\$1,499	1.121	(0.776–1.618)
\$1,500–\$1,999	1.224	(0.824–1.820)
More than \$2,000	1.157	(0.784–1.708)
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>1.914</b>	<b>(1.122–3.265)</b>
P1 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>1.445</b>	<b>(1.010–2.067)</b>
P1 Coping		
Well to extremely well	Ref	
Poor	1.138	(0.656–1.975)
P1 External support		
Enough	Ref	
Not enough	1.161	(0.921–1.463)
P1 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>1.377</b>	<b>(1.060–1.789)</b>
P1 Reciprocal support		
Lower	Ref	
Higher	1.122	(0.826–1.525)
P1 Relationship satisfaction		
Higher	Ref	
Lower	1.143	(0.845–1.547)

**Table D19: Secondary carer (P2) hostile parenting, infant cohort, couple sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
<b>n=2,973</b>		
Sex of study child		
Male	0.970	(0.801–1.175)
Female	Ref	
P2 Age at child's birth (years)		
Under 25	1.325	(0.851–2.062)
25–34	Ref	
35 and above	0.923	(0.743–1.146)
P2 Country of birth		
Australia	Ref	
Outside Australia	0.819	(0.637–1.054)
P2 Education		
Year 9 or less	1.165	(0.541–2.507)
Year 10	0.834	(0.508–1.368)
Year 11 or 12	0.784	(0.555–1.107)
Trade certificate or diploma	0.971	(0.758–1.244)
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	1.224	(0.839–1.785)
Unemployed	1.516	(0.756–3.043)
Not in labour force	1.270	(0.689–2.343)
Family structure		
Married, intact	Ref	
<b>De facto, intact</b>	<b>0.723</b>	<b>(0.522–0.999)</b>
Married, step	0.958	(0.590–1.556)
De facto, step	0.729	(0.371–1.434)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.457</b>	<b>(1.174–1.809)</b>
3	0.992	(0.721–1.365)
4 or more	0.942	(0.596–1.488)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.355	(0.890–2.061)
\$1,000–\$1,499	1.464	(0.953–2.248)
<b>\$1,500–\$1,999</b>	<b>1.593</b>	<b>(1.033–2.456)</b>
<b>More than \$2,000</b>	<b>1.769</b>	<b>(1.139–2.747)</b>
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.037	(0.543–1.979)
P2 Life difficulties		
Fewer	Ref	
Many	1.142	(0.807–1.616)
P2 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>1.941</b>	<b>(1.236–3.049)</b>
P2 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>1.512</b>	<b>(1.173–1.950)</b>
P2 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>1.526</b>	<b>(1.159–2.010)</b>
P2 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>1.435</b>	<b>(1.120–1.839)</b>

**Table D20: Primary carer (P1) hostile parenting, infant cohort, lone parent sample**

n=336	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
Sex of study child		
Male	0.628	(0.356–1.107)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	0.841	(0.414–1.711)
25–34	Ref	
35 and above	0.381	(0.123–1.181)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.385	(0.126–1.180)
P1 Education		
Year 9 or less	0.846	(0.280–2.556)
Year 10	0.746	(0.258–2.156)
Trade certificate or diploma	1.019	(0.457–2.274)
Year 11 or 12 or university	Ref	
P1 Employment status		
Full time	Ref	
Part time	4.590	(0.868–24.267)
Unemployed	3.607	(0.481–27.044)
Not in labour force	3.395	(0.650–17.724)
Number of children in household		
1	Ref	
2	0.587	(0.286–1.206)
3	0.773	(0.290–2.057)
4 or more	0.490	(0.121–1.988)
Income categories		
Less than \$600	Ref	
\$600 or more	0.775	(0.260–2.312)
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>4.334</b>	<b>(1.147–16.381)</b>
P1 Life difficulties		
Fewer	Ref	
Many	1.068	(0.407–2.805)
P1 Coping		
Well to extremely well	Ref	
Poor	3.109	(0.825–11.720)
P1 External support		
Enough	Ref	
Not enough	1.104	(0.487–2.500)

**Table D21: Primary carer (P1) warm parenting, child cohort, couple sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
<b>n=2,854</b>		
Sex of study child		
Male	1.198	(0.993–1.446)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	0.898	(0.640–1.261)
25–34	Ref	
35 and above	1.106	(0.871–1.404)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.167	(0.927–1.469)
P1 Education		
Year 9 or less	0.944	(0.515–1.731)
Year 10	1.021	(0.715–1.458)
Year 11 or 12	1.145	(0.892–1.471)
Trade certificate or diploma	0.940	(0.740–1.196)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	1.115	(0.800–1.553)
Unemployed	0.795	(0.406–1.555)
Not in labour force	1.273	(0.905–1.971)
Family structure		
Married, intact	Ref	
De facto, intact	1.234	(0.869–1.753)
Married, step	0.720	(0.462–1.120)
De facto, step	0.906	(0.477–1.720)
Number of children in household		
1	Ref	
2	1.517	(0.996–2.311)
<b>3</b>	<b>1.730</b>	<b>(1.085–2.760)</b>
<b>4 or more</b>	<b>2.087</b>	<b>(1.227–3.547)</b>
Income categories		
Less than \$600	Ref	
\$600–\$999	1.426	(0.920–2.211)
\$1,000–\$1,499	1.458	(0.946–2.330)
<b>\$1,500–\$1,999</b>	<b>1.652</b>	<b>(1.040–2.623)</b>
More than \$2,000	1.517	(0.960–2.398)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.238	(0.672–2.280)
P1 Life difficulties		
Fewer	Ref	
Many	1.087	(0.735–1.608)
P1 Coping		
Well to extremely well	Ref	
Poor	1.071	(0.645–1.779)
P1 External support		
Enough	Ref	
<b>Not enough</b>	<b>1.324</b>	<b>(1.060–1.655)</b>
P1 Argumentative relationship		
Lower	Ref	
Higher	1.016	(0.746–1.384)
P1 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>1.435</b>	<b>(1.080–1.908)</b>
P1 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>1.324</b>	<b>(1.018–1.723)</b>



**Table D22: Secondary carer (P2) warm parenting, child cohort, couple sample**

n=2,767	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
Sex of study child		
Male	1.113	(0.909–1.363)
Female	Ref	
P2 Age at child's birth (years)		
Under 25	0.965	(0.604–1.542)
25–34	Ref	
35 and above	1.233	(0.987–1.540)
P2 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>1.309</b>	<b>(1.022–1.676)</b>
P2 Education		
Year 9 or less	1.641	(0.832–3.239)
Year 10	1.234	(0.766–1.986)
Year 11 or 12	0.972	(0.666–1.418)
Trade certificate or diploma	1.182	(0.914–1.529)
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	0.700	(0.426–1.151)
Unemployed	1.129	(0.504–2.529)
Not in labour force	0.550	(0.264–1.148)
Family structure		
Married, intact	Ref	
De facto, intact	1.008	(0.665–1.528)
Married, step	0.885	(0.537–1.457)
<b>De facto, step</b>	<b>1.866</b>	<b>(1.044–3.338)</b>
Number of children in household		
1	Ref	
2	1.134	(0.743–1.730)
3	1.408	(0.905–2.191)
4 or more	1.632	(0.979–2.721)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.697	(0.437–1.112)
\$1,000–\$1,499	0.763	(0.492–1.184)
\$1,500–\$1,999	0.715	(0.449–1.140)
More than \$2,000	0.705	(0.436–1.141)
P2 Psychological Distress		
Non-clinical range	Ref	
Clinical range	0.813	(0.391–1.691)
P2 Life difficulties		
Fewer	Ref	
Many	1.143	(0.784–1.666)
P2 Coping		
Well to extremely well	Ref	
Poor	1.359	(0.846–2.182)
P2 Argumentative relationship		
Lower	Ref	
Higher	1.254	(0.951–1.653)
P2 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>2.454</b>	<b>(1.829–3.294)</b>
P1 Relationship satisfaction		
Higher	Ref	
Lower	1.105	(0.816–1.498)

**Table D23: Primary carer (P1) warm parenting, child cohort, lone parent sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
<b>n=483</b>		
Sex of study child		
Male	0.962	(0.577–1.605)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	1.142	(0.604–2.160)
25–34	Ref	
35 and above	0.877	(0.402–1.913)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.194	(0.604–2.362)
P1 Education		
Year 9 or less	1.055	(0.341–3.264)
Year 10	1.500	(0.622–3.614)
Year 11 or 12	0.957	(0.403–2.274)
Trade certificate or diploma	0.868	(0.413–1.821)
University	Ref	
P1 Employment status		
Full time	Ref	
<b>Part time</b>	<b>3.755</b>	<b>(1.540–9.156)</b>
Unemployed	0.642	(0.141–2.927)
<b>Not in labour force</b>	<b>2.956</b>	<b>(1.130–7.731)</b>
Number of children in household		
1	Ref	
2	1.662	(0.851–3.246)
3	1.847	(0.862–3.954)
4 or more	1.400	(0.612–3.202)
Income categories		
Less than \$600	Ref	
\$600 or more	0.935	(0.521–1.675)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.137	(0.427–3.028)
P1 Life difficulties		
Fewer	Ref	
Many	1.324	(0.699–2.508)
P1 Coping		
Well to extremely well	Ref	
Poor	1.267	(0.541–2.970)
P1 External support		
Enough	Ref	
<b>Not enough</b>	<b>2.008</b>	<b>(1.128–3.574)</b>

**Table D24: Primary carer (P1) hostile parenting, child cohort, couple sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low-high)
<b>n=2,854</b>		
Sex of study child		
<b>Male</b>	<b>1.285</b>	<b>(1.052–1.570)</b>
Female	Ref	
P1 Age at child's birth (years)		
Under 25	1.245	(0.923–1.679)
25–34	Ref	
35 and above	0.889	(0.685–1.154)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.149	(0.895–1.475)
P1 Education		
Year 9 or less	1.463	(0.848–2.523)
Year 10	1.276	(0.909–1.791)
Year 11 or 12	1.160	(0.881–1.528)
Trade certificate or diploma	0.932	(0.727–1.196)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	0.959	(0.711–1.292)
Unemployed	0.723	(0.379–1.380)
Not in labour force	0.997	(0.731–1.361)
Family structure		
Married, intact	Ref	
<b>De facto, intact</b>	<b>1.571</b>	<b>(1.111–2.221)</b>
Married, step	0.666	(0.403–1.103)
De facto, step	1.054	(0.574–1.937)
Number of children in household		
1	Ref	
2	1.373	(0.944–1.998)
3	1.285	(0.851–1.940)
4 or more	1.232	(0.799–1.900)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.227	(0.798–1.889)
\$1,000–\$1,499	1.098	(0.695–1.737)
\$1,500–\$1,999	1.036	(0.661–1.625)
More than \$2,000	0.952	(0.585–1.550)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.670	(0.938–2.975)
P1 Life difficulties		
Fewer	Ref	
Many	1.007	(0.684–1.482)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>4.302</b>	<b>(2.710–6.831)</b>
P1 External support		
Enough	Ref	
Not enough	1.184	(0.946–1.482)
P1 Argumentative relationship		
Lower	Ref	
Higher	1.062	(0.801–1.409)
P1 Reciprocal support		
Lower	Ref	
Higher	1.250	(0.925–1.688)
P1 Relationship satisfaction		
Higher	Ref	
Lower	1.271	(0.941–1.717)

**Table D25: Secondary carer (P2) hostile parenting, child cohort, couple sample**

<b>n=2,765</b>	<b>Child cohort</b>	
	<b>OR<sub>adj</sub></b>	<b>95% confidence interval (low–high)</b>
Sex of study child		
<b>Male</b>	<b>1.376</b>	<b>(1.105–1.715)</b>
Female	Ref	
P2 Age at child's birth (years)		
Under 25	1.034	(0.658–1.624)
25–34	Ref	
<b>35 and above</b>	<b>0.744</b>	<b>(0.575–0.962)</b>
P2 Country of birth		
Australia	Ref	
Outside Australia	0.923	(0.711–1.197)
P2 Education		
Year 9 or less	2.061	(0.996–4.265)
Year 10	1.023	(0.610–1.715)
Year 11 or 12	1.326	(0.902–1.950)
<b>Trade certificate or diploma</b>	<b>1.378</b>	<b>(1.052–1.804)</b>
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	0.967	(0.600–1.558)
Unemployed	1.155	(0.459–2.907)
Not in labour force	1.173	(0.665–2.067)
Family structure		
Married, intact	Ref	
De facto, intact	1.024	(0.683–1.534)
Married, step	0.785	(0.468–1.317)
De facto, step	1.639	(0.904–2.972)
Number of children in household		
1	Ref	
<b>2</b>	<b>1.995</b>	<b>(1.289–3.088)</b>
3	1.641	(0.999–2.696)
4 or more	1.641	(0.977–2.759)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.858	(0.510–1.443)
\$1,000–\$1,499	0.774	(0.461–1.298)
\$1,500–\$1,999	1.052	(0.593–1.866)
More than \$2,000	1.194	(0.671–2.123)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.419	(0.680–2.959)
P2 Life difficulties		
Fewer	Ref	
Many	1.258	(0.843–1.876)
P2 Coping		
Well to extremely well	Ref	
Poor	1.005	(0.587–1.720)
P2 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>1.985</b>	<b>(1.579–2.494)</b>
P2 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>1.531</b>	<b>(1.134–2.068)</b>
P2 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>1.373</b>	<b>(1.045–1.805)</b>

**Table D26: Primary carer (P1) hostile parenting, child cohort, lone parent sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=503</b>		
Sex of study child		
Male	1.067	(0.662–1.720)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	1.518	(0.845–2.726)
25–34	Ref	
35 and above	0.917	(0.449–1.873)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.298	(0.630–2.674)
P1 Education		
Year 9 or less	1.275	(0.467–3.479)
Year 10	1.790	(0.755–4.246)
Year 11 or 12	0.603	(0.251–1.450)
Trade certificate or diploma	0.742	(0.348–1.584)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	0.492	(0.210–1.151)
Unemployed	0.587	(0.181–1.909)
<b>Not in labour force</b>	<b>0.428</b>	<b>(0.197–0.932)</b>
Number of children in household		
1	Ref	
2	1.806	(0.898–3.632)
3	1.984	(0.966–4.074)
4 or more	1.332	(0.522–3.403)
Income categories		
Less than \$600	Ref	
<b>\$600 or more</b>	<b>0.311</b>	<b>(0.166–0.581)</b>
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.957	(0.822–4.660)
P1 Life difficulties		
Fewer	Ref	
Many	1.780	(0.958–3.310)
P1 Coping		
Well to extremely well	Ref	
Poor	1.640	(0.662–4.059)
P1 External support		
Enough	Ref	
<b>Not enough</b>	<b>2.000</b>	<b>(1.134–3.526)</b>

**Table D27: Primary carer (P1) consistency, child cohort, couple sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=2,854</b>		
Sex of study child		
Male	0.852	(0.697–1.042)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	0.945	(0.684–1.308)
25–34	Ref	
35 and above	0.998	(0.755–1.318)
P1 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>1.546</b>	<b>(1.215–1.968)</b>
P1 Education		
<b>Year 9 or less</b>	<b>2.419</b>	<b>(1.286–4.550)</b>
<b>Year 10</b>	<b>2.120</b>	<b>(1.428–3.147)</b>
<b>Year 11 or 12</b>	<b>1.977</b>	<b>(1.426–2.741)</b>
<b>Trade certificate or diploma</b>	<b>1.777</b>	<b>(1.317–2.397)</b>
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	0.843	(0.602–1.182)
<b>Unemployed</b>	<b>0.456</b>	<b>(0.218–0.954)</b>
Not in labour force	0.985	(0.712–1.361)
Family structure		
Married, intact	Ref	
<b>De facto, intact</b>	<b>1.606</b>	<b>(1.127–2.289)</b>
Married, step	1.234	(0.760–2.002)
<b>De facto, step</b>	<b>1.987</b>	<b>(1.120–3.527)</b>
Number of children in household		
1	Ref	
2	1.157	(0.749–1.787)
3	1.276	(0.812–2.005)
4 or more	1.561	(0.935–2.606)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.925	(0.620–1.382)
<b>\$1,000–\$1,499</b>	<b>0.623</b>	<b>(0.414–0.935)</b>
<b>\$1,500–\$1,999</b>	<b>0.540</b>	<b>(0.351–0.831)</b>
More than \$2,000	0.654	(0.419–1.020)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.438	(0.775–2.665)
P1 Life difficulties		
Fewer	Ref	
Many	0.882	(0.580–1.341)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>3.013</b>	<b>(1.875–4.842)</b>
P1 External support		
Enough	Ref	
Not enough	1.186	(0.916–1.536)
P1 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>1.787</b>	<b>(1.325–2.410)</b>
P1 Reciprocal support		
Lower	Ref	
Higher	1.101	(0.808–1.501)
P1 Relationship satisfaction		
Higher	Ref	
Lower	1.073	(0.757–1.519)

**Table D28: Secondary carer (P2) consistency, child cohort, couple sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=2,763</b>		
Sex of study child		
Male	0.933	(0.764–1.139)
Female	Ref	
P2 Age at child's birth (years)		
Under 25	1.088	(0.751–1.576)
25–34	Ref	
35 and above	1.170	(0.948–1.443)
P2 Country of birth		
Australia	Ref	
<b>Outside Australia</b>	<b>1.515</b>	<b>(1.203–1.909)</b>
P2 Education		
<b>Year 9 or less</b>	<b>4.625</b>	<b>(2.437–8.777)</b>
<b>Year 10</b>	<b>1.652</b>	<b>(1.097–2.488)</b>
Year 11 or 12	1.359	(0.983–1.878)
<b>Trade certificate or diploma</b>	<b>1.524</b>	<b>(1.195–1.944)</b>
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	0.724	(0.472–1.112)
Unemployed	0.862	(0.359–2.066)
Not in labour force	1.327	(0.837–2.104)
Family structure		
Married, intact	Ref	
De facto, intact	1.328	(0.929–1.898)
Married, step	0.788	(0.510–1.217)
De facto, step	1.670	(0.960–2.908)
Number of children in household		
1	Ref	
2	1.088	(0.791–1.497)
3	1.225	(0.871–1.722)
4 or more	1.425	(0.937–2.167)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.849	(0.573–1.257)
<b>\$1,000–\$1,499</b>	<b>0.660</b>	<b>(0.451–0.964)</b>
<b>\$1,500–\$1,999</b>	<b>0.605</b>	<b>(0.394–0.929)</b>
More than \$2,000	0.701	(0.456–1.078)
P2 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>1.947</b>	<b>(1.100–3.445)</b>
P2 Life difficulties		
Fewer	Ref	
Many	1.164	(0.830–1.632)
P2 Coping		
Well to extremely well	Ref	
Poor	1.082	(0.687–1.702)
P2 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>1.877</b>	<b>(1.499–2.352)</b>
P2 Reciprocal support		
Lower	Ref	
<b>Higher</b>	<b>1.489</b>	<b>(1.130–1.961)</b>
P2 Relationship satisfaction		
Higher	Ref	
Lower	1.255	(0.964–1.634)

**Table D29: Primary carer (P1) consistency, child cohort, lone parent sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=483</b>		
Sex of study child		
Male	0.956	(0.606–1.507)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	0.711	(0.395–1.277)
25–34	Ref	
35 and above	1.195	(0.642–2.224)
P1 Country of birth		
Australia	Ref	
Outside Australia	1.086	(0.549–2.148)
P1 Education		
Year 9 or less	2.713	(0.846–8.701)
<b>Year 10</b>	<b>3.239</b>	<b>(1.177–8.911)</b>
<b>Year 11 or 12</b>	<b>3.535</b>	<b>(1.260–9.917)</b>
Trade certificate or diploma	2.119	(0.781–5.748)
University	Ref	
P1 Employment status		
Full time	Ref	
<b>Part time</b>	<b>0.398</b>	<b>(0.166–0.954)</b>
Unemployed	1.166	(0.431–3.152)
Not in labour force	0.728	(0.322–1.643)
Number of children in household		
1	Ref	
2	0.764	(0.411–1.421)
3	0.764	(0.379–1.538)
4 or more	1.855	(0.825–4.169)
Income categories		
Less than \$600	Ref	
<b>\$600 or more</b>	<b>0.453</b>	<b>(0.239–0.861)</b>
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>3.565</b>	<b>(1.419–8.961)</b>
P1 Life difficulties		
Fewer	Ref	
Many	0.653	(0.338–1.262)
P1 Coping		
Well to extremely well	Ref	
Poor	1.252	(0.529–2.963)
P1 External support		
Enough	Ref	
Not enough	0.700	(0.400–1.227)



**Table D30: Primary carer (P1) self-efficacy, infant cohort, couple sample**

<b>n=3,185</b>	<b>Infant cohort</b>	
	<b>OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Sex of study child		
Male	0.846	(0.461–1.554)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	1.503	(0.574–3.937)
25–34	Ref	
35 and above	1.696	(0.875–3.286)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.541	(0.242–1.210)
P1 Education		
Year 9 or less	3.425	(0.358–32.753)
Year 10	1.704	(0.590–4.926)
Year 11 or 12	1.544	(0.631–3.778)
Trade certificate or diploma	2.139	(0.985–4.645)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	1.093	(0.441–2.706)
Unemployed	1.059	(0.253–4.437)
Not in labour force	0.906	(0.334–2.458)
Family structure		
Married, intact	Ref	
De facto, intact	0.423	(0.122–1.464)
Married, step	0.169	(0.017–1.662)
De facto, step	0.924	(0.299–2.856)
Number of children in household		
1	Ref	
2	0.796	(0.387–1.636)
3	1.615	(0.711–3.668)
4 or more	1.565	(0.468–5.233)
Income categories		
Less than \$600	Ref	
\$600–\$999	0.789	(0.289–2.160)
\$1,000–\$1,499	0.867	(0.308–2.437)
\$1,500–\$1,999	0.449	(0.136–1.481)
More than \$2,000	0.662	(0.189–2.319)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.448	(0.528–3.972)
P1 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>2.238</b>	<b>(1.001–5.004)</b>
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>2.764</b>	<b>(1.031–7.414)</b>
P1 External support		
Enough	Ref	
<b>Not enough</b>	<b>2.091</b>	<b>(1.044–4.190)</b>

P1 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>0.475</b>	<b>(0.228–0.989)</b>
P1 Reciprocal support		
Lower	Ref	
Higher	1.217	(0.583–2.538)
P1 Relationship satisfaction		
Higher	Ref	
<b>Lower</b>	<b>2.899</b>	<b>(1.250–6.723)</b>
P1 Parenting warmth		
Higher	Ref	
<b>Lower</b>	<b>3.383</b>	<b>(1.945–5.883)</b>
P1 Hostile parenting		
Lower	Ref	
<b>Higher</b>	<b>2.913</b>	<b>(1.668–5.087)</b>

**Table D31: Secondary carer (P2) self-efficacy, infant cohort, couple sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=2,054</b>		
Sex of study child		
Male	1.166	(0.634–2.147)
Female	Ref	
P2 Age at child's birth (years)		
Under 25	1.985	(0.745–5.286)
25–34	Ref	
35 and above	1.715	(0.837–3.512)
P2 Country of birth		
Australia	Ref	
Outside Australia	0.389	(0.139–1.089)
P2 Education		
Year 9 or less	2.470	(0.542–11.250)
Year 10	1.060	(0.303–3.712)
<b>Year 11 or 12</b>	<b>0.204</b>	<b>(0.050–0.832)</b>
Trade certificate or diploma	1.029	(0.480–2.204)
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	0.621	(0.154–2.498)
Unemployed	1.872	(0.362–9.675)
Not in labour force	0.578	(0.100–3.350)
Family structure		
Married, intact	Ref	
De facto, intact	0.759	(0.353–1.631)
Married, step	1.053	(0.161–6.876)
De facto, step	2.259	(0.595–8.575)
Number of children in household		
1	Ref	
2	0.608	(0.314–1.177)
3	0.403	(0.137–1.189)
4 or more	0.187	(0.026–1.357)
Income categories		
Less than \$600	Ref	
\$600–\$999	1.052	(0.348–3.175)
\$1,000–\$1,499	0.397	(0.120–1.310)
\$1,500–\$1,999	0.575	(0.137–2.410)
More than \$2,000	0.334	(0.078–1.422)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	0.749	(0.172–3.258)
P2 Life difficulties		
Fewer	Ref	
Many	1.689	(0.707–4.039)

P2 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>3.750</b>	<b>(1.681–8.367)</b>
P2 Argumentative relationship		
Lower	Ref	
Higher	2.074	(0.996–4.316)
P2 Reciprocal support		
Lower	Ref	
Higher	1.278	(0.631–2.587)
P2 Relationship satisfaction		
Higher	Ref	
Lower	1.400	(0.602–3.257)
P2 Parenting warmth		
Higher	Ref	
<b>Lower</b>	<b>4.542</b>	<b>(2.386–8.645)</b>
P2 Hostile parenting		
Lower	Ref	
<b>Higher</b>	<b>1.916</b>	<b>(1.005–3.652)</b>

**Table D32: Primary carer (P1) self-efficacy, infant cohort, sole parent sample**

	Infant cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=343</b>		
Sex of study child		
Male	0.296	(0.069–1.265)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	4.167	(0.326–53.184)
25–34	Ref	
35 and above	0.847	(0.101–7.130)
P1 Education		
Year 10 or less	3.019	(0.353–25.799)
Year 11 or 12	3.758	(0.336–41.971)
Trade certificate or university	Ref	
P1 Employment status		
Working full time or part time	Ref	
Unemployed or not in labour force	0.705	(0.117–4.247)
Number of children in household		
1	Ref	
2	0.229	(0.030–1.755)
3	1.995	(0.075–53.199)
4 or more	5.310	(0.416–67.791)
Income categories		
Less than \$600	Ref	
\$600 or more	1.012	(0.093–10.981)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.412	(0.189–10.565)
P1 Life difficulties		
Fewer	Ref	
Many	0.941	(0.150–5.893)
P1 Coping		
Well to extremely well	Ref	
Poor	5.101	(0.615–42.330)
P1 External support		
Enough	Ref	
Not enough	2.204	(0.514–9.452)
P1 Parenting warmth		
Higher	Ref	
Lower	4.823	(0.827–28.119)
P1 Hostile parenting		
Lower	Ref	
Higher	2.283	(0.653–7.983)

**Table D33: Primary carer (P1) self-efficacy, child cohort, couple sample**

<b>n=3,400</b>	<b>Child cohort</b>	
	<b>OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Sex of study child		
Male	1.252	(0.698–2.244)
Female	Ref	
P1 Age at child's birth (years)		
Under 25	0.740	(0.329–1.662)
25–34	Ref	
35 and above	0.888	(0.447–1.766)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.982	(0.501–1.924)
P1 Education		
Year 9 or less	0.492	(0.058–4.174)
Year 10	2.147	(0.822–5.606)
Year 11 or 12	1.616	(0.718–3.635)
Trade certificate or diploma	1.463	(0.670–3.192)
University	Ref	
P1 Employment status		
Full time	Ref	
Part time	1.112	(0.475–2.599)
Unemployed	1.087	(0.188–6.287)
Not in labour force	1.247	(0.565–2.755)
Family structure		
Married, intact	Ref	
De facto, intact	1.231	(0.499–3.036)
Married, step	1.594	(0.523–4.862)
<b>De facto, step</b>	<b>5.442</b>	<b>(2.011–14.728)</b>
Number of children in household		
1	Ref	
2	0.821	(0.317–2.128)
3	0.699	(0.253–1.933)
<b>4 or more</b>	<b>0.161</b>	<b>(0.036–0.717)</b>
Income categories		
Less than \$600	Ref	
<b>\$600–\$999</b>	<b>0.158</b>	<b>(0.058–0.434)</b>
\$1,000–\$1,499	0.458	(0.206–1.018)
\$1,500–\$1,999	0.548	(0.230–1.308)
More than \$2,000	0.644	(0.245–1.693)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	2.851	(0.966–8.412)
P1 Life difficulties		
Fewer	Ref	
Many	0.508	(0.211–1.225)
P1 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>4.115</b>	<b>(1.985–8.532)</b>
P1 External support		
Enough	Ref	
Not enough	1.274	(0.722–2.248)

P1 Argumentative relationship		
Lower	Ref	
Higher	1.041	(0.507–2.139)
P1 Reciprocal support		
Lower	Ref	
Higher	1.556	(0.832–2.913)
P1 Relationship satisfaction		
Higher	Ref	
Lower	1.488	(0.801–2.764)
P1 Parenting warmth		
Higher	Ref	
Lower	1.472	(0.816–2.652)
P1 Hostile parenting		
Lower	Ref	
<b>Higher</b>	<b>4.729</b>	<b>(2.669–8.382)</b>
P1 Consistent parenting		
Higher	Ref	
Lower	1.340	(0.694–2.587)

**Table D34: Secondary carer (P2) self-efficacy, child cohort, couple sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=2,670</b>		
Sex of study child		
Male	1.200	(0.753–1.913)
Female	Ref	
P2 Age at child's birth (years)		
Under 25	0.775	(0.226–2.653)
25–34	Ref	
35 and above	1.238	(0.752–2.038)
P2 Country of birth		
Australia	Ref	
Outside Australia	0.798	(0.429–1.483)
P2 Education		
Year 10 or less	1.031	(0.421–2.522)
Year 11 or 12	2.032	(0.865–4.775)
Trade certificate or diploma	1.420	(0.714–2.826)
University	Ref	
P2 Employment status		
Full time	Ref	
Part time	1.240	(0.485–3.174)
Unemployed	0.575	(0.079–4.207)
Not in labour force	0.570	(0.138–2.345)
Family structure		
Married, intact	Ref	
De facto, intact	1.184	(0.511–2.745)
Married, step	1.268	(0.471–3.410)
De facto, step	0.741	(0.197–2.790)
Number of children in household		
1	Ref	
<b>2</b>	<b>0.467</b>	<b>(0.230–0.948)</b>
3	0.568	(0.276–1.166)
4 or more	0.367	(0.134–1.005)

Income categories		
Less than \$600	Ref	
\$600–\$999	1.822	(0.669–4.962)
\$1,000–\$1,499	1.669	(0.615–4.532)
\$1,500–\$1,999	1.472	(0.484–4.470)
More than \$2,000	0.747	(0.232–2.404)
P2 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.912	(0.698–5.238)
P2 Life difficulties		
Fewer	Ref	
<b>Many</b>	<b>2.292</b>	<b>(1.294–4.057)</b>
P2 Coping		
Well to extremely well	Ref	
<b>Poor</b>	<b>2.414</b>	<b>(1.065–5.476)</b>
P2 Argumentative relationship		
Lower	Ref	
<b>Higher</b>	<b>2.586</b>	<b>(1.477–4.526)</b>
P2 Reciprocal support		
Lower	Ref	
Higher	1.014	(0.580–1.774)
P2 Relationship satisfaction		
Higher	Ref	
Lower	0.851	(0.451–1.606)
P2 Parenting warmth		
Higher	Ref	
<b>Lower</b>	<b>3.049</b>	<b>(1.824–5.098)</b>
P2 Hostile parenting		
Lower	Ref	
<b>Higher</b>	<b>4.002</b>	<b>(2.402–6.667)</b>
P2 Consistent parenting		
Higher	Ref	
Lower	0.762	(0.428–1.357)

**Table D35: Primary carer (P1) self-efficacy, child cohort, sole parent sample**

	Child cohort	
	OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=477</b>		
Sex of study child		
Male	0.654	(0.280–1.529)
Female	Ref	
P1 Age at child's birth (years)		
<b>Under 25</b>	<b>3.701</b>	<b>(1.236–11.082)</b>
25–34	Ref	
35 and above	1.346	(0.336–5.404)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.714	(0.236–2.162)
P1 Education		
Year 9 or less	3.240	(0.396–26.476)
Year 10	1.676	(0.171–16.391)
Year 11 or 12	0.651	(0.073–5.800)
Trade certificate or diploma	1.914	(0.318–11.514)
University	Ref	

P1 Employment status		
Full time	Ref	
Part time	0.618	(0.162–2.364)
Unemployed	0.199	(0.020–2.032)
Not in labour force	0.423	(0.108–1.656)
Number of children in household		
1	Ref	
2	0.700	(0.229–2.139)
3	0.232	(0.049–1.108)
4 or more	0.787	(0.164–3.788)
Income categories		
Less than \$600	Ref	
\$600 or more	0.568	(0.155–2.078)
P1 Psychological distress		
Non-clinical range	Ref	
<b>Clinical range</b>	<b>4.345</b>	<b>(1.492–12.653)</b>
P1 Life difficulties		
Fewer	Ref	
Many	2.551	(0.860–7.569)
P1 Coping		
Well to extremely well	Ref	
Poor	2.514	(0.894–7.066)
P1 External support		
Enough	Ref	
Not Enough	1.941	(0.603–6.249)
P1 Parenting warmth		
Higher	Ref	
Lower	1.361	(0.478–3.874)
P1 Hostile parenting		
Lower	Ref	
<b>Higher</b>	<b>6.297</b>	<b>(2.156–18.396)</b>
P1 Consistent parenting		
Higher	Ref	
Lower	0.484	(0.136–1.729)





# Appendix E

## Section 5: Parents living elsewhere (PLE)

### *Infant cohort*

**Table E1: Number (proportion) of PLEs by distance of PLE's residence from infant study child's residence**

		n	%	Valid %
<b>Valid</b>	Less than 5 km	108	2.1	24.7
	5–19 km	108	2.1	24.7
	20–49 km	84	1.6	19.2
	50–99 km	31	0.6	7.1
	100–499 km	48	0.9	11.0
	500 or more km	44	0.9	10.0
	Overseas	15	0.3	3.4
	<b>Total</b>	<b>438</b>	<b>8.6</b>	<b>100.0</b>
<b>Missing</b>	Refused	11	0.2	
	Don't know	49	1.0	

**Table E2: Reason why infant study child has never met the PLE (n=85)**

Reason given by P1	n	%
PLE does not want to see child	28	33.7
Identity of PLE unknown	16	19.3
PLE lives too far away or overseas	10	12.0
PLE does not know about child	5	6.0
PLE is subject of a restraint order or has history of drug, alcohol or violence problems	5	6.0
Respondent does not want PLE to see child	4	4.8
PLE is in prison	3	3.6
PLE has another partner or family	3	3.6
PLE is sick/disabled (include mental illness)	1	1.2
PLE does not have suitable living arrangements	1	1.2
Child was the result of rape	1	1.2
Other reason	6	7.2
<b>Total</b>	<b>83<sup>(a)</sup></b>	<b>100.0</b>

(a) Don't know: n=2.

**Table E3: Reason why infant study child has no contact with PLE (n=24)**

Reason given by primary care giver	n	%
PLE does not want to see child	13	68.4
PLE lives too far away or overseas	2	10.6
PLE is subject of a restraint order or has history of drug, alcohol or violence problems	2	10.6
Respondent does not want PLE to see child	1	5.3
Other reason	1	5.3
<b>Total</b>	<b>19<sup>(a)</sup></b>	<b>100.0</b>

(a) Missing n=4; Don't know n=1.

**Table E4: Number (proportion) of infants with a biological PLE receiving alternative care arrangements, by sex of child**

		Male children n (%)	Female children n (%)	All children n (%)
<b>Valid</b>	P1 has main care	173 (94.0)	165 (95.4)	338 (94.7)
	Shared or joint parenting	11 (6.0)	4 (2.3)	15 (4.2)
	Other	0 (0.0)	1 (0.6)	1 (0.3)
	Not applicable	0 (0.0)	3 (1.7)	3 (0.8)
	<b>Total</b>	<b>184</b>	<b>173</b>	<b>357</b>
<b>Missing</b>	Don't know	0	1	1

**Table E5: Number (proportion) of infants with a biological PLE receiving varying frequency of daytime contact, by sex of child, care arrangement, pattern of care, location of contact and proximity**

	Frequency of PLE daytime contact with infant					
	Daily	Once a week	Once a fortnight	Once every 1–3 months	Less than once in 3 months	All PLEs
Sex of study child n=358 (100.0)						
Male	48 (26.1)	75 (40.8)	22 (12.0)	12 (6.5)	27 (14.7)	184 (51.4)
Female	42 (24.1)	78 (44.8)	20 (11.5)	12 (6.9)	22 (12.6)	173 (48.3)
Care arrangement n=353 (100.0)						
P1 has main care	84 (24.9)	143 (42.3)	41 (12.1)	22 (6.5)	48 (14.2)	338 (95.8)
Shared or joint care	5 (33.3)	8 (53.3)	1 (6.7)	1 (6.7)	0 (0.0)	15 (4.2)
Set pattern n=345 (100.0)						
Yes	83 (37.6)	104 (47.1)	21 (9.5)	8 (3.6)	5 (2.3)	221 (64.1)
No	7 (5.6)	47 (37.9)	20 (16.1)	15 (12.1)	35 (28.2)	124 (35.9)
Location of contact n=351 (100.0)						
P1's home only	46 (32.9)	63 (45.0)	6 (4.3)	9 (6.4)	16 (11.4)	140 (39.9)
P1's home and elsewhere	42 (30.7)	62 (45.3)	17 (12.4)	7 (5.1)	9 (6.6)	137 (39.0)
Elsewhere only	2 (2.7)	28 (37.8)	19 (25.7)	8 (10.8)	17 (23.0)	74 (21.1)
Proximity to study child's home (km) n=352 (100.0)						
<5	41 (40.6)	45 (44.5)	6 (5.9)	3 (3.0)	6 (5.9)	101 (28.7)
5–19	35 (37.6)	38 (40.9)	10 (10.8)	7 (7.5)	3 (3.2)	93 (26.4)
20–49	10 (14.1)	43 (60.6)	13 (18.3)	1 (1.4)	4 (5.6)	71 (20.2)
>49	3 (3.4)	26 (29.9)	12 (13.8)	11 (12.6)	35 (40.2)	87 (24.7)
Total (%)	90 (25.1)	153 (42.7)	42 (11.7)	24 (6.7)	49 (13.7)	358 (100.0)

Note: Sample size varies between categories due to missing data.

**Table E6: Number (proportion) of infants with a biological PLE receiving overnight care, by sex of child, care arrangement, pattern of care, location of contact and proximity**

	PLE overnight care of infant	
	Yes	No
Sex of study child (n=352)		
Male	54 (30.0)	126 (70.0)
Female	32 (18.6)	140 (81.4)
Care arrangement (n=347)		
P1 has main care	79 (23.8)	253 (76.2)
Shared or joint care	4 (26.7)	11 (73.3)
Set pattern (n=345)		
Yes	64 (29.0)	157 (71.0)
No	20 (16.1)	104 (83.9)
Location of contact (n=351)		
P1's home only	8 (5.7)	132 (94.3)
P1's home and elsewhere	60 (43.8)	77 (56.2)
Elsewhere only	18 (24.3)	56 (75.7)
Proximity to study child's home (km) (n=347)		
<5	27 (26.7)	74 (73.3)
5–19	27 (29.0)	66 (71.0)
20–49	15 (21.1)	56 (78.9)
>49	16 (19.5)	66 (80.5)
Frequency of daytime contact (n=347)		
Daily	25 (27.8)	65 (72.2)
Once a week	40 (26.1)	113 (73.9)
Once a fortnight	14 (33.3)	28 (66.7)
Once every 1–3 months	3 (12.5)	21 (87.5)
Less than once in 3 months	4 (9.3)	39 (90.7)
<b>Total (%)</b>	<b>86 (24.4)</b>	<b>266 (75.6)</b>

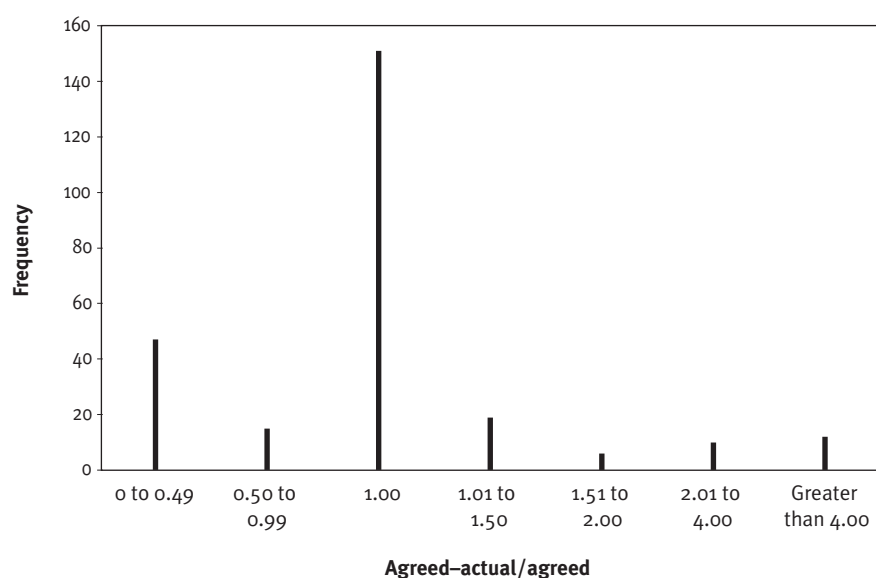
Note: Sample size varies between categories due to missing data.

**Table E7: Child support payments from the PLE (monthly) (n=231)**

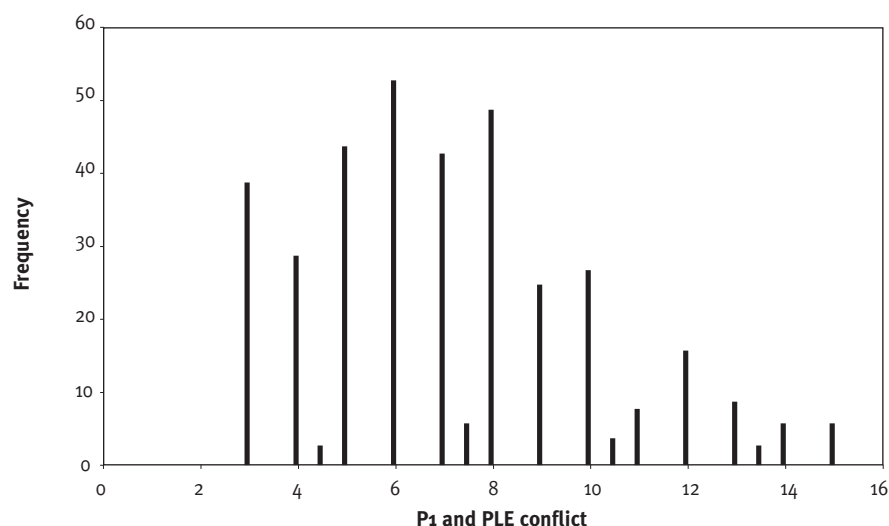
Payments (\$)	Amount agreed to be paid n (%)	Amount actually paid for the last month n (%)
0	n/a	31 (13.4)
1–100	105 (45.5)	76 (32.9)
101–200	56 (24.2)	61 (26.4)
201–400	47 (20.3)	45 (19.5)
401–600	17 (7.4)	12 (5.2)
601–750	6 (2.6)	6 (2.6)
Mean	\$171.52	\$160.62
Standard error	\$11.24	\$10.89
Median	\$128	\$120
Range	\$0–750	\$0–750

To further examine the discrepancy between the amount agreed and the actual amount received, a discrepancy score was computed. Figure E1 shows the difference between actual amounts received in the last month as a function of the agreed amount that was meant to be paid. This was calculated by taking the difference between the agreed amount and the actual amount, dividing it by the agreed amount, and adding 1. The values in the resulting scale included: a low of 0 where nothing was paid; 0.50 where the amount paid was half of that owed; 1.00 where the amount paid equalled the amount owed; 2.00 was twice the amount owed; and so on.

**Figure E1: Difference in child support payment from PLE as a function of agreed amount**



**Figure E2: Distribution of P1 and PLE conflict**



**Table E8: Descriptive statistics for conflict between P1 and PLE**

n	Mean	Standard error	Median	Range
353	7.13	2.89	7.00	3-15

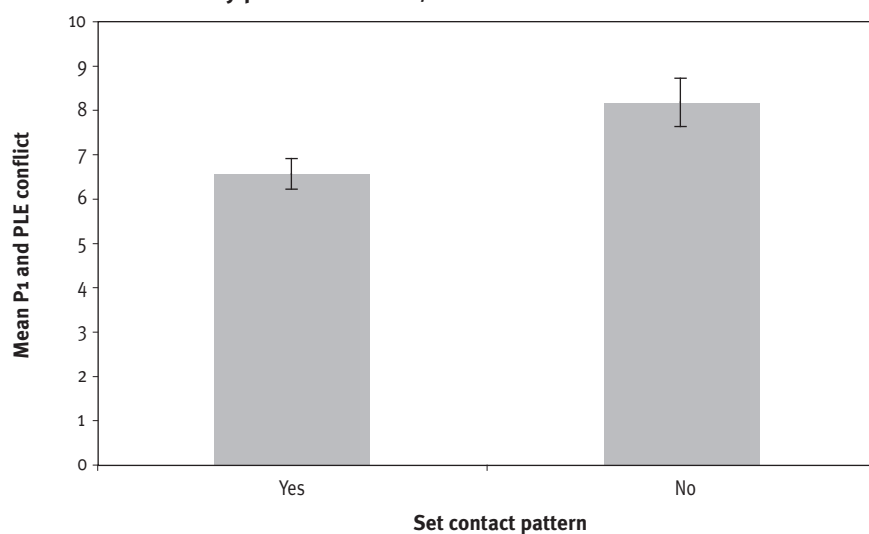
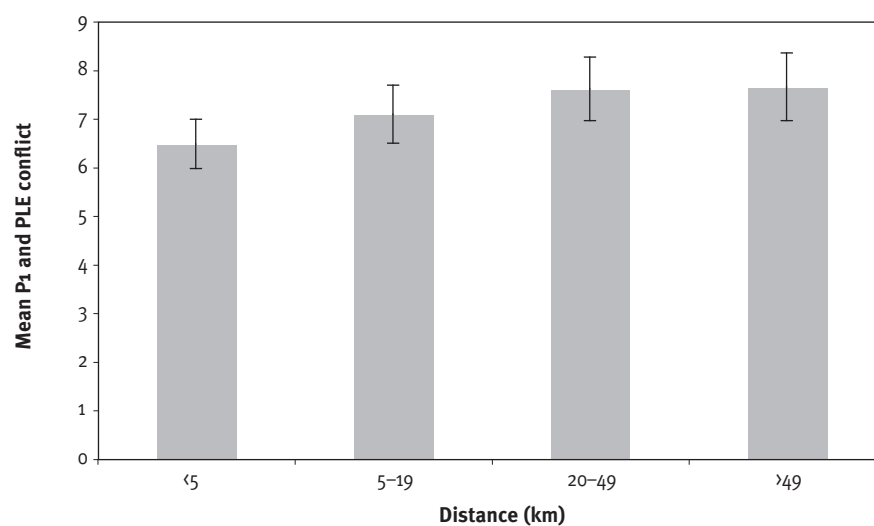
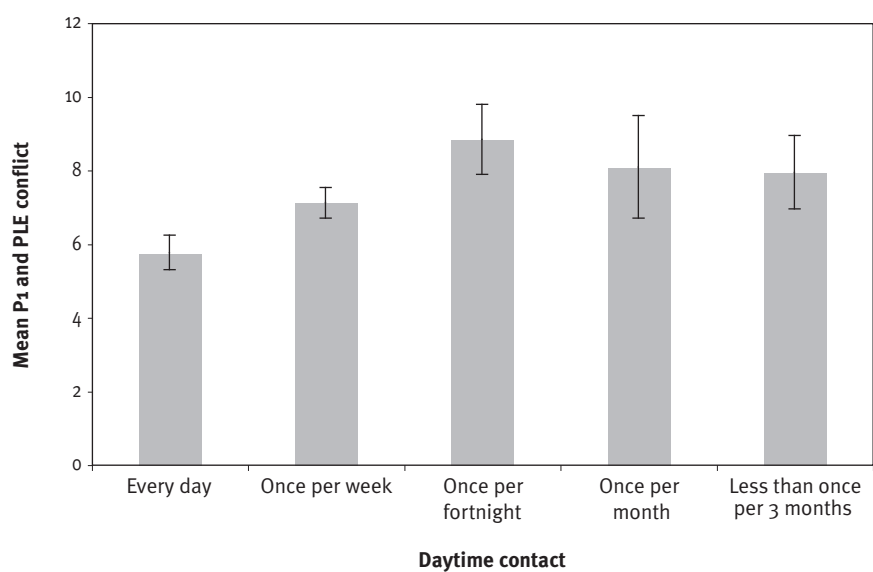
**Figure E3: Mean conflict scores by pattern of infant/PLE contact****Figure E4: Mean conflict scores by distance that PLE lives from infant's home****Figure E5: Mean conflict scores by amount of daytime contact between PLE and infant**

Figure E6: Mean conflict scores by the discrepancy between the agreed and actual amount of child support paid

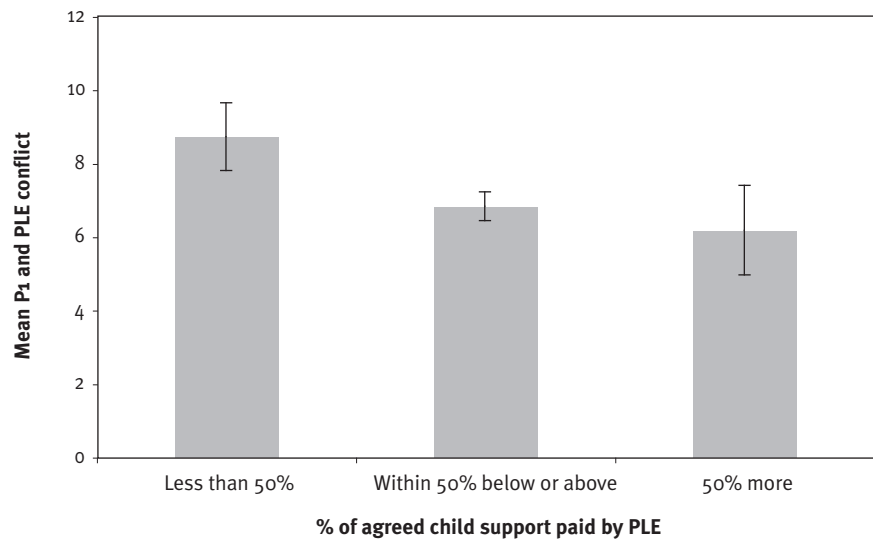


Figure E7: Mean conflict scores by infant physical health, socio-emotional behaviours or learning

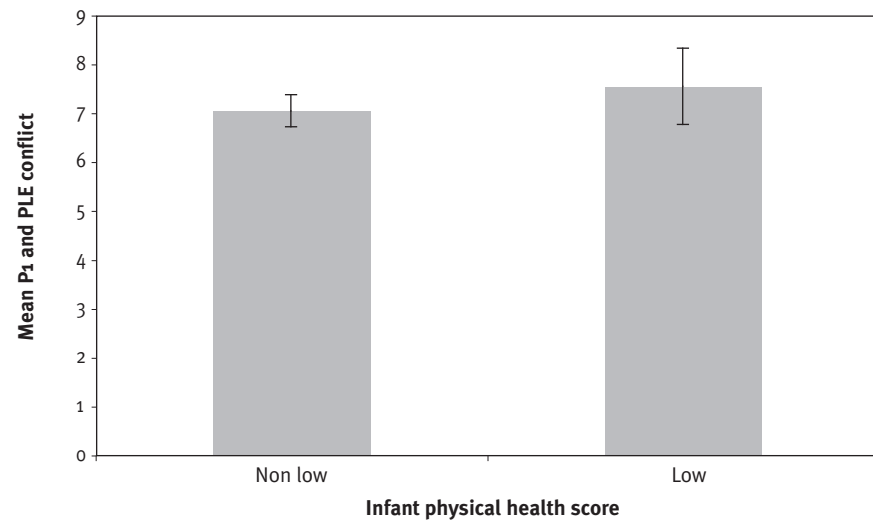
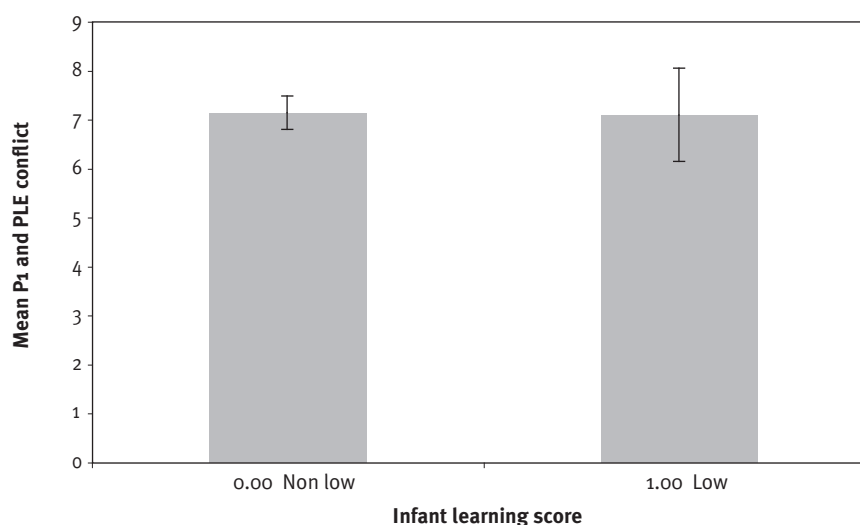


Figure E8: Mean conflict scores by infant socio-emotional behaviours



**Figure E9: Mean conflict scores by infant learning score***Child cohort***Table E9: Number (proportion) of PLEs by distance (km) of PLE's residence from study child's residence**

		n	%
<b>Valid</b>	Less than 5 km	163	22.1
	5–19 km	169	23.0
	20–49 km	114	15.5
	50–99 km	64	8.7
	100–499 km	86	11.7
	500 or more km	108	14.7
	Overseas	32	4.3
	<b>Total</b>	<b>736</b>	<b>100</b>
<b>Missing</b>	Refused	15	
	Don't know	67	

**Table E10: Reason why child has never met the PLE (n=72)**

Reason given by P1	n	%
PLE does not know about child	22	31.9
Identity of PLE unknown	10	14.5
PLE does not want to see child	7	10.1
PLE lives too far away or overseas	6	8.7
PLE is in prison	6	8.7
Respondent does not want PLE to see child	3	4.3
PLE is subject of a restraint order or has history of drug, alcohol or violence problems	2	2.9
Child was the result of rape	2	2.9
PLE has another partner or family	1	1.4
PLE is sick/disabled (include mental illness)	1	1.4
PLE does not have suitable living arrangements	1	1.4
Other reason	8	11.6
<b>Total</b>	<b>69<sup>(a)</sup></b>	<b>100.0</b>

(a) Don't know/refused: n=3.

**Table E11: Reason why study child has no contact with PLE (n=87)**

Reason given by P1	n	%
PLE does not want to see child	34	45.3
PLE is subject of a restraints order or has a history of drug, alcohol or violence problems	15	20.0
PLE lives too far away or overseas	13	17.3
Respondent does not want PLE to see child	5	6.7
PLE is sick/disabled	2	2.7
PLE has a new partner/family	2	2.7
PLE does not have time to see child	1	1.3
PLE is in prison	1	1.3
Other reason	2	2.7
<b>Total</b>	<b>75<sup>(a)</sup></b>	<b>100.0</b>

(a) Missing n=11; Don't know n=1.

**Table E12: Number (proportion) of children with a biological PLE receiving alternative care arrangements by sex of child**

		Male children n (%)	Female children n (%)	All children n (%)
<b>Valid</b>	P1 has main care	268 (82.7)	243 (83.8)	511 (83.2)
	Shared or joint parenting	48 (14.8)	35 (12.1)	83 (13.5)
	Other	1 (.3)	5 (1.7)	6 (1.0)
	Not applicable	7 (2.2)	7 (2.4)	14 (2.3)
	<b>Total</b>	<b>324</b>	<b>290</b>	<b>614</b>
<b>Missing</b>	Refused/don't know			2



**Table E13: Number (proportion) of children with a biological PLE receiving varying frequency of daytime contact, by sex of child, care arrangement, pattern of care, location of contact and proximity**

	Frequency of PLE daytime contact with child					All PLEs
	Daily	Once a week	Once a fortnight	Once every 1–3 months	Less than once in 3 months	
Sex of study child n=616 (100)						
Male	41 (12.6)	115 (35.4)	81 (24.9)	49 (15.1)	39 (12.0)	325 (52.8)
Female	36 (12.4)	107 (36.8)	66 (22.7)	49 (16.8)	33 (11.3)	291 (47.2)
Care arrangement n=594 (100)						
P1 has main care	56 (11.0)	117 (34.6)	121 (23.7)	90 (17.6)	67 (13.1)	511 (86.0)
Shared or joint care	15 (18.1)	35 (42.2)	24 (28.9)	6 (7.2)	3 (3.6)	83 (14.0)
Set pattern n=590 (100)						
Yes	61 (15.3)	179 (44.8)	112 (28.0)	36 (9.0)	12 (3.0)	400 (67.8)
No	12 (6.3)	41 (21.6)	34 (17.9)	62 (32.6)	41 (21.6)	190 (32.2)
Location of contact n=596 (100)						
P1's home only	24 (24.5)	35 (35.7)	14 (14.3)	13 (13.3)	12 (12.2)	98 (16.4)
P1's home and elsewhere	45 (24.1)	81 (43.3)	29 (15.5)	23 (12.3)	9 (4.8)	187 (31.4)
Elsewhere only	7 (2.3)	106 (34.1)	103 (33.1)	62 (19.9)	33 (10.6)	311 (52.2)
Proximity to study child's home (km) n= 599 (100)						
<5	52 (34.4)	73 (48.3)	19 (12.6)	5 (3.3)	2 (1.3)	151 (25.2)
5–19	18 (11.9)	85 (56.3)	33 (21.9)	9 (6.0)	6 (4.0)	151 (25.2)
20–49	4 (4.2)	41 (42.7)	35 (36.5)	12 (12.5)	4 (4.2)	96 (16.0)
>49	1 (.5)	20 (10.0)	58 (28.9)	63 (31.3)	59 (29.4)	201 (33.6)
<b>Total (%)</b>	<b>77 (12.5)</b>	<b>222 (36.0)</b>	<b>147 (23.9)</b>	<b>98 (15.9)</b>	<b>72 (11.7)</b>	<b>616 (100)</b>

Note: Sample size varies between categories due to missing data.

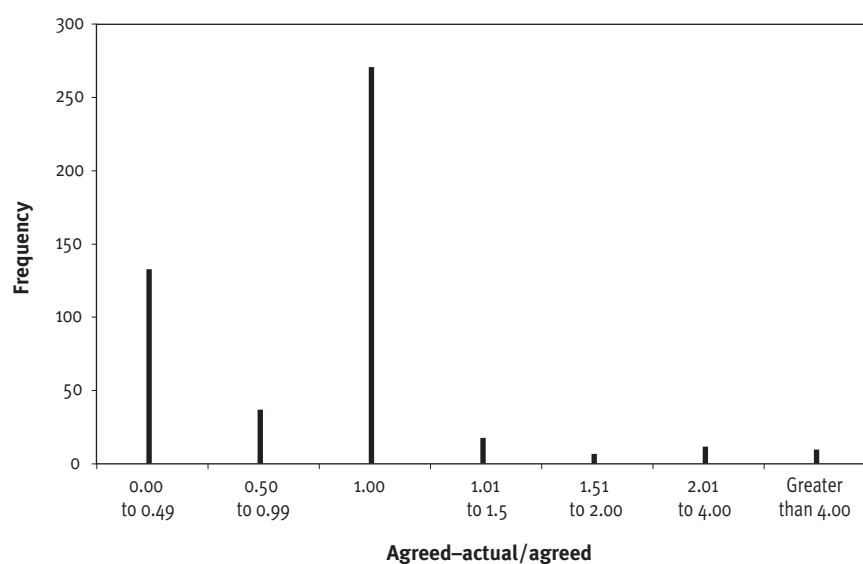
**Table E14: Number (proportion) of children with a biological PLE receiving overnight care, by sex of child, care arrangement, pattern of care, location of contact and proximity**

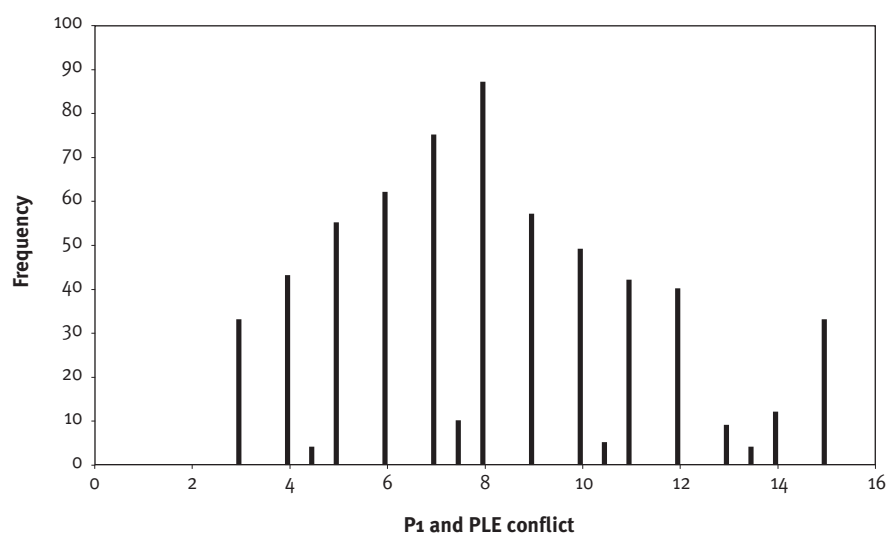
	PLE overnight care of child	
	Yes	No
Sex of study child (n=616)		
Male	237 (75.2)	78 (24.8)
Female	185 (65.8)	96 (34.2)
Care arrangement (n=347)		
P1 has main care	339 (68.5)	156 (31.5)
Shared or joint care	71 (87.7)	10 (12.3)
Set pattern (n=345)		
Yes	318 (79.7)	81 (20.3)
No	100 (52.6)	90 (47.4)
Location of contact (n=351)		
P1's home only	33 (34.4)	63 (65.6)
P1's home and elsewhere	137 (73.3)	50 (26.7)
Elsewhere only	251 (80.7)	60 (19.3)
Proximity to study child's home (km) (n=347)		
<5	110 (72.8)	41 (27.2)
5–19	111 (75.0)	37 (25.0)
20–49	67 (70.5)	28 (29.5)
>49	127 (68.3)	59 (31.7)
Frequency of daytime contact (n=347)		
Daily	42 (56.8)	32 (43.2)
Once a week	178 (80.2)	44 (19.8)
Once a fortnight	124 (84.4)	23 (15.6)
Once every 1–3 months	53 (54.1)	45 (45.9)
Less than once in 3 months	25 (45.5)	30 (54.5)
<b>Total (%)</b>	<b>422 (70.8)</b>	<b>174 (29.2)</b>

Note: Sample size varies between categories due to missing data.

**Table E15: Child support payments from the PLE (monthly) (n=424)**

<b>Payments (\$)</b>	<b>Amount agreed to be paid n (%)</b>	<b>Amount actually paid for the last month n (%)</b>
0	n/a	87 (20.7)
1–100	163 (38.6)	119 (28.3)
101–200	66 (15.6)	57 (13.5)
201–400	94 (22.2)	79 (18.8)
401–600	53 (12.6)	44 (10.4)
601–1,600	45 (11.8)	36 (8.3)
Mean	\$280.67	\$230.23
Standard error	\$15.27	\$14.70
Median	\$200	\$120
Range	\$0–1,510	\$0–1,510

**Figure E10: Difference in child support payment from PLE as a function of agreed amount**

**Figure E11: Distribution of primary carer (P1) and PLE conflict****Table E16: Descriptive statistics for conflict between P1 and PLE**

n	Mean	Standard error	Median	Range
603	8.14	0.127	8	3–15



# Appendix F

## Section 6: Child outcomes

**Table F1: Predictors of infants falling below the negative cut-off on the Overall Outcome Index, infant cohort, lone parent sample**

<b>n=296</b>	<b>Odds of &lt;negative cut-off OR<sub>adj</sub></b>	<b>95% confidence interval (low-high)</b>
Sex of study child		
Female	Ref	
Male	1.160	(0.579–2.320)
P1 Age at child's birth (years)		
Under 25	2.513	(0.842–7.497)
25–34	Ref	
35 and above	0.630	(0.181–2.186)
P1 Country of birth		
Australia	Ref	
Outside Australia	2.064	(0.747–5.703)
P1 Education		
Year 10 or less	1.292	(0.535–3.124)
Trade certificate or diploma	0.452	(0.158–1.292)
Year 11 or 12 + university	Ref	
P1 Employment classification		
Full time	Ref	
Part time	0.313	(0.062–1.589)
Unemployed	0.407	(0.054–3.075)
<b>Not in labour force</b>	<b>0.187</b>	<b>(0.038–0.924)</b>
Number of children in household		
1	Ref	
<b>2</b>	<b>4.036</b>	<b>(1.451–11.225)</b>
3	2.285	(0.649–8.044)
4 or more	3.455	(0.699–17.084)
Income categories		
Less than \$600	Ref	
\$600 and more	1.381	(0.463–4.123)
Community connectedness		
Low	Ref	
Higher	0.654	(0.282–1.517)
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.950	(0.389–2.320)
990–1,010	0.597	(0.182–1.964)
1,020–1,060	1.950	(0.779–4.879)
1,070–1,150	0.370	(0.053–2.590)
P1 Parenting self-efficacy		
Average or above average	Ref	
Low	0.882	(0.161–4.839)
P1 Parental warmth		
Non-low warmth	Ref	
<b>Low warmth</b>	<b>3.193</b>	<b>(1.162–8.778)</b>

P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	4.301	(0.986–18.763)
P1 Hostile parenting		
Non-high	Ref	
High	1.209	(0.428–3.418)
Parent gets enough external support		
Does not get enough support	Ref	
Gets enough support	1.151	(0.511–2.592)

Note: P1 refers to primary carer.  
P2 refers to secondary carer.

**Table F2: Predictors of 4 to 5 year olds falling below the negative cut-off on the Overall Outcome Index, child cohort, lone parent sample**

	Odds of negative cut-off OR <sub>adj</sub>	95% confidence interval (low–high)
<b>n=277</b>		
Sex of study child		
Female	Ref	
<b>Male</b>	<b>2.037</b>	<b>(1.192–3.472)</b>
P1 Age at child's birth (years)		
Under 25	1.469	(0.821–2.629)
25–34	Ref	
35 and above	0.508	(0.236–1.092)
P1 Country of birth		
Australia	Ref	
Outside Australia	0.870	(0.419–1.805)
P1 Education		
<b>Year 9 or less</b>	<b>3.308</b>	<b>(1.095–9.994)</b>
<b>Year 10</b>	<b>2.904</b>	<b>(1.121–7.524)</b>
Year 11 or 12	2.561	(0.974–6.733)
Trade certificate or diploma	1.954	(0.795–4.805)
University	Ref	
Family structure		
Married, intact	Ref	
Single	1.097	(0.662–1.819)
De facto, intact	0.824	(0.572–1.186)
<b>Married, step</b>	<b>0.533</b>	<b>(0.310–0.915)</b>
De facto, step	1.479	(0.710–3.081)
P1 Employment classification		
Full time	Ref	
Part time	0.630	(0.266–1.490)
Unemployed	0.413	(0.116–1.476)
Not in labour force	0.631	(0.242–1.645)
Number of children in household		
1	Ref	
2	0.591	(0.305–1.145)
3	0.806	(0.365–1.780)
4 or more	1.253	(0.518–3.031)
Income categories		
Less than \$600	Ref	
\$600 and more	0.505	(0.252–1.011)

Community connectedness		
Low	Ref	
Higher	1.154	(0.608–2.189)
SEIFA disadvantage categories		
650–950	Ref	
960–980	0.945	(0.488–1.830)
990–1,010	1.333	(0.628–2.831)
1,020–1,060	1.337	(0.651–2.745)
1,070–1,150	0.858	(0.275–2.682)
P1 Parenting self-efficacy		
Average or above average	Ref	
Low	1.778	(0.700–4.517)
P1 Parental warmth		
Non-low warmth	Ref	
Low warmth	1.096	(0.626–1.919)
P1 Psychological distress		
Non-clinical range	Ref	
Clinical range	1.981	(0.885–4.437)
P1 Hostile parenting		
Non-high	Ref	
<b>High</b>	<b>2.321</b>	<b>(1.279–4.212)</b>
Parent gets enough external support		
Does not get enough support	Ref	
Gets enough support	1.245	(0.629–2.464)





# Appendix G

## LSAC Research Consortium

Members of the LSAC Research Consortium are:

Dr John Ainley, Deputy Director, Australian Council for Educational Research

Associate Professor Donna Berthelsen, Centre for Applied Studies in Early Childhood,  
Queensland University of Technology

Professor Michael Bittman, Department of Sociology, University of New England

Dr Linda Harrison, Senior Lecturer, School of Teacher Education, Charles Sturt University, Bathurst

Professor Ilan Katz, Acting Director, Social Policy Research Centre, University of New South Wales

Associate Professor Jan Nicholson, Murdoch Childrens Research Institute, Melbourne

Dr Bryan Rodgers, Senior Fellow, Family and Community Health Research Unit, National Centre for  
Epidemiology and Population Health

Professor Ann Sanson, Network Coordinator, Australian Research Alliance for Children and Youth,  
and LSAC Principal Scientific Advisor, Department of Paediatrics, University of Melbourne

Professor Michael Sawyer, Child and Adolescent Psychiatry, Women's and Children's Hospital,  
Department of Paediatrics, University of Adelaide

Professor Sven Silburn, Co-director, Curtin University of Technology, Centre for Developmental Health,  
Institute for Child Health Research, Perth

Dr Lyndall Strazdins, Research Fellow, National Centre for Epidemiology and Population Health,  
Australian National University

Associate Professor Judy Ungerer, Department of Psychology, Macquarie University

Professor Graham Vimpani (Representative of the Australian Research Alliance for Children and Youth),  
Director, Child Adolescent and Family Health Service, University of Newcastle

Dr Melissa Wake, Director, Research and Public Health Unit, Centre for Community Child Health,  
Royal Children's Hospital, Melbourne

Professor Stephen Zubrick, Co-director, Curtin University of Technology, Centre for Developmental Health and  
Head, Division of Population Science, Institute for Child Health Research, Perth.



# Endnotes

- 1 The LSAC Outcome Index is intended to be a composite measure to reflect how LSAC children are developing. LSAC tracks the development of children across multiple domains, including physical (health), socio-emotional and learning, and the Outcome Index provides a means of summarising this complex information.
- 2 Refer to Appendix A for more information about SEIFA.
- 3 There were three exceptions: the K-6 scale of psychological distress, which provides a cut-off score based on normative data; and the self-efficacy item and coping item, which each had response categories that clearly indicated meaningful cut-offs.



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