The Assessment and Support of New Fathers

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STATEMENT OF ORIGINALITY

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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I hereby certify that the work embodied in this Thesis contains published papers of which I am a joint author. I have included as part of the thesis a written statement from each co-author attesting to my contribution to the joint publications.

Signature: ......................................................

Date: .................................................................
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ABSTRACT

The assessment and support of new fathers

Early intervention to support families with infants and young children is widely accepted; however, fathers rarely access existing support services, and services directed to fathers are underdeveloped. To addresses the question of how the needs of expectant fathers might be assessed and how information and support may be delivered to new fathers in an appropriate manner, four tasks were undertaken. In the first task, the literature on father–infant connection was reviewed to provide a theoretical basis for assessing fathers’ needs in the antenatal period. The second involved a cross-sectional survey of expectant fathers in the Hunter Valley of New South Wales; it was carried out using a set of psycho-social questions derived from the literature and a standard measure of depression. The third task arose from the recognition that fathers’ lack of face-to-face contact with health services precluded their assessment and support through existing channels of peri-natal care. The World Wide Web, which is recognised as a potentially important source of information and support for parents, contains many websites which offer material for fathers; however, no protocol was available to evaluate web pages in view of new fathers’ needs. An evaluation framework for assessing web-based materials for new fathers was developed and used as a guide for designing web-linked materials to inform and support fathers in the peri-natal period. In the fourth task a randomised control trial was conducted with fathers from Newcastle, New South Wales, and Hobart, Tasmania, to determine if information and support provided to new fathers would result in an increase in their attachment to their infant as measured by a self-report scale. The findings of this thesis highlight the importance of developing assessment instruments, information and support specifically tailored to the needs of new fathers and the potential of the internet and email to reach and support fathers in this busy period of their lives.
CHAPTER 1 INTRODUCTION

1.0 Introduction

The connection of fathers to infants is the subject of this thesis. This study addresses the way in which a father might become emotionally attached to the developing baby in his partner’s womb, the influences and pressures which may build or detract from his identification with his baby and its future wellbeing, and the role of the professional in facilitating father–infant connection. The emphasis throughout this thesis is on the early part of a father’s journey with his offspring. While many of the concerns which stimulate research and program development in the area of family relationships arise from the high cost of maladaptive behaviours later in life, the possibility of intervening during gestation and infancy to improve developmental outcomes for children underpins this study.

In this chapter the increase in research on fathers’ involvement with children and programs and policies addressing fathers are described. The argument for antenatal assessment of fathers, identifying their needs and providing information and support, is elaborated. The development of the thesis, including its links to ongoing work within the health care sector, is also described.

1.1 Early intervention with fathers

The wisdom of early intervention in the course of physical diseases is taken for granted and screening, early diagnosis and the prevention of physical ailments are understood to be important responsibilities of government health services. Over recent decades the scientific community has also grown more confident in identifying precursors to social and psychological maladies. Longitudinal studies using modest interventions in the preschool years of a child’s life have demonstrated the possibility of reducing a wide
variety of social and psychological ills, and the weight of evidence now suggests that established risk and protective factors can be identified among family members and groups for a range of mental illnesses and social maladaptive behaviours (Beckwith, 2000; Mazrek & Haggerty, 1994). Early intervention to prevent maladaptive behaviour is now thought to be not only feasible but necessary. As the first Australian National Mental Health Action Plan explained:

It is becoming increasingly clear that treatment interventions alone cannot significantly reduce the enormous personal, social and financial burdens associated with mental health problems and mental disorders, and that interventions are required earlier in the development of these conditions.

(Commonwealth Department of Health and Aged Care, 2000, p. 1)

While “early” does not necessarily mean “at birth”, recent evidence from several disciplines (including neuroscience, psychology and psychiatry) has drawn attention to the importance of infancy in the development of life-long patterns of behaviour and to the power of the earliest relationships to affect later wellbeing (Schore, 1994). New babies require emotional availability as well as physical care and stimulation. Those intimately involved, usually the mother and father, are required to manage their own emotional balance so as to be able to respond appropriately to their infant’s signals. In the world of infancy the “factors” which may place an infant at risk include not only individual characteristics, such as temperament, but also his or her intimate relationships. If these relationships are impaired then physiological and psychological changes in the infant may increase the risk of maladaptive behaviours later in life (Crittenden, 1988). It is these considerations that have highlighted the importance of identifying and addressing maternal depression in the first year of infancy in order to prevent problems later in the child’s life (Murray, Sinclair, Cooper, Ducournau, & Turner, 1999; Mathers, Vos, & Stevenson, 1999). Postnatal depression among mothers has become a leading mental health issue to be addressed by health and community services supporting families in their earliest years (Austin & Priest, 2004).

But what of the fathers? How can services that provide support to mothers during the initial stages of their parenthood include fathers? And should they? What is the
justification for targeting fathers in the early years of family formation? These are important questions that have political, research and social influences and solutions.

1.2 Including fathers in early intervention services for families

Three broad arguments can be advanced to urge services whose remit is early intervention with families to attend to fathers as well as mothers: preventing negative outcomes for infants and children; promoting positive outcomes for infants and children; and supporting the mother in her role to benefit infants and children. Phares and Compas (1993), in a review of the psychological literature from 1984 to 1991 to correct the “sexist bias towards studying mothers’ contribution to child and adolescent maladjustments” found that fathers made a significant contribution to the likelihood of Attention-Deficit Hyperactivity Disorder, Conduct Disorder, delinquency, depression, alcohol and substance abuse, autism, anxiety disorders, schizophrenia, eating disorders and suicidal tendencies manifesting in their children. Since that time there has been an increased willingness to identify fathers as the perpetrators of harm to children (Moran, 2002; Peled, 2000), and the prominence given to the effects of domestic violence on children and the prevalence of childhood sexual abuse has highlighted the potential “dangers” of fatherhood for families (Jaffee, Moffitt, Caspi, & Taylor, 2003). If the point of early intervention is to connect families to support services to prevent maladaptive behaviours, then fathers would appear to be an essential group to target and involve.

The benefit of fathers’ involvement with children has also received increasing recognition. Now that fatherhood is a recognised field of study with its own journals, research streams and professional associations, there is increasing discussion of the way that a father’s involvement can enhance the positive development of his child/children (Rohner & Veneziano, 2001). In a recent review of 59 studies examining the effects of the father–child relationship, Amato and Gilbreth (1999) found evidence that paternal support and non-coercive control do indeed benefit children, leading to less externalising and internalising behaviour problems, and that these positive effects persist through to adulthood. This positive conclusion, however, is limited in its generality. Like most research on this topic the sample was drawn from white middle-class two-parent families in the United States of America. Although a number of similar
studies showing positive effects of father involvement have been reported from Western Europe, the UK and Australia (Cabrera & Coll, 2004; Lamb & Tamis-Lamonda, 2004) most researchers are cautious in their assessment of the effects of father involvement, and there is increasing recognition of the diversity of fathers. Although the question “Does father involvement benefit children?” might seem amenable to a straightforward empirical analysis, the increased research on fathers has resulted in a more complex picture of father effects than a singular “yes” or “no”.

Amato and Gilbreth (1999), for example, point out that father–child interaction is only one of the avenues for fathers to influence their children; children’s wellbeing is also affected by the social and financial resources contributed by fathers and by the nature of the marital relationship. The particular social context for the child might also determine the relative importance of fathers’ involvement. From an examination of the wellbeing of children in Botswana, whose fathers are often away working, Bock and Johnson (2002) argue that in societies where basic requirements—such as nutrition and health care—are not universally available, the father’s remittance of money may be more important than the time invested in the father–child relationship. Cabrera and Coll (2004) report the same sentiment expressed by a Latino father answering questions for a study of low-income fathering. After answering a lengthy questionnaire on how often he sings to, dances with and bathes his child the man erupted in frustration asking the interviewer “when would she ask him about how he breaks his back to support his child” (Cabrera & Coll, 2004, p. 102). The widely promoted notion that fathers should maximise their children’s benefit by being involved (necessitating spending time with them) may be applicable only to certain groups in Western industrial societies. The general shift in research evidence on the question of fathers may best be summed up by Lamb (1997), who pointed to a change in the underlying premise of the research: from attempting to decide if fathers are important to an acceptance that fathers are significant in child development, capable of producing positive or negative outcomes.

The third strand of argument advanced to encourage fathers’ involvement with infants and children is on the grounds of equity. In Australia, women’s higher involvement in the workforce has been accompanied by a sustained attention to the unequal workload in childcare and housework borne by mothers and fathers (Bittman & Pixley, 1997; Dempsey, 2000). Large-scale self-report surveys support the proposition
that, while mothers are taking on the traditionally male role of breadwinner for the family, fathers are failing to take up traditionally female areas of baby and childcare (Bittman, 1995). At the same time, community views of fathers’ and mothers’ responsibilities show marked support for fathers’ involvement with infants and children (Pocock, 2003; Russell et al., 1999). As Phares (1996) suggests, a “growing awareness of the importance of fathers, and the simultaneous increase in fathers’ participation in child care” could lead to a “new respect for parenting behaviours of both mothers and fathers” (p. 110).

In parallel to these investigations of fathers’ roles, policy and programs have developed to support the role that fathers might play in promoting children’s wellbeing. In the USA, a 1995 memorandum from president Clinton directing all government departments to include fathers produced a flurry of initiatives, including a series of national meetings sponsored by the Federal Interagency Forum on Child and Family Statistics. The resulting report, (Federal Interagency Forum on Child and Family Statistics, 1998) *Nurturing Fatherhood: Improving Data and Research on Male Fertility, Family Formation and Fatherhood*, provided the basis for a wave of new research and policy development addressing fathers’ roles.

Similarly, in Europe governments have attempted to foster fathers’ involvement with children at the expense of their breadwinning role through legislating for paternity leave. In the United Kingdom fathers have been targeted in the Labour Party’s family policies since 1997, and fathers’ involvement has been identified as a key target of new family support schemes (Burghes, Clarke, & Cronin, 1997; Lloyd, O'Brien, & Lewis, 2003). In October 2004 the departments of education and health released new “core standards” to be met by children’s services, including a directive to include fathers. The standards cite evidence that positive involvement by fathers in their children’s learning is associated with better mental health, higher quality of later relationships, less criminality, better school attendance and behaviour, and better examination results (Department of Health & Department for Education and Skills (United Kingdom), 2004). In the non-western world, government and non-government organisations have also supported research and program development to increase father participation in childrearing (Hobson, 2002; Monasso, 2001).
In Australia, while there has been a significant increase in programs for fathers, the focus has been on the role of fathers in family separation. The Men and Family Relationships initiative, launched by the Australian Government in 1998, is directed to provide services and programs for fathers with “relationship difficulties” (Commonwealth Department of Family and Community Services, 2002). Non-government organisations providing marriage and family counselling have also been funded to target separated couples with children (usually with the father being non-resident) to provide dispute resolution, family counselling and contact programs for separated parents (Fathers Direct - the National Information Centre on Fatherhood, 2007) in high-conflict families (Moloney, 2006). As family separation typically happens when children are older (at one year of age only 15% of babies are not living with both their natural parents (ABS, 2002) the emphasis on services surrounding family separation means that the majority of fathers with new babies are not benefiting from the increase in father-focused activity and program development.

If the logic of early intervention to support families applies to fathers as well as mothers, then the appraisal of a father’s mood disorders and general psychological wellbeing during the pregnancy—linked to a system of referral or ongoing support—would potentially benefit all members of the family. However, in order to intervene to support fathers in their role with young babies a number of issues need to be resolved. Confusion persists, for example, over the manifestation of depression in males and hence over the appropriate tools for its detection and measurement (Matthey, Barnett, Kavanagh, & Howie, 2001). While the Edinburgh Postnatal Depression Scale (EPDS) has been validated on an Australian sample of fathers (Matthey et al., 2001), the minimum score to effectively predict mood disorder remains untested in practice. Expanding the factors to be assessed beyond depression, as is done in the Integrated Peri-natal Care (IPC) approach for mothers, will require identifying male-equivalent psychosocial factors from the current research literature on fathers’ needs. In addition, since fathers are not the authorised client of the health service whose attendance at health service appointments is critical to the provision of care, the appropriate means of assessing expectant fathers will need to be determined. Is it sufficient to provide a printed form to complete, or a telephone interview, to avoid the need for attendance at the clinic or hospital? Without answers to these practical questions the implementation of a routine support system for fathers to accompany that offered to mothers is unlikely.
The resource commitments and ethical issues entailed in assessing what amounts to a duplicate client group—fathers or male partners of women presenting to give birth—also need to be considered. Without an estimate of the response to questions asking the men to identify their needs, health services contemplating the support of fathers are placed in an invidious position. How many fathers will score high on the EPDS? How many will identify financial or relationship difficulties? How many will accept a referral, and to whom will they be referred?

There is also the question of treatment modalities. In the IPC model, midwives provide the first line of counselling and connection: how appropriate this offer would be for males presenting with their wives or partners is not clear. Putting aside the hours required, is a midwife required to assess and assist fathers? Should a male midwife or other male counsellor or support worker be available? Finally, there is the fundamental issue of impact. If the process of engaging with the expectant father, treating identified mood disorders, providing support for other difficulties and demonstrating that the health and associated services do care about the father and his role, then will his relationship with the developing baby be affected? Will the provision of an early intervention with fathers lead to improved father–child relationships?

These are the core questions for the provision of effective antenatal support services to fathers. Several of these issues—such as the capacity of services to provide staff, the appropriate mechanisms for follow through on identified needs and maintaining support to fathers into the first years of infancy—are beyond the scope of this study. However, a number of preliminary but fundamental questions can be examined. The needs expressed by expectant fathers when assessed in the antenatal period with questions similar to those for mothers could be evaluated, both to clarify the nature of the identified needs and to provide an estimate of the support implications if fathers were to be considered as requiring support. Fathers’ responses may also make available evidence of different needs between important subgroups, such as younger and older fathers or blue-collar and white-collar fathers. The possible use of alternative service delivery modalities, such as email and web-based support, could also be examined to estimate their potential for reaching fathers in the peri-natal period. The usefulness of information provided to fathers could be tested and the impact of support services on
crucial developmental variables, such as fathers’ depression or father–infant bonding, could be measured.

1.3 The development of the thesis

This thesis, *The Assessment and Support of New Fathers*, was completed over a period of six years beginning in 2001. During this period important policy and program developments for fathers in Australia influenced the context and the direction of the investigations reported upon. Some developments, such as the increasing recognition of early intervention to support families, have afforded a context for focusing on parents with young children; hence, the investigation of fathers’ role in the peri-natal period has become more topical. Professionals from a variety of disciplines have begun to recognise that fathers are not simply mother substitutes and government departments and non-government organisations have taken steps to distinguish fathers as a separate group for service delivery (Father Inclusive Practice Forum). As a result, programs directed to fathers have multiplied. Research on fathers and fatherhood has also increased in volume and sophistication with important national and international conferences and new publications in a variety of disciplines. Overall, the period of the thesis saw significant social and intellectual developments that provided a favourable climate for investigating fathers, but which have necessitated constant revision of the material in the thesis.

A second important contextual feature for the thesis was my role as project manager/researcher with the Engaging Fathers Project within the University of Newcastle. As a part-time doctoral student I was able to link the doctoral research with clinical and project work relating to fathers in a variety of settings. The basis of the Engaging Fathers Project was to develop models of father-inclusive practice across a broad range of services. The project work included: the initiation of a fathers group at the Neonatal Intensive Care Unit; a placement at the First Steps Parenting health service (which involved accompanying midwives on home visits, and facilitating discussion groups for fathers whose wives or partners were attending a group program for postnatal depression); delivering father-inclusive practice workshops for staff (and fathers) in a variety of postnatal and community services, Indigenous-managed services, and services for particular groups (such as for families of children suffering from spina
bifida). During this time I completed the Graduate Diploma of Infant Mental Health, which led to the piloting of a fathers’ support service offering home visits based on the Systematic Training in Effective and Enjoyable Parenting program developed by Egeland and Erickson (1999). For 18 months I also conducted antenatal session (two hours) on a voluntary basis for the expectant fathers attending a large private hospital.

The chapters of the thesis reflect, approximately, the order of my developing ideas derived from the reading undertaken as part of the thesis and the knowledge developed through my role in the Engaging Fathers Project. My initial focus was on the lack of any assessment for fathers in the antenatal period. At a time when psychosocial assessments for mothers were gaining increasing recognition in New South Wales and in other regions of Australia my first research project involved answering the question “What would you ask fathers if you were going to assess them?” During this research I became aware of how the exclusive focus on mothers by midwives, nurses and neonatologists was not simply conventional practice but rooted in a view of mothers as sufficient for babies to meet almost all aspects of infant development. Although it was rarely articulated in conversation, the basic ideas of Bowlby’s attachment theory (Bowlby, 1969)—especially the notion that the infant–mother relationship is the primary template for all other relationships—seemed to underpin the conventional wisdom of taking care of the mother and leaving fathers aside. I was then led to investigate the question “What is the basis of the father–infant connection?” While a coherent answer to this question is provided in Chapter 2, the struggle to understand the differences in attachment formation between mothers and fathers has remained a core feature of the work over the six years. By the time that I had completed the cross-sectional survey and had more than two years’ experience negotiating with hospital and community health staff at various levels, I had come to recognise that my initial plan to trial a father-specific peri-natal service modelled on the IPC service for mothers was fanciful. This left me with some evidence of fathers’ needs and some experience in supporting fathers at an antenatal and postnatal level, but no way to trial supporting the new fathers due to their limited contact with any postnatal health services. Conversations during my ongoing antenatal classes for fathers, however, eventually provided the idea of utilising email and internet channels to offer support to new fathers.
In designing the randomised trial incorporating an email fathers’ group and a Child and Family Health Nurse service I assumed that, since the internet provided countless web pages on topics such as fatherhood, that developing the materials for fathers (conceived initially as a one-page guide to useful websites) would be a simple task. As I began searching more systematically for father-useful websites, however, I became dismayed at both the lack of specific information and the number of parenting websites which implied that they were for mothers and fathers but which were in fact designed for mothers. (I registered on one parenting website as an expectant father with a fictitious due date; although I could register as a father all emails from the website addressed me as “mother” and offered me links to “other mothers”.) Realising that I had overestimated the quality of available websites I spent some months searching websites in order to produce the materials to use with fathers. I also developed a critique of existing web-based resources and a guide for evaluating internet resources for new fathers (Chapter 4). The trialling of these materials as part of a comprehensive support system incorporating professional email support and father-to-father contact as well as information via the web is reported in Chapter 5.

1.4 The content of the thesis

A review of the current understanding of the father–infant connection is necessary to provide a theoretical basis for investigations of fathers’ support needs (Chapter 2). The needs expressed by expectant fathers when assessed in the antenatal period with questions similar to those for mothers are to be evaluated, both to clarify the nature of the identified needs and to provide an estimate of the support implications if fathers were to be considered as requiring support. Fathers’ responses will also provide evidence of different needs between important subgroups, such as younger and older fathers or blue-collar and white-collar fathers (Chapter 3). The possible use of alternative service delivery modalities, such as email and web-based support, will also be examined. Following from the earlier theoretical description, a model of evaluating web-based information for new fathers is developed (Chapter 4). This model, in turn, is used to prepare a set of draft support materials to be linked with email-based professional support to estimate their potential for reaching fathers in the peri-natal period (Chapter 5). The usefulness of information provided to fathers is tested and the
impact of support services on crucial developmental variables, such as fathers’
depression or father-infant bonding, is measured (Chapter 6).
CHAPTER 2 BACKGROUND: FATHERS’ NEEDS IN RELATION TO FATHER-INFANT CONNECTION

2.0 Introduction

In this chapter fathers’ needs in the peri-natal period are discussed with reference to father-infant connection. The basis of the connection between fathers and their infants is examined from three perspectives: the physiological base of fathers’ behaviour with infants; the sociological analysis of fathers’ role; and, the attachment-based approach utilised in the health sciences as applied to fathers. The research on infant-father attachment is reviewed to provide a theoretical basis for identifying and addressing fathers’ needs. The fundamental constructs of attachment theory, such as secure and insecure attachment categories and sensitive responsiveness to infant cues, are recognised as equally applicable to fathers and mothers. Differences are found, however, in the assessment of infant-father and infant-mother attachment and in the proposed mechanisms for developing secure attachment relationships for fathers and mothers. A third crucial difference is in the context for infant-father connection: his position as mate to the mother who carries and delivers the infant and then, in most cases, as mate to the mother who provides the neonates’ nutrition and who provides the majority of nurturing care. The chapter concludes that fathers’ needs must be identified in the reality of the father-infant-mother context so that a father’s personal needs cannot be separated from his “need” to have a healthy infant and partner.

2.1 Fathers’ needs

The birth of his first child marks one of the most profound changes a man may undergo, transforming his standing in the community, his most intimate relationships and his identity (Draper, 2003). Not only is his legal status irrevocably altered and his constellation of family members greatly extended but he must accommodate dramatic
changes in his relationship with the child’s mother and make room for a completely new bond between himself and his infant (Cabrera & Coll, 2004). However, he may come to the moment of his infant’s birth naively, unprepared for the speed of the changes taking place and unaware of the range and depth of the demands which he will face (Fletcher, 2004). Without the rush of physical changes to propel him toward a new sense of himself, a man can drift toward the precipice of his new identity with little preparation to ensure that he and his refigured family fulfil their potential for a rich and satisfying life (Svensson, Barclay, & Cooke, 2006). From the point of view of the new baby, it will be important to have a father who is ready to provide the physical aspects of care and sustenance and ready to support the mother in her new role; but it will also be important to have a father who has the mental and emotional resources to form a secure and nourishing relationship. Supporting those who need assistance in preparing for fatherhood is properly seen as a responsibility of public health care (Harris, 1990).

2.1.1 Fathers’ physical needs

Just what is it that fathers need? Investigators seeking to identify needs based on physical symptoms among expectant fathers have identified a “couvade syndrome”, (the experiencing of the symptoms of pregnancy and labour by a male) described by (Richman, 1982) as the “birth rites of fathers” (p. 92). Case control studies matching men whose partners were pregnant with married men without pregnant partners have produced conflicting results. Trethowan and Conlon (1965) found that significantly more expectant fathers experienced symptoms than controls and estimated the incidence of couvade among expectant fathers at 11% (Trethowan, 1968). Clinton (1987), however, found that expectant fathers’ physical health did not differ from that of non-expectant men prior to the birth of their child, although after the birth there were differences.

Lipkin and Lamb (1982) used a random sample of 300 couples from a large health maintenance organisation (the men’s records before and after the birth allowed the men to be their own controls) to identify expectant fathers seeking treatment for physical symptoms such as nausea, vomiting, and abdominal bloating “without other explanation” (p 509). Of the 267 men assessed 60 (22.5%) were identified as presenting with symptoms consistent with couvade syndrome. These men had a twofold increase in
visits to their doctor (four times more symptoms than during control periods) and twice as many prescriptions for medication as men without the syndrome. While these results are intriguing, they have not provided a basis for addressing fathers’ needs during pregnancy. The discussion of couvade has remained largely confined to the anthropological literature where the emphasis is clearly on the context and meaning of the physical changes for the men. In the health and child development literature it is the mental and emotional changes in fathers that have been investigated.

2.1.2 Fathers’ mental and emotional needs

In seeking to understand the disparate experiences of men as they progress from the point of pregnancy confirmation to the birth, descriptive accounts using interviews or clinical cases have offered a variety of categorisations. Based on interviews with a total of 100 fathers, Henderson (1982) suggests three phases in the emotional involvement of fathers during the pregnancy. The announcement phase experienced as either joy or shock—depending on his desiring of the pregnancy—is followed by a “moratorium” phase during which “many men put conscious thought about the pregnancy aside for a time” (p. 340) followed by a “focusing” phase where the men perceive the pregnancy as real and important. From repeated interviews with 28 men, Jordan (1990) identified “labouring for relevance” as the essence of the experience of new fatherhood. The men in her study were grappling with the reality of the pregnancy while seeking recognition as a parent from friends, workmates and family and trying to develop their role as a father. From a psychodynamic perspective, Raphael-Leff (1985) identified “participators” who are “eager to participate as fully as possible in pregnancy and primary child-care” (p. 176) and “renouncers” who are threatened by the pregnancy and resolve their anxiety by emphasising the woman’s responsibility for the pregnancy. Other researchers, using a variety of scales and survey instruments, have also offered schemas for the transition to fatherhood (Cowan, Cowan, Heming, & Miller, 1991; Goodman, 2004). While these categorisations have merit in providing a scaffold for examining the divergent evidence of expectant fathers’ needs they give little guidance for early intervention to improve their health. Instead, while regular calls are made in the professional literature for practitioners to give greater attention to fathers (Armstrong, 2001; Bennett, 1998), the strategies suggested amount to little more than
awareness raising, leaving services unchanged (Chapman, 1992; de Montigny & Lacharite, 2004).

2.2 Fathers and depression

The most detailed evidence regarding fathers’ mental health needs has followed from the recognition of the effects of postnatal depression among mothers. Harvey and McGrath (1988) examined the partners of mothers admitted with a postnatal psychiatric illness and found that 42% of partners of the women had a diagnosis according to the Diagnostic and Statistical Manual of Mental Disorders (DSM). In an effort to replicate this finding, Lovestone and Kumar (1993) examined the level of psychiatric illness among men whose partners were admitted to a Mother and Baby Unit with severe puerperal psychiatric illness. Twelve out of the 24 men were found to be “cases” judged from their Schedule for Schizophrenia and Affective Disorders (SADS) assessment interview. A limitation in both studies was the small sample size and the restriction to partners of women with severe mental illness. Studies using larger samples from non-clinical populations have found conflicting evidence of concordant mood disturbances in mothers and fathers. Raskin, Richman and Gaines (1990), for example, using the Center for Epidemiologic Studies Depression scale to measure depression in a community sample of 86 mothers and fathers eight weeks after the birth, found no association between mothers’ and fathers’ depression. However, Ballard et al. (1994) using the Edinburgh Postnatal Depression Scale (EPDS) among 200 mothers and their partners found that fathers were found to be significantly more likely to be depressed if their partners were also depressed. By far the largest study was one that measured depression in 7,108 women and their partners using the EPDS at 18 weeks gestation and eight weeks postpartum. Partners’ depression (EPDS ≥ 12) was significantly correlated with the women’s depression both before and after the birth (Deater-Deckard, Pickering, Dunn, & Golding, 1998).

Fathers may also be depressed irrespective of their partner’s assessed mood. From measures of depression in community samples we would expect fathers to exhibit approximately half the rate found among mothers (Weissman et al., 1997). Although studies vary in the measures used to determine the level of depression among women, rates in the first postnatal year are accepted to be between 10% and 20% (Barnett,
Matthey, & Gyaneshwar, 1999). In a review of the research literature on fathers and depression Goodman (2004) found the incidence of paternal depression ranged from 1.2% to 25.5% in community samples, and from 24% to 50% among partners of depressed mothers. But the estimation of depression among fathers may be an underestimation because men may be reluctant to express their depressed mood or they may express it in ways that are not recognised as symptomatic of depression.

Studies using a range of western populations have consistently shown women are more emotionally expressive than men, as measured by ratings of communication accuracy, self-reported expression and ratings of nonverbal behaviours (such as smiling and gesturing) (Kring & Gordon, 1998), though the significance of the differences is disputed (Dindia & Canary, 2006; Doka & Martin, 1998). Studies specifically investigating sadness have also found women to be more expressive than men, and there is support for the influence of social factors on gender differences in expression of emotion (Kring & Gordon, 1998). Males are considered to be socialised into regarding emotional expression as unacceptable (Buck, Losow, Murphy, & Costanzo, 1992) and across the spectrum of mental and counselling services men have shown a reluctance to access services (Addis & Mahalik, 2003; Aoun, Palmer, & Newby, 1998; McCarthy & Holliday, 2004; Relationships Australia, 2006). Men’s coping style and social context in dealing with grief or depression, for example, are dissimilar in many respects to those of women (Baum, 2004; Brownhill, Wilhelm, Barclay, & Schmied, 2005; Stroebe, Stroebe, & Schut, 2001), and among men those adhering to more traditional values applying to male identity are less likely to seek or accept psychological help (Berger, Levant, McMillan, Kelleher, & Sellers, 2005). As Rickwood and Braithwaite (1994) explain “The Australian culture, in particular, has been described as a ‘hard’ culture, especially for men, who are expected to be tough, suppress their emotion, and avoid feminine qualities such as compassion” (p. 570).

However, males’ reluctance to come forward to use services has not been shown to explain the gender difference in community depression rates. Weissman et al. (1997) reanalysed data on depression from two large cross-national surveys—the National Comorbidity Study (N= 8,000) and the Epidemiological Catchment Area Study (N=18,000)—to remove from the counts of depressed individuals those who had “told the doctor or another health professional about the depressive episode.” They found the
female-to-male ratio of depression virtually unchanged, and pointed to males’ use of alcohol as a more likely factor influencing the masking of male depression. In the light of emerging evidence of a difference in male and female expression of depression, and from clinical experience counselling dysthymic men who present their distress in an oblique or idiosyncratic manner, it has been suggested that the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for major depression be adapted to include “masculine-specific manifestations of depression” (Cochran & Rabinowitz, 2003, p. 134). In addition to the standard indicators, such as a decrease in activities and sleep disturbance, it is recommended that men should be evaluated by asking about behaviours such as increased conflict and anger in interpersonal relationships, increased use of alcohol or other mood altering substances, and decrease in sexual interest (but not in sexual activity). Inquiring about familial and intra-group norms regarding the expression of depressive affect is also suggested.

Support for a male-appropriate assessment of depression has also come from the efforts over two decades to reduce the number of male suicides in Sweden (Rutz, Walinder, Von Knorring, Rihmer, & Pihlgren, 1997). Based on the evidence that suicide risk was 50% lower among depressed patients treated with antidepressants, all general practitioners on the island of Gotland attended seminars in the early 1980s on the identification and management of depression. After the 1983–84 program, inpatient care, sick leave, rate of hospital admissions, prescriptions of non-specific anxiolytic drugs and suicide rates dropped significantly during the following years. However, analysis of the improved suicide rates showed that females accounted for almost the entire benefit (Rihmer, Rutz, & Pihlgren, 1995). In reviewing cases of suicide it was noted that 60% of the female suicide victims but only 20% of male suicide victims were known to health services, while 20% of male suicide victims but only 3% of female suicide victims were receiving social welfare assistance for drug and alcohol abuse. In addition, 15% of the males but none of the females were known to the police. Armed with the evidence of a gendered effect in the first initiative, the program was reinstituted in 1993 and 1995, during which the seminars paid particular attention to the diagnosis of depression in males. The intervention again resulted in improved prescribing patterns (this period saw the introduction of the new SSRI antidepressants onto the Swedish market) and further reduced suicide rates. However, in spite of the emphasis on males during the seminars, only one-third of the new SSRI prescriptions were for males, and
the male suicide rate was virtually unchanged. The researchers concluded that while the identification and management of depression and suicidal tendencies can be addressed through education for general practitioners “suicidal males have insufficient contact with the medical services, do not ask for help, are rejected due to abusive or aggressive behaviour, and are not recognised as being depressed” (Rutz et al., 1997, p. 43).

On the basis of the Gotland experience a “male depressive syndrome” has been proposed, with several “atypical” clinical features such as sudden and periodically lowered stress tolerance in otherwise stress-resistant men, impulsive-aggressive or psychopathic “personality disorder” in otherwise non-psychopathic persons, and suddenly occurring endorphin or serotonin-related behaviour including alcohol and/or drug abuse or abusive equivalents (e.g. workaholism, excessive jogging, etc.) in otherwise non-abusive men (Rihmer, Pestalty, Pihlgren, & Rutz, 1998). The concept of a specific male depressive syndrome is strengthened by evidence supporting a stress-precipitated, cortisol-induced, serotonin-related, anxiety- or aggression-driven depression, and by findings from Amish and Jewish communities which show an equal gender distribution of unipolar depression when alcohol abuse is not a confounding diagnostic factor (Van Praag, 1996; Weissman et al., 1997).

A validation study of the Gotland Male Depression Scale (GMDS) has been published (Zierau, Bille, Rutz, & Bech, 2002) and the scale has recently been used alongside the EDS in a study of 600 Danish fathers recruited through antenatal classes and midwife consultations and assessed six weeks after the birth. The GMDS identified an additional 1.5% of men as depressed who scored below 10 on the EDS (Madsen, Juhl, & Vestergaard, 2006) On the basis of their study the Danish researchers recommend the further development of male-sensitive instruments for measuring depression, but in the interim proposed that both scales be used in screening fathers of newborns.

Research into the mental health of fathers in the peri-natal period has also led to proposals for male-sensitive criteria for mood disorders. Matthey et al. (2001) have argued that equating depression with distressed mood is unnecessarily narrow and suggested the criteria for “caseness” be expanded to include anxiety alongside depression to better capture the experience of fathers (and mothers). They point to the
acknowledged overlap between anxiety and depression and the fact that depressed patients often present with anxiety. In their assessment of first time mothers (408) and fathers (356) at six weeks postpartum (using the Diagnostic Interview Schedule) the inclusion of panic disorder and acute adjustment disorder with anxiety increased the rates of caseness by between 57% and 100% for mothers and by between 31% and 130% for fathers (p.139). As a result, the authors suggested the term “postnatal mood disorder” instead of “postnatal depression” to capture the significant adjustment difficulties experienced by some fathers (and mothers) in the postnatal period.

2.2.1 Beyond fathers’ individual needs

Assessment using either the EDS with a cut-off score adapted for males or with the EDS used in conjunction with the GMDS may identify fathers experiencing depression and anxiety who might benefit from intervention or support. The “needs” of fathers, however, may extend beyond their own distress since, as fathers, they may have needs relating to their infant or partner. In the case of depression, for example, assessing a father’s lowered affect or intrusive thoughts may identify some of his needs, but assessing the effect of these on his children’s development or his partners’ wellbeing will also be important. Ramchandani and colleagues (2005), for example, used the Avon Longitudinal Study of Parents and Children (n=5,939) to examine the effects of fathers’ and mothers’ postnatal depression (EDS>12) on the children’s emotional and behavioural development at three-and-a-half years of age. Fathers’ depression measured eight weeks postpartum and was strongly associated with an increased risk of high problem scores among the children, and the association remained after controlling for social class, degree of education, maternal depression and fathers’ later (21 month) depression. Data from a US longitudinal study using a nationally representative sample of families (n=822) also found that fathers’ poor mental health impacted on children’s behavioural and emotional problems (Kahn, Brandt, & Whitaker, 2004). A meta-analysis of 21 studies examining the effect of paternal depression found a moderate effect size for the impact of paternal depression on children’s internalising and externalising symptoms or diagnoses similar to the effect size reported for maternal depression (Kane & Garber, 2004).
Fathers also influence children’s development through their relationship with the mother. Marital conflict or relationship difficulty has been consistently linked to maternal postpartum depression (Burke, 2003; Cummings, Keller, & Davies, 2005; Goodman & Gotlib, 1999; Gross, Wells, Radigan-Garcia, & Dietz, 2002) although causality may be bidirectional (Karney, 2001). Fathers’ poor mental health can also add to the deleterious effects of mothers’ depression to increase their children’s risk of emotional and behavioural disorder (Dierker, Merikangas, & Szatmari, 1999; Kahn et al., 2004). Conversely, fathers’ support of the mother may reduce the development of depression (Morgan, Matthey, Barnett, & Richardson, 1997) or improve treatment outcomes for mothers with depression (Grube, 2005; Misri, Kostaras, Fox, & Kostaras, 2000). Fathers’ positive involvement can also buffer the impact of poor maternal mental health on children’s outcomes (Bifulco, Brown, Moran, Ball, & Campbell, 1998; Burke, 2003), particularly if he is involved in the care of their infant (Chang, Halpern, & Kaufman, 2007; Mezulis, Hyde, & Clark, 2004). Finally, fathers’ own wellbeing is at risk when living with a depressed spouse (Benazon & Coyne, 2000).

The evidence regarding a father’s influence on his family (and they on him) in the case of depression points to a multiplicity of needs extending beyond the father to include the welfare of his offspring and his partner. Addressing these multiple needs requires considering the father as a male parent in the context of his family, rather than as simply an adult in the community. The notion of “male parent”, in turn, requires clarification as there is no universally accepted model of parenting (Keller et al., 2006) or of fatherhood (Benson, 1985). O’Connor (2002), for example, points to society-level factors and behavioural genetics as important explanatory factors when considering the evidence of parent–child relationship quality and children’s wellbeing, factors which are well recognised in research on fathering (Lamb & Tamis-Lamonda, 2004).

The search for a conceptual basis for the “male parent” raises the question of the connection between fathers and children and whether fathers have a unique role to play in infant development. As outlined in the introduction, whether the starting point is fathers’ risk to children, fathers’ potential benefit to children or the equity involved in fathers taking their share of children’s care, addressing fathers through early intervention is clearly preferable to meeting the families’ needs once family breakdown has occurred or maladaptive behaviour is a significant problem. However, the
conceptualisation of fathers’ connection to children will shape the nature and style of service provision that is directed to fathers and families. While negative paternal behaviours—such as hostility or indifference—can be targeted on the basis of the evidence of their deleterious effects on children’s wellbeing, an understanding of fathers’ positive potential (the male parent role) in child development is needed to underpin effective support for fathers (Borkowski, Smith, & Akai, 2007). Furthermore, if fathers’ connection to children is not only significant for child development but different in quality to that of infant–mother connection, then the question arises as to whether or not there are different antecedents and influences on a father’s development of an optimum relationship with his infant.

2.3 Father’s connection to infants

A prominent paediatrician describes the responses of an infant with her mother and with her father:

In front of her mother, her movements are smooth and cyclical. Her hands, feet, fingers, and toes extend toward the mother and withdraw at a rate of four times a minute, in smooth cycles. Her face brightens softly . . . With her father, every part of her body reacts differently. Her body gets tense and jerky. Her face brightens; her eyebrows go up, her mouth opens in a grin; and her fingers, toes, arms and legs jerk out towards the fathers as if she expects a playful interaction from him. (Brazelton, 1993, p. 79)

The difference in infant play between mothers and fathers has been a consistent finding in the research on parent–infant interaction (Bretherton, Lambert, & Golby, 2005; Feldman, 2007; Kazura, 2000; Kromelow, Harding, & Touris, 1990; MacDonald & Parke, 1986). But its significance has been interpreted in widely divergent ways. On the one hand, the finding that fathers play more often or more vigorously than mothers has been taken as evidence that infants’ experience a particular type of interaction with their fathers. Fathers’ playful interactive style, in turn, has been examined for its impact on the child’s social or cognitive development, providing a basis for the claim that fathers make an important, even unique, contribution to infant development (Grossman, Grossman, & Zimmerman, 1999). However, the same observation, that fathers spend
more of their time with infants playing while mothers spend more of their time caring for the infant’s physical and general emotional needs, has also been used to argue that fathers are avoiding their responsibility to care for their offspring in equal proportion to the child’s mother (Craig, 2003). A third approach is to seek hormonal or neurological factors which may explain the occurrence of particularly vigorous play among male parents (Cahill, 2005). The issue is an important one for those in early intervention services seeking to address fathers’ role with infants since the three approaches would imply radically different service priorities. If, for example, fathers have no special contribution to make over and above their ability to supply labour (the equality perspective) then services would be wise to encourage all possible assistance for the mother regardless of kinship ties; grandparents, neighbours, friends and community members could be targeted to provide assistance. Fathers may be urged to contribute more labour, but they could also reasonably be encouraged to spend more time at work in pursuit of economic resources since psychological and social resources can be provided by any competent adult. If, on the other hand, fathers’ contribution is qualitatively different to that of mothers, and to other non-maternal care, in the sense that it will influence the development of the infant, then services would do well to include fathers in their provision of support to families.

The basic facts of parenting behaviours are rarely disputed: mothers across cultures devote more time and take more responsibility for infants than do fathers. Understanding and addressing these differences in parenting activity is, however, subject to conflicting evidence and theory. Three approaches to parental behaviour will be considered in this chapter: the biophysical explanation of parenting (which seeks to identify underlying genetic and hormonal processes to explain behaviour); the sociological interpretation of parent roles arising from concerns over equitable family arrangements in raising children; and the child development framework (which has currency within infant mental health literature and practice). None of these frameworks argue that fathers are unimportant. However, they differ markedly on how to interpret fathers’ behaviour in their interactions within families and in the theoretical tools that they bring to bear.
2.3.1 The biophysical approach

From the biological perspective, parental behaviour can be understood through the view of natural selection and evolution. Those behaviours of fathers and mothers which increase the chances of offspring growing to maturity and reproducing will be favoured, in evolutionary terms, and replicated in subsequent generations (Simerly, 2002). Parental behaviour, within this perspective, comprises one strategy within the more general evolutionary undertaking of successfully coordinating sexual reproduction. The problem faced by mammals is how best to integrate the internal physiological developments of sexual maturity with the social interactions involved in selecting a mate, pairing, conception and nurturing of young. Although considerable differences in the brains of males and females have been recognised for some time, the development of and the integration of neuroendocrine physiology and neuroanatomy suggest that changes in brain architecture under the influences of hormones during the peri-natal period can lead to structural differentiation of male and female brain development, which can in turn influence paternal behaviours (Durston et al., 2001; Fiske, 2004; Zeigler, 2000).

For example, oxytocin, a hormone secreted from the posterior lobe of the pituitary gland, has been identified as necessary for the contraction of the uterine muscles during labour and for effective lactation in female mammals. It has also been implicated in studies of behaviours beyond feeding which maximise the survival of offspring. Injections of oxytocin have produced maternal behaviours in virgin female rats within minutes, while lesions to oxytocin-producing cells or the injection of an oxytocin antagonist suppressed maternal behaviour in postpartum female rats (Leckman & Herman, 2002). In humans, oxytocin levels in postpartum women have also been linked to calmness (breastfeeding mothers with higher levels of oxytocin exhibit less cortisol reactivity than non-breastfeeding women) and openness to social interaction (Mezzacappa & Katkin, 2002; Uvnas-Moberg, 1998). Since oxytocin activity is implicated in the psychological wellbeing of mothers, and may be triggered by psychological as well as physical stimuli, the investigation of neural pathways may identify physiological contributors to a range of mothering behaviours including the mental and emotional components of infant–mother relationship development (Lippert, Mueck, Seeger, & Pfaff, 2003). Preliminary evidence of neurohormonal interactions
featuring oxytocin pathways and dopaminergic neurons has been used to offer an explanation of mothers’ “primary maternal preoccupation” described in the psychiatric literature (Leckman et al., 2004).

Hormonal processes involved in the “muted version of the maternal experience” found in mammalian fathers have also been described, and changes found in the same range of hormones as in mothers have been suggested as potentially biologically validating of the experiences of involved fathers (Wynne-Edwards & Reburn, 2000, p. 464). While oxytocin levels and receptors have been recognized in the mating activity of males as well as females, the changes in vasopressin (a hormone closely related to oxytocin) seems to be a critical marker for paternal behaviours. Studies of closely related species of voles, for example, have shown that vasopressin may be central to bonding behaviour and to the care and protection of offspring. Prairie voles exhibit strong tendency to monogamous mating, pairing with one female for life and sharing parental care of the young. However, the male of the closely related meadow vole exhibits none of these traits, mating with novel females and abandoning its young. Male prairie voles injected with a vasopressin antagonist showed reduced levels of pair bonding, while non-monogamous male meadow voles were induced into prairie vole-like paternal behaviours with the viral manipulation of a single gene responsible for vasopressin receptor development (Israel, Thomsen, Langeveld, & Stormark, 2004).

Sexually dimorphic pathways for mothering and fathering brain configurations have also been identified in studies mapping neuroendocrine changes in response to social-environmental factors. Male and female rats exposed to maternal care both show changes in the density of receptors in amygdala as adults. As adults, nurtured female pups had higher levels of oxytocin receptors. Male pups given the same nurturing treatment developed no more oxytocin receptors; however, they did exhibit increased vasopressin receptors, an effect not seen in the females (Aviezer, Sagi, Resnick, & Gini, 2002). Adult humans exposed to the sound of infant crying and laughing demonstrated both gender-specific and experience-dependent brain activation. Mothers and childless females showed greater activation in the amygdala and interconnected limbic regions than either fathers or childless males. However, parents of both genders demonstrated a greater response to crying, while non-parents responded more to laughing (Seifritz et al., 2003). These results, taken together, are suggestive of a neurological component
influencing fathers, caring behaviours with their infants; however, all researchers acknowledge the preliminary status of these conclusions and the scattered nature of the evidence currently available. While specific biological mechanisms for fathering cannot be asserted the general conclusion that male and female adult brains have significant differences in architecture and functioning, and that at least some of this difference is genetically determined, has considerable support in the scientific literature (Cahill, 2005; Dunbar, 2007; Durston et al., 2001). Mothers’ and fathers’ parenting interactions, therefore, may well show significant differences as a consequence of sex-specific, contrasting neuroanatomical features suggesting that fathers’ “maleness” ensures that they are not simply “mother substitutes” when they are caring for and interacting with their infants.

2.3.2 The sociological approach

Researchers from sociological or social science perspectives frequently commence with the premise that fathers and mothers should share equal responsibility for their offspring and should contribute an equal share of the effort needed to raise infants and children (Bittman & Lovejoy, 1993). Within the terms set by this analysis, questions relating to fathers’ needs or mothers’ needs are settled by measuring labour time or effort contributed to children’s upbringing. Embedded within the argument is the assumption that male and female parenting roles are equivalent. For example, the “Juggling Time” campaign taken up by the Australian Government and unions at the end of the 1980s aimed to reduce women’s “double burden” (household tasks, including childcare, plus paid employment) by encouraging fathers to spend more hours in home-based duties. A summary of Australian Bureau of Statistics’ studies of men’s and women’s time use, including time spent with children, was widely distributed (Bittman, 1992). Analyses comparing men’s and women’s contribution to household tasks and childcare provided clear evidence that men were contributing less time than women. The campaign also suggested a direct equivalence in tasks so that not only were cleaning and maintenance duties the same irrespective of whether mother or father carried them out, but time spent interacting with infants and children was also gender-neutral. The idea that a father’s caress or vocalising might impact on an infant differently to that of the mother was specifically proscribed by the assumptions built into the analysis (Bittman, 1991).
Other researchers from the social sciences concerned with equity in parenting have argued for one important difference between mothers and fathers: the motivations of males in their role as fathers are considered to be at variance with those of mothers. As part of a theory of family dynamics based on the paradigms of Marxism and feminism, fathers’ interests as a group are held to be fundamentally in opposition to the interests of mothers; father’s ultimate aim is considered to be to oppress and subjugate women in their role of mother (Connell, 1987; Segal, 1990). According to this theory, fathers are motivated to exploit mothers’ willingness to contribute an unequal amount of the labour to care for infants and children. The application of this approach can be seen in the recent attempts to analyse “shared parenting” by distinguishing between enjoyable activities, such as play and talking, and onerous activities involved in routine physical care (Craig, 2003). Fathers’ involvement through play, in this research, is interpreted as clear evidence of their power to appropriate the most enjoyable aspects of parenting to themselves while leaving the unpleasant tasks to their wives or partners (Craig, 2003). In a similar vein, the recent widespread changes in hospital delivery suites to allow fathers involvement in the labour process have been identified as hiding the reality of male power behind the rhetoric of family-centred practice (Mardorossian, 2003). While the Marxist/feminist theory of gender and its detailed analysis of male privilege is widely utilised in academic discussions of domestic arrangements within families, it has little to say about the role of fathers in child development except to suggest that anyone acknowledging differences in fathers’ and mothers’ roles are misinformed or, worse, maliciously asserting male privilege (Silverstein & Auerbach, 1999; McMahon, 1999).

Both the biophysical and the sociological approach are clearly relevant to a discussion of fathering since fatherhood is biologically defined but unquestionably a social activity (Lamb & Tamis-Lamonda, 2004). However, neither the evidence from the neurosciences nor from the equity-based sociological approach to families offers an adequate theoretical basis for addressing fathers’ needs in regard to fathers’ interaction with infants. Attachment theory, which claims an evolutionary basis but which supplies a detailed and clinically-relevant understanding of parent–infant interaction (Cassidy, 1999), has the potential to provide a platform for identifying fathers’ needs in relation to the “maleness” of their role while taking account of the social nature of family interactions.
## 2.4 Attachment

Within the health sciences, attachment theory is the predominant framework for considering early parenting. As described briefly in the introduction, the focus of attachment research is the way that infants are able to form secure bonds with their carers. Although fathers are recognised as having potential to form an attachment with their infants, research explicating the nature of attachment has been firmly fixed on the mother’s relationship. Since early studies set out to recruit infants in the care of their mothers it was hardly surprising to find that “in an overwhelming proportion of cases a child’s principal attachment figure was his natural mother” (Bowlby, 1973, p. 364). Even so, exceptions have been noted and the question of infant–father attachment has been addressed at a number of points in the development of attachment theory and research. Given that some infants were known to protest separation from their fathers as well as their mothers, initial investigations were concerned to establish if infants attached to their fathers or simply formed “affiliative” bonds (Lamb, 1977b).

Subsequent research on fathers was strongly influenced by the development of particular methods for assessing attachment bonds. As Ainsworth’s laboratory-based Strange Situation Procedure (SSP) became accepted as the benchmark for measuring attachment among infants and carers during the second year of life, researchers asked if fathers’ attachment was modelled on that of the mother. When subjects who had been assessed as infants were then followed into childhood and adolescence it became possible to seek evidence of infant–father attachment effects on child development. Similarly, when George, Kaplan and Main (1985) developed their interview procedure for capturing an adult’s attachment history, it became possible to assess the impact of the father’s mental representations of attachment relationships. The Decade of the Brain (a 10-year interagency initiative between the USA’s Library of Congress and the National Institute of Mental Health of the National Institutes of Health, lasting from 1990 to 1999) (Schore, 2001), which saw the linking of neuroscience with psychology, psychiatry and psychoanalysis, opened the micro-processes involved in parent–infant interactions to study promising detailed descriptions of fathers’ interactions and their effects on infants. Finally, or at least, among the most recent developments, the move from dyadic to triadic and systemic analysis has given rise to more broadly focused
investigations, which include fathers as part of a more complex picture of family and child development.

2.4.1 Separation and attachment

Separation from the mother was established as the principal focus of early attachment research both through the emphasis on “maternal separation” identified by Bowlby (1951) and the identification of infant–mother relationships as the basis for all future love relationships in the psychoanalytic work underpinning psychological theories of the time (Crockenberg & Leerkes, 2003). Research examining “separation protest” in regard to fathers was framed by the recognition that fathers’ interaction with infants was minimal when compared to that of mothers. Detailed studies of fathers’ time use within family settings were rare when attachment theory was first being articulated, but reports of fathers spending 38 seconds per day interacting with their new infants appeared in the literature (Ban & Lewis, 1974). Two major questions were asked of father–infant relationships: “Did infants protest separation from their fathers to the same degree as from their mother?” and “Did infants protest separation from their fathers more than from other familiar figures or from strangers?”

In a seminal study, Schafer & Emerson (1964) visited 60 normal babies several times after the birth up to 12 months and then again at 18 months. The working class families had typical patterns of responsibility for infant care in that fathers were frequently absent and mothers and grandmothers took responsibility for tending to the infant’s needs. Mothers were interviewed about their infant’s behaviour in specific situations where “separation” from adults (being left outside in his pram, being left alone) might be expected to trigger protest. The strength of the attachment was estimated from the intensity of the infant’s reaction: “intensity of the infant’s need for proximity may thus be gauged by the magnitude of the child’s reactions and efforts (if any) to restore the status quo” (Schafer & Emerson, 1964, p. 8). The interview questions also identified the person whose absence had triggered the reaction. Not only did fathers form the first attachment figure in some cases, but within a month of starting to form specific attachments (about 24 weeks) more than a quarter of the infants had also formed attachments to the father. The researchers noted:
Once again the important role played by fathers is emphasised: of all the instances in which individuals other than the mother were found to be principal objects (either solely or jointly with the mother), 62 per cent referred to fathers . . . At 18 months father was chosen as sole principal object by 16 per cent of the subjects … and joint principal object by another 18 per cent. (p33)

Subsequent studies employing observational procedures found similar rates of protest at separation from mother and father (Spelke, Zelazo, Kagan, & Kotelchuck, 1973; Willemsen, Flaherty, Heaton, & Ritchey, 1974).

A second line of inquiry in comparing infant–mother and infant–father attachment was to discover if, in times of stress (that is, through separation from the parent or by the intrusion of a stranger), when the infants’ attachment system should be activated, there was a clear preference for mothers over fathers. In their study of infants from 10 to 16 months of age Cohen and Campos (1974) found that, in the presence of a stranger, infants approached the mother twice as often as the father but expressed little difference in distress vocalisation between mothers and fathers exiting. Observing separate groups of one-year-olds and two-and-a-half-year-olds with their mother or father and a stranger, Feldman and Ingham (1975) reported that, contrary to expectation, infants behaved differently toward mothers and fathers under mild but not under moderate stress. Over a number of years, Lamb conducted a series of studies examining infant’s reactions to mothers and fathers in the presence of a stranger from approximately seven months of age to two years. He concluded that while “affiliative behaviours” (looking, proffering) were preferentially directed at fathers, when both parents were available in times of stress then there was indeed a preference for mothers. However, among eight-month-old infants and among two-year-olds he found no preference for either parent, allowing him to conclude that infants became attached to both their mothers and fathers in the first year of life (Lamb, 1976).

A difficulty of the time, for the expanding field of attachment research, was the lack of a coherent model to guide the specification and interpretation of the numerous components measured in assessments of attachment. While visual, loco-motor and vocal activity of infants were commonly measured (although one influential study of fathers used “greeting behaviour”; Pedersen & Robson, 1969) there was little agreement as to
the interpretation of each result. It was Ainsworth (1978), who provided a more sophisticated, reliable and replicable method for describing the relationship between mothers and fathers and their infants. The Strange Situation Procedure (SSP)—, a controlled, laboratory-based sequence of interactions between the caregiver, a stranger and the infant—, quickly became the benchmark for attachment measures (Ainsworth, 1978). While infant–mother attachment continued to dominate the interest of attachment researchers, the SSP allowed direct comparisons between mothers and fathers on the quality and nature of their infants’ attachment.

2.4.2 Categories of attachment

An important feature of Ainsworth’s laboratory-based procedure was its ability to reliably categorise mobile, one-year-old infants into one of three (later four) attachment categories. Secure infants (Ainsworth’s “B” category) used their mother as a “secure base” from which to explore the environment and seemed to have developed the confident expectation that the mother would be available in times of need. Insecure infants could be of two types: infants with insecure/ambivalent attachments (“C” category) have limited ability to explore their environment and seem anxiously concerned with their mother’s attention. On reunion these infants both desire contact with the mother and actively repudiate the mother’s attempts at soothing or reassurance. Another category, insecure/avoidant (“A” category) exhibited relationships which were marked by the infant’s apparent unconcern at separation and steadfast ignoring of mothers upon reunion (Ainsworth, 1978). A fourth “D” category comprised infants who displayed insufficient patterning in their behaviour to be allocated to any of the three groups and were thought to be disorganised in their attachment (Karen, 1998).

The degree of concordance between infant–mother and infant–father attachments has been a major interest in conceptualising attachment. If, as advanced by Bowlby (1969; 1982), infant–mother attachment forms a template or primary form of attachment then the classification of the infant–mother and infant–father should substantially agree. However, early studies of attachment did not support this formulation. Studies of the concordance between an infant’s SSP classification with the mothers and with the fathers failed to find any association between the two leading researchers to conclude that the strange situation taps the quality of specific relationships (Chibucos & Kail,
This view was challenged by Bentley and Fox (1991) who reviewed the concordance between mothers’ and fathers’ attachment to their infants in meta-analysis examining 11 studies (710 babies) using the SSP. The study found that the rate of secure attachment was similar for mothers (65%) and fathers (66%), although for some comparisons mothers and fathers were given different classifications. Overall, “the results of the meta-analysis clearly support a position that argues for dependence of attachment classification to mother and father” (1991 p.220). These results support the notion that either there is considerable similarity in the attachment-related behaviours among couples or that the mother’s attachment to the infant does provide a template for subsequent attachment relationships (Karen, 1998).

Not all researchers were persuaded by Fox et al.’s results. Cox, Owen, Henderson and Margand (1992) examined the predictability of attachment classifications by observing parents at three months with their infants and then in the SSP at 12 months. They reported that correlations between the attachment scores of infants with their mothers and their fathers were not significant. Finally, a more recent meta-analysis (Bus, Belsky, van Ijzendoorn, & Crnic, 1997), using data from eight additional studies, established that infants’ attachment classifications with their mothers were not substantially related to those with their fathers, concluding that infants form separate attachments to mothers and fathers.

The conclusion that infant–father attachments are formed independently leads immediately to the question of the impact (if any) of the father’s attachment relationship. Investigators have used adults’ self-reports to retrospectively assess paternal warmth or care and overprotection in early parenting and then identified current or lifetime incidence of factors such as depression, criminality or social success. Young women whose fathers are recalled as more intrusive and less empathic had higher rates of eating disorder and depression (Gutzwiller, Oliver, & Katz, 2003; Hall, Peden, Rayens, & Beebe, 2004) while young male offenders were more likely to have been arrested earlier if they recalled their fathers as intrusive or controlling (Chambers, Power, Loucks, & Swanson, 2001). In a community sample of adults (60% female) the sense of belonging was significantly correlated with father caring and father overprotection, while among academically successful inner-city youth maternal affective care was positively associated with academic outcomes while paternal
attachment protected against depression (Hagerty, Williams, & Oe, 2002; Kenny, Gallagher, Alvarez-Salvat, & Silsby, 2002). Enns, Cox and Clara (2002) used the Parental Bonding Instrument scores from the US National Comorbidity Survey to estimate the influence of early relationships on mental illness. They found that some effects were gender-linked (paternal overprotection reduced the risk of externalising disorders among adult males) but generally concluded that fathers’ warmth versus overprotectiveness and authoritarian parenting does have a modest effect on adult psychopathology.

2.4.3 Effects of attachment

Among infants, Ainsworth’s SSP, usually measured at 12 months, has been used to discover if secure attachments with fathers at an early age relates to later emotional and social competence, the area where infant–mother attachment has been demonstrated to have important consequences. While some cross-sectional studies have found a positive effect for infant–father secure attachment (Lamb, 1982) the substantial evidence from longitudinal studies shows no effect. Volling (2001) for example, when examining four-year-olds, found that infant–mother attachment (but not infant–father attachment) predicted the children’s success in emotional regulation. Suess (1992) also found that infant–mother attachment measured at 12 months predicted a five-year-old’s social competence whereas infant–father attachment did not. van IJzendoorn et al. (1991) also failed to find a connection between fathers’ secure attachment and their children’s sociability (measured two years later). Infant–mother (but not infant–father) attachments have also been shown to predict problem behaviour, conflict among six-year-olds and their younger siblings and school readiness (Aviezer, 2002; Rothbaum, 1995; Volling & Belsky, 1992a). Finally, Steele et al. (1999) found that infant–mother attachment at one year predicts children's understanding of mixed emotions at six years, but that infant–father attachment showed no effect.

The lack of impact of infant–father attachment when compared to that of mothers has prompted investigators to suggest that fathers would have similar impact to mothers if they were to spend equivalent time with the infant (Heidt-Kozisek, Pipp-Siegel, Easterbrooks, & Harmon, 1997). However, attempts to link higher father involvement with more secure attachment have had mixed success, although there is some evidence
that infants may have different expectations of parent availability which may affect their attachment relationships (Braungart-Rieker, 1999; Caldera, 2004; Lamb et al., 1983a). A second response has been to identify a buffering effect for infant–father attachment. That is, a secure infant–father attachment relationship is significant for children especially when mother’s attachment is not secure. Verschueren and Marcoen (1999), for example, found that “children with two secure attachment representations showed more peer social competence (pro-social behaviour, popularity, peer acceptance) and less anxious and withdrawn behavioural problems, were better adjusted to the stresses of school, and showed a higher behavioural self-esteem and a more positive evaluation of self ... than children with two insecure attachment representations”, children with discordant attachment representations (that is, insecure with mother or with father) scored in between (p.196). In the study by Suess et al. (1992) cited above, when attachment to mothers and fathers was combined, significant differences could be demonstrated for a hierarchy of scores on social competence from secure attachments with both parents to secure attachment with neither. Main and Weston (1981) assessed toddler’s conflict behaviour and the readiness to establish new relationships in the light of their attachment to mothers and fathers. They found that toddlers who had been classified insecure with their mother but secure with the father showed greater readiness to form a friendly relationship with a stranger than those with two insecure relationships. They concluded that on “the basis of the present study we suggest both that highly different relationships can be formed and that the ‘effects’ of an insecure relationship can be mitigated by a secure relationship” (p. 939). The buffering effect of the father’s relationship with the infant is also supported by studies examining families where mothers are experiencing postnatal depression (Edhborg, Lundh, Seimyr, & Widstrom, 2003; Mezulis et al., 2004).

A third response to the lack of demonstrated impact of infant–father attachment is to ask if the SSP is better suited to identifying mother’s attachment relationship than it is for father’s, a suggestion that has been made by a wide range of researchers (Fonagy et al., 1996; Freitag et al., 1996; Grossman et al., 2002; Steele, Steele, & Fonagy, 1996; Suess et al, 1992; Volling, 2001; Volling & Belsky, 1992a). Cohen (1974) commented:

… most of the scales devised by Ainsworth et al. have to do with caretaking functions, in which many fathers do not necessarily engage. Dimensions such as a father’s tendency to
reinforce a child’s clinging to him and the amount of time a father spends in play with his infant may play a more important role in determining an infant’s attachment to his father. (p154).

2.4.4 Father-specific attachment processes

A persuasive account of a father-specific alternative to the qualities assessed in the SSP has been advanced by Grossman et al. (2002). In a longitudinal study of fathers’ and mothers’ influence on attachment at 12 months, 24 months, six years, 10 years and at 16 years of age were assessed with age-appropriate instruments. As well, the study measured “sensitive and challenging” interactions during play at two and six years by means of a newly developed Sensitive and Challenging Interactive Play (SCIP) Scale. The scale measures parent–toddler interaction when the toddler’s attachment system was not aroused by the absence of a parent but was “striving for autonomy and assistance in exploration and required guiding, scaffolding and teaching but there are no right or wrong answers” (Grossman, 2002, p.316). At age six both the infant–mother and the infant–father attachment measured on the SSP predicted the children’s responses to picture stories of separation. However, at age 10 the children’s reported attachment was not predicted by infant–mother attachment but by the father’s play sensitivity. This result, Grossman et al. (2002) suggest, points to a “unique contribution to the child’s emotional security: fathers might contribute mainly by providing sensitive support during explorative play … whereas mothers as primary caregivers might contribute mainly by providing comfort when the child is in distress” (p.325). This formulation of attachment does not entail equivalence of a mother’s and father’s effect on attachment; since, as Grossman et al. (2002) acknowledge, mothers provide the main part of infant care “in all cultures” they remain the primary attachment figure (p.326). Instead the analysis notes that it is in toddlerhood when the infant is interested in new social relationships and is physically capable of exploration that fathers’ sensitive challenging play can potentially influence attachment as later demonstrated at age 10.

While the development of a robust measure of a father’s interaction style is to be welcomed, this model of fathers’ attachment is limited to the period after attachment is thought to be largely formed. In Grossman et al.’s study, which began in the 1970s, the sensitive-play observations took place only when the child had reached 24 months.
Paternal sensitivity with infants (as opposed to toddlers) could not be measured using the scales from maternal sensitivity because fathers in this sample interacted with their infants only when the infant was in an agreeable mood. Fathers’ care-giving involvement and play quality during the first year was derived from the mother’s reports. Researchers discussing differences between fathers’ and mothers’ interactions with infants have frequently relied on older infants’ heightened mobility to picture the father’s unique style. Notaro and Volling (1999) for example, in arguing for an expanded notion of behaviours relevant to attachment pointed out that:

Fathers’ competence as parents is often compared to that of mothers’ with respect to how well they perform childcare or traditionally female household responsibilities, not with how gifted they may be at giving “horsie” rides, wrestling on the floor, playing hide-and-seek, or providing any number of positive emotional experiences in their children’s lives. (p463).

But if, as is generally agreed, infants’ attachments are formed during the first months of life (Lamb, 1980), then a father’s interactions with his infant during this early period is the crucial test of how his relationship will develop and influence the child’s development.

This raises the question of how infant–father attachment is supposed to occur. The basic concept of Ainsworth’s attachment-building (1973) featured a sensitive, responsive caregiver who understands the child’s individual attributes and is capable of facilitating harmonious interactions between herself and the infant. With the SSP procedure to categorise attachments between infants and their carers various measures of sensitive responsiveness have been employed to identify antecedents for attachment. While the research on infant–mother attachment has built a solid body of evidence linking maternal sensitivity to secure attachment, studies of fathers have failed to demonstrate the same predictors for infant–father attachment (Bus et al., 1997). Easterbrooks and Goldberg (1984) found no significant association between a father’s sensitivity (measured as emotional supportiveness and quality of assistance) and attachment security. Naturalistic studies using home observation and laboratory studies using a “no-toy” paradigm (the carer has to entertain the infant in a laboratory setting without toys) to measure sensitivity have also failed to demonstrate a significant
association between a father’s sensitivity and secure attachment (Braungart-Rieker, Garwood, Powers, & Wang, 2001; Grossman & Grossman, 1992; Notaro & Volling, 1999). Volling and Belsky (1992a) made in-home observations at three and nine months, coding fathers’ interaction for contingency, stimulation, care-giving (feeding, changing) and expressing positive emotion. The relation between the father’s behaviours and secure attachment measured at 13 months was not significant.

To the extent that a father’s ability to react sensitively is influenced by his own upbringing, a measure of his own attachment history would provide a measure of his sensitive potential. The Adult Attachment Interview (AAI) developed by Mary Main and colleagues seeks to identify the psychological, internal representations of attachment within adults (George et al., 1985). In parallel with the categories derived from the SSP, the mother’s and father’s accounts of their relationships with their own caregivers allowed the adults to be categorised into “secure-autonomous”, “dismissing” (avoidant in SSP), “preoccupied” (ambivalent in SSP) and “unresolved/disorganised”. These internal representations, in turn, are held to influence the caregiver’s ability to respond empathically and appropriately to infant needs (Fonagy et al., 1995). Studies of mothers and fathers have found that fathers AAI classification largely matches their attachment classifications with infants, and that infant–father attachment classification (using the SSP) are not affected by a mother’s classification through the AAI (Buist, Morse, & Durkin, 2003; Fonagy et al., 1995). However, other studies have failed to link the father’s classification on the AAI to attachment measured on the SSP (van IJzendoorn et al., 1991). Further, as was the case when seeking effects of a father’s attachment measured on the SSP, researchers seeking to identify consequences of the father’s AAI categorisation in children’s social and emotional development have also been unsuccessful. Studies measuring children’s ability to solve emotional problems and understand mixed emotions demonstrated a significant link to mothers evaluated as secure-autonomous on the AAI but not to secure-autonomous fathers (Steele, 2002; Steele et al., 1999).

Recent meta-analyses investigating the antecedents of secure attachment for fathers and mothers have put these findings into perspective. van IJzendoorn and De Wolff (1997) combined data from eight studies to appraise the relation between a father’s sensitivity and infant–father secure attachment. They reported an overall significant
association for the father’s sensitivity with a small effect size of 0.13, appreciably less than the effect size for mother’s sensitivity of 0.24 (p. 605). They concluded that the “modest association between paternal sensitivity and infant–father attachment suggests that in the case of fathers as well as mothers the transmission mechanisms are largely unknown” (p. 607).

The complexity of the sensitivity construct has been made clear in a second meta-analysis focusing on the variety of measures used to identify parental antecedents of attachment. van IJzendoorn and De Wolff (1997) used an expert group to categorise the 55 concepts found in the research on mothers’ sensitivity into five groups: synchrony, mutuality, support, positive attitude and stimulation. While their meta-analysis confirmed that maternal sensitivity is an important predictor of attachment security they also pointed out that sensitivity “cannot be considered to be the exclusive and most important factor in the development of attachment.” The remaining four factors were also strongly associated with attachment security and “aspects of parenting only indirectly related to the sensitivity concept appear to play a similar role in the development of attachment” (p. 585). These findings lend support to the search for antecedents for infant–father attachment that are independent of those for mothers.

In a sense, the research evidence on the lack of connection between sensitivity and attachment takes us back to fathers’ playful role with infants described by Brazelton (1993) at the start of this section. If fathers’ attachment to infants is distinct from that of mothers”, and “sensitivity” is not the only or even the most significant antecedent to infant–father attachment, then the way that fathers “play” with their infants suggests an avenue for understanding the development of infant–father attachment. Brazelton’s interpretation of the infant as expecting playful interaction from her father points to an infant correlate of the “rough and tumble” play commonly observed among fathers interacting with children and toddlers (Bretherton et al., 2005; Kazura, 2000; Lamb, 1977c; MacDonald & Parke, 1986). Can fathers’ “rough and tumble” style be discerned in their interactions with young infants and, if so, how could this be important for infant development?

We have no population-based evidence of differences in typical interaction style between mothers and fathers with their infants. However, there are consistent findings
in studies with small samples using observational measures contrasting mothers’ reciprocal, contained interaction with fathers’ more playful and heightened interaction with infants from two weeks of age (Crawley & Sherrod, 1984; Henderson, 1982; Jones & Lenz, 1986). Goossens and van IJzendoorn (1990) measured paternal and maternal sensitivity during a 10-minute free-play session before conducting the SSP. They found secure attachment predicted by fathers’ but not mothers’ sensitivity. Cox et al. (1992) videotaped a 15-minute play session in the home at three months where parents were instructed to “do whatever you would normally do”. They found that both mothers’ and fathers’ secure attachment was predicted by their behaviour at three months, but that the pattern of observational and interview-derived variables from the three-month visit varied across parents. In a linear-regression model, mothers’ time spent with the infant accounted for 20% of the variance (i.e. $R^2 = 0.20$) while for fathers’ time spent accounted for 8% (i.e. $R^2 = 0.08$). When the observational variables (positive interaction and physical affection) were added to the model an additional 15% of variance was explained for mothers (i.e. $R^2 = 0.35$) and 35% for fathers (i.e. $R^2 = 0.43$). For fathers, but not mothers, attitudinal variables (attitudes about the infant and his parenting role) added 12% (i.e. $R^2 = 0.55$). Clearly, different factors are implied in the development of mothers’ and fathers’ attachment to their infants. What is noteworthy in the approach of Cox et al. is the selection of a broad range of variables within a play context used to measure the qualities of interaction at three months. The variables, which included “activity level” and “appropriate encouragement of achievement” as well as “sensitivity and warmth” were selected because, the authors explained, “fathers’ interactions are more likely to involve play than mothers. Thus, fathers may be more likely to show behaviours related to attachment in a play context than in a caretaking context” (p. 475).

In addition, Feldman (2003) suggests a mechanism whereby fathers’ more energetic interaction style may contribute positively to infant development. Videotaped interactions of 100 couples with their firstborn child at 20 weeks allowed the assessment of “synchrony” (the co-regulation of positive arousal) among fathers and mothers. While no significant differences were found in the degree of synchrony, different patterns of arousal were evident in infant–father and infant–mother interactions.

During mother–infant interactions, most infants cycled between states of neutral and low arousal with or without a single positive peak, and when the single peak appeared it was
typically embedded within a social episode. During father–infant interactions, infants’ arousal was typically organised in several bursts of emotional intensity that seemed to appear at random and could be reached from any state. (pp. 13–4).

How might these patterns of sudden arousal be related to development? As Feldman explains, in synchrony:

… partners co-construct both the infant’s positive arousal and the regulatory framework as play proceeds. Mothers use synchrony to moderate infant’s excitement, augment their tolerance for high positive states, and assist infants in processing the high amounts of cognitive and affective information afforded by face-to-face settings. (p. 4).

They do this by preceding peaks of emotional excitement with a gradual build up of emotional intensity and followed by a gradual decline. Microanalysis of the father’s patterns of arousal with the infant found a different pattern. Father’s interactions were “often organised in several peaks of sudden high positive intensity … these were sudden rather than gradual, and tended to appear more often as play progressed” (p. 16). Feldman concluded that mothers and fathers “may facilitate the development of different modes of affective sharing and co-regulation” (p. 17). The results of this study, and those above, including De Wolff and van IJzendoorn’s (1997) results, support the suggestion by Grossman, Grossman and Zimmermann (1999) that the emphasis on “an individual’s response to the real or possible loss of an attachment figure” represents a narrow view of attachment as it ignores the emotion regulation which is involved in challenging exploration (p. 760). They propose a wider view of attachment, one which pays attention to “the organization of emotion and behaviours along the entire attachment-exploration spectrum” (p. 761) and which is measured by assessments of parents’ ability to provide a “secure base” for exploration as well as safety. On the theoretical level Paquette (2004) has explicitly linked the evolutionary perspective with the notion of fathers’ attachment involving warmth and the “father-child activation system” developed through physical play. While the goal for both mothers and fathers is the formation of secure attachment relationships there appear to be separate pathways in their development necessitating distinct measures and processes which can be applied to infants with their mothers and their fathers. Measures which may be utilised to measure father-infant attachment are discussed in Chapter 5.
2.4.5 Beyond dyadic models of attachment

However, as many researchers have pointed out, fathers may also influence their infant’s development indirectly. Lamb and Tamis-Lamonda (2004), for example, stress that fathers’ economic role and contributions to household tasks are important avenues for fathers to influence child outcomes. The effect of marital discord on children’s development is another area which has been extensively investigated, including the identification of separate effects on offspring of conflict behaviour displayed by mothers and fathers (Cummings & Davies, 1994). Studies of infant development have demonstrated how a father’s behaviour may alter developmental outcomes of children through influencing the mother’s interactions with the infant (Crockenberg & Leerkes, 2003; Soliday, McCluskey-Fawcett, & O'Brien, 1999). In the case of alcoholic families, Eiden, Edwards and Leonard (2002) found that the father’s alcoholism influenced the infant directly (through reduced sensitivity) but the father’s alcoholism also reduced the mother’s sensitive response to infants via maternal depression. More generally, several studies have demonstrated that the quality of marital interaction, or the quality of the couple’s relationship, can impact on children’s development (Cowan et al., 1991), and several researchers have called for a more systemic approach to the study of infant development (Bus et al., 1997; Cowan, Cowan, Cohn, & Pearson, 1996; Kerig, 2001; McHale & Fivaz-Depeursinge, 1999; Van den Boom, 1997).

An attempt to move beyond the dyadic framework and bridge the systemic perspective with the micro-analysis of observational studies in early infancy can be seen in the development of the “Lausanne triadic play” system analysing brief (two-minute) interactions between fathers, mothers and their infants from the first months of life (Fivaz-Depeursinge & Corboz-Warnery, 1999). Although still mainly used for clinical work with families, this approach has the potential to inform our nascent understanding of a father’s role in interaction with mothers and infants. By setting the research context to include interaction with all three (father, mother and infant) the approach assumes that a father’s interaction with his infant (and with the mother) is significant. In support of this assumption, researchers have demonstrated triadic engagement (infants rapidly shifting their attention and affect between their parents, or making social referencing to one parent concerning the other’s behaviour) in infants at only four months of age (Fivaz-Depeursinge, Favez, Lavanchy, de Noni, & Frascarolo, 2005). Capacity for
antenatal triadic interaction has also been identified through a “triadic interview” covering the mother’s and father’s childhood experiences, emotional experience of the pregnancy (including experience of foetal movements and ultrasound), fantasies about the unborn child, changes in the partnership, fantasies about future family relationships, and the role of the future grandparents (Burgin & von Klitzing, 1995). Fathers’ and mothers’ roles were compared in a longitudinal study utilising the antenatal triadic interview and then assessing the infant’s capacity to relate to both parents at four months using the “Lausanne triadic play” procedure. To the researchers’ surprise the strongest predictor of the four-month-old infant’s contribution to the success of the triadic play was the father’s antenatal-assessed triadic capacity (von Klitzing, Simoni, Amsler, & Burgin, 1999).

While the Lausanne triadic play system mimics the structural features and observational coding of the SSP to produce an empirical assessment of the attachment relationship, the triadic interview is closer to the AAI in its focus on the way that parents describe their own history and their fantasy of the unborn baby. Both the AAI and the triadic interview investigate the internal mental states (internal working models) of mothers and fathers as a means to identify their ability to form secure attachments or productive triadic interactions with their infants. Fonagy et al. (1996) have also extended the discussion of mental representations as predictors of trans-generational attachment arguing that the ability to reflect on others’ mental states is an important dynamic underpinning attachment formation. In this regard, the evidence from the psychoanalytic perspective which incorporates the family as a triadic system may assist in grasping the father’s importance in an infant’s mental development, even when most caring is provided by the mother. While earlier formulations of psychoanalytic theory focused on the conflict between the infant’s desire for the mother and fear of the father, later theorists have emphasised the father’s role in psychic separation and developing an orientation to the world beyond the mother–infant dyad (Abelin, 1971, 1975). In this formulation an important part of the infant’s perception of the father, which makes him psychically relevant, is to sense that there is sexual desire (libidinal cathect) between the mother and father (Applegate, 1987). The intimacy between mother and father is part of what is transmitted by the mother when she is with the infant even in the absence of the father. The mother’s “primary maternal preoccupation” allows her communicate internal mental images, imbued with emotional tones, to her infant (Winnicott, 1975). In
this way the infant can develop a mental representation of a triangular set of relationships, including an image of the father, even when the father has only brief contact (Lemche & Stoeckler, 2002).

2.5 Summary

In her first study of Ugandan infants and parents Ainsworth noted:

It seems to be especially to the father that these other attachments were formed, even in the case of babies who saw their fathers relatively infrequently. One can only assume that there was some special quality in the father’s interaction with his child—whether of tenderness or intense delight—which evoked in turn a strength of attachment disproportionate to the frequency of his interaction with the baby (Ainsworth, 1967, p. 352)

Forty years on we are still striving to understand the “special quality in the father’s interaction with his child”. On the available evidence infants seek to form, and do form, attachments to their fathers analogous to those formed with their mothers. Like infant–mother attachment, infant–father attachment can be classified into secure, avoidant, ambivalent or disorganised, with the most favourable emotional and behavioural outcomes linked to secure and the most damaging to infants classified as disorganised in their attachments. Also, in line with the extensive evidence from mothers and their infants, the way that fathers develop a secure infant–father attachment is through the experience of numerous, satisfying interactions between the two where the infants’ needs are recognised and appropriate responses made. The evidence of the negative effect of fathers’ depression on pre-schoolers’ emotional and behavioural development (a similar effect to that found in mothers, but one that is independent of mothers’ mental health status) suggests that supporting fathers as well as mothers should be a priority for early intervention services.

Where fathers and mothers differ is in three key areas with important implications for the way that services offer support. If the attachment category of mothers and fathers may differ with the same infant, the aim of early intervention services should be to maximise the chances that both parents will enjoy a secure attachment relationship. In
the event of an impaired infant–mother relationship the secure attachment to the father may act as a buffer, and if both attachments are secure the infant will have the best chance of favourable outcomes. In the relatively common situation where the mother is depressed in the postnatal period services should consider supporting the father’s connection to the infant as well as the mothers’.

Secondly, while the details of the steps leading to secure infant–father attachment are lacking (as they are for mothers) the emerging neurological evidence of male-female differences coupled with the considerable evidence of fathers’ preferred play style with infants suggests that the quality of playful interactions is an important feature of fathers’ positive connection with their infant. The evidence does not suggest that fathers need only to play rough and tumble games with their infant, leaving mundane care to others and waiting until the infant is mobile and able to make physically coordinated responses to play bids. Both the studies of early infant interactions with fathers and the theoretical schemas involving secure-exploration (Grossman et al., 1999) and father–child activation relationships (Paquette, 2004) stress the importance of fathers’ interaction with young infants. Early intervention initiatives aiming to support fathers in their role should examine established measures of need and styles of support to identify father-specific elements which, for pragmatic reasons, might best be initiated before birth.

A third important difference between fathers and mothers is in the context of infant–father attachment. The identification of new fathers’ needs cannot be accomplished without considering the fathers’ position as mate to the mother who carries and delivers the infant and then, in most cases, as mate to the mother who provides the neonates’ nutrition and who provides the majority of nurturing care. Fathers’ needs must be identified in the reality of the father–infant–mother context so that a father’s personal needs cannot be separated from his “need” to have a healthy infant and partner.

**Providing support to fathers**

The nature and extent of the support provided to fathers requires investigation into the strengths and needs of fathers and into the modalities and methods of effective support. The assessment of fathers’ needs is taken up in Chapter 3 and the examination of how
support may effectively be delivered to fathers is examined in Chapters 4 and 5. However, to illustrate some of the service delivery implications of the above discussion and to flag the place of psychodynamic formulations in understanding fathers’ role the following case study is included.

2.6 An illustrative case study

Psychoanalytic concepts and theory can aid in the understanding of secure infant–father attachment. However, the approach to evidence in the psychoanalytic field is markedly different to that found in the general research literature on attachment and psychoanalytic perspectives are not easily incorporated into a discussion of evidence-based service development. Rather than attempting to provide a general integration of psychoanalytic and attachment theory as they relate to infant–father relationships the following case study is offered to illustrate a more psychodynamic approach to understanding how to support fathers to “find their place” in the primary triangle and thereby encourage secure infant–father attachment and promote the healthy development of their baby.

A case study: promoting infant wellbeing in the context of maternal depression by supporting the father

Tony, William and Vicki (Names are fictional and all identifying details have been removed)

A “free service” for fathers was set up as a part of the preparation for researching infant–father attachment. The service was provided by a doctoral student (author of this thesis) who had worked with fathers in groups for many years and had completed the Infant Mental Health Graduate Diploma through the NSW Institute of Psychiatry. The “service” was advertised through a brochure offering “a free service for new fathers” who may have “a wife or partner who is not doing so well”. A one-hour first meeting in a family health service building could be arranged. No specific therapy or subsequent action was promised in the publicity; however, a home-visiting model was offered at the first interview if appropriate. Weekly supervision was provided to the doctoral student (the Home Visitor) by a clinician from the local health authority in NSW. The approach
adopted for the home visits was based on the Systematic Training in Effective and Enjoyable Parenting (STEEP) program developed by Egeland and Erickson (1999) for distressed mothers. A central feature of STEEP is the use of videotape to record the parent doing “whatever they enjoyed” with their infant and then viewing the tape together to discuss questions such as “What is the baby thinking here?”

Tony rang the number advertised on the brochure three months after William was born (he had picked up the brochure before the birth). At the initial interview he explained his reason for contacting the service as wanting to be “the best father possible” and “you would be a fool to turn down a free offer”. By the end of the interview, he had described his wife’s serious depression after William’s delivery by emergency caesarean and his role in taking care of the baby in the hospital for the first five days. He also described his determination to be the opposite of his father in his relationships and behaviour. Tony presented as an affable, self-reliant man from a working class background now moving into a white-collar occupation after completing post-school training.

At the first interview an agreement was made to have three fortnightly visits, which led to a total of 10 home visits over seven months. By the time of the first visit Tony’s wife, Vicki, was no longer taking medication and was not in contact with any support service. She appeared pleased at the support Tony was getting and initially stayed in a separate room during the sessions, though she often passed through the room where I videotaped William and Tony and often joined in the discussions at some point during the sessions.

Tony and William

At the first home visits Tony’s interactions with William were intrusive and frenetic. Tony would wave objects directly into William’s face and move him to a different activity or object every few seconds. Asked about why he decided to move William at that point (when reviewing the tape) Tony explained that babies had a short attention span. From the perspective of infant–father attachment the aim of the supportive relationship between the Home Visitor and Tony was to modify these patterns of interaction so that Tony could more effectively notice what William’s cues and
preferences might be and to encourage Tony to respond to William in a way that facilitated intimate interaction between them.

Over the four months the discussion of the previous week’s videotaped interactions varied considerably. On occasions the discussion of how William might understand what was happening during the taped play sessions or of related topics, such Tony’s visit to his sister’s house and her reaction to William, happened easily. At other times the conversation was stilted and awkward (much of the supervision sessions provided to me were taken up with discussion of my feelings of total failure). After the third visit, in despair at the lack of any real discussion of what was being seen I selected a moment on the tape where Tony waited for William to initiate an action.

The following visit I showed Tony the scene and emphasised that “This is what we are after. Interactions just like this.”

“Oh, OK” replied Tony, “now I get it, I wait for him to make a move and then respond.”

At the next visit where I began by filming Tony soon after arriving I was stunned to see that nothing had changed at all. Tony was exactly as intrusive as he had been before. The psychodynamic aspect of the infant–father relationship became much clearer to me after this episode, and I more often resisted giving directives on how to interact. Over the 10 visits, however, in spite of the limitations of the support provided, there was a noticeable change in the way that Tony played with William. As well as making fewer intrusive gestures Tony also waited for longer periods before initiating new activities.

On the ninth visit, one factor which led to my suggesting that we wind up the intervention was the scene captured on tape during the previous visit when I asked Tony to “do as little as possible” for the duration of the taping (approximately 10 minutes). Tony obediently sat on the mattress while William crawled over to the camera bag and, with several looks back at Tony, tried to bite it and pull the straps. After several attempts he became distressed and crawled back to Tony and up onto his lap. Tony patted him but did not try to entertain or direct him and as soon as William squirmed to get down Tony released him saying nothing. William repeated the sequence but became
more distressed and crawled back to Tony holding up his arms to be picked up. When we watched the tape together Tony commented at this section “That is the first time that he has ever asked me for a cuddle” and then, after a long pause and in a very soft voice, “I suppose I’ve never given him the chance”.

**Tony’s place in the family**

During the first visits I was invariably met by both Tony and Vicki and led to the lounge room, where a large mattress covered most of the floor. Here William was placed for the videoing and reviewing of the tapes. I was regularly offered coffee by Vicki at this point and, though I declined, Tony often accepted the offer. This meant that Vicki was usually involved in the chit-chat at the commencement of the session. During these periods in the early visits Tony seemed unsure of himself and excessively polite, addressing Vicki as “darling” in a very endearing tone and adding many “pleases” and “thank yous.” Whenever a question was directed to Tony he would look first at Vicki as he started to answer to make sure that she agreed and as soon as Vicki started to respond or comment (which she did very often) he would immediately cede the floor to her and look interested and nod in approval of her ideas. When Vicki left the room Tony sometimes looked uncomfortable. Several times when Vicki was in her room at the other end of the house and I asked Tony something about William’s development Tony would call out and go to get an opinion from Vicki, sometimes bringing her back into the room to join us to answer the question.

From an infant–father attachment perspective Tony’s nervousness around his parenting and his deference to Vicki in relation to William’s care are important only as factors which may impede his sensitive, responsive, loving care of William. But from a triangular, oedipal perspective William needs to develop a tolerance for the relationship between Vicki and Tony, including the intimate relationship between them. Tony, for his part must discover how to come between Vicki and William to develop his own relationship with William. The recognition within a safe enough environment of the “other” relationship of his mother is what allows William as an infant to develop the mental capacity “for seeing ourselves in interaction with others and for entertaining another point of view whilst retaining our own, for reflecting on ourselves whilst being ourselves” (Britton, 1989). If Tony’s role in the home were represented spatially
William and Vicki would occupy all of the rooms and Tony would remain in one of the corners. From the oedipal perspective the task of the supportive relationship between the Home Visitor and Tony is to facilitate Tony taking his place in the mother–father–infant space of the home.

**The “devil’s advocate” interview**

One area of discussion which was consistently devoid of content was the goals for my visits. Although I encouraged both Tony and Vicki to verbalise what they hoped to gain from these visits they were unwilling or unable to do so. Asked at the end of the third session if he wanted the visits to continue Tony replied “Sure, why not?” but with very positive affect and indications that he did want the visits to continue. The same questions at several points throughout the visits drew the same brief, general answers.

At the conclusion of the ninth visit I asked Tony and Vicki if they would be willing to be videotaped answering questions about their experience of the whole process. They agreed and provided written consent. They were advised that the questions would be asked in the form of “devil’s advocate” but the exact content of the interview was not discussed. The questions in the final interview were designed in the hope that more provocative questions might produce more elaborated comments about the process. They were also based on comments that Tony had made about other people’s perceived negative reaction (in his workplace or in the gym where he took the baby) to his involvement with the baby.

In the following extracts from the interview the words in quotations are those used by Tony or Vicki, with some minor editing to remove “um” and repeated words. At first, Tony was on camera by himself.

Richard Tell us what happened in the first interview. How did you get started?

Tony I wanted to be a good father … I didn’t have any issues that I wanted to resolve, I didn’t have any concerns, I just wanted to be a better father than I could be and I thought that this program would maybe teach me something new, something that I hadn’t thought of … right from the
start it was positive … the questions were very positive, they made me think about when I was a child … the issues I had ... I want to do things differently … All in all I want to have a very good relationship with my child and that’s what I got out of the interview, that things like that were possible

Richard So let me get this straight, Tony, this man comes to your house every week and stays for a couple of hours, what does he do?

Tony He films William and I interacting … he sets specific exercises for William and I to do, like it might be “See if you can hold his gaze for 10 seconds” or “Can you get him to talk to you?” or “Can you two interact and just see how it goes” and then he shows me the DVD of last week’s and then I look at the video and Richard explains it to me and shows me what was happening … it was really good because it opens my eyes to things on the video that I pick up when Richard shows them to me that I don’t see when its actually happening.

Richard But isn’t that instinctive? Being a parent don’t you just know what to do?

Tony No its not …[pause] being a parent is instinct, being a good parent is something that you can train yourself to do … anybody can change a nappy, anybody can pick him up if he is crying … but what I am looking for out of this is the interaction that you are missing … and that’s what I am picking up. Through the DVDs and the video I am picking up those little signals that William wants to interact. Which I think in the long run will bring William and I a lot closer and improve our relationship and that’s the whole point of the exercise.

Richard It sounds like a long time to be doing this. Couldn’t he just have given you a book or a pamphlet?
Tony  [pause] The little fella’s going to be living in my house for the next 25 years so it’s an investment. You invest money over a long period of time ... what I’m doing now is investing time in my relationship with my son.

Vicki joined Tony in front of the camera with William, who squirmed and got down shortly afterward. After a short wait the camera was restarted and the questions addressed to both Vicki and Tony.

Richard Have you noticed that anything is different because of the visits?

Tony Because of the … started to see William as a real little person instead of a baby … we realised that even though he couldn’t do much that there was an individual in there trying to interact with us…

Tony looked at Vicki and they both convulsed with laughter. When, after some seconds Tony through the laughter said “your turn” Vicki pointed to him through the giggles and bursts of laughter “You’ve already said everything!” After some time they continued...

Vicki I think that you [indicating Tony] taught me to be more aware. I think that I spent the first months going “Oh, there is this to do and that to do and everything to do” and because Richard would ask you “What do you think he’s doing there?” then you would ask me “What do you think that he is doing there?” and it actually made me more aware that he is actually thinking about things ... not this lump that just … [William yells loudly and drowns out Vicki’s words]. I think that made me love him even more because I stopped thinking about all the things that had to be done.

Both Vicki and Tony describe an improvement in their individual relationships with William. Although no attempt was made to measure William’s attachment status with either parent, the changes they describe are consistent with the current understanding of developing secure attachments and promoting infant wellbeing. What is noteworthy is
that this appeared to have been achieved by directing support to the father rather than the mother in the family. What is also highlighted in this case, however, is the (completely unintended) effect of the intervention on the father’s relationship with the mother and baby.

In the mind of the Home Visitor the intervention was directed solely at Tony and William, and Vicki’s involvement was not seen as relevant. When Vicki was invited into the discussion she was, of course, treated with respect. But the entire process of designing the intervention and discussing each session in supervision was framed within a dyadic perspective directed at Tony’s relationship with William. Within this framework, Tony’s excessive deference to Vicki in parenting was interpreted as reflecting his lack of parenting confidence and general personality. The uproarious laughter at the final taping session was puzzling but attributed to nervousness before the camera, something that is not apparent in Tony’s answer to previous questions. It was only in retrospect, when reviewing the tapes of the case and trying to develop a more coherent account of the changes illustrated in the family that led to rethinking the events with Tony’s place in the triangle of Vicki, he and William as part of the context. The importance of Tony “finding his place” in the relationship and the possible significance of Tony and Vicki’s bursting out laughing at him “telling everything” became more apparent.
CHAPTER 3 THE PSYCHOSOCIAL ASSESSMENT OF FATHERS ANTENATALLY

3.0 Introduction

The assessment of new fathers to identify their needs is investigated in this chapter. Psychosocial questions used with mothers in NSW hospitals are taken as a starting point for developing a Strengths and Needs of Fathers Survey to assess fathers’ needs. In keeping with the father–infant–mother model of fathers’ role described in Chapter 2, the question topics included a father’s expected competence with his infant, his support of the mother of his infant, and his own mental health and coping style. The questions, alongside the Edinburgh Depression Scale (EDS, a validated scale indicating the likelihood of depression) were tested on a sample of 307 fathers recruited from antenatal classes in the Hunter Valley. The level of need in this population is estimated on the frequency of responses to the 14 psychosocial questions; for some equivalent questions the fathers’ responses are compared to those of the mothers’. Participants’ answers to questions specific to fathers’ role in supporting the mother are also reported. Responses to the survey are also analysed using occupation status, age, public or private hospital usage and level of depression score (EDS score) to identify possible high-need groups of fathers. Finally, the acceptability of the questions used in the survey is evaluated using the reports of the participating fathers.

3.1 Assessing psychosocial risks of mothers

The association of psychosocial factors among pregnant women with adverse family outcomes in the postnatal period is well recognised across family services. Health and welfare services in different regions have developed similar psychosocial assessment tools in attempting to reduce the negative aspects of birth and infant development. In the US, low birth weight and prematurity have been a major policy and public health
concern, and psychosocial assessments have been built into many standard care procedures for pregnant women (Alexander, 1998; Wilkinson, Korenbrot, & Greene, 1998). In Canada, concern over the lack of detection of antenatal domestic violence led to the development of assessment protocols to be used by primary care health professionals when seeing women during pregnancy (Carroll et al., 2005). Australian protocols for a general psychosocial assessment based on the recognition of antenatal and postnatal mood disorder have also been developed (Barnett, Glossop, Matthey, & Stewart, 2005; Laing, 2001). The assessments developed for mothers can provide a template for assessing fathers’ needs; the psychosocial questions can suggest topics for fathers and the framing of their use as “screening” or “assessment” can guide the use of questions with fathers.

A recent review of the evidence for antenatal need during pregnancy identified four main groups of factors: family issues (e.g. lack of social support, recent stressful life events); domestic violence (e.g. mother or partner witnessed violence in childhood, current abuse by partner); maternal characteristics (e.g. low self-esteem, antepartum depression, unwanted pregnancy); and substance abuse by the mother or her partner (Wilson et al., 1996). The importance of correctly identifying and quantifying the level of risk among expectant mothers has prompted the development of a plethora of scales and instruments to be completed as self-report measures by the pregnant woman or utilised by health professionals to elicit responses from mothers (for a review see Haglund & Britton, 1998). In some cases these instruments have been incorporated into a comprehensive care management system to ensure that those identified as high risk through the screening process are offered appropriate referrals to treatment or support services. Three examples are described below illustrating this approach: Florida’s Healthy Start Program targeting low birth weight and premature births; Canada’s national guidelines for Family-Centred Maternity and Newborn Care; and the Integrated Peri-natal Care project originating in Sydney.

In the USA, Florida’s Healthy Start Program aims to identify mothers at risk of low birth weight or preterm delivery. The Program was initiated as state-wide screening in 1992, and has since been taken up by the American College of Obstetricians and Gynaecologists for use in health services nationally (Lapp, 2000). The Florida Healthy Start Prenatal Risk Screening Instrument consists of 15 self-report questions covering
age, education, race, weight, tobacco and alcohol use, history of mental health problems, stress, number of recent relocations, neighbourhood and family violence, pregnancy intention and hunger among family members. Health providers calculate the scores for each question (higher scores = more risks) and add scores for late antenatal care, medical problems and previous birth difficulties. Each question is scored 0 or 1 (except “Race”, which is 0 or 2). A score of four or more indicates sufficient risk for referral to family support services such as counselling, education or home visiting. The questions included in the screening instrument were developed from the analysis of existing data, a literature review and professional judgment. One year following implementation of the first screen, the prenatal screening data were matched to the corresponding birth record data for births that occurred in 1993 to test for association with low birth weight and preterm birth. As a result the questions were modified and the new screening instrument introduced in 1994. A second evaluation utilising 1998 birth data concluded that the screening test was performing well, selecting approximately 50% of the women who will experience adverse birth outcomes (Simmonds, Thompson, & Graham, 1998).

In 1989 family physicians across Canada were surveyed about their perspectives on antenatal psychosocial assessment. The majority of family physicians (77%) agreed that an antenatal risk assessment form would be of benefit to them. In response, the Antenatal Psychosocial Health Assessment (ALPHA) was designed as a tool to be used by obstetrical care providers for the systematic assessment of the psychosocial health of pregnant women (Carroll et al., 2005).

Antenatal psychosocial factors were selected based on a critical review of the literature examining predictors of adverse postpartum outcomes such as woman abuse, child abuse, couple dysfunction, postpartum depression and increased childhood physical illness (Wilson et al., 1996). The resulting form was modified after feedback from focus groups of obstetricians, family physicians, midwives, nurses, social workers and childbirth educators and found to be acceptable to the women assessed and to service providers (Reid et al., 1998). The ALPHA scale is recommended by the Public Health Agency of Canada and has been incorporated into the World Health Organization training course “Essential Antenatal, Peri-natal and Postpartum Care” being offered throughout the European region after being endorsed by the reproductive
health units of most member states (Canada, 2000; Chalmers, Mangiaterra, & Porter, 2001).

In the south-western Sydney region of NSW an Integrated Peri-natal Care (IPC) system focusing on intervention for all women through routine antenatal care has been initiated. At the time of booking in to the hospital, midwives collect a general medical and obstetric history to provide a basis for planning of subsequent obstetric care. The IPC project formulated additional questions to identify a broad range of problems (or their antecedents) including anxiety, depression, psychosis, alcohol and other substance abuse, personality disorders, bereavement, lack of social support, domestic violence, chronic or acute physical ill-health, other adverse life events, and adverse childhood experiences. The semi-standardised assessment process is designed to identify vulnerabilities rather than diagnose mental illnesses per se and is also a means to form a connection of trust between the mother and the health service (Barnett, Hopper, Glossop, Sneddon, & Matthey, 2004). The assessment includes the Edinburgh Depression Scale (EDS, which is scored by the clinician during the interview) and a series of psychosocial questions. If the woman scores above 10 on the EDS, or above zero on the EDS self-harm question or on in any of the psychosocial risk domains, she is offered a referral.

These approaches to assessing women during pregnancy offer some important pointers for the development of an assessment process for fathers. In each case a set of questions was derived from the literature, aided by clinical experience in order to identify women at risk of adverse outcomes who otherwise may not be recognised in the normal process of antenatal care. The questions were then modified after implementation and evaluation, including acceptability to the women being assessed and to health providers. For fathers, the development of a set of questions could begin from those asked of mothers and examine the research for evidence for parallel processes or outcomes for fathers. The way that the psychosocial assessments for mothers have been developed and evaluated may suggest the appropriate steps in the development of a psychosocial instrument for fathers while recognising that the context of the assessment will be different for fathers and mothers. The extent to which the assessment is envisaged as “screening” will also be important.
3.1.1 Evaluation of assessment of mothers

In the Healthy Start Program in Florida a formal evaluation process was undertaken using low birth weight and prematurity to reassess the validity of the screening measure. At that time some measures were added that had not previously been demonstrated to have a significant association with adverse outcomes: domestic violence, high stress, insurance type and availability, body mass index, and mother’s birth weight (Simmonds et al., 1998).

The Canadian ALPHA instrument has been evaluated in a randomised control trial comparing the use of the ALPHA form with usual care when performing a psychosocial assessment during pregnancy. Outcome measures included the quality of psychosocial information obtained, interventions following assessment with the ALPHA form, and, providers’ and pregnant women’s satisfaction with the ALPHA process. Providers using the ALPHA form were more likely to identify psychosocial risks and significantly more likely to identify domestic violence concerns. Both providers and patients found the protocol acceptable (Carroll et al., 2005).

The IPC questions were first evaluated after two years and redundant questions (e.g. when asked if the current partner was also the father of the baby 99% said “yes”) or questions in risk of modifying (e.g. why the women were being asked about their childhood) were identified. The original 31 questions were reduced to 12 to be used in conjunction with the EDS. Among 2,167 women presenting to the antenatal clinics in Sydney approximately 12% had three or more scores in the risk domains—with 6.7% taking up face-to-face counselling—while a further 7.2% maintained telephone contact with the services (Barnett et al., 2004). A telephone-based survey (n=104) with women who had been assessed one week earlier showed that 80% thought that the additional questions were acceptable and many appreciated the personal interest displayed by the midwife in their wellbeing (Barnett et al., 2005).

3.1.2 Screening or assessment?

The Florida Healthy Start Program labels its questions as a screening instrument and the Antenatal Psychosocial Health Assessment states that “a number of antenatal risk
factors were chosen for screening” (Health Canada, 2000, p. 6). While the IPC process involves the use of a recognised screening instrument for depression (the EDS) the psychosocial questions are regarded as an aid to assessment rather than a screening tool. The difference is not trivial as screening may be regulated by government health authorities, and there are standard criteria to be applied when considering the introduction of screening (McLennan & Offord, 2002). All three assessment protocols have several features of established screening procedures—they each aim to identify conditions among individuals who are asymptomatic by using a simple, safe, precise and validated instrument with an established cut point—but all three programs would have difficulty in meeting all the requirements of screening (see a discussion of the suitability of the EDS in section 3.2.4) (McLennan & Offord, 2002; Shakespeare, 2001). Although the psychosocial risk factors in the instruments described above have been identified through an appraisal of available research, and in the Healthy Start Program by two validation studies, there is currently no evidence, for example, that effective treatment is available for the risks identified through antenatal assessment which will lead to better outcomes than could be produced with later treatments. Interventions during the antenatal period to reduce the number of low birth-weight infants have generally not been shown to be effective and there have been no randomised control trials of the IPC or the ALPHA assessment to gauge possible reduced morbidity or mortality. The assessment of psychosocial factors among antenatal women is best described as a process intended to assist in the provision of appropriate care in the perinatal period, rather than a screening tool for identifying illness.

An important aspect of the discussion of these instruments for assessing women during pregnancy is the context of the interview or assessment process. Although most reports emphasise the questions to be used and the content of the instruments the way that the questions are asked is also important. In arguing against the notion that psychosocial assessment is screening, Barnett et al.(2005) stress the importance of the counselling-oriented stance of the health practitioner. Staff involved in the IPC are expected to engage with the woman, and any other relatives or friends who may be present “conveying a message that the service cares about her personally” (Barnett et al., 2004, p. 7). Guidelines for the Canadian ALPHA assessment also stress the necessity for rapport between the health practitioners and the women to be assessed and
report that using the ALPHA questions facilitates an increase in the understanding between the pregnant woman and practitioner (Canada, 2000).

3.2 Psychosocial assessment of fathers

The initiatives incorporating psychosocial questions to identify risks and improve the health systems’ support for pregnant women suggest a template for developing an appropriate instrument for fathers. The fourfold grouping recommended by Wilson for examining mothers’ psychosocial risks provides a starting point; fathers’ lack of social support and recent stressful life events, low self-esteem, unwanted pregnancy and substance abuse are logical topics for self-report instruments or interview measures to identify as “risk factors” or “risks” in fathers. Asking about violent behaviour (as opposed to being a victim of violence), however, is not straightforward and there is also debate as to the prevalence, measurement and impact of depression in fathers (males). Some of the risk factors for women, such as poor relationship with their mother, require investigation to identify appropriate parallels for fathers and the differences in mothers’ experience of pregnancy and delivery of the baby and the fathers’ experience as partner and father need to be considered.

3.2.1 The context of asking psychosocial questions of fathers

The psychosocial questions developed for women in the examples given above aim to identify a broad range of problems (or their antecedents) that “might make life difficult for families to develop and function satisfactorily” (Barnett et al., 2005). The design of a psychosocial assessment for fathers on the same basis (that is, to identify factors in the fathers that might make life difficult for the family) presents a number of challenges. While fathers are included with mothers under the rubric “parent” in general and academic usage, the context of the assessment for fathers will be different to that for mothers. Mothers are interviewed as part of their preparation for birth at which time they will almost certainly become a patient in a hospital. The psychosocial questions asked of mothers are embedded within a framework which has a clear emphasis on physical health and on medical history and conditions, such as any previous surgery, previous pregnancies, current and past medications, and family history of hereditary disease. The immediate purpose of interviewing the mother is clearly to ensure the best
Care is provided to the mother during the birth and to ensure that, as far as possible, she delivers a healthy infant. The psychosocial questions also target factors that might influence the mother’s postnatal wellbeing and her parenting competence with the infant.

For fathers, the purpose of any proposed assessment or interview is different. Fathers are not (necessarily) current or imminent hospital patients and are not progressing through the physical stages of pregnancy and birth. The psychosocial assessment of fathers will not be part of a health assessment based on their pregnant condition; it will not include questions relating to medical history and physical health, nor will it canvass female-specific aspects of reproduction such as menstruation. In addition, the psychosocial questions for fathers cannot be assumed to be identical to those for mothers. While there may well be some overlap, unique factors are to be expected as fathers will have a different role to mothers during the pregnancy and birth and in the immediate aftermath. For example, questions directed at estimating “practical/emotional support” in the case of fathers will refer to the male’s ability to provide support to his wife or partner as well as the likelihood that he will need to receive support. Also, the requirements of the support role for fathers may entail particular stressors such as unemployment which may not have the same salience for mothers.

The proposed methodology for examining the applicability of antenatal assessment of fathers also places limitations on the questions to be used. In the study described in Section 3.2.5 fathers are assessed via an anonymous questionnaire completed at home and mailed back to the university. The assessment is clearly not part of any ongoing clinical care and so cannot benefit from the personal interaction normally surrounding the contemplation of the questions by the mothers. Topics which might properly form part of a face-to-face assessment (domestic violence, substance abuse and history of abuse experienced as a child) were omitted from the survey due to the risk that they might provoke unnecessary distress. Such questions might also have deterred some men from completing the survey and reduced the ability of the research to report meaningful results. Since this survey was the first to evaluate antenatal assessment questions for fathers it was thought prudent to restrict questions to those least likely to provoke anxiety or distress among the men faced with completing the survey.
3.2.2 Psychosocial questions for fathers

In the table below, the domain of need (variable) for fathers is given alongside the relevant questions to be used in assessing father’s needs. The equivalent questions used in the female-oriented IPC are also provided. A number of questions from the IPC for mothers are not included in the list of parallel questions for fathers. Questions relating to adverse childhood experiences and involvement with the Department of Community Services are not replicated in the father’s assessment but are discussed separately below, as are questions relating to mental health, psychiatric and recent drug history. The questions relating to domestic violence and depression are discussed under a separate heading.

Table 3.1 Psychosocial questions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Responses</th>
<th>Equivalent question in IPC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Recent stressors in the last 12 months</td>
<td>1. In the last 12 months have you had any major stressors, changes or losses recently such as financial problems, someone close to you dying or any other major worries?</td>
<td>Yes, No, Not sure</td>
<td>In the last 12 months have you had any major worries stress or change.</td>
</tr>
<tr>
<td>B. Emotional support</td>
<td>2. Do you have someone that you can talk to (apart from your wife/partner) if you have stresses or worries?</td>
<td>Yes, No, Sometimes</td>
<td>Do you have someone you are able to talk to about your feelings or worries?</td>
</tr>
<tr>
<td>C. Low self-esteem/anxiety or perfectionist traits</td>
<td>3. Generally, do you consider yourself a confident person?</td>
<td>Yes, No, In some ways</td>
<td>Generally, do you consider yourself a confident person?</td>
</tr>
<tr>
<td></td>
<td>4. Does it worry you if things get messy or out of place?</td>
<td>Yes, No, Sometimes</td>
<td>Does it worry you if things get messy or out of place?</td>
</tr>
<tr>
<td>D. Mental health treatments</td>
<td>5. Are you currently receiving or have in the past received, treatment for any emotional problems?</td>
<td>Yes, No, Not applicable</td>
<td>Have you ever had treatment for any emotional/mental health problems?</td>
</tr>
<tr>
<td>Variable</td>
<td>Question</td>
<td>Responses</td>
<td>Equivalent question in IPC*</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>E. Intention to have a family</td>
<td>6. Was this pregnancy planned?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Partly</td>
<td></td>
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<tr>
<td></td>
<td>7. Did you consider your wife/partner not continuing with the pregnancy?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maybe</td>
<td></td>
</tr>
<tr>
<td>F. Support for breastfeeding</td>
<td>8. I would like my baby to be breastfed.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td></td>
</tr>
<tr>
<td>G. Support for wife/partner after the birth</td>
<td>9. I expect to have time off to be at home.</td>
<td>Not possible</td>
<td>Will you be able to get practical support after the birth of your baby?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A couple of days</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. I will be able to provide financial support for my family.</td>
<td>Yes, easily</td>
<td>Will you be able to get practical support after the birth of your baby?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes, if nothing too unexpected happens</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>With difficulty but we'll probably manage</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not sure where the money is coming from</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. If my wife/partner needs someone for emotional support.</td>
<td>I will find it easy to support her</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I will try to support her</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I will rely on help from relatives and friends</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I will figure that out after the birth</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.1  Psychosocial questions (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Responses</th>
<th>Equivalent question in IPC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Parenting confidence</td>
<td>12. I will be able to tell if my wife/partner becomes depressed.</td>
<td>Definitely</td>
<td>Will you be able to get practical support after the birth of your baby?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maybe</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Not sure at this stage</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probably not</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. When its time for sleep I expect to be able to settle my baby down.</td>
<td>Easily</td>
<td>Will you be able to get practical support after the birth of your baby?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probably</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possibly</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not sure until I try</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14. When my baby cries I will be able to tell what the crying means (e.g. hunger, tired, bored, “letting off steam” etc.).</td>
<td>All the time</td>
<td>Will you be able to get practical support after the birth of your baby?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most times</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sometimes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not sure until I try</td>
<td></td>
</tr>
</tbody>
</table>

* The IPC questions were grouped into need domains: Lack of support; Major stressors; Vulnerable personality style; Past or present mental health problems; Abusive or traumatic health problems; Family violence; History of Department of Community Services involvement; Smoking, drugs, alcohol; Current mood (EDS score of 10 or more); Positive response to Q10 on EDS; Cultural vulnerability (Barnett et al., 2004, p. 9).

3.2.3  Rationale for the questions

A.  Stressors in the last 12 months

Cowan and Cowan (1995) set out the general rationale for early intervention services with parents in their review of longitudinal studies:

…”distress in parents during the early years of family formation are associated with negative developmental outcomes for their children in the preschool and elementary school periods. (Cowan & Cowan, 1995, p. 413)
They also and that individual and marital distress in parents of young children can be predicted from need indicators obtained before partners enter parenthood (Cowan & Cowan, 1995). While few studies have examined the link between stressors—such as loss of a close relative and postnatal distress among fathers—there is abundant evidence of men’s difficulty in coping with rapid role change. Males’ elevated suicide rates in the face of social changes (such as those affecting Eastern Europe in the last decade) point to a male vulnerability in the face of shifting social arrangements due to a culturally-prescribed male inexpressiveness, a reluctance to seek help and maladaptive coping strategies such as alcohol abuse (Möller-Leimkühler, 2003).

Australian research also suggests that fathers may use alcohol to self-medicate when coping with grief leading to persistently high rates of mood disorders (Najman, 1996). Gender-specific attitudes to grieving are also thought to influence the way fathers experience grief surrounding peri-natal loss (in Australia early pregnancy loss occurs in at least one in 10 first pregnancies, and over one in 10–15 pregnancies subsequently (Knowles, 1994). In a qualitative study of men whose partner had experienced pregnancy loss McCreight (2004) found recurring themes, including self-blame loss of identity, and the need to appear strong and hide feelings of grief and anger. More generally, given that unresolved grief (as identified through the Adult Attachment Interview) is approximately as common among non-clinical males as it is among non-clinical females then fathers may be as likely to as mothers to face difficulties with any recent loss at the time of birth (van IJzendoorn & Bakermans-Kranenburg, 1996). Financial worries may be particularly relevant for fathers-to-be since their partners will not be working during the birth period and the extra expenses incurred due to the birth put added stress on family budgets. Among fathers attending antenatal classes surveyed by Matthey et al.(2002b) almost 50% nominated the cost of having a baby as a worry.

B. Receiving emotional support

Studies of gendered patterns of support in cohabiting couples report that women's support networks often include close friends and relatives whereas men typically name their wives as their main source of support or the only person in whom they confide (Kiecolt-Glaser & Newton, 2001). In addition, several studies have found that men
generally hold more negative attitudes towards seeking support than women and do not access psychological support services to the same degree as women (Cowan et al., 1991; Good, Dell, & Minz, 1989; Matthews, Stansfeld, & Power, 1999). New fathers also name their partners as their main source of support and are uninform ed about family-related support services and are unaware of their purpose (Chalmers, 1995; Fletcher, 2001). Since it is recognised that mothers will be preoccupied in the period surrounding the birth, and that approximately 15–20% of mothers will experience postnatal depression (Pope, 2000), the availability of a confidante for the fathers other than their spouses will be important. Zelkowitz and Milet (1997) found that fathers whose partners had depression had higher stress levels yet received less support from in-laws, other relatives and friends than matched controls in depression-free families.

C. Low self-esteem, anxiety, perfectionist

Negative self-appraisal, anxiety and perfectionist traits have been established as precursors to postnatal depression (and therefore reduced positive parenting) in women (Dennis & Boyce, 2004; Fontaine & Jones, 1997; Hewitt, Flett, & Ediger, 1996; Whitton, Appleby, & Warner, 1996). While self-esteem and perfectionism have rarely been investigated as predictors for depression in fathers they have been recognised as risk factors for impaired parenting in general, and maladaptive perfectionism has been identified as increasing the risk of psychopathology for both men and women (Belsky, 1984; Cox & Enns, 2003). One study of 527 men whose partners were expecting a baby found that low levels of pre-partum self-esteem were associated with higher levels of postpartum distress (Frost, 1997).

Matthey et al. (2004) reviewed recent studies on the detection and treatment of postnatal depression and concluded that anxiety should be assessed alongside depression in expectant fathers. In an earlier study Matthey et al. (2000) found that including anxiety (as well as depression) in assessments of postnatal distress among fathers increased the rates of caseness by between 31% and 130%; a longitudinal study found that both prenatal depression and anxiety for fathers was predictive of father attachment at three years (DelCarmen-Wiggins, Huffman, Pedersen, & Bryan, 2000). Fathers’ mood disorders will not only affect their relationship with their infants but have an affect on the mothers’ levels of interaction.
An indirect effect can also be identified for perfectionism in fathers since perfectionism has been conceptualised as having an “other-directed” as well as a personal component (Hewitt & Flett, 1991). Studies of social support among newly married couples have found that while men and women are equally skilled at offering support, husbands were more likely to convey negativity as well as support when their wives were experiencing stress (Neff & Karney, 2005). Roehling and Robin (1986) compared levels of unrealistic beliefs in distressed and non-distressed families and found that fathers from distressed families endorsed more unreasonable beliefs involving perfectionism, obedience, ruination, and malicious intent than non-distressed fathers. Condon and Corkindale (1997) found that controlling and dominating male partners were linked with women’s low attachment to their developing baby, and over-controlling partners of women with high interpersonal sensitivity have also been linked with higher rates of postnatal depression among the mothers (Boyce, Hickie, & Parker, 1991).

D. Mental health treatments

Given that parenthood is a time for increased stress and tension, any existing mental health problems may mean that fathers require extra support in the peri-natal period. Estimates of mental health problems among males and females vary depending on the types of mental illness being considered. While the rates of depressive and nervous conditions among women are approximately twice that for men, males’ alcohol use is almost four times that of women and so, if alcohol is included, the overall levels of mental disorder are almost equivalent (Najman, 1996). Women with serious mental illness, however, are more likely to marry and become parents than are seriously mentally ill males (Nicholson, Nanson, Calabresi, & Yando, 1999; Oyserman, Mowbray, Meares, & Firminger, 2000).

The higher treatment rates for mental illness among women may reflect both their willingness to seek assistance and the lack of effective services for men with substance abuse problems (Najman, 1996). Notwithstanding the lower rate of fathers with previous mental health treatment, identifying those who have an existing mental disorder is warranted given the potential influence that a father’s mental health can have
on marital quality and child development. Clinicians do not regularly seek information on men’s paternal role, and those with serious mental illness have been found to have similar needs to those of mothers similarly afflicted (Nicholson et al., 1999). Paternal psychopathology has been found to negatively influence infant development leading to an increase in behaviour problems and a reduction in the triadic capacity of the family (Jacob & Johnson, 1997). As well, the social networks of depressed husbands have been found to reduce over time so that their wives are increasingly socially isolated (Wilhelm, 1996).

### E. Intention to have a family

Estimates of unintended pregnancy in Australia are uncertain; however, it seems likely that the number is far higher than the abortion rate of approximately 73,000 per year (Pratt, Biggs, & Buckmaster, 2005). Unintended pregnancies have been identified with poor outcomes for children and mothers, though discussion continues over differences in outcomes for unplanned as opposed to unwanted pregnancies (David, Dytrych, & Matejcek, 2003; Fischer, Stanford, Jameson, & DeWitt, 1999; Kitamura, Sugawara, Sugawara, Toda, & Shima, 1996). Fathers of unplanned births experience increased stress levels compared to fathers who planned the pregnancy and fathers’ stability and feelings towards the pregnancy significantly affect their partner’s experience of an unwanted pregnancy (Clinton & Kelber, 1993; Kroelinger & Oths, 2000; Leathers & Kelley, 2000). Leathers and Kelley (2000) also found that 22% of couples in their sample disagreed on the intention of a pregnancy, and that pregnancies viewed as unintended by males and intended by their partners appeared to pose the greatest risk for postpartum depressive symptoms among the women.

### F. Support for breastfeeding

Breastfeeding of infants in Australia is recognised as a national health priority. The National Health & Medical Research Council (NHMRC) recommends breastfeeding as the preferred method of nutrition for infants and includes encouraging and supporting breastfeeding as one of the key issues outlined in Dietary Guidelines for Children and Adolescents (NHMRC, 2003). Fathers approval of breastfeeding (or the mother’s perception of this) has been widely reported in the international literature as associated
with greater breastfeeding success. Scott and Binns (1998) conducted an extensive review of the international literature to 1997 to document the factors associated with the initiation and duration of breastfeeding, and identified that fathers participate in, and influence, the mother’s decision to breastfeed. The influence of fathers on uptake of breastfeeding and decision to wean has also been documented in Australian populations (Armstrong et al., 1999; Barnett, Matthey, & Gyaneshwar, 1999).

G. Support for wife/partner after the birth

While there is general community support for the notion that men and women should share in the care and nurturing of their offspring, the reality of biological, economic and social conditions mean that mothers spend more time with newborns and take more responsibility for infant care than fathers (Bittman, 1995; Pocock, 2003; Russell et al., 1999). However, the father’s support for the mother will be a key determinant of both the mother’s wellbeing and the infant’s development (Gloger-Tippelt & Huerkamp, 1998). Support, in the context of a new baby, includes provision of financial support, physical involvement in the care of the infant and emotional support for the mother. Reduced social supports, including reduced support from the father and marital distress, have been identified as important predictors of postnatal mood disorders in mothers (Beck, 1996). When fathers are not perceived as supportive, for example when they fail to fulfil the expectations of their partners for involvement in infant care, mother’s satisfaction with the relationship declines (Cowan & Cowan, 1992) and marital conflict can impair infant parent attachment relationships (Owen & Cox, 1997).

H. Parenting confidence

In part, the ability of the father to support the mother and his infant will depend on his confidence in handling the baby. Matthey et al. (2002b) found settling the baby was one of the main worries of fathers (and mothers) attending antenatal classes, and surveys through well-child screening across Queensland have found that up to 25% of parents seek professional help with settling their new baby (Armstrong, Quinn, & Dadds, 1994). While the link between perceptions of efficacy and positive parenting behaviours (responsiveness, stimulation and non-punishing caretaking) have been identified for mothers, recent investigation of parental sense of competence among Australian parents
found no significant differences between mothers’ and fathers’ sense of efficacy (Jorm, Griffiths, Christensen, Parslow, & Rogers, 2004).

3.2.4 Assessing depression in expectant fathers

The Edinburgh Depression Scale (EDS) was developed specifically for use in the perinatal period as existing depression scales were unable to allow for pregnancy-related or infant-related symptoms such as sleep disturbance, weight gain and changes in libido (Cox & Enns, 2003; Matthey et al., 2001). It is the most widely used screening scale for assessing mothers in the peri-natal period (Buist et al., 2002) and has been used in studies of fathers’ depression in postnatal and antenatal samples (Areias, Kumar, Barros, & Figueiredo, 1996; Condon, Boyce, & Corkindale, 2004; Culbertson, 1997; Deater-Deckard et al., 1998; Edhborg, Matthiesen, Lundh, & Widstrom, 2005; Lane et al., 1997; Ramchandani et al., 2005). The EDS is a 10-item self-report questionnaire in which subjects are asked to rate how they have felt in the previous seven days. Each question has four stem questions that are scored 0–3 (resulting range 0–30). The scale takes about five minutes to complete and is usually scored immediately by the health worker involved, although recently it has become available on websites such as the University of New South Wales site www.blackdoginstitute.org.au. Several validation studies in the English language have been carried out and the scale is recognised as a reliable and valid measure of distress so that scores of greater than 12 are taken as reasonable indicators of major depression (although there is disagreement as to the most appropriate cut off scores; see below). Research on peri-natal depression in numerous non-English speaking populations has also been reported using translations of the EDS.

Recently there has been debate over the appropriateness of the EDS as a screening tool. A report prepared for the UK National Screening Committee identified concerns in three areas: the ability of postnatal depression (PND) screening to reduce mortality and morbidity; the acceptability of screening for PND among health professionals and the public; and, the possibility that the benefits of screening do not outweigh any psychological harm (Shakespeare, 2001). Similar concerns have been raised by Canadian researchers (McLennan & Offord, 2002). In response, a group of leading Australian researchers argued that screening for depression “is likely to be useful because of the high prevalence of depressive disorders at both times and because of
evidence that depression can be effectively treated” and that “alerting women that there may be a problem and providing them with information about resources is empowering rather than unethical” (Buist et al., 2002, p. S104). Both critics and advocates of screening agree, however, that research is needed into the design, delivery and evaluation of screening tools and practices to detect antenatal and postnatal depression. Given the lack of research into the assessment of depression among fathers in the perinatal period, investigations are also clearly needed for this population.

As discussed in Chapter 2, there is currently no accepted measure of depression designed specifically for males. The EDS has been validated with fathers (using the Diagnostic Interview Schedule to confirm the presence of depression) postpartum and has been used by researchers assessing fathers’ depression in a number of studies on western populations (Ballard et al., 1994; Dudley, Roy, Kelk, & Bernard, 2001; Matthey et al., 2001; Ramchandani et al., 2005). Although the questions in the EDS given to fathers and to mothers are identical, there is debate over the appropriate cut-off point for use for fathers (as there is for mothers) since the scores on the EDS are continuously distributed in the population with no obvious cut-off to distinguish between “cases” and “non-cases”. Research on mothers has established a cut-off for “probable depression” at 12/13, and 9/10 for “possible depression” while recognising that the level of the score does not reflect severity of the depression (Fletcher, Matthey, & Marley, 2006). In routine clinical practice (such as in the IPC protocols) the lower threshold has been recommended as a cut-off point to increase sensitivity since the use of the lower score results in very few depressed women being missed (Shakespeare, 2001). However, evaluations of the validity of the EDS on non-western populations has resulted in a range of cut-off points for “probable depression” being suggested (for example, 11/12 for a French population and 4/5 for Japanese) to allow for the influence of cultural factors in the way that subjects respond to the translated questions on the EDS (Barnett et al., 1999b; Matthey et al., 2001).

In their study to examine the validity of the EDS for fathers Matthey et al. (2001) argued that “cultural factors” should be considered when evaluating men’s answers to questions regarding negative emotions: fathers with similar levels of distress to mothers would be likely to score lower on self-report measures of distress. The authors also pointed out that since anxiety disorders were a significant form of distress in the
postpartum period, a point recognised by the inclusion of anxiety-focused questions in the EDS, anxiety may well be present in fathers and should be taken into account in deciding “caseness” for fathers. Fathers and mothers in their study were therefore assessed using the Diagnostic Interview Schedule for major or minor depression but also for Panic, Specific Phobia and Adjustment Disorder with Anxiety. The EDS was shown to be reliable and valid for fathers. With anxiety orders included a cut-off of 5/6 was considered the optimum for fathers postpartum since it would correctly identify 75% of distressed fathers and 69.8% of non-distressed fathers. The high rate of false positives, it was argued, was acceptable in order to detect men who were distressed. The cut-off score proposed by Matthey et al. (2001) has not, however, been validated for fathers antenatally. When the EDS was evaluated for use with mothers in the antenatal period a higher cut-off than would be appropriate postpartum was recommended and this approach has been endorsed by other researchers from the field (Fletcher et al., 2006; Murray & Lopez, 1996). It would seem prudent to follow this approach with fathers, utilising a higher cut-off for antenatal fathers while recognising that for mothers there is clearly a biological component to their experience of distress not present in fathers (Hall et al., 2004). In view of these considerations a reasonable, although admittedly subjective, cut-off of 6/7 has been chosen for fathers assessed in this study. In line with the IPC approach, the use of the EDS for fathers is considered to be part of an overall assessment of need in order to reduce later parenting stress and to maximise the wellbeing outcomes for the fathers’ family.

In the research design described below, the psychosocial questions and the EDS are included in an anonymous survey of new fathers during the last trimester of the pregnancy. Results are presented for the cut-off score of 6/7 as well as for the cut-off of 9/10, the recognised cut-off point for mothers in community samples.

3.3 Identifying new fathers’ needs through a cross sectional survey

Previous research has found that community surveys are able to identify felt needs not already evident in mortality and morbidity data and not previously proposed by lobby groups (Higginbotham et al., 1993). In the interests of health policies which have the most chance of meeting the needs of the target population community surveys are an
important source of information (Redman, Hennrikus, Bowman, & Sanson-Fisher, 1988).

Cross-sectional surveys are recognised as one of the basic investigative methods of epidemiology and they have been used to estimate the prevalence of a variety of physical and social conditions within the general population. Advantages of cross-sectional studies are their simplicity, and the short timeframe of the study compared to prospective studies (Alderson, 1980). Within the population of adult males there may well be meaningful differences in the needs of major subgroups. Existing literature on men’s health status suggests that younger males may differ from older males in their concerns and that blue-collar males may differ from white-collar males (Donaldson, 1992). A study which examines expectant fathers’ perceived needs could assist the development of appropriate and effective health policies targeting such men in their situation as new fathers. The following cross-sectional survey of new fathers was designed to address these research questions:

1. What level of need is identified by new fathers through a set of self-report psychosocial questions and the Edinburgh Depression Scale administered antenatally?
2. Can profiles of new fathers be developed, linking new fathers’ needs with subgroups in the population such as older men, blue-collar workers, distressed fathers or fathers of babies delivered in public hospital?
3. Would a set of questions investigating psychosocial health be acceptable to expectant fathers?

3.3.1 Study aims
To identify the needs of new (first-time) fathers using a cross-sectional survey (see Appendices 3.1-3.5).

3.3.2 Study factors
Perceived needs of expectant fathers
Perceived needs were measured by:
a) The percentage of the sample who indicate “needs” through the 14 psychosocial questions on the survey

b) The number of “needs” identified through 14 psychosocial questions on the survey

c) The score of the Edinburgh Depression Scale included in the survey.

**Age**

Age was measured in years. “Young” was taken as up to and including 32 years at the time of the survey (the mean age of fathers in the Australian population (Australian Bureau of Statistics, 2003). “Older” was taken as 33 years and above at the time of survey.

**Socioeconomic status**

Socioeconomic status was measured by self-reported main occupation. “Blue-collar” men were those reporting occupations in the following categories: tradesmen, clerks, salesmen, plant and machine operators, labourers (categories 4–9 in Australian Standard Classification of Occupations (ASCO) (ABS, 1997) “White-collar” men were those reporting occupations in the following categories: managers, professionals, para-professionals (categories 1–3 in ASCO).

**Distress**

Those expectant fathers scoring above six on the Edinburgh Depression Scale were identified as distressed while those scoring six or below were considered to be non-distressed (Matthey et al., 2001).

**Public and Private condition**

Those expectant fathers attending antenatal education classes at Newcastle Private Hospital were designated “private” fathers and those attending antenatal classes organised through John Hunter and Belmont hospitals, public hospitals operated by the Hunter New England Area Health Service, were designated “public.”
3.3.3 Subjects

The source population comprised men attending antenatal classes in John Hunter Hospital, Belmont Hospital and Newcastle Private Hospital between November 2004 and September 2005. Nursing educators handed men attending the classes an anonymous survey comprising the 10 question Edinburgh Depression Scale (EDS), plus nine demographic questions and 14 psychosocial questions. The survey was addressed to “The Expectant Father” and was accompanied by a reply paid envelope addressed to the University of Newcastle. An optional section on the survey identified the respondent and gave his permission to be telephoned to provide feedback on the acceptability and suitability of the survey questions. These telephone interviews were conducted approximately one week after receipt of the completed survey.

3.3.4 Sample size

The analysis sought to establish the proportion of fathers identifying “need” factors from a range of psycho-educational factors and via the EDS.

A sample size of 400 was estimated as necessary by taking into account the following formula:

\[ n = \frac{Z^2_{(1-\alpha/2)} \times p(1-p)}{d^2} \]

Where \( n \) = sample size; \( z_{(1-\alpha/2)} \) = upper 100(1-\( \alpha/2 \))th percentile of the standard normal distribution (e.g. if \( \alpha =0.05 \) \( z=1.96 \)); \( p \) = the proportion of the population nominating the “need” factor; and \( d \) = half the width of a confidence interval of the 100(1-\( \alpha \)) percent level.

Then, a sample size of 400 gives an estimate of the proportion within five percentage points at a confidence level of 95%, assuming the most conservative value of \( p = 50\% \).
**Age and socioeconomic differences**

The first two (null) hypotheses to be tested were (a) that there are no differences in the needs of older and younger expectant fathers, and (b) that there are no differences in the needs of white-collar and blue-collar expectant fathers.

(a) Older and younger expectant fathers

Since the median age for first birth in Australia is 32.5 years (Australian Bureau of Statistics, 2004, p. 16) then approximately 50% (200) subjects would be in each age category. Using the PS computer program (Dupont & Plummer, 1990), 200 subjects in each group would allow for the following differences to be detected.

With a significance level of 5%, the sample of 400 (i.e. 200 in each group) will allow the detection of a significant difference with a power of 80% as specified in Table 3.2 (below), given that such a difference exists. That is, if the proportion of “young” expectant fathers nominating any item on the list of health issues in the sample is as given in column A below, and the proportion of “old” expectant fathers nominating that item is outside the limits given in column B, the probability of detecting the difference as statistically significant is at least 80%. Table 3.2 shows that the sample size of 400 is adequate to detect reasonable differences over the range of proportions.

**Table 3.2  Range of proportions of older (B) expectant fathers for a given proportion of younger (A) expectant fathers for α= 0.05, (1-β) = 0.80**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>≤0.80, ≥0.97</td>
</tr>
<tr>
<td>0.8</td>
<td>≤0.67, ≥0.90</td>
</tr>
<tr>
<td>0.7</td>
<td>≤0.56, ≥0.82</td>
</tr>
<tr>
<td>0.6</td>
<td>≤0.46, ≥0.73</td>
</tr>
<tr>
<td>0.5</td>
<td>≤0.36, ≥0.64</td>
</tr>
<tr>
<td>0.4</td>
<td>≤0.27, ≥0.54</td>
</tr>
<tr>
<td>0.3</td>
<td>≤0.18, ≥0.44</td>
</tr>
<tr>
<td>0.2</td>
<td>≤0.10, ≥0.32</td>
</tr>
<tr>
<td>0.1</td>
<td>≤0.03, ≥0.20</td>
</tr>
</tbody>
</table>
(b) White-collar and blue-collar expectant fathers

If the proportions in the sample reflect the occupational distribution for Newcastle local government area (LGA) (Australian Bureau of Statistics, 2003) including the “not stated” and “unemployed” responses in the total, then there will be 235 “blue-collar” subjects and 103 “white-collar” subjects among the 400 expectant fathers. Using the PS computer program 103 and 235 subjects in each group will allow for the following differences to be detected (Dupont & Plummer, 1990).

With a significance level of 5%, the sample of 400 (i.e. 103 and 235 in the two groups) will allow the detection of a significant difference with a power of 80% as specified in Table 3.3 (below), given that such a difference exists. That is, if the proportion of blue-collar expectant fathers nominating any item on the list of risk factors in the sample is as given in column A below, and the proportion of white-collar expectant fathers nominating that item is outside the limits given in column B, the probability of detecting the difference as statistically significant is at least 80%.

Table 3.3  Range of proportions of white collar (B) expectant fathers for a given proportion of blue collar (A) expectant fathers for α = 0.05, (1-β) = 0.80

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>≤0.78, ≥0.98</td>
</tr>
<tr>
<td>0.8</td>
<td>≤0.66, ≥0.92</td>
</tr>
<tr>
<td>0.7</td>
<td>≤0.54, ≥0.84</td>
</tr>
<tr>
<td>0.6</td>
<td>≤0.44, ≥0.76</td>
</tr>
<tr>
<td>0.5</td>
<td>≤0.34, ≥0.66</td>
</tr>
<tr>
<td>0.4</td>
<td>≤0.24, ≥0.56</td>
</tr>
<tr>
<td>0.3</td>
<td>≤0.16, ≥0.46</td>
</tr>
<tr>
<td>0.2</td>
<td>≤0.08, ≥0.34</td>
</tr>
<tr>
<td>0.1</td>
<td>≤0.02, ≥0.22</td>
</tr>
</tbody>
</table>

(c) Distressed and non-distressed expectant fathers

The proportions of distressed and non-distressed expectant fathers cannot be readily calculated. Published rates of depression among fathers in the antenatal period have reported prevalence rates of 3.5%, based on a cut-off score of 12/13 (Deater-Deckard et
al, 1998a) and 12% based on a cut-off of 9/10 (Buist et al., 2002) on the Edinburgh Depression Scale, whereas this study, following Matthey et al. (2001), uses a cut-off of 6/7. The number of fathers expected to be in the distressed-group cut-off is estimated as 18.5% assuming a proportional increase in distressed fathers (Fletcher, 2004).

(d) Fathers attending public and private hospitals.

The number of deliveries at the public hospitals in Newcastle is approximately three times that of the private hospital; however, fathers from the private sector are expected to participate more readily in research than those from the public sector since the private hospital has included a specific fathers’ session in their antenatal parenting education courses to highlight the father’s role. The proportion of fathers included from public hospitals is estimated at 60%.

For the first two hypotheses, assessing differences in priorities of blue-collar and white-collar expectant fathers and between young and old expectant fathers, the sample size of 400 will allow the detection of minimum differences of approximately 10%.

3.3.5 Statistical analysis

Student’s t-test and Chi-square test were used to compare group differences on scores of psychosocial measures and on the Edinburgh Depression Scale scores. Analyses were performed using SPSS version 14.2 (SPSS Inc, 2006).

3.3.6 Results

3.3.6.1 Recruitment of subjects

Survey forms addressed to “The Expectant Father” were distributed through antenatal parenting classes at John Hunter, Belmont and Newcastle Private hospitals over the period November 2004 to November 2005 (See Appendices 3.2, 3.3, 3.4,3.5). Staff noted the number of forms given out. Completed forms were returned in prepaid envelopes. From a total of 1,043 distributed forms 307 surveys were returned giving a response rate of 29.4%.
3.3.6.2 Description of respondents

In this section the characteristics of the survey respondents are given: their age, country of birth, language, occupation, whether or not they are Indigenous, marital status, education level and employment status. The number of months until the baby is due, and whether this is a first child, are also recorded.

Table 3.4 Age of respondents (N=307)

<table>
<thead>
<tr>
<th>Age</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24</td>
<td>16</td>
<td>5.2</td>
</tr>
<tr>
<td>25-29</td>
<td>87</td>
<td>28.3</td>
</tr>
<tr>
<td>30-34</td>
<td>122</td>
<td>39.7</td>
</tr>
<tr>
<td>35-39</td>
<td>50</td>
<td>16.3</td>
</tr>
<tr>
<td>40-44</td>
<td>25</td>
<td>8.1</td>
</tr>
<tr>
<td>45-49</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>50+</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.5 Country of birth of respondents (N=307)

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>280</td>
<td>91.2</td>
</tr>
<tr>
<td>Not Australia</td>
<td>27</td>
<td>8.8</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.6 Language spoken at home of respondents (N=307)

<table>
<thead>
<tr>
<th>Language</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>304</td>
<td>99.0</td>
</tr>
<tr>
<td>Non-English</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3.7  Occupation categories of respondents (N= 307)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>17</td>
<td>5.5</td>
</tr>
<tr>
<td>Professional</td>
<td>73</td>
<td>23.8</td>
</tr>
<tr>
<td>Associate professional</td>
<td>47</td>
<td>15.3</td>
</tr>
<tr>
<td>Trades</td>
<td>74</td>
<td>24.1</td>
</tr>
<tr>
<td>Clerical, Sales and Service</td>
<td>69</td>
<td>22.4</td>
</tr>
<tr>
<td>Labourer and Cleaners</td>
<td>15</td>
<td>4.9</td>
</tr>
<tr>
<td>Not in labour force</td>
<td>12</td>
<td>3.9</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.8  Respondents with first or subsequent child (N=307)

<table>
<thead>
<tr>
<th>First child</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>First child</td>
<td>281</td>
<td>91.5</td>
</tr>
<tr>
<td>Not First Child</td>
<td>24</td>
<td>7.8</td>
</tr>
<tr>
<td>Not stated</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.9  Months until baby of respondents is due (N=307)

<table>
<thead>
<tr>
<th>Baby due</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 Month</td>
<td>11</td>
<td>3.6</td>
</tr>
<tr>
<td>1-2 Months</td>
<td>218</td>
<td>71.2</td>
</tr>
<tr>
<td>&gt;2 Months</td>
<td>77</td>
<td>25.2</td>
</tr>
<tr>
<td>Not stated</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.10  Marital status of respondents (N=307)

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>235</td>
<td>76.8</td>
</tr>
<tr>
<td>Single</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Defacto</td>
<td>70</td>
<td>22.9</td>
</tr>
<tr>
<td>Separated</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Not stated</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>
**Table 3.11 Indigenous or Non-Indigenous (N=307)**

<table>
<thead>
<tr>
<th></th>
<th>Indigenous Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Non-Indigenous</td>
<td>297</td>
<td>98.7</td>
</tr>
<tr>
<td>Not stated</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 3.12 Employment status of respondents (N=307)**

<table>
<thead>
<tr>
<th>Employment</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time work</td>
<td>261</td>
<td>85.3</td>
</tr>
<tr>
<td>Part time work</td>
<td>12</td>
<td>3.9</td>
</tr>
<tr>
<td>Casual work</td>
<td>22</td>
<td>7.2</td>
</tr>
<tr>
<td>Unemployed/on benefits</td>
<td>11</td>
<td>3.6</td>
</tr>
<tr>
<td>Not stated</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 3.13 Education level of respondents (N=307)**

<table>
<thead>
<tr>
<th>Education</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left before school certificate</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td>School certificate</td>
<td>47</td>
<td>15.4</td>
</tr>
<tr>
<td>Left before HSC</td>
<td>14</td>
<td>4.6</td>
</tr>
<tr>
<td>HSC</td>
<td>35</td>
<td>11.4</td>
</tr>
<tr>
<td>TAFE/University</td>
<td>202</td>
<td>66.0</td>
</tr>
<tr>
<td>Not stated</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The Australian Bureau of Statistics (ABS) publishes the age of fathers in its regular reporting of births in Australia (Australian Bureau of Statistics, 2004) but does not regularly collect data on the characteristics of fathers. The national Midwives Data Collection, containing information collected by hospital staff as part of the minimum national data set, includes mothers but not fathers (Fletcher, 2004).

From the published data on fathers for Australia only the mean age (32.8 years) is available (Australian Bureau of Statistics, 2004). For this research study additional unpublished data relating to fathers was retrieved from the 2003 Family Characteristics...
Survey (FCS) by the ABS. Unfortunately, this data has two major limitations: the closest approximation to new fathers are fathers defined as “natural”, “adoptive” and “stepfathers” with a child under two years; and, the data on occupation and education levels are linked to the FCS records from the Labour Force Survey carried out in the same year. Due to some mismatches and sample design issues, occupation data and education level data are not available in the ABS data for 18% of fathers, so the education and occupation rates reported below are derived from 82% of the FCS records on fathers. The lack of data on fathers in Australia has been acknowledged by the Australian Bureau of Statistics (Fletcher, Fairbairn, & Pascoe, 2004). Table 3.14 (below) compares the national sample with those fathers from the Hunter region included in the study to provide an indication of how representative the study fathers are of all new fathers.

Table 3.14  Comparison of Newcastle respondents (N=307) with national sample of fathers**

<table>
<thead>
<tr>
<th>Study factor</th>
<th>Newcastle sample (fathers from antenatal classes)</th>
<th>National sample (ABS 2003** Children &lt; 2 yrs)</th>
<th>p-value***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (average)</td>
<td>32</td>
<td>33*</td>
<td>0.01</td>
</tr>
<tr>
<td>Education (%)</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>University/TAFE</td>
<td>66</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Yr 12 complete</td>
<td>11</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Less than Yr 12</td>
<td>23</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Occupation (%)</td>
<td></td>
<td></td>
<td>0.66</td>
</tr>
<tr>
<td>Professional/Semi-professional</td>
<td>46</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>45</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Unskilled</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

* ABS Births 2004
** ABS unpublished data 2003
*** Note: Assume no error in national sample due to large sample and many data sets combined.

The average ages, education and occupation levels are similar in the two samples; however, the national sample is significantly older (one year) and those not gaining post-secondary qualifications are underrepresented in the Newcastle sample. As there are no nationally available figures for the remaining characteristics of the fathers it
impossible to say how well the participants in this research match the population of all new fathers.

3.3.6 Needs identified through psychosocial questions

Fourteen questions in the survey sought to identify self-reported needs (in addition to the participants’ scores on the EDS). In this section a summary of the responses to the psychosocial questions in the survey is provided. The IPC psychosocial questions for presenting mothers included positive, negative and in-between responses (e.g. “not sure”, “sometimes”). For most items women were designated as in need of further assistance only if they gave the most extreme negative response; for example, answering “No” to the question “Do you have someone to talk to about your feelings or worries?” However, based on clinical experience, in-between responses for some items were also taken as indicating referral or investigation. Due to the lack of clinical experience in the psychosocial assessment of expectant fathers only the most extreme negative response was taken as indicating a “need.”

3.3.6.1 Percentage of expectant fathers indicating need

In Table 3.15 (below) the percentage of respondents answering positively (indicating “need” as described in the above table) to each of the psychosocial questions is given. The complete responses to the 14 questions are included in Appendix 3.6.
Table 3.15  Percentage of expectant fathers indicating need (with associated 95% confidence interval; N=307)

<table>
<thead>
<tr>
<th>Psychosocial Question (and response indicative of need)</th>
<th>Percentage of sample</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When my baby cries I will be able to tell what the crying means (e.g. hunger, tired, bored, “letting off steam” etc.). (Not sure until I try)</td>
<td>52.9</td>
<td>(47.1, 58.6)</td>
</tr>
<tr>
<td>2. When its time for sleep I expect to be able to settle my baby down. (Not sure until I try)</td>
<td>39.2</td>
<td>(33.7, 44.9)</td>
</tr>
<tr>
<td>3. In the last 12 months have you had any major stressors, changes or losses recently such as financial problems, someone close to you dying or any other major worries? (Yes)</td>
<td>33.9</td>
<td>(28.6, 39.2)</td>
</tr>
<tr>
<td>4. Does it worry you if things get messy or out of place? (Yes)</td>
<td>20.5</td>
<td>(16.0, 25.0)</td>
</tr>
<tr>
<td>5. Are you currently receiving or have in the past received, treatment for any emotional problems? (Yes)</td>
<td>13.8</td>
<td>(9.9, 17.6)</td>
</tr>
<tr>
<td>6. Was this pregnancy planned? (No)</td>
<td>11.4</td>
<td>(7.9, 15.0)</td>
</tr>
<tr>
<td>7. Do you have someone that you can talk to (apart from your wife/partner) if you have stresses or worries? (No)</td>
<td>11.1</td>
<td>(7.6, 14.6)</td>
</tr>
<tr>
<td>8. Did you consider your wife/partner not continuing with the pregnancy? (Yes)</td>
<td>5.9</td>
<td>(3.3, 8.5)</td>
</tr>
<tr>
<td>9. I expect to have time off to be at home. (Not possible)</td>
<td>3.0</td>
<td>(1.1, 4.9)</td>
</tr>
<tr>
<td>10. Generally, do you consider yourself a confident person? (No)</td>
<td>2.0</td>
<td>(0.4, 3.5)</td>
</tr>
<tr>
<td>11. I would like my baby to be breastfed. (No)</td>
<td>1.0</td>
<td>(0.0, 2.0)</td>
</tr>
<tr>
<td>12. I will be able to provide financial support for my family. (Not sure where the money is coming from.)</td>
<td>1.0</td>
<td>(0.0, 2.0)</td>
</tr>
<tr>
<td>13. If my wife/partner needs someone for emotional support. (I will figure that out after the birth.)</td>
<td>1.0</td>
<td>(0.0, 2.0)</td>
</tr>
<tr>
<td>14. I will be able to tell if my wife/partner becomes depressed. (Probably not.)</td>
<td>0.0</td>
<td>-</td>
</tr>
</tbody>
</table>

The number of subjects identifying each possible need ranged from 0 to 162 (out of a possible 307) with a mean of 43 (SD=51). The number of needs identified by individuals ranged from 0 to 8 (out of a possible 14) with mean of 2.0 (SD=1.3). The
distribution of needs is shown in Figure 3.1. The needs were slightly skewed to the right, with a maximum value of eight needs (one father).

**Figure 3.1 Histogram of Needs identified by respondents (N=300)**

3.3.6.2 Distress identified through the Edinburgh Depression Scale

The final section of the survey asked respondents to complete the 10 questions that form the Edinburgh Depression Scale. Each question has four options and the scale is scored from 0 to 3 of each question so that the range is 0 to 30. Table 3.16 shows the responses of the expectant fathers to the scale questions using various cut-off points of 5/6 and 9/10. The fathers response to the self-harm question (Question 10: “The thought of harming myself has occurred to me”) on the EDS is also provided since in assessment protocols for mothers any score above zero (Never) on this question justifies a referral (Barnett et al., 2005).
Table 3.16  Respondent's score on Edinburgh Depression Scale (N= 307)

<table>
<thead>
<tr>
<th>EDS score</th>
<th>Respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below cut off (&lt;7)</td>
<td>256</td>
<td>84.5</td>
</tr>
<tr>
<td>Above cut off (&gt;6)</td>
<td>47</td>
<td>15.5</td>
</tr>
<tr>
<td>High (&gt;9)</td>
<td>16</td>
<td>5.3</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>1.3</td>
</tr>
</tbody>
</table>

**Question 10**
- Sometimes: 4 (1.3)
- Hardly ever: 13 (4.2)
- Never: 290 (94.5)

Using the recommended 6/7 cut-off point for distress (depression and anxiety) approximately 16% of expectant fathers in this sample were in need. In addition, using the IPC guideline of any score above zero on the self-harm question (Question 10) of the EDS indicating a need for further contact, 5.5% of these fathers were in need of further contact. Since three of those scoring above zero on Question 10 had overall scores less than seven the overall estimate of need in this sample is 17%. The distribution of EDS is shown in Figure 3.2. The scores are skewed to the right.

Figure 3.2  Histogram of Edinburgh Depression Scores
3.3.6.3  **Comparison of fathers needs with those identified by expectant mothers**

The assessment of women in the IPC process developed by the NSW Health Department utilises a number of psychosocial questions to identify women at need in the antenatal period. These items were taken as a basis for the psychosocial questions for fathers in the current study. The questions for women are asked as part of routine care in the hospital setting and a number of the items in the IPC do not match those used in this survey; they include questions on domestic violence, substance use and childhood abuse. Also, some questions apply differently to mothers than to fathers: Will you receive support? (mothers); Will you support your spouse or partner? (fathers). Overall, however, the two assessments have the same aim: to identify individuals in need of assistance; and to convey that the wellbeing of the participant is of interest to those asking questions via the survey.

No data was collected from the partners of the fathers in this study, so direct comparison of mothers’ and fathers’ needs in this population is not possible. However, Matthey et al. (2004) reported results for the IPC questions from over 2,000 women (56.9% multiparous) presenting at a hospital antenatal service over a 12-month period. Five of the 14 questions asked of the fathers matched questions for the mothers. The mothers and fathers were also compared in their responses to the EDS. Mothers were significantly more likely than fathers to score above the community cut-off point of nine on the EDS (mothers 23.5%, fathers 5.3%, p<0.01) suggesting that fathers are more likely to face difficulties supporting a wife or partner with depression than managing their own depressed mood. However, there was no significant difference in those scoring above zero on the self-harm question (mothers 4.3%, fathers 5.5%, p=0.4), but still indicating the possibility of a small group of fathers who may be “at need”. The results for these mothers and fathers on matching psychosocial questions are provided in Table 3.17 below. There were significant differences for the following psychosocial questions: major stressors, changes or losses recently (mothers 24.5%, fathers 35.2%, p<0.001); someone to talk to about worries (mothers 94.9%, fathers 72.0%, p<0.001); consider yourself a confident person (mothers 83.3%, fathers 70.4%, p<0.001); worry if things get out of place (mothers 22.1%, fathers 20.5%, p<0.001).
Table 3.17  Responses of mothers attending a Sydney hospital (N= 2015-2167)\(^a\)
and fathers attending Newcastle hospitals (N=307) to matching psychosocial questions. Responses given as percentage of sample

<table>
<thead>
<tr>
<th>Psychosocial question subject matter</th>
<th>Mother/Father</th>
<th>Yes</th>
<th>Sometimes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors, changes or losses recently?(^*)</td>
<td>Mother</td>
<td>24.5</td>
<td>-</td>
<td>75.5</td>
</tr>
<tr>
<td></td>
<td>Father</td>
<td>33.9</td>
<td>b</td>
<td>63.5</td>
</tr>
<tr>
<td>Someone to talk to about worries?(^*)</td>
<td>Mother</td>
<td>94.9</td>
<td>3.1</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Father</td>
<td>72.0</td>
<td>16.9</td>
<td>11.1</td>
</tr>
<tr>
<td>Consider yourself a confident person?(^*)</td>
<td>Mother</td>
<td>83.3</td>
<td>13.9</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>Father</td>
<td>70.4</td>
<td>27.7(^c)</td>
<td>2.0</td>
</tr>
<tr>
<td>Worry if things get out of place?(^*)</td>
<td>Mother</td>
<td>22.1</td>
<td>29.5</td>
<td>48.4</td>
</tr>
<tr>
<td></td>
<td>Father</td>
<td>20.5</td>
<td>46.9</td>
<td>32.6</td>
</tr>
<tr>
<td>Treatment for emotional problems?</td>
<td>Mother</td>
<td>11.2</td>
<td>-</td>
<td>88.8</td>
</tr>
<tr>
<td></td>
<td>Father</td>
<td>13.7</td>
<td>-</td>
<td>85.7</td>
</tr>
</tbody>
</table>

\(^{a}\) Matthey et al., 2004 (sample size not reported for individual questions)  
\(^{b}\) “not sure” response (2.6) for fathers was excluded from the analysis  
\(^{c}\) “in some ways” replaced “sometimes” for fathers  
* responses for mothers and fathers significantly different (p<0.001)

The mothers and fathers whose responses are reported in the above table are not strictly comparable, however, since the data for mothers was obtained from a sample of all English-speaking mothers presenting to a large urban hospital over a 12-month period, including approximately 57% multiparous mothers, while the fathers’ responses are drawn from primarily first-time fathers undertaking antenatal education in public and private hospitals.

While the characteristics of those fathers who did not return surveys are not known, it seems unlikely that the most distressed fathers would be interested in completing an anonymous survey. Also, the inclusion of private hospital fathers in the sample boosts the proportion of those with white-collar occupations (56.8% private, 32.2% public; p<0.001). However, on the basis of these five common questions the rate of “need” or need among fathers is clearly comparable to that for mothers.

### 3.3.6.4 Role-defined needs for fathers

The question in the IPC assessment for mothers “Will you be able to get practical support after the birth of your baby?” was interpreted from the fathers’ perspective as
asking about a range of supports that the father could potentially offer. The two questions relating to infant care were the most frequently identified needs in the sample overall; however, the remaining four questions in this category—examining emotional and practical support (time away from work), financial security and the recognition of postnatal depression—were rarely indicted as needs (defined as the most extreme negative response for each question). However, the intermediate responses to these questions point to a group of families where early intervention and support may well be indicated. For these questions the optimum situation for families is taken as one where fathers can be at home after the birth to offer emotional and practical support free of excessive worry about finances. The fathers should also be able, if required, to notice the symptoms of depression. Table 3.18 (below) shows the range of responses for the four role-defined questions in the survey. The pattern of responses across the four options indicate that many families will fail to receive the optimum in fathering support: 36% of fathers expect to have a week or less to be at home; 68% are not confident that financial demands will be met; and, 39% will not find it easy to provide emotional support or recognise depression in their wife or partner.

Table 3.18  Responses of fathers across four options for role-defined needs – optimum response shown in bold (N=307)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response options</th>
<th>Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I expect to have time off to be at home.</td>
<td>Not possible</td>
<td>9 (3%)</td>
</tr>
<tr>
<td></td>
<td>A couple of days</td>
<td>33 (11%)</td>
</tr>
<tr>
<td></td>
<td>A week</td>
<td>65 (21%)</td>
</tr>
<tr>
<td></td>
<td>More than a week</td>
<td>198 (64%)</td>
</tr>
<tr>
<td>I will be able to provide financial support for my family.</td>
<td>Yes easily</td>
<td>97 (32%)</td>
</tr>
<tr>
<td></td>
<td>Yes, if nothing too unexpected happens</td>
<td>170 (55%)</td>
</tr>
<tr>
<td></td>
<td>With difficulty but we’ll probably manage</td>
<td>36 (12%)</td>
</tr>
<tr>
<td></td>
<td>Not sure where the money is coming from</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>In my wife/partner needs someone for emotional support.</td>
<td>I will find it easy to support her</td>
<td>148 (48%)</td>
</tr>
<tr>
<td></td>
<td>I will try to support her</td>
<td>144 (47%)</td>
</tr>
<tr>
<td></td>
<td>I will rely on help from friends or relatives</td>
<td>11 (4%)</td>
</tr>
<tr>
<td></td>
<td>I will figure that out after the birth</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>I will be able to tell if my wife/partner becomes depressed.</td>
<td>Definitely</td>
<td>187 (61%)</td>
</tr>
<tr>
<td></td>
<td>Maybe</td>
<td>105 (34%)</td>
</tr>
<tr>
<td></td>
<td>Not sure at this stage</td>
<td>14 (5%)</td>
</tr>
<tr>
<td></td>
<td>Probably not</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>
3.3.7 Research Hypotheses

In this section the possibility of profiling the needs of expectant fathers is tested by examining their responses to the psychosocial questions on the basis of their demographic characteristics (age and socioeconomic status), their public or private hospital use and their degree of distress (EDS score). Four hypotheses examined are:

1. Older expectant fathers (> 32 years) and younger expectant fathers (≤ 32 years) will identify significantly different needs.
2. White-collar fathers and blue-collar fathers (defined by occupation) will identify significantly different needs.
3. Distressed fathers and non-distressed fathers (defined by EDS score) will identify significantly different needs.
4. Fathers in this survey attending a private hospital will identify significantly different needs to those attending the nearby public hospital.

Each hypothesis is first tested using the proportions of each group indicating needs to identify significant differences and the rank order of the most common needs identified are compared. The importance of the significant differences in profiling groups among expectant fathers who may be in particular need is then addressed by calculating the adjusted odds ratios (OR), using logistic regression models, for predicting individual questionnaire item responses from fathers’ characteristics.

**Hypothesis 1: Older expectant fathers (> 32 years) and younger expectant fathers (≤ 32 years) will identify significantly different needs.**

The proportions of older and younger respondents identifying each of the 14 needs are given in Table 3.19. Due to some incomplete answers there are small differences in sample size between the questions. For each need the difference between the proportion of older and younger fathers is given and the p-value for that difference occurring by chance if in fact there is no difference. Applying the Bonferroni adjustment (Sankoh, Huque, & Dubey, 1997) for 14 tests with alpha 0.05 produces a test of significance of less than 0.004. The EDS scores of the two groups are also compared and tested for
significant difference. Table 3.20 lists the most common needs identified for older and younger fathers.

**Table 3.19** Comparison of percentage of older (N=119) and younger (N=188) expectant fathers identifying each need

<table>
<thead>
<tr>
<th>Question</th>
<th>Old% (N=119)</th>
<th>Young% (N=188)</th>
<th>Old-Young</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>31.9</td>
<td>35.1</td>
<td>-3.2</td>
<td>0.56</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>16.8</td>
<td>7.4</td>
<td>9.4</td>
<td>0.02</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>3.4</td>
<td>1.1</td>
<td>2.4</td>
<td>0.21</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>22.7</td>
<td>19.1</td>
<td>3.6</td>
<td>0.66</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>19.3</td>
<td>10.2</td>
<td>9.1</td>
<td>0.03</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>13.8</td>
<td>7.6</td>
<td>6.2</td>
<td>0.07</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>6.8</td>
<td>5.3</td>
<td>1.5</td>
<td>0.62</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>0.9</td>
<td>1.1</td>
<td>-0.2</td>
<td>0.85</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>4.3</td>
<td>2.1</td>
<td>2.2</td>
<td>0.33</td>
</tr>
<tr>
<td>Provide financial (not sure)</td>
<td>0.0</td>
<td>2.5</td>
<td>-2.5</td>
<td>-</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>1.7</td>
<td>0.5</td>
<td>1.2</td>
<td>0.37</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>36.4</td>
<td>41.0</td>
<td>-4.6</td>
<td>0.72</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>54.2</td>
<td>52.1</td>
<td>2.1</td>
<td>0.72</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>7.6</td>
<td>2.7</td>
<td>4.9</td>
<td>0.07</td>
</tr>
</tbody>
</table>

**Table 3.20** Comparison of five most common needs identified by older and younger respondents

<table>
<thead>
<tr>
<th>Need Identified (%)</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand crying baby (54.2)</td>
<td>Understand crying baby (52.1)</td>
<td></td>
</tr>
<tr>
<td>Settle baby (36.4)</td>
<td>Settle baby (41.0)</td>
<td></td>
</tr>
<tr>
<td>Major stressors in 12 months (31.9)</td>
<td>Major stressors in 12 months (35.1)</td>
<td></td>
</tr>
<tr>
<td>Worry if things get messy (22.7)</td>
<td>Worry if things get messy (19.1)</td>
<td></td>
</tr>
<tr>
<td>Treatment for emotional problems (19.3)</td>
<td>Someone to talk to (10.2)</td>
<td></td>
</tr>
</tbody>
</table>
None of the differences in proportions between older and younger fathers are significant. In addition the EDS scores of the two groups (Older 19.8; Younger 12.8) were not significantly different (p=0.11). To identify differences between older and younger fathers across all three responses (yes, maybe/sometimes, no) a Chi-square test was performed for each question with similar results (no significant differences were found; see Appendix 3.7). Also, as can be seen in Table 3.20, four of the five most frequently identified needs of the two groups are the same.

**Hypothesis 2: White-collar fathers and blue-collar fathers (defined by occupation) will identify significantly different needs.**

In this section the percentage of blue-collar and white-collar fathers identifying each need is displayed. Due to some incomplete answers there are small differences in sample size between the questions. The differences in the percentages of blue-collar and white-collar men identifying each need are given in Table 3.21 along with the probability of this difference occurring in the sample by chance if, in fact, there is no difference (p<0.004). Their scores on the EDS are also compared and tested for significant difference. Table 3.22 lists the most common needs identified by white-collar and blue-collar fathers.
### Table 3.21 Comparison of percentage of blue-collar (N=137) and white-collar (N=162) expectant fathers identifying each need

<table>
<thead>
<tr>
<th>Question (response indicating need)</th>
<th>Blue% (N=137)</th>
<th>White% (N=162)</th>
<th>Blue - White</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>28.5</td>
<td>37.7</td>
<td>-9.2</td>
<td>0.09</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>13.0</td>
<td>9.5</td>
<td>-2.5</td>
<td>0.34</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>1.5</td>
<td>2.5</td>
<td>-1.0</td>
<td>0.52</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>24.7</td>
<td>15.3</td>
<td>9.4</td>
<td>0.04</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>11.2</td>
<td>14.0</td>
<td>-2.8</td>
<td>0.18</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>15.4</td>
<td>4.4</td>
<td>11.0</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>1.9</td>
<td>0.0</td>
<td>1.9</td>
<td>0.08</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>1.9</td>
<td>0.0</td>
<td>1.9</td>
<td>0.08</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>3.1</td>
<td>2.2</td>
<td>0.9</td>
<td>0.38</td>
</tr>
<tr>
<td>Provide financial (not sure)</td>
<td>0.6</td>
<td>0.7</td>
<td>-0.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>0.6</td>
<td>1.5</td>
<td>-0.9</td>
<td>0.48</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>37.7</td>
<td>41.9</td>
<td>-4.2</td>
<td>0.45</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>49.4</td>
<td>57.4</td>
<td>-8.0</td>
<td>0.16</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
</tr>
</tbody>
</table>

* < 0.004

### Table 3.22 Comparison of five most common needs identified by blue-collar fathers and white-collar fathers

<table>
<thead>
<tr>
<th>Need Identified (%)</th>
<th>Blue</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand crying baby (49.4)</td>
<td>Understand crying baby (57.4)</td>
<td></td>
</tr>
<tr>
<td>Settle baby (37.7)</td>
<td>Settle baby (41.9)</td>
<td></td>
</tr>
<tr>
<td>Major stressors in 12 months (28.5)</td>
<td>Major stressors in 12 months (37.7)</td>
<td></td>
</tr>
<tr>
<td>Worry if things get out of place (24.7)</td>
<td>Worry if things get out of place (15.3)</td>
<td></td>
</tr>
<tr>
<td>Pregnancy not planned (15.4)</td>
<td>Treatment for emotional problems (14.0)</td>
<td></td>
</tr>
</tbody>
</table>
A significant difference between blue-collar and white-collar fathers is the higher percentage of blue-collar fathers where the pregnancy was not planned (p<0.001). To identify differences between blue-collar and white-collar fathers across all three responses (yes, maybe/sometimes, no), a Chi-square test was performed for each question with similar results except for two areas: pregnancy planning and confidence (see Appendix 3.7). Blue-collar fathers were significantly more likely to have not planned or partly planned the pregnancy (p<0.001) and were significantly less likely to be confident (p<0.001). Although the percentages shown in Table 3.21 to the question about the men’s confidence are small (1.5 and 2.5) the intermediate response to this question, “in some ways” was nominated by 16.8% of white-collar fathers and 34.6% of blue-collar fathers.

There was a significant difference in the responses of the two groups to the EDS: 10.4% of white-collar fathers and 20.0% of blue-collar fathers scored above 6 (p=0.02). For scores above 9 the proportions were 1.5% (white collar) and 8.1% (blue collar) (p<0.001). As reported in Table 3.22, which lists the most commonly indicated needs for each group of fathers, the most common needs were equivalent in four out of five needs, in the highest five needs identified.

**Hypothesis 3: Distressed fathers and non-distressed fathers (defined by EDS score) will identify significantly different needs.**

The proportion of distressed (EDS>6) and non-distressed (EDS≤6) identifying each need is given in Table 3.23. Due to some incomplete answers there are small differences in sample size between the questions. For each need the difference between the proportion of distressed and non-distressed fathers is given and the p-value for that difference occurring by chance if in fact there is no difference. Table 3.24 lists the most common needs identified by distressed and non-distressed fathers.
Table 3.23  Comparison of percentage of distressed (N=47) and non-distressed (N=256) expectant fathers identifying each need

<table>
<thead>
<tr>
<th>Question</th>
<th>Distressed%</th>
<th>Not distressed%</th>
<th>Distressed-Not distressed</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>68.1</td>
<td>28.1</td>
<td>40.0</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>17.0</td>
<td>10.2</td>
<td>6.8</td>
<td>0.24</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>8.5</td>
<td>0.8</td>
<td>7.7</td>
<td>0.06</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>42.6</td>
<td>16.0</td>
<td>26.6</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>32.6</td>
<td>10.6</td>
<td>22.0</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>10.6</td>
<td>11.3</td>
<td>-0.7</td>
<td>0.89</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>8.5</td>
<td>5.5</td>
<td>3.0</td>
<td>0.48</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>0.0</td>
<td>1.2</td>
<td>-1.2</td>
<td>0.08</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>6.4</td>
<td>2.4</td>
<td>4.0</td>
<td>0.27</td>
</tr>
<tr>
<td>Provide financial (difficulty)</td>
<td>4.3</td>
<td>0.4</td>
<td>3.7</td>
<td>0.19</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>2.1</td>
<td>0.8</td>
<td>1.3</td>
<td>0.54</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>31.9</td>
<td>40.6</td>
<td>-8.7</td>
<td>0.24</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>51.1</td>
<td>53.5</td>
<td>-2.4</td>
<td>0.76</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* < 0.004

Table 3.24  Comparison of five most common needs identified by distressed and non-distressed fathers

<table>
<thead>
<tr>
<th>Need Identified (%)</th>
<th>Distressed</th>
<th>Non-distressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in 12 months (68.1)</td>
<td>Understand crying baby (53.5)</td>
<td></td>
</tr>
<tr>
<td>Understand crying baby (51.1)</td>
<td>Settle baby (40.6)</td>
<td></td>
</tr>
<tr>
<td>Worry if things get messy (42.6)</td>
<td>Major stressors in 12 months (28.1)</td>
<td></td>
</tr>
<tr>
<td>Treatment for emotional problems (32.6)</td>
<td>Worry if things get messy (16.0)</td>
<td></td>
</tr>
<tr>
<td>Settle baby (31.9)</td>
<td>Pregnancy not planned (11.3)</td>
<td></td>
</tr>
</tbody>
</table>
Compared to fathers who did not score in the distress range of the EDS distressed fathers were more likely to be lacking in confidence (p<0.001) and worried about untidiness (p<0.001). They were also more likely to have had treatment for an emotional disorder (p<0.001) and stressors in the last 12 months (p<0.001). To identify differences between distressed and non-distressed fathers across all three responses (yes, maybe/sometimes, no) a Chi-square test was performed for each question with similar results except that distressed fathers were significantly less likely to have a confidante (p<0.001; see Appendix 3.7). The differences between the two groups are also reflected in the most common needs identified. Table 3.24 reports the most common needs identified for each group; distressed fathers more frequently indicate personal psychological needs to do with stress and worry than non-distressed fathers.

Hypothesis 4: Fathers in this survey attending a private hospital will identify significantly different needs to those attending the nearby public hospital.

In this section the percentage of public hospital fathers and private hospital fathers identifying each need is displayed. Due to some incomplete answers there are small differences in sample size between the questions. The differences in the percentages of public hospital and private hospital fathers identifying each risk domain are given in Table 3.25 along with the probability of this difference occurring in the sample by chance if, in fact, there is no difference. Their scores on the EDS are also compared and tested for significant difference. Table 3.26 lists the most common needs identified by public hospital and private hospital fathers.
Table 3.25  Comparison of percentage of public hospital fathers (N=152) and private hospital fathers (N=155) identifying each need

<table>
<thead>
<tr>
<th>Question</th>
<th>Public% (N=152)</th>
<th>Private% (N=155)</th>
<th>Public - Private</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>36.2</td>
<td>31.6</td>
<td>4.6</td>
<td>0.40</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>12.5</td>
<td>9.7</td>
<td>2.8</td>
<td>0.43</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>2.6</td>
<td>1.3</td>
<td>1.3</td>
<td>0.40</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>19.7</td>
<td>21.3</td>
<td>-1.6</td>
<td>0.54</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>16.0</td>
<td>11.6</td>
<td>4.6</td>
<td>0.28</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>18.5</td>
<td>4.5</td>
<td>14.0</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>8.7</td>
<td>3.2</td>
<td>5.5</td>
<td>0.05</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>2.0</td>
<td>0.0</td>
<td>2.0</td>
<td>0.08</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>5.3</td>
<td>0.6</td>
<td>4.7</td>
<td>0.02</td>
</tr>
<tr>
<td>Provide financial (difficulty)</td>
<td>1.3</td>
<td>0.6</td>
<td>0.7</td>
<td>0.55</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>0.7</td>
<td>1.3</td>
<td>-0.6</td>
<td>0.57</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>41.1</td>
<td>37.4</td>
<td>3.7</td>
<td>0.51</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>51.0</td>
<td>54.8</td>
<td>-3.8</td>
<td>0.50</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Score &gt; 6 on EDS</td>
<td>16.7</td>
<td>14.4</td>
<td>2.3</td>
<td>0.58</td>
</tr>
</tbody>
</table>

* < 0.004

Table 3.26  Comparison of most common needs identified by public hospital and private hospital fathers

<table>
<thead>
<tr>
<th>Need Identified (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Private</td>
</tr>
<tr>
<td>Understand crying baby (51.0)</td>
</tr>
<tr>
<td>Settle baby (41.1)</td>
</tr>
<tr>
<td>Major stressors in 12 months (36.2)</td>
</tr>
<tr>
<td>Worry if things get messy (19.7)</td>
</tr>
<tr>
<td>Pregnancy not planned (18.5)</td>
</tr>
</tbody>
</table>
Significant difference between fathers of babies delivered in a public hospital and a private hospital were found in planned pregnancy (p<0.001). To identify differences between public hospital and private hospital fathers across all three responses (yes, maybe/sometimes, no), a Chi-square test was performed for each question (see Appendix 3.7). Significant differences were found for three questions: planned pregnancy (p<0.001), confidence (p<0.001) and difficulty with providing financially for the family (p<0.001). There was no significant difference in the EDS scores of the two groups (public hospital 16.7%, private hospital 14.4%, p=0.58). The most common needs identified for the two groups, shown in Table 3.26, were also similar with four of the five needs equivalent in rank order.

3.3.8 Prediction of fathers in need

The likelihood of particular subgroups of fathers identifying specific psychosocial needs was examined by calculating the odds ratio for need identification for older and younger, blue collar and white collar, distressed and non-distressed, and public hospital and private hospital fathers for each of the seven questions which had responses from at least 10% of the sample. Adjusted odds ratios (OR) were obtained via logistic regression models for each of the psychosocial questions separately. The adjusted ORs refer to logistic regression models that contain all four independent predictor variables (i.e. each OR obtained for an independent variable is “adjusted” for by the other three independent variables). Table 3.27 shows the adjusted odds ratios for predicting individual questionnaire items using fathers’ characteristics.
Table 3.27  Adjusted odds ratio (with associated 95% confidence interval) profile for fathers identifying needs in the seven questions with >10% response from entire sample. (N=307)

<table>
<thead>
<tr>
<th>Possible Predictors</th>
<th>Major stressors in the last 12 months (yes)</th>
<th>Someone to talk to (no)</th>
<th>Worry if things get messy (yes)</th>
<th>Pregnancy planned (no)</th>
<th>Treat for emotional problems (yes)</th>
<th>Settle baby down (not sure)</th>
<th>Understand crying baby (not sure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue/White collar</td>
<td>0.85 (0.49, 1.46)</td>
<td>0.734 (0.34, 1.61)</td>
<td>0.65 (0.34, 1.22)</td>
<td>0.33* (0.13, 0.85)</td>
<td>1.72 (0.79, 3.74)</td>
<td>1.21 (0.74, 1.99)</td>
<td>1.37 (0.84, 2.21)</td>
</tr>
<tr>
<td>Public/Private Hospital Care</td>
<td>1.02 (0.60, 1.74)</td>
<td>1.25 (0.58, 2.68)</td>
<td>0.71 (0.38, 1.32)</td>
<td>3.31* (1.34, 8.18)</td>
<td>1.18 (0.55, 2.50)</td>
<td>1.30 (0.80, 2.11)</td>
<td>0.91 (0.57, 1.46)</td>
</tr>
<tr>
<td>Distressed/ Not distressed</td>
<td>1.33* (1.21, 1.47)</td>
<td>1.10 (0.98, 1.23)</td>
<td>1.23* (1.12, 1.35)</td>
<td>0.90 (0.78, 1.04)</td>
<td>1.25* (1.12, 1.40)</td>
<td>0.94 (0.87, 1.03)</td>
<td>1.04 (0.96, 1.12)</td>
</tr>
<tr>
<td>Older/ Younger</td>
<td>0.97 (0.92, 1.02)</td>
<td>1.11* (1.05, 1.12)</td>
<td>1.01 (0.96, 1.07)</td>
<td>0.96 (0.89, 1.03)</td>
<td>1.09* (1.02, 1.15)</td>
<td>0.97 (0.93, 1.06)</td>
<td>0.98 (0.94, 1.03)</td>
</tr>
</tbody>
</table>

* statistically significant (p<0.05)
Selection of three of the items by the fathers was significantly predicted by one characteristic. “Major stressors in the last 12 months” was a 1.33 (95% CI: 1.21, 1.47) times greater need for those fathers who were distressed, compared to fathers who were not distressed; Not having someone to talk to” was 1.11 (95% CI: 1.05,1.12) times greater need for older rather than younger fathers and “Worry if things get messy” was also 1.23 (95% CI: 1.12, 1.35) times more likely to be identified as a need by distressed fathers compared to fathers who were not distressed. Having an unplanned pregnancy was 0.33 (95% CI: 0.13, 0.85) times less likely to be identified as a need by white-collar fathers compared to blue-collar fathers, but 3.31 (95% CI: 1.34, 8.18) times more likely for fathers attending public rather than private hospitals. Having had treatment for emotional problems was 1.25 (95% CI: 1.12, 1.40) times more likely for distressed fathers compared to fathers who were not distressed and 1.09 (95% CI: 1.02, 1.15) times more likely for older rather than younger fathers. For the remaining items, there were no statistically significant characteristics.

3.3.9 Summary: needs of expectant fathers

Of the 14 psychosocial need areas included in the survey, four were indicated by more than 20% of respondents: not being confident to understand babies’ cries; not feeling confident to settle the baby; experience of stress in the last year; and worry about mess. More than one in 10 fathers indicated needs in four or more of the areas and fathers in this sample identified similar levels of need to the mothers in a non-equivalent comparison group for five matching questions. In addition to the needs identified through psychosocial questions 15.5% of the respondents scored above the cut-off on the EDS. These responses, taken together, suggest that fathers, at the time of the birth, have needs in regard to their ability to cope with the stresses of new parenthood and the skills and knowledge to care for their new baby.

Contrary to expectation, there was little difference in the percentages of older and younger fathers identifying psychosocial needs. Similarly, comparing the responses of blue-collar fathers to those from white-collar occupations also did not produce dramatic differences in the majority of needs nominated by the two groups. Blue-collar fathers were
more likely than white-collar fathers to have not planned their pregnancy, less likely to be confident and more likely to score above the cut off on the EDS. Public hospital fathers when compared to private hospital fathers also were more likely to say that their pregnancy was unplanned, to expect to have financial difficulties and were less likely to be confident. In the case of those fathers who were distressed, however, there were consistent differences in the frequency of needs indicated by the two groups. Compared to non-distressed fathers distressed fathers were more than twice as likely to have had stressors in the previous 12 months, more than twice as likely to worry if things get messy and three times more likely to have had treatment for emotional problems. Distressed fathers also indicated significantly more needs in their levels of response to questions about their confidence and their access to a confidante. The multiple regression analysis found that, while some needs were linked to characteristics such as age or distress, the odds ratios were small so that the prediction of the profile of fathers for particular needs is generally weak. In two cases, however, the odds ratios marked a clear association: blue-collar fathers and public hospital fathers were three times more likely than white-collar fathers or those attending private hospitals to have an unplanned pregnancy.

3.3.10 Acceptability of survey questions to fathers

One hundred and three fathers provided a phone number and a “best time” to be interviewed. Twenty-eight could not be contacted (three phone calls unanswered within the time specified by the respondent). The results for the 75 participants who could be interviewed are provided in Table 3.28.
Table 3.28 Participants’ reaction to questions used in the survey (N=75)

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondents agreeing</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did any of the questions bother you?</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Did any of the questions miss the mark?</td>
<td>8</td>
<td>10.7</td>
</tr>
<tr>
<td>Did the questions bring up any issues or concerns for you?</td>
<td>30</td>
<td>40.0</td>
</tr>
<tr>
<td>Is there anything else that we should be asking?</td>
<td>13</td>
<td>17.3</td>
</tr>
<tr>
<td>Do you think that most fathers would answer these questions honestly?</td>
<td>56</td>
<td>74.7</td>
</tr>
<tr>
<td>Do you think that the <em>Who to Contact -Dads List</em> will be useful to you in the future?</td>
<td>60</td>
<td>80.0</td>
</tr>
<tr>
<td>Finally, is there anything you would like to add about the needs of fathers that we haven’t covered in this survey?</td>
<td>13</td>
<td>17.3</td>
</tr>
</tbody>
</table>

* A *Who to Contact -Dads List* leaflet with contact numbers for financial, parenting, counselling and welfare services was included with the survey.

Comments made (and noted) to the seven telephone survey questions were as follows:

Q1. *Did any of the questions bother you?*
None of the respondents indicated that they were “bothered” by the survey questions.

Q2. *Did any of the questions miss the mark?*
Comments were phrased as: optional answers too limited; what is the point of those questions?; sometimes weren’t related to being a dad; more psychological than I thought; "Crying all the time?” a strange question; couldn’t put how I felt.

Q3. *Did the questions bring up any issues or concerns for you?*
Twenty respondents volunteered that they had completed the survey with their wife or partner (discussed the questions with her or showed the questions to her). Other comments included: in a positive way; realisation of what you are going through; one or two did - How well am I doing?; good to raise question of support people “Who do I get?”;
optimistic about role; talked to guys at work; reinforced to be organised; discussed with friend; made me think about things.

**Q4 Is there anything else that we should be asking?**
Suggestions for expanding the questions in the survey were: how does it make you feel being a dad?; possible interaction techniques with the baby; general questions about what you are expecting; open question “What are your needs?”; about dad staying at home to look after baby; it’s masculine to think about emotions; self-harm; more info on support groups; before the birth questions; should have questions for first-time fathers; How much input should I be having?; what am I looking forward to?; practical side of being a father; more info for dads.

**Q5. Do you think that most fathers would answer these questions honestly?**
Comments made were: yes, except for self-harm; no, some guys might not want to let on; no, some would struggle; no, trying to be macho; no, probably not they are paranoid; no, they don't like to talk about that sort of thing; no, don’t want to appear weak; no, don’t like to show weakness; no because harm yourself; no, embarrassed.

**Q6. Do you think that the Who to Contact -Dads List* will be useful to you in the future?**
Most respondents volunteered that they had “filed it with the other information” or “put it on the fridge”.

**Q7. Finally, is there anything you would like to add about the needs of fathers that we haven’t covered in this survey?**
Most fathers had answered this question in Question 4 (see above). Additional comments were: what the mothers are going through; I'm awestruck by the baby coming; after the birth; what responsibilities during/after birth?; needs to be more information directed at fathers; feel like a spare part; issues post birth – What do I do now?; had a nervous breakdown last year.
3.4 Discussion

In this section the adequacy of the sample to represent the views of new fathers is considered. The identified needs of fathers in this sample are discussed using related research from other sources. The nature of the differences between the identified needs of blue- and white-collar fathers, older and younger fathers, distressed and non-distressed fathers and public and private hospital fathers are considered and the use of psychosocial questions to assess expectant fathers’ needs summarised. Recommendations for addressing the needs identified in this survey are given in the conclusion.

3.4.1 Sample characteristics

The study aimed to enlist expectant fathers, those with partners expecting to deliver at hospitals in Newcastle area. From a total of 1,043 distributed forms 307 surveys were returned giving a response rate of 29.4%. Although the response rate was lower than anticipated it is similar to the response rate from other surveys of expectant fathers. (Condon et al., 2004) found that only 34.5% of expectant fathers agreed to participate in his study while in a US postal survey of expectant fathers only 21.3% were returned (out of 300) and only 13.3% were completed (Abramowitz, Schwartz, & Moore, 2003).

It was not possible in the recruitment process for fathers who did not wish to be included in the survey to give a reason, but other recent surveys of expectant fathers have cited “complications of pregnancy”, “dislike of the survey questions” and “lack of time” as reasons for declining to complete survey forms (Condon et al., 2004).

3.4.2 Characteristics of respondents

Respondents provided demographic information on their age, occupation, education, marital status, language spoken at home, employment status, place of birth, expected time to delivery and whether they had previously had children. While the occupational and educational characteristics of fathers in this study are broadly similar to the national figures,
the low response rate to the survey makes it difficult to generalise from this group to all new fathers. Additional limitations on the representative nature of the sample frame were the restriction to the Hunter Valley of NSW, low numbers of fathers from the range of ethnic groups found in Australia and the fact that not all expectant fathers attend antenatal groups.

3.4.3 The needs of expectant fathers

The results reported here support those who conceptualise the transition to parenthood as consisting of numerous challenges; restructuring a sense of self as well as redefining relationships and roles (Barclay & Lupton, 1999; Bryan, 2000; Cowan et al., 1991; Feeney, Hohaus, Noller, & Alexander, 2001). The fathers in this survey identify a number of “needs” in areas where early assistance may improve outcomes for the father, his spouse, the infant or all three. Also, when expectant fathers’ responses are compared to those of expectant mothers on similar questions the similarity in the levels of need is striking. Without suggesting equivalence between fathers’ experience of pregnancy and that of mothers the parallels in identified needs should prompt services to investigate how fathers can be included in the early identification of families where extra support is advised.

3.4.4 Profiling fathers in need

On the evidence from this study the level of need among new fathers is not strongly affected by their age or associated with their employment status or choice of public or private hospital provider. The exception was unplanned pregnancy where substantially higher rates were recorded for blue-collar and public hospital fathers. Since 58.6% of blue-collar fathers and only 35.8% of white-collar fathers attend the public hospital (p<0.01) the overlap between the two groups in their experience of unplanned pregnancy is to be expected, especially since research on mothers has found unplanned pregnancy is associated with lower socioeconomic status (Cubbin et al., 2002). The population variable which did produce major differences in need was distress measured on the EDS. Fathers
scoring above six on this scale were significantly more likely to identify need responses in areas of personal vulnerability and their social support.

### 3.4.5 Stress, social support and depression among fathers

The transition to parenthood is recognised as involving some stress for every parent and so the presence of stress in the period leading up to the birth should not be taken as evidence of pathology. However, the experience of stress is also recognised as leading to mental health disorders in vulnerable individuals. The vulnerability–stress model of the development of major depression links distal factors such as genetic inheritance, personality and adverse early environment to cognitive vulnerabilities (dysfunctional attitudes, negative inferential style, rumination) which, in the face of stressful circumstances, lead to the development of depression (Hankin & Abramson, 2001; Kendler, Gardner, & Prescott, 2006). A number of the psychosocial questions in this survey provide an indication of the presence of these factors among new fathers. As well as being asked about major stressors in the last 12 months, these men were asked if they were confident, if they had a confidante apart from their wife, if they worried about mess and if they had previously received treatment for emotional problems. While these questions are crude indicators of need they do suggest the numbers of expectant fathers who may benefit from referral or assistance. For example, of the fathers who scored above six on the EDS, 68% had experienced stressors in the last 12 months, 17% had no one to talk to (apart from their wife or partner) and 37% had previously been treated for an emotional problem. For these men there would seem to be a strong case for offering further assistance with the possibility of face-to-face counselling, a telephone crisis service, or contact with other fathers undergoing similar difficulties.

The questions asking respondents if they are confident and if they worry about untidiness assess the possibility that the fathers have vulnerabilities due to their personality. In this sample, while only 2% said that they were not confident, one in five fathers (20.5%) said that they worry “if things get messy or out of place”. While both of these results are similar to those for mothers the sizeable number of men indicating that they would be
concerned at “if things get messy or out of place” is unexpected. The literature on household distribution of work, for example, has consistently reported that men not only do less cleaning and tidying than their wives or partners but that they have different perceptions of cleanliness and that they do not see a clean or neat house as part of their identity in the same way that many women do (Baxter, 2000; Gunter & Gunter, 1991; Kerr, Rosero, & Doty, 2005; Robinson & Milkie, 1998; Van Berkel & De Graaf, 1999). To find that expectant fathers would acknowledge perfectionism, worrying about mess or untidiness at comparable levels to pregnant women does not fit with the accepted gendered nature of housework (although the question does not ask specifically about household tidiness, with the arrival of a new baby household tidiness is very likely to be affected). The result is also unexpected since the question on tidiness was incorporated into the IPC to identify those mothers whose way of coping with anxiety focused on keeping their context—as opposed to what is going on in their heads—tidy and under control (the house, the meals etc.). This mode of managing anxiety can interfere with parenting (e.g. the child must be clean, tidy all the time) and there may be an emphasis on cleaning the house, baking biscuits and such like at the expense of spending time playing and interacting with the infant or child (pers comm. B.Barnett 20/5/2005). It seems likely that the context of dealing with messiness will be encountered differently by fathers (who usually return to work soon after the baby’s birth) than by mothers. If the father is anxious about tidiness, there is a need that his perfectionism or attempts to control the home situation will not only diminish his own parenting but also detract from the mother–infant relationship and increase her likelihood of depression. Finally, as a marker of a vulnerable personality, the high number of fathers indicating worry about mess points to the possibility of their being depressed once the added stresses of the new baby are encountered.

The overall picture of fathers’ concerns represented in Table 3.17 as similar to those of mothers suggest that if the vulnerability–stress model is generally correct fathers would be expected to show similar rates of depression to mothers. The recently reported comprehensive analyses of the development of major depression in men and women found that overall the “pattern of need factors and their relationship through developmental time were broadly congruent in the two sexes” (Kendler et al., 2006, p. 121). Yet the rates of
depression among fathers and mothers and men and women generally are well known to be different. Both international and Australian data show female rates of depression as twice the rate for males (Pope, 2000; Weissman et al., 1997) and a similar higher morbidity among mothers compared to fathers is reported in the postpartum period (Pope, 2000). The rates of depression reported for mothers and fathers during the peri-natal period also suggest that women have far higher needs than men. In studies using the EDS, for example, cut-off scores of 12/13 are used to indicate the likely presence of major depression and 9/10 for the likelihood of minor or major depression in mothers postpartum (Fletcher et al., 2006). When these cut-off scores are applied to fathers the percentage found likely to be depressed is small, leading some researchers to conclude that very few fathers have needs (Buist et al., 2002). Other researchers, however, have questioned “narrow focus on ‘male postnatal depression’ extrapolating directly from the methodologies of previous studies of women” (Condon et al., 2004). Barnett et al. (2004) and Matthey et al. (2004), for example, point to the way that EDS cut-off scores have been varied to maximise the applicability of the EDS to mothers in different cultures; while 9/10 is the accepted cut-off for detecting probable depression in Australia, the United States of America and the United Kingdom, in Asian cultures scores of 9/10, 6/7 and 4/5 are recommended. The differences between males and females in their willingness to disclose distressing emotional experiences, it is argued, makes it likely that fathers would score differently to mothers on measures assessing depression and anxiety (Barnett et al., 2004). As well, fathers may suffer anxiety at levels which impair their functioning so the optimal cut-off score for assessing postnatal depression and anxiety among fathers should be reduced to 5/6 (Matthey et al., 2001). Since mothers also may have anxiety as well as depression the lower cut-off points recommended for mothers (7/8) would not eliminate the over representation of women in “caseness” but would identify a larger pool of fathers who may benefit from further assistance.

In this study, the percentage of fathers scoring above the 9/10 cut-off recommended for identifying depression was 5.3%. This is identical to the rate reported by Matthey et al. (2000) in an Australian study of 157 fathers using the Beck Depression Inventory at 20–24 weeks gestation. It is considerably lower, however, than the 12% of fathers scoring above
nine on the EDS reported by Morse, Buist, and Durkin (2000) in their study of Melbourne fathers assessed at 26 weeks gestation, though the Melbourne sample may have included more low-income and ethnically diverse participants than in this study. In this study a cut-off of 6/7 is used on the EDS to discriminate fathers who are likely to be distressed from non-distressed fathers. Using the 6/7 cut-off point 15.5% if fathers in this sample were likely to be suffering from depression and or anxiety.

Concern with the father’s mental health is not based only on his own wellbeing. If a father is impaired in his ability to support his partner and to interact responsively and joyfully with his infant then the wellbeing of the whole family may be jeopardised. Taking into account the advisability of utilising a lower cut-off point for fathers than for mothers to identify possible distress and recognising that male expressions of mood disturbance may appear different to those routinely seen among females, the level of peri-natal mood disorder among fathers suggests a need comparable to, but not identical with, needs identified among mothers. In addition, the level of need suggested by the responses of the fathers in this sample to questions about recent stressors, the availability of a confidante and their level of comfort with untidiness also imply that services should consider assessing and providing assistance to new fathers.

3.4.6 Sleep and crying

For new parents, establishing a routine so that they can confidently and reliably settle their baby to sleep is an important task. There is a wide range of normal infant characteristics and, although most babies have established a Circadian rhythm by four months of age, a large proportion of parents (approximately 30%) have a significant problem settling their infant to sleep (Armstrong et al., 1994). For a percentage of babies wakefulness will be accompanied by excessive crying and estimates of “colic” (excessive crying) among infants in the first months ranges from 10% to 54% depending on the definition used (St James-Roberts & Halil, 1991). Prolonged sleep disruption and the stresses of an unsettled or colicky baby can impair the wellbeing of both parents and may place the mother at increased need of postnatal depression and place the infant at risk of abuse (Armstrong et
al., 1994; Barr, 1990; Day & Lamb, 2003). If mothers are to enjoy the effective support of the fathers of the baby then the men will presumably need to be competent in the care of the baby, including the areas of settling and soothing.

The men participating in the current study were not well prepared for this aspect of their role as a new father. Overall parenting confidence was the most frequent area of need identified: more than half the fathers (52.9%) were not confident that they would be able to interpret the baby’s cries even some of the time, while almost four out of 10 (39.2%) fathers did not expect to be able “to settle my baby down”. Over 60% of the total sample could be at need in one or both of these areas. Unfortunately, the preparedness of the fathers in this sample to support breastfeeding was not well assessed by the question used in the survey. Almost every father in this survey wished his baby to be breastfed, yet recent surveys in Australia show that very few babies are fully breastfed for the recommended six months after birth and father’s attitudes to breastfeeding have been identified as an important determinant of breastfeeding initiation and maintenance (Donath, 2005; Scott & Binns, 1998). The questions used in this survey clearly do not exhaust the possible areas for investigation and may be improved with further investigation.

3.4.7 Risks, wants or needs?

The men’s responses to the settling and crying questions highlight the complexity of deriving service requirements from the views of those in the target population. It has been argued in earlier chapters that fathers’ positive and responsive caring is important for the healthy development of their infant. However, if the father is lacking in experience and preparation for what are recognised to be very common areas of difficulty (such as settling the baby and responding to its cries) then his direct interaction with the infant and his role in co-parenting with the mother are likely to be compromised. The links between the father’s lack of preparation and poorer outcomes for the family, however, have not been researched so that we have little understanding of the mechanisms and cannot quantify the developmental consequences for the infants of unprepared fathers. In this situation it is not clear how best to draw attention to the possible improvements which could be made if
fathers were better prepared. In the IPC interview for mothers, which was the template for the psychosocial assessment questions for fathers, the questions for mothers are grouped into “risk domains”, and if mothers are found to score positively in any of the domains then they are offered further assistance. The IPC questions are not represented as part of a scale with documented psychometric properties but as one element of an assessment process which acknowledges “all levels of risk”. (Barnett et al., 2005). The IPC therefore extends the “risk identifying” process beyond that of validated instruments such as the EDS to include psychosocial questions as part of “good clinical care”.

Extending this process to fathers who lack preparation for their role and labelling the majority as “at risk” may devalue the assessment (if most dads are “at risk” then why bother to assess them at all?) even though using the “risk” label might ensure greater attention to the unmet needs of new fathers (Caruso, 1990). Rather, it would seem prudent to see the expressed lack of confidence in baby care on the part of expectant fathers as evidence for improved antenatal education and information for fathers so that they were better equipped to support and enhance the wellbeing of both the mother and the baby. The identification of “need” should be reserved for those fathers with multiple areas of need identified through the questions in this study although, even in these cases, further exploration of the consequences of identifying fathers in distress during the antenatal period would be advisable. In the case of mothers identified as being at need though the IPC for example, one-third either could not be contacted for follow up or did not want or need any further contact and only 6.7% of the mothers assessed required face-to-face counselling at the IPC clinical team set up to support the IPC process (Barnett et al., 2004).

3.4.8 Father-role questions

The question in the IPC assessment for mothers “Will you be able to get practical support after the birth of your baby?” was interpreted from the father’s perspective as asking about a range of supports that the father could potentially offer. Two of the questions relating to infant care have been discussed above. The remaining four questions in this category were more specifically related to the social role of fathers: taking time off work, providing
financial and emotional support and recognising depression in his wife or partner. Few fathers indicated needs in the most extreme categories of these questions. Only 3% of fathers were unable or unwilling to take time away from work, only 1% could not provide financially or emotionally and no fathers thought that they would be unable to detect depression in the mother if it occurred. However, the intermediate responses to these questions point to a group of families where early intervention and support may well be indicated. For example 33 (11%) of fathers would only be taking “a couple of days” off from work for the birth and another 65 (21%) could only take a week. Similarly, 36 (12%) expected that finances would be “difficult” even though they thought that they “would probably manage” and another 170 (55%) would also manage but “only if nothing too unexpected happens”. Approximately one-third of the fathers in this survey were also uncertain of their ability to recognise depression or to offer emotional support if needed. These responses indicate families where “unexpected” events connected to the birth may pose a serious strain on the mother and the father. Given the rates of emergency caesarean deliveries, postnatal depression, premature births, difficulties with feeding and settling and babies with physical and mental disorders the chances of birth-related difficulty requiring extra resources of time and money seem high. Services whose remit is to support vulnerable families would do well to identify fathers who are likely to be unavailable during much of the day, unsure of how or if to provide emotional support and having only a small margin for meeting extra financial demands.

3.4.9 The question of service use

It should be recognised that the men in this survey were not asked to identify services that they would wish to use so that their responses cannot be taken as a request for assistance. However, as has been documented in the area of men’s health, lack of public clamour for services does not mean that needs are already being met (Fletcher, 2001). The development of health services specifically directed at males (as opposed to generic health services which assumed a male patient) followed from considerable discussion among mainly female health workers linked to epidemiological evidence of poorer outcomes for males compared to females on key health indicators (Fletcher, Higginbotham, & Dobson, 2002).
In the area of parenting, the father’s influence on the health and wellbeing outcomes for infants and children has recently been recognised. Also, in parallel with the development of “men’s health” as a legitimate aspect of service delivery in Australia, father-inclusive services have developed through multiple minor initiatives by service providers initiating small-scale adaptations to antenatal and postnatal services in several regions (University of Newcastle, 2005). These initiatives have occurred in an ad hoc manner without any public demand from fathers. A recently published evaluation of father-specific antenatal preparation classes, however, demonstrated that fathers value the opportunity to focus on their fathering role and find talking to other fathers in an all-male educational context worthwhile (Friedewald, Fletcher, & Fairbairn, 2005).

3.5 Conclusion

On the evidence from the fathers in this survey, new fathers have needs in a number of areas. Some men, through their personality and life experiences, will be at risk of mental illness in the period surrounding the birth. In the interests of their families’ wellbeing early identification and referral should form part of normal, appropriate health care. The use of the EDS as part of routine antenatal care for both mothers and fathers would seem to be indicated.

As well, however, fathers may have concerns or vulnerabilities in areas not covered by questions relating to their mood. Financial troubles, uncertainty about continuing with the pregnancy and lack of time away from work may increase the likelihood of marital conflict or impair the development of satisfying and healthy relationships between a father and his infant or partner or both. Compounding the effect of these stresses, the reliance on his partner as someone to talk over any difficulties may leave fathers isolated or place an additional strain on an already taxed new mother.

An early intervention strategy using psychosocial questions would seek to recognise and address potential problems before they become manifest as dysfunctional behaviours or relationships. The fathers who responded by telephone in this survey had no difficulty with
the questions posed and, where the questions did raise issues, they were commonly discussed with their wife or partner and described uniformly in positive terms (e.g. “made me think about things”). Not all the needs identified by the fathers in this survey point to group or individual forms of counselling and support. The lack of confidence among fathers in their ability to settle the new baby or understand its cries may be able to be effectively addressed by the provision of education through the expansion of existing antenatal classes or through a variety of media channels and in formats not restricted to “chalk and talk”. The survey utilised in this study could be improved with further testing to incorporate areas identified in the initial discussion, such as domestic violence and alcohol abuse, which are important determinants of family wellbeing. The psychosocial questions could also be refined and validated against behavioural outcomes such as father-infant attachment and care.
CHAPTER 4 PROVIDING SUPPORT TO NEW FATHERS

4.0 Introduction

In previous chapters it was argued that attachment theory was suitable for appraising fathers’ role in child development and that the connection between fathers and their infants is an important factor in their healthy development. A father’s own wellbeing, and his support for the mother, were also identified as important aspects of fathers’ role. A range of potentially detrimental psychosocial factors were assessed in men approaching fatherhood and the provision of information and support to new fathers was recommended. However, it was also acknowledged that fathers were unlikely to be in frequent face-to-face contact with health staff and that novel channels for the delivery of support to new fathers would need to be developed. This chapter first examines the nature of access to web-based information for new fathers in the light of research into interactive health communication. Then, using examples from existing websites, a set of guidelines are proposed for designing and evaluating web-based information and support for new fathers. In Chapter 5, a set of materials based on the guidelines are included in a randomised control trial of the effect of support on father–infant attachment.

4.1 Barriers for fathers to access information and support

A number of barriers prevent the straightforward delivery of services to address the needs of new fathers. The psychosocial nature of the problems experienced mean that fathers may not recognise their own needs, may fail to seek help or may be unaware that help is available. The lack of explicit demand for services from new fathers and the widely recognised external constraints on fathers’ involvement, such as work commitments, diminish the pressure on services to investigate avenues to support new fathers; hence,
there is little “practice wisdom” or research evidence to guide service development. In addition, the well-established pattern of mother-focused service delivery surrounding birth creates a significant obstacle to recognising fathers as a legitimate consumer group.

4.1.1 Barriers for fathers: internal constraints

Qualitative studies using convenience samples in the United States of America and the United Kingdom have documented men’s feelings of frustration, helplessness, anxiety, discomfort and nervousness in the context of antenatal classes and their resentment at their feelings being ignored at the birth (Chapman, 2000; Henderson & Brouse, 1991; Jordan, 1990; Nichols, 1993; Notaro & Volling, 1999; Smith, 1999). Australian research has also shown that new fathers are often unprepared for the relationship changes occasioned by the birth, and that they are unaware of services available to assist families (Fletcher et al., 2002). Yet, when expectant fathers were surveyed prior to the birth, they reported that they felt “more confident about their role as a support person in labour, better prepared for the changes in lifestyle after the birth and that they had opportunities to talk about issues that were important to them” (Galloway, Svensson, & Clune, 1997, p. 38). Fathers rate their support from hospital staff as excellent (Chalmers, 1995) and when a large representative sample (n=1,000) of Australian fathers were asked to identify their needs the most common responses were “don’t know” (16%) and “nothing needed” (14%); only 3% identified a need for more assistance from services (Russell et al., 1999).

The discrepancy between an identified need and demand for assistance has been a feature of research into the use of mental health services; an area where fathers clearly have unmet needs (Fletcher et al., 2006). Mujitabai et al. (2002) examined the use of mental health services by those with mood, anxiety or substance abuse disorders. The researchers listed a variety of reasons for those experiencing symptoms not to seek professional help, finding that they:

… do not think they need treatment as they believe the symptoms are temporary or not serious. Alternatively, individuals may not perceive a need because they do not recognise
their problem as a mental health problem, do not know that appropriate help is available believe that treatment will not help, do not find services accessible or are embarrassed about seeking help” (Mujitabai et al., p. 78).

Rather than conceptualising help-seeking as an individual, singular decision, researchers in the mental health area describe “help-seeking pathways” involving multiple social interactions to identify and assess the psychosocial need and multiple decision points leading to engagement with services and treatment (Aoun et al., 1998; Rogler & Cortes, 2003).

Many of the reasons suggested to explain why individuals do not seek help from mental health services may be applied to those fathers who are finding the birth and early parenting processes stressful, who are lacking confidence in their ability to be a “good father” to their new baby, or who are suffering from anxiety and unstable moods but do not request assistance from services. Fathers may not seek help because they (correctly) believe that their infant’s crying or unsettled behaviour will probably subside over time and so may expect that their own symptoms will be temporary. The widespread knowledge that lack of sleep and consequent disruption of exercise patterns and relationships are to be expected with new babies may also make the recognition of mental health problems by fathers less likely. Fathers’ perception of the risk of embarrassment might be another factor, deterring them from seeking help from services or preventing the discussion of help for mental health problems within their social networks.

While there is little research explicitly focused on fathers’ uptake of mental health services the influence of gender on health service utilisation has been investigated with particular reference to depression in men. Several studies of adult male populations in the United States have found that males are more reluctant than females to seek help for psychological problems, even when the level of psychological distress is comparable (Addis & Mahalik, 2003). This finding was echoed in the results of a use survey among general practitioners conducted in Western Australian (Aoun et al., 1998). One factor adduced to explain men’s reluctance to seek help is the socialisation of males from an early
age to avoid emotional expression and to seek to be in control. Self-report scales to measure the degree of role conflict between an idealised, socially prescribed set of behaviours and those preferred by men have been developed (Addis & Mahalik, 2003; Levant et al., 2006; O'Neil, Helms, Gable, David, & Wrightsman, 1986). High scoring on these scales, associated with “traditional” or “normative” male values have been linked to avoidance in seeking help for psychological distress (Addis & Mahalik, 2003; Bayer & Peay, 1997).

4.1.2 Barriers for fathers: opportunity constraints

In contrast to mothers, who of necessity attend antenatal and postnatal services, fathers’ attendance at pregnancy services is optional. Fathers do not need to have health professionals assess their weight, blood pressure and so on, and so do not need to attend clinics for procedures or consultations. As a result, a major obstacle to engagement with fathers is the lack of regular contact with health services. Although there are no published statistics of fathers’ attendance at peri-natal health visits, men are less likely than women to visit general practitioners during the primary parenting years (20–45) and are less likely to contact telephone health services for information and support (Bayram, Britt, Kelly, & Valenti, 2003; Gibbs & Reidpath, 2005).

Fathers also face considerable time pressure. As part of a general increase in working hours since the 1970s many current fathers of new babies will be working long hours; almost 50% of men working more than 60 hours per week have children under four years of age (Weston, Gray, Qu, & Stanton, 2004). Fathers in Russell et al.’s (1999) survey most frequently cited lack of time and the competing demands of work as a barrier to becoming involved with their children. As fathers take their paternity leave (or annual or sick leave) when the baby is born or immediately afterwards, their ability to attend antenatal appointments during working hours is restricted. However, the lack of time is, to some extent, a subjective judgement influenced by the father’s perception of the importance of the activity concerned (Brannen, 2005). For example, the prediction of a father’s involvement with children from the father’s workplace demands—such as the number of hours worked—is relatively weak (Russell & Hwang, 2004) and the experience of father-
involvement programs is that once the fathers see the point of the activity then ways to manage work demands are often found (Fletcher, 2004).

4.1.3 Barriers for fathers: service constraints

Fathers are not considered central to the health services’ support of new families, as demonstrated by the designation of peri-natal services as “maternity” or “maternal” services. “Fathers” as a group are not recognised as having a fundamental link to their infant but instead are deemed to be part of the mother’s family or part of her support system (McCreight, 2004; NSW Health Department, 2000; Victorian Department of Human Services, 1999). From the time that the pregnancy is confirmed the mother becomes the client of the health service and her pregnancy becomes the focus of visits with her general practitioner or to the hospital antenatal clinic. Hospital data collections may not record the father’s name, and the materials given to mothers during her hospital stay may not even mention fathers, referring instead to mothers and their “support person” (Fletcher, 2001). Analysis of popular commercial childrearing information in North America found that fathers were rarely mentioned, and when they were their role was depicted as predominantly ancillary to mothers and voluntary (Fleming & Tobin, 2005). A recently completed review of parents’ information needs in Australia found that peri-natal parenting information is usually directed explicitly to mothers and that there is widespread recognition among service providers that the father’s role is considered an “add on” and insufficiently addressed (Australian Government, 2004).

Evidence from a wide range of studies suggests the attributes of staff and the design of services may inhibit a father’s participation. A literature review conducted as part of a research report for Families First NSW on fathers’ access to family services identified 13 barriers to fathers’ participation (Fletcher, 2001). Although the attitudes of fathers and mothers were included as possible barriers several characteristics of health service staff were also nominated as problematic. The attitudes to fathers of health professionals and educators, their lack of skills to engage with men, and the lack of appropriate models of male service delivery were identified as hindering fathers’ involvement. A paucity of
appropriate information and resource materials targeting fathers and service providers’ lack of knowledge about men were also noted (Fletcher et al 2001). The lack of knowledge about men may derive, in part, from the gendered nature of the workforce in health and family services. Although there is no evidence that male clinicians provide better care to males, the need for nursing staff to represent the diversity of the clients being serviced—including male clients—is recognised in the nursing literature (Wenzel & Utz, 2002). In Australia fathers are unlikely to encounter males in any of the frontline areas of midwifery, paediatric nursing, or among nurses making home visits in the weeks after the birth. Of the 13,865 people employed as midwives, 99% are female; of 4,548 paediatric nurses 97% are female; and 99% of the 3,067 Child and Family Health Nurses also are female. (Australian Bureau of Statistics, 2003; Australian Institute of Health and Welfare, 2002).

The way that these factors might interact to marginalise fathers was recently described as part of an invited contribution to the Medical Journal of Australia’s special issue on men’s health:

When Michelle and Anthony attend Michelle’s GP after the positive pregnancy test Anthony expresses his support but asks few questions. When asked about the couple’s intentions for pregnancy care Anthony’s quick glance toward Michelle flags his uncertainty. For the next visits Michelle attends the clinic alone. Anthony does participate in the ultrasound consultation and he joins in when asked during the antenatal classes but he accepts that the emphasis throughout is appropriately on the mother and a successful birth. During the birth he wonders if he is in the way and is grateful in the end to have a healthy mother and baby. Post-birth, when the home-visiting nurse arrives, Anthony goes to make coffee and misses most of the discussion. His return to work precludes him attending the check-ups for mother and baby at the doctors.

Anthony’s minimal role with health professionals is mirrored at home and in social settings. Michelle reads the books, brochures and magazines and tells Anthony about popular names, baby development, and the dangers of SIDS. Anthony is affectionately ribbed by workmates about sleep deprivation and nappy changing and although one of his mates has just become a father Anthony has little chance to learn about the business of fathering. Social time with the new baby is dominated by eager mothers or girlfriends and there are
few opportunities for Anthony to try out “holding a new baby” without drawing attention to himself. (Fletcher et al., 2006, p. 461).

The internal and external constraints on new fathers seeking and receiving assistance make it unlikely that services built around mothers’ frequent face-to-face contact with health practitioners will be successfully adapted to support new fathers. Other styles of service delivery must be found which can overcome the barriers identified above. Designing effective support, however, will require a clear idea of new fathers’ needs. The areas identified through the anonymous survey reported in Chapter 3 will require refining to provide sufficient guidance in preparing information. Channels to reach new fathers with information and support will also have to be specified. One development which may help deliver assistance to fathers is the recent exponential growth in the use of the internet and electronic mail to supply health information and to connect dispersed populations with centralised services (Fergusson & Frydman, 2004). In the next section the issue of fathers’ needs is revisited to provide a more detailed framework for formulating information and support, and the research on web-based support for chronic diseases is examined to identify possible channels of support for new fathers.

4.2 Designing a web-based information and support service for new fathers

The first step in developing an information and support system for new fathers is to clarify the needs that are to be addressed. In previous chapters the fostering of father–infant connection was identified as an appropriate goal for health services, and needs were identified among expectant fathers in three main areas: mental health, role-specific areas (such as financial support and time away from work) and ability to care for the new infant. How best to provide appropriate support to meet these needs, however, is far from obvious. Two fields are explored to clarify the types of information and support which may be useful for new fathers: the health of babies, and the questions posed by fathers on a new-fathers’ website.
4.2.1 What type of information do new fathers need?

Important areas of concern for fathers can be identified through research into infant health. Conditions affecting babies’ mental and physical progress will naturally require fathers to face particular difficulties (Chesler & Parry, 2001) but even normal development presents significant challenges to many new families. Infants vary widely in their progress toward self-regulation and, although most babies have established a Circadian rhythm by four months of age, a large proportion of parents (approximately 30%) have a significant problem settling their infant to sleep (Armstrong et al., 1994). For a percentage of babies, wakefulness will be accompanied by distress and estimates of “colic” (excessive crying) among infants in the first months ranges from 10% to 54% (St James-Roberts & Halil, 1991). Prolonged sleep disruption and the stresses of an unsettled or colicky baby can impair the wellbeing of mothers and fathers (Lam, Hiscock, & Wake, 2003). Fathers’ own mental health may suffer in the postpartum period, but a more common scenario is where the father is affected by the postpartum depression of his partner. Studies from a variety of regions suggest between 10% and 20% of new mothers will suffer from depression. A considerable number of fathers will therefore face the issues of supporting a distressed mother while managing the new baby’s needs (Armstrong et al., 1994; Milgrom, Martin, & Negri, 1999). Additional issues for fathers identified in the literature on family formation include: bonding with the new baby; resuming the sexual relationship after the birth; supporting mother’s initiation and maintenance of breastfeeding; and managing their return to work (Lamb & Tamis-Lamonda, 2004). The range of concerns for fathers also includes the traditional role of provider, since at the time of the birth the mother’s income may be reduced and her ability to carry out physical tasks can be severely impaired.

How fathers might express their needs is difficult to determine as there have been no studies reported in the literature that have examined the nature of fathers’ queries to, for example, infant health services. There are, however, questions posted on existing websites that give an indication of the way that fathers might frame their wishes for information. These requests for information from individual fathers provide concrete examples of the important dimensions of the role demands of new fathers: knowing about infant
development and needs; understanding what their partner is experiencing and being able to assist her; evaluating health advice and information; being able to form a secure attachment with the infant; and taking care of his own health. Consider the situation of a new father who recently emailed this item to a website bulletin board:

It's been a while since I've posted, but we are now enjoying a nearly 3 week old little boy named Matthew. He has had quite a few ups and downs... He's doing fine and gaining a whole bunch of weight, has already surpassed his birth-weight, etc., but my wife's milk hasn't come in. We're working with the paediatrician and a lactation consultant (by the way, have any of you ever felt caught between two different philosophies, i.e. breast vs. bottle and nipple confusion, we have) My wife is trying herbs, something called, Mother's Milk Plus, and has a prescription drug called Reglan, to help increase production. My question is this...I've heard that it can also be the woman's stress level, attitude, and overall confidence level that can help boost milk production. After a scary delivery, and all this other stuff happening, I'm trying to get my wife to focus on the positive, but I'm finding it difficult. Any suggestions? (Brandnewdads, 2006)

This comment suggests that this father is seeking help with successful breastfeeding but he also appears to be wondering about his wife’s mental health and how best to support her. Although he clearly has expert advice available from health professionals his dilemma is not exclusively a health issue but one which relates to his role as father of the baby and husband to his wife. As the mother is usually the one with knowledge of daily care of new babies, in situations where the ill-health of the baby is not quickly resolved fathers can be left wondering whether to rely on the mother’s knowledge or to seek information and decide for themselves how best to act, while maintaining support for the mother. Another father on the same website put his request in this way:

My daughter has some serious rash down below and most people say use baby powder... but my wife is concerned about the powder getting inside and causing cysts.. is this true? Other than creams and ointments, is there any other way to treat the diaper rash? … Any advice would be appreciated (Brandnewdads, 2006)
While this father is seeking help with a nappy (diaper) rash, a relatively common health care issue for infants, he also seems to be seeking help in assessing whether baby powder can cause cysts. While he may have the greatest respect for his wife’s knowledge of baby care it does not appear that he is convinced that her worry is justified.

Finally, fathers may also have needs in relation to their infant apart from the need to support their partner:

I'm just coming back from being over in Iraq and my daughter who is only 6 and a half months old doesn't stop crying when ever I hold her. The moment my wife is out of her sight she starts crying and the longer I'm holding her the worse she gets. My upstairs neighbors said it sounds like some one is trying to kill her. I don't know what to do I've tried holding her and letting her cry until she stops, but like I said her crying just gets worse. I want for us to re-bond so bad that every time she cries I cry. If any of you guys can give me any advice I'm more then happy to take it. (Brandnewdads, 2006)

These personal requests illustrate the range of concerns that can be incorporated within the role of a new father. Within their questions are evident both the need for information on infant health and development, and requests for advice from other fathers in similar circumstances or with experience in similar situations. Fathers are not simply seeking information; as Mayes, Swain & Leckman (2005) comment “the advent of a new infant involves an adjustment in the parents’ hedonic [source of pleasure] homeostasis as they establish lasting reciprocal bonds and make room in their inner lives for a new family member” (p. 304). The combination of medical or health queries with social and interpersonal questions is a central feature of the situation of new fathers.

This has important implications for where support for fathers might realistically be located. Websites that are explicitly promoted as “for fathers” typically address the father in his role with children in middle childhood and the teenage years; that is, at a time when health issues and direct care are much reduced from infancy. But fathers with infants are faced with many situations where health and developmental knowledge is required. To address new fathers’ need for information will require linking medical expertise with the
more social knowledge of fathers’ roles. Websites aiming to effectively support new fathers will need to address infant health issues with attention to evidence that applies to general medical and health websites while reflecting the unique features of the new father’s role in the family setting.

4.2.2 New fatherhood as a chronic disease

Becoming a father for the first time can be likened to discovering that one has a chronic illness. The “condition” of new fatherhood requires adapting to new limitations and tasks never before encountered. It is almost certain to be long term, it impairs physical stamina and it inevitably entails a large emotional component, including anxiety, elation, relief and frustration. Like those with chronic disease, new fathers have multiple needs, including needs for information, social support, support with making decisions and help with adopting desired behaviours (Gustafson, 1999). Of course, there are major differences between fathers and those with chronic diseases: fatherhood is, in most cases, a voluntary condition and recognised as bringing great personal satisfaction and community recognition and—although there may be health risks involved—fatherhood is not a disease. Another important difference between fathers with their first baby and those with an ongoing illness is the way in which their needs are recognised by health services. Assisting sufferers of chronic illness is accepted as a basic function of health practitioners, and chronic illness constitutes a major item in national and state budgets for health services (Infante et al., 2004; Mathers et al., 1999). Meeting the needs of new fathers has only recently been raised as a concern of health services and, to date, specific funding for this area has not been included in national or state budgets (but see (HM Treasury & Department for Education and Skills, 2007).

A feature of recent efforts to improve the health of those with chronic disease has been the use of internet and computer-assisted communication to deliver a complex mix of educational services including information, social support, skills training, and decision or planning tools to specific individuals (Gustafson, 1999). These technologies can offer professional expertise to multiple receivers, while allowing the content to be tailored to
individual needs. Information can be accessed as required and considered when convenient. Individuals can also ask questions of professionals and seek support to help them deal with their emotional responses in a way that minimises the risk of embarrassment. Links to others facing similar difficulties can be formed without geographic or timetabling restrictions. The possible benefits of Interactive Health Communication Applications (IHCAs) have been widely recognised and large investments have been made in their development in western industrialised nations (Murray, Burns, See Tai, Lai, & Nazareth, 2005). A recent Cochrane review (systematic reviews of available evidence coordinated by the Cochrane Collaboration) assessing the effects of IHCAs for people with chronic disease found that the provision of information and support through multimodal systems improved users’ knowledge, social support, health behaviours and clinical outcomes. The review proposed a pathway of change, based on the existing psychological research on health behaviour change and the investigations of disease-specific programs to support those with ongoing health needs. The review suggested that:

IHCAs act by combining information with additional services (peer support, decision support or behaviour-change support) to allow internalisation and interpretation of the information by the user. This leads to changes in knowledge, motivation for improved health or health behaviours, affective parameters and self-efficacy (Murray et al., 2005, p. 5).

The emphasis on linking health advice with social support has relevance to fathers who, as described above, lack information on infant development through pregnancy and infancy and have little access to professional or peer support (Fletcher, 2004; Friedewald et al., 2005). As time pressure is frequently cited by fathers as a barrier to involvement and fathers, on average, return to work soon after the birth the supply of information and support without the need for face-to-face contact would seem a promising strategy (Bittman, 2004; Russell et al., 1999). The use of internet and computer-assisted communication also fits with the evidence that males make more frequent use of the internet and use it for seeking information more than females (Shaw & Gant, 2002). The range of possible support that could be offered through electronic media is suggested by the
following list of elements developed for a computer-based service to support those with HIV infection in their homes.

- **Questions & Answers**: short answers to commonly asked questions about HIV infection, treatments, and life with HIV.

- **Instant Library**: includes full-text articles covering a broad range of topics drawn from scientific journals, newsletters, and the popular press.

- **Getting Help/Support**: contains descriptions of approximately 300 relevant health services, ways to find a provider, and how to be an effective consumer.

- **Referral Directory**: has descriptions and ways to contact a set of national services that offer information, support, and referrals of value on the health problem.

- **Assessment**: asks questions about a person’s lifestyle, assesses the risk, and offers specific advice on how he/she can reduce his/her risks.

- **Decision Aids**: helps patients think through difficult decisions. Users learn about the options, clarify their values, the consequences of their actions, and the misconceptions they have.

- **Action Plan**: helps users plan how to successfully implement decisions. They identify goals and resources, and learn how to overcome obstacles.

- **Discussion Groups**: are facilitated online support groups allowing patients and families with similar problems to share information and support.
• **Ask an Expert**: allows patients to write a question and receive confidential responses from experts. Experts can depersonalize the response and place it on *Open Expert* for other users to see.

• **Personal Stories**: are real-life accounts of people with similar problems, living and coping with their illness. (Gustafson, 1999, p. 2)

For some elements in the above list, designing parallel services for fathers would seem to be straightforward: personal stories from fathers who had recently experienced a birth would have obvious benefit for inexperienced fathers, and discussion groups for new fathers would fulfil a similar role to the HIV discussion groups for patients (sharing information with others in a comparable situation and deriving support from knowing that other fathers face similar difficulties and recognise similar successes, thus reducing the possible sense of isolation). Fathers’ self-assessment has been described in the previous chapter; however, the provision of specific advice on how to reduce risks might require considerable development. Referral to telephone counselling for men or to general help lines for parents is possible at present in the Australian context. Whether these services are sufficiently attuned to new fathers’ concerns is discussed further in the following sections.

Other areas, such as “Ask an Expert”, do not readily translate to new fatherhood. Men becoming fathers for the first time enter into a dual role: as a parent in need of information and support in caring for their infant; and as a father looking for information and support as the adult male component of a triangular family unit. Elements such as “Ask an Expert” suggest an expert in baby care such as a midwife, paediatrician or Early Childhood Nurse—someone who could supply professional advice on infant health topics such as settling, feeding and common illnesses. But the “expert” advice being sought might also be linked directly to the father’s role: How seriously do I take my wife’s concern about her adequacy as a mother? Should I ask my mother to come to help? How important is it for me to bond with the baby? Should I try for more time away from work? Does the father have a role in settling the baby? For these queries or concerns an “expert’s” qualifications might prove difficult to establish. Although medically qualified practitioners are highly regarded by parents and sought out by many as experts on general lifestyle issues, these “fathering”
questions might not be appropriate to address to medical practitioners but rather to someone with an appreciation and wisdom related to the specific situation of fathers.

While the provision of information and support for fathers via the internet seems to offer an avenue for avoiding some of the barriers to father engagement the issue of fathers’ access remains. The lack of established “help-seeking pathways” for new fathers is part of a general problem of human services being “invisible” to fathers and fathers being “invisible” to services. In the case of fathers’ uptake of parental leave, for example, the Nordic experience indicates that simply offering fathers remuneration to spend time with their infant does little to change fathers’ behaviour. Strenuous efforts must be made to publicise the paternal leave entitlements that are available, and modelling by fathers taking advantage of father-friendly provisions is an important factor in their uptake (Bittman, 2004; Lloyd et al., 2003). In the case of web-based information it cannot be assumed, for example, that as men make frequent use of the internet they will access parenting information and advice there. A recent study of a popular Swedish website promoted as a “neutral” parenting website for mothers and fathers found that 84% of users were female (Sarkadi & Bremberg, 2004). The existence of websites declaring themselves as specifically “for fathers” does suggest that there is some interest in web-based “fathering” information and some existing “fathering” websites show evidence of the elements in Gustafson et al.’s list. However, no published evaluations of their utility or benefit to fathers could be located (Morris, Dollahite, & Hawkins, 1999). The only example of multimodal support for fathers located in the research literature was a report of a pilot study offering fathers email and internet support for two months following the birth of their baby (Hudson, Campbell-Grossman, Fleck, Elek, & Shipman, 2003). Fathers involved in an intervention group were offered web-based information, an email group with other fathers and access to an advanced practice nurse to answer questions via email. After one month these fathers showed significantly greater change in self-efficacy and satisfaction than did a comparison group. The study results, although promising, were limited by the small sample size (14 in the intervention group) and by the use of a comparison rather than a control group. The new electronic communication technologies offer the possibility of meeting fathers’ support needs without the wholesale restructuring of a major portion of hospital and health care
system. The technologies do not, however, automatically create a help-seeking pathway, nor do they remove the difficulty of discovering what information men find most useful in their transition to fatherhood.

4.2.3 Web-based information and support for new fathers

Web pages providing parents with information and support have expanded rapidly along with the spread of home-based access to the internet (Larkin, 1998); however, there has been little interest in researching their effectiveness or utility. Formative evaluations of “parenting” websites (eliciting feedback almost exclusively from mothers) or of “fathering” websites have been limited by extremely low response rates, some as low as 4% of those accessing a site (Cook, Rule, & Mariger, 2003; Grant, Hawkins, & Dollahite, 2001). The evaluation of the Swedish parenting website reported above (Sarkadi & Bremberg, 2004) was unable to report on the overall response rate, but the finding that only 3.3% of 2,221 participants in the study were fathers accords with evidence from parenting classes and other infant-directed services that mothers are more likely to participate in parent education and to seek parenting information than fathers (Fletcher, 2004). Qualitative investigations of electronic discussion groups for mothers have identified emotional, instrumental and community support as benefits (Drentea & Moren-Cross, 2005; Nystrom & Ohrling, 2006; O'Connor & Madge, 2004). A qualitative investigation of fathering websites (by Morris et al., 1999) selected six websites to represent three approaches to supporting fathers. Websites characterised as “instrumental/technical” aimed to teach skills or provide information based on expert knowledge; “interpretive” sites utilise stories from fathers and accounts of their experiences to build knowledge and support; while “critical-emancipatory” sites encourage fathers to critique the cultural context of parenting. In the case of fathering this means encouraging fathers to change the laws and regulations affecting (separated) fathers’ access to children. There is some parallel in the categories used by Morris with the features of support listed by Gustafson. Instrumental/technical sites provide information (Q&A and library notions), albeit without the recognition of an “expert” in fathering as discussed previously. And “interpretive” sites using stories from fathers match Gustafson’s “real-life accounts of people with similar problems”. The third
category, “critical-emancipatory”, indicating advocacy for social change, has no equivalent in the list for chronic illness. However, Morris does not attempt to establish the prevalence of each type of site but notes that the categorisation is not meant to be exclusive and for the accessibility of information and support for fathers. As with those for chronic illness, it is better if the range of services is provided through the one site or set of sites to reduce fathers’ possible confusion and frustration.

4.2.4 Assessing web-based support for new fathers

There are a number of aspects to be considered in evaluating the support currently available to fathers via the internet. The first is the range of web pages that can be accessed by fathers. As government departments, non-government organisations and private companies and individuals are interested in supplying information to new parents, and as web pages can be accessed by fathers with a suitably equipped computer anywhere in the world, there is an enormous variety of websites available which may or may not contain useful information for fathers. Deciding between possible sources or locating appropriate information and support is a daunting task. Although it is usual for computers to include web search capability as standard, search engines cannot guarantee that the information retrieved will be appropriate or useful.

The evaluation of websites containing health information has been a major concern of health authorities, medical providers and researchers, and a variety of general schemas and guides for identifying misleading or inadequate sites have been proposed (Bernstam, Shelton, Walji, & Meric-Bernstam, 2005; Charnock, Shepperd, Needham, & Gann, 1999; Wyatt, 1997) As a result a number of attempts have been made to develop guidelines, protocols or web portals to assist health professionals and consumers of health care to evaluate internet sites. Arising from an international conference in Geneva in 1995 the HONcode (Health On the Net code) accreditation system provides an internationally recognised seal of approval for health websites so that websites can apply to be assessed and approved by the HONcode organisation. Operating mainly in developed countries, HONcode has over 5,000 certified medical sites in 72 countries (HONcode, 2006). The
DISCERN model developed for the British Library aims to assist professionals and consumers evaluate health web information by providing a set of 16 questions to guide individuals through an assessment of a web document’s reliability, balance and standard of information on treatment choices (University of Oxford, 1996).

At a broader level a number of governments and health organisations have developed health information portals where viewers can find health websites which have been previously vetted by experts in various health disciplines (Charnock et al., 1999). However, while there is general agreement that health websites should certify the credentials of contributors and indicate the currency of the information, these general measures do not, of themselves, answer questions about relevance or quality (Jadad, 1998). For example, within the fields of cancer, mental health and child health researchers assessing websites have used clinical guidelines, literature reviews and textbooks to identify key messages or facts about a particular condition or treatment (Griffiths, Tang, Hawking, & Christensen, 2005; Impicciatore, Pandolfini, Casella, & Bonati, 1997). Web pages have then been evaluated by how many of the correct facts they contain or by how factually balanced the messages are within the page. Not surprisingly, these reviews have concluded that the health information available via the internet is of variable quality.

Demonstrating the fallibility of some websites, however, does not resolve the problem of assessing the vast array of material available nor the problem of how quickly new material is added to the web (McMillan, 2000). In an effort to manage the ongoing nature of quality evaluation researchers have turned to computer analysis of web pages to automatically register the occurrence of important terms or facts. Lexicon-based systems are able to score sentences in a document according to the number of matching words with a set of key terms, while “semantic-similarity” programs compare the meaning of a sentence or phrase with a core set of meanings gleaned from a representative set of documents. Both systems have recently been employed in studies trialling automatic evaluation of health care information (Griffiths et al., 2005; Peck, Suresh, Blackmon, & Dragomir, 2004). A second strategy to provide ongoing assessment of web content has been the development of checklists which can be used by consumers to evaluate new materials without professional assistance. In an evaluation of the DISCERN health
evaluation instrument (a set of 16 questions to evaluate health information) Griffiths et al. (2005) found that the scores by consumers without specific mental health training matched those by health professionals using evidence-based guidelines when assessing information on depression. However, the time required to train individuals in the use of the instrument made it unlikely that consumers would use DISCERN to evaluate health information. Instead, the authors proposed that consumer organisations could invest the time necessary to use DISCERN on behalf of others providing a method for developing portals to guide consumers without the resource costs of ongoing professional evaluation. In the same study the “page rank” score provided automatically when searching with the Google search engine was also found to be an adequate judge of quality. This avenue of quality evaluation is taken up in the final searches in the section below.

In the following sections the questions that might be used by fathers are considered and the range of information and support needs that they might identify are described. A consideration of fathers’ questions highlights the importance of assessing father-related content when evaluating websites for new fathers. The issue of father-relatedness is explored in the discussion of the quality of father-linked web pages using the notion of “tailoring” borrowed from the health promotion literature. Following a brief description of the process for searching for information on the internet the results from a series of searches are presented. The questions guiding the searches first concentrate on the number of types of web pages retrieved for different search terms by different web engines. The results of “Australian-only” and “global” searches are compared to identify the overlap between retrieved pages and the type of page retrieved from each search. The content of the “information” pages is then examined using a framework derived from web-based support for individuals with chronic illness followed by a discussion of the quality of web pages for new fathers. From these considerations an evaluative framework is provided to guide the evaluation (and construction) of websites from the perspective of new fathers’ needs.
4.2.5 What is available to fathers on the web?

To investigate the material available to new fathers with access to the internet a number of searches were conducted of websites using popular search engines. Both general search terms and specific queries were used to identify sources of information and support. Searches targeting general information for new fathers were conducted using a popular search engine combined with general search terms to locate resources within the area of fathers’ role with newborns. The first 30 uniform resource locators (URLs, the “web address”) were retrieved then viewed and allocated to one of five mutually exclusive categories: “information”; ‘news”; “products”; “research”; or “not relevant”. These categories were evident from a cursory reading of the pages. Because the search engine only lists the page if the word “father” (or “dad”) appears then all pages retrieved are assumed to contain something of relevance to fathers. The categorisation did not attempt to evaluate the quality of usefulness of the information, so that distinguishing between information (for example a discussion of a father’s role in breastfeeding) and a product page (T-shirts for new fathers) was not difficult. Similarly, news stories or reports about fathers were easily identified by the media source (e.g. Sydney Morning Herald, Australian Broadcasting Corporation) and research reports had a distinctive style and organisational credit. (While some of the information in these reports may have been of interest to fathers the reports were clearly not written for the audience of fathers but in the formal research language used in journals and academic writing and so were excluded from the information category).

In a second analysis, the “information” pages from these searches were then evaluated based on the content displayed when the URL was opened. Content was identified in the following categories (based on Gustafson, 1999): “information for fathers”; “further information”; “referrals”; “discussion groups”; “ask an expert”; and, “personal stories from fathers”. Finally, specific searches were then carried out to evaluate the information available on two well-recognised issues facing fathers in their transition to fatherhood: settling the baby, and mothers’ postnatal depression. For each search the first 10 URLs were investigated to ascertain the nature and quality of the support provided for fathers.
Where URLs were primarily a menu page the most obvious father-related link was assessed.

**Search engines**

There are a number of freely available software programs ("search engines") that are able to retrieve text from website pages into an index and then match words in the search terms with all the words in documents stored in an index. At the time of this research Google was the most commonly used search engine, using a lexicon-based (word matching) algorithm to search web pages. Google also ranks pages by the number of other authentic web pages linked to the page being evaluated. There are no publicly available ratings for Australia, but according to industry ratings for the USA Google is the market leader with 46.3% of queries, followed by Yahoo (23.4%) and MSN (11.4%) (Search Engine Watch, 2007). Other search engines, such as AltaVista, search the “meta tabs” containing the page title and keywords linked to web pages in addition to lexicon-based searches of text. Unlike Google they do not register links to other pages in ranking their search results.

Google Australia has an option to search Australian-only websites or to search the entire internet. Yahoo has a ‘local’ option and MSN has an Australian affiliate, ninemsn, formed in 1997 as a joint venture between the Microsoft Corporation and the Australian media company Publishing and Broadcasting Limited (Ninemsn, 2006).

**Search Strategy Questions**

As so little is known about fathers’ use of the internet for information and support the preliminary questions addressed are those relating to general features of web pages available:

- Are there more resources directed to mothers than to fathers?
- Are the searches in this area sensitive to the terms used to find web pages?
• Do searches of Australian sites retrieve much the same information as those searching the entire internet?

A second set of questions relate to the content available to fathers via the internet:

• What sort of information do father-linked web pages contain?
• Are there chat rooms, links to further information and ways to obtain help with particular problems on the web pages for fathers?

The third section examines the notion of quality in relation to fathers’ needs. When pages linked to the term “father” and “babies” are examined, how well do they address the specific situation of new fathers?

Fathers searching the internet may be browsing for general information relating to their baby’s health or development or for more specific fathering advice. The situation investigated in this research is one where the father is searching for something related to his role as a father, so that his query will not be sufficiently addressed by general information on infant care or general advice to parents or to mothers. To approximate the situation where a new father is searching for role-specific information the term “father” or “dad” was used to avoid retrieving general health or parenting information, and these terms were linked with “babies” or “infants” to restrict the searches to the early years of fathering. Google was used to locate URLs. Research into searching behaviour has found that users do not usually access addresses beyond the first 10 URLs (all search engines being discussed present their results as 10 URLs to a page) and rarely read past the first three pages (Lorigo et al., 2006). In this study, all information pages retrieved in the first 30 URLs were listed to allow for the effect of different ranking protocols used by the search engines. Different search engines may retrieve the same website but rank it differently or include more “product” pages so that the information website occurs further down the list of displayed addresses. Duplicate addresses were identified. A summary is provided here of the results of the searches, and details are included in Appendix 4.1.
1. **Do search engines retrieve similar numbers and types of pages for searches with mothers and fathers in relation to babies?**

Searching for “new” + “fathers” retrieved approximately 43 million web pages, while “new” + “mothers” produced approximately 88 million and “new” + “parents” 594 million pages. Within the first 30 URLs, however, there was little difference between the type of web pages for fathers and those for mothers. Approximately half of the web pages contained information (as well as some advertisements); the remainder were almost evenly divided between product pages and news items about fathers or mothers, with occasional research reports.

2. **Do search engines retrieve very different sources when the Australian search option (AUS) is selected compared to results from searching the entire internet?**

As expected the number of web pages retrieved for “fathers” + “babies” from a search of Australian sites was far fewer (approximately 100,000) than the number retrieved from a search of the entire internet (approximately 5,000,000). It should be noted, however, that many of the sites retrieved from a search of “Australian” sites are in fact US based. When the sites retrieved from the entire internet and Australian-only searches were compared using “fathers” + “babies” there were few common URLs: out of 25 information pages (13 from the entire internet, 12 from Australian-only) only two sites appeared in both results.

3. **Do the terms used in the search (e.g. “father” or “dad” “baby” or “infant) significantly alter the results?**

When “dads” versus “fathers” is paired with “babies” and “infants” few of the sites are duplicated using either entire internet or AUS Australian-only search fields. Fathers searching for information who use ‘father” are likely to discover different web sites than to those using ‘dad” in their searches. Searchers using the terms “babies” and “infants”; however, will discover many of the same sites. If the fathers searching the web only read as far as the first page of results for his search using “babies” or “infants” then three out of
five sites would be repeated for entire internet searches and four out of five for Australian-only searches.

4.2.6 Information and support available: content questions

As described above, fathers seeking information or support related to their role as a father will benefit from having access to a range of modalities: information; discussion groups; experts to ask; and accounts from other men facing similar issues. Content questions relate to how far internet searches can meet these needs. The pages classified as “information” pages retrieved in Searches 1–3 were listed in the order retrieved. In the second analysis only URLs of information pages appearing in the first page displayed in each search (that is, within the first 10 addresses retrieved) were viewed to evaluate the range of information and support included. The quality of the information (or its verifiability) was not evaluated at this point. The type of information and support being offered was examined and evaluated by identifying which of the following categories of information and support (drawn from Gustafson 1999) were available at each address:

Information specific to fathers may cover standard health or development subjects, but the text refers specifically to fathers.

Further Information includes full-text articles covering a broad range of father-specific topics drawn from scientific journals, newsletters, and the popular press.

Help has descriptions and ways to contact a set of relevant services that offer support for fathers.

Discussion Groups are facilitated online support groups allowing fathers with similar concerns or interests to share information and support.
**Ask an Expert** allows fathers to write a question and receive confidential responses from experts. (Experts can depersonalise the response and place it on *Open Expert* for other users to see.) Alternatively, telephone advice numbers can be provided.

**Personal Stories** are real-life accounts of fathers with similar concerns or experiences.

The category of “Self-Assessment” was not included as no self-assessment tools for fathers have been reported in the literature, and extensive reading of father-related web pages found only two examples of self-assessment relative to this investigation. The Edinburgh Depression Scale (with instructions for use and a scoring guide) is available to the general public through the Black Dog Institute website and a “Dad IQ” test (including questions such as “How long should you let your newborn cry at night before picking him up?” and “What should you always bring your wife when she breastfeeds?”) is available on the US Babycenter website (BabyCenter, 2006; Black Dog Institute, 2002). Similarly, the help categories of “Action Plan” and “Decision Aids” were not included as the applicability of these categories to fathering is not clear and no father-relevant web pages were found during an extensive search of web pages.

The nature of the information retrieved when the terms fathers and “babies” or “infants” were used in entire internet and Australian-only searches was evaluated by identifying the categories of possible support available through the websites identified in the searches. The addresses classified as containing information and appearing on the first page of retrieved results (the first 10 URLs listed) for each search, “fathers” + “babies” and “fathers” + “infants” were analysed and are reported in Table 4.1 (below).
Table 4.1  Categories of possible support on information pages retrieved from the entire internet searches using “fathers” + “babies” and “fathers” + “infants”

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<td><a href="http://www.brandnewdad.com/">www.brandnewdad.com/</a> Dedicated US new-fathers site</td>
<td>Yes</td>
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<td>Yes</td>
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<td>Yes</td>
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<td></td>
<td><a href="http://www.infantmassage.com/">www.infantmassage.com/</a> Promoting infant massage</td>
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<td>-</td>
<td>-</td>
<td>Yes</td>
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<td><a href="http://www.medicinenet.com/">www.medicinenet.com/</a> General medical information</td>
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<td>Yes</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
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<td><a href="http://lancaster.unl.edu/">http://lancaster.unl.edu/</a> University Extension</td>
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<td><a href="http://www.fathersdirect.com/">www.fathersdirect.com/</a> Dedicated UK fathers site</td>
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<td>Yes</td>
<td>Yes</td>
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<td><a href="http://www.babycenter.com">www.babycenter.com</a> Commercial baby site</td>
<td>Yes</td>
<td>Yes</td>
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<td><a href="http://www.lalecheleague.org">www.lalecheleague.org</a> International organisation promoting breastfeeding</td>
<td>Yes</td>
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While the range of services provided gives an indication of the support for fathers the benefit of each site will ultimately depend on the quality of information, support and advice. In the case of information, for example, simply referring to fathers or mentioning fathers in passing will not provide sufficient help to fathers with new babies. The criteria for judging sites to be father-friendly or “quality sites for fathers” are taken up in the following section.

4.2.7 Information and support available: quality questions

The list of elements provided to support chronic disease sufferers gives a starting point for assessing the support available to fathers. The nature of fatherhood and fathering, however, is not equivalent to chronic disease, and Gustafson’s seven elements can readily be grouped, for the sake of this discussion of fathers’ needs, into four broad areas: information for fathers; peer interaction; personal stories; and expert advice. The overarching criterion will be the extent to which each page or website provides information or support from the perspective of fathers who seek assistance with some aspects of their role in relation to a new baby. The core quality of “father-role-specific” material will distinguish web-based sources for fathers from general health or parenting pages and websites. The aim of this section is to elaborate the nature of “father-role-specific” quality by examining examples of parenting web pages which, supposedly, offer support to fathers.

4.2.7.1 Tailoring health information and support to fathers

A variety of studies examining health behaviours related to diet, exercise, mammogram use and cancer-risk perception have demonstrated that health-promoting information messages tailored to participants’ demographic, psychosocial and behavioural characteristics are more effective than generic health promotion information (de Nooijer, Lechner, & de vries, 2002; Kreuter, Bull, Clark, & Oswald, 1999). When compared to generic health information (in print form) tailored information has been found to be more likely to be read and remembered, more often discussed with others, and to be perceived as more interesting and personally relevant (Dijkstra & De Vries, 1999; Kreuter et al., 1999). Tailored messages are effective, it is argued, because they reduce superfluous information, link to prior knowledge, allow staged health behaviour
messages and encourage thoughtful consideration because the messages are perceived as more relevant and provoke less defensiveness (de Nooijer et al., 2002; Dijkstra, 2005; Kreuter et al., 1999). Simply “personalising” health information, by using the participant’s name at the head of generic material, however, does not improve effectiveness (Kreuter & Streicher, 1996).

Those advocating tailoring are at pains to distinguish the individually designed (tailored) message from messages designed for audiences defined by demographic or group variables; however it is generally agreed that there is a spectrum of precision—from general information for the whole population to information prepared specifically for each individual (Kreuter, 2000; Pasick, 2001). As well, the notion of cultural tailoring suggests that the shared values of a group may be the focus of tailoring rather than individual preferences (Pasick, 2001). In the case of parenting information for fathers, much of the information available is, at best, “personalised” in the sense that fathers are simply mentioned in the title or referred to in the text without the information being tailored to fathers. For web pages to be “father-role-specific” for new fathers the content will need to take account of the perspective, values, abilities and prior knowledge of new fathers.

4.2.8 Guidelines for evaluating the quality of web-based information and support

Since new fathers’ needs for information and support span both the infant health and fathers’-role areas, evaluations of web-based support from both medical and parenting areas may be useful. The proliferation of web-based health information has raised concerns among health authorities, medical providers and researchers, and a variety of schemas and guides for identifying misleading or inadequate sites have been proposed (Bernstam et al., 2005; Charnock et al., 1999; Sutherland, Wildemuth, Campbell, & Haines, 2005; Wyatt, 1997). The Health Summit Working Group (HSWG), for example, proposed seven major criteria to be applied, including: the credibility of the source; the content and architecture of the links; feedback mechanisms and means for exchange of information among users; and disclosure of marketing functions of the site (http://hitiweb.mitrek.org/docs/policy.html, downloaded 18/8/05). More-detailed schemas for evaluating patient decision aids have added the use of “personal stories” and the opportunity to “clarify values” as evidence of quality in web-based support.
(Elwyn et al., 2006). Both the HSWG criteria and those proposed by Elwyn are designed for use by website developers or professionals evaluating websites; however, evaluation tools with similar criteria have also been developed which are intended for use by consumers (Wilson, 2002).

In the USA, information and support for parents frequently comes under the rubric of Family Life Education (FLE), and formative evaluations of FLE websites using visitor feedback have been reported (Hughes & Hans, 2001; Steimle & Duncan, 2004). Guidelines have also been proposed for the effective development of FLE websites: emphasise the credibility of the site; employ active learning strategies; incorporate variety and choices; provide instructional maps; and offer broad support (Dennis & Ebata, 2005). While there are marked differences in the depth of research underpinning the FLE and health evaluation criteria the general categories identified in the two areas appear to be similar. Both evaluation frameworks stress credibility, interactive learning and site architecture to facilitate use by viewers.

Both the health evaluation and the FLE criteria are designed to be content-free so that they may be applied to new web pages as they are developed. However, the ability of generic criteria to identify web-based support specifically for new fathers is yet to be established. For example, the Tufts University “Child & Family Webguide” (Tufts University, 2001/2003) uses generic criteria similar to those included in the HSWG to screen and evaluate sites offering information on child development and parenting. The Tufts rating procedure first eliminates personal and primarily commercial sites before awarding research-based sites a rating of one to five stars, based on four criteria: “Authority” (the credentials of both the sponsoring organisation and the individual authors); “Content” (citations of sources for research findings and statistics); “Ease of Use” (accessibility of material); and “Stability” (inclusion of creation/copyright dates). Only highly rated sites are included in the WebGuide.

Under the “Family/Parenting” heading on the WebGuide seven sites are recommended for the topic “fathers”. A summary of the seven sites is provided:
These sites offer a wide variety of information about fathers and resources for fathers. Extensive research-based articles on issues surrounding fatherhood are presented, looking at absent fathers and father involvement issues, non-custodial and custodial single fathers, father-related policy issues, and more. The sites listed here offer substantial practical advice as well, on topics including responsible fathering, co-parenting, and healthy father involvement. (Tufts University, 2001/3)

However, when the seven highly rated sites addressing fathers were inspected, six of the sites were found to contain only research papers written about fathers (for a professional audience) or statistics on fathers and families. Two of the sites were explicitly fathering sites: The National Centre on Fathers and Families (NCOFF) (University of Pennsylvania, 2007) and the National Center for Fathering (National Center for Fathering, 2007). The NCOFF provides research, educational materials for practitioners and advocacy for fathers’ involvement. The site contains no information directly addressed to new fathers. The National Center for Fathering has a category “newborns”, with 11 magazine-style texts containing commentary on general topics, such as being patient with infants, or tip sheets on settling a new baby. While the Tufts’ WebGuide rating process allowed the identification of authoritative information on child development and fathers’ behaviors, it did not ensure that the sites retrieved would offer practical information suited to a lay audience of fathers. The Tufts website evaluation process failed to sufficiently distinguish between information about fathers and information for fathers. However, even on the National Center for Fathering website, the information available was limited to brief, general advice articles and interactive features, such as chat rooms or forums, were absent.

To identify websites that address the needs of new fathers will clearly require more detailed criteria than those utilised in the health evaluation and FLE literature. Ideally, as happens in mature fields of research, each criterion would be supported by a body of evidence linking the key concepts contained in the criterion with desired outcomes in family wellbeing (Elwyn et al., 2006). In the relatively immature field of new-fatherhood research, the effects of providing tailored information or support to new fathers is not available. Criteria for discussion, however, can be identified by taking the core domains suggested in the research literature on evaluation of health information (authority, content and ease of use) and exploring popular parenting and fatherhood
websites to assess the quality of their provision of information and support for new fathers.

**Domain 1. Authority of individual contributors**

In well-regulated fields such as medicine the identification of an “expert” is relatively straightforward. However, in the case of parenting, regulatory guidelines are sparse. While health professionals are recognised as knowledgeable in matters to do with direct health care of infants, there is no formal qualification that is recognised as conferring expert status as a parent. In areas such as fathering, where research is less well established, the claim to be an expert is tenuous.

‘Pampers” is the brand name for a well-known brand of disposable nappies and is a division of Proctor & Gamble, a USA-based company that maintains a “Pampers Parenting Institute” to provide parents “with the best in information and support from the world’s leading experts in child health and development” (Pampers, 2006). The 10 members of the “expert advisory board” responsible for the material on the Pampers.com site are listed as professors of paediatrics and nursing, clinical psychologists, and “a nationally recognized parenting expert and the best-selling author of six books on fatherhood” (Pampers, 2006). While the public recognition of this author may be demonstrated, the lack of any indication of an evidence-base which would be expected in describing an expert in any scientific field raises the possibility that in the fathering arena “expert” is synonymous with “popularity”.

The issue of credibility also arises when websites provide avenues for fathers to contribute their own stories. Researchers from the FLE field highlight the desirability of learners’ active participation (Dennis & Ebata, 2005) and Elwyn et al. (2006) include three quality criteria for “patient stories”: they represent a range of positive and negative experiences; financial or other reasons for sharing the story are disclosed; and, documentation is included indicating that the patient gave informed consent to use their stories.

Where websites offer “dads” pages, with content purporting to come from fathers, there is often a blurring of authorship when professional writers, who may also be fathers, are represented as the voice of fathers. On the Childbirth Solutions
(ChildbirthSolutions Inc, 2007) website, for example, both professional writers and lay fathers appear to be represented on the “Daddy” page. The opening paragraphs and authorship credits of “Boy Baby Blues” and “A Guy’s Perspective” are as follows:

“Boy Baby Blues” by Forrest Seymour

I gave our new son his second bath today. No, that’s not quite right. This morning he had his first shower; five days ago when he was born he had his first bath, in our small town hospital. Then, as his mother rested from her titanic struggle, he was sponged gently by the hands of the nurse, my four-year-old daughter, and myself, when they would condescend to let me squeeze up to the heat-lamp-warmed table his wrinkled new body lay on, crying intermittently.

“A Guy’s Perspective” by Jerry Hansen

Let me give you the story of a bed-rest pregnancy experience from a husband’s perspective. When we decided to have our first baby I was in my fourth year of graduate school and my wife was the principal moneymaker in the family while I was concentrating on school and earning a token sum of money as a teaching assistant. We were blessed with having an easy pregnancy and my wife was really enjoying the process and the idea of it all. As with all pregnancies, there was a surge of hormones and the addition of books about pregnancy and childbirth that freaked both of us out a bit…the scary unknown!

Authors utilising their fathering experience to provide subject matter for professional pieces are, of course, entitled to publish their work on the web. The Forrest Seymour article included the footnote “A Father’s Journal, vol. 5, no. 1, Originally Syndicated January 12th, 1999 Copyright Forrest Seymour, 1999. Reprint with permission only”. However, without disclosure of financial or consent arrangements the viewing father is left unsure of whether “Boy Baby Blues” or “From a Guy’s Perspective” are experiential accounts from other fathers in similar situations or fictionalized accounts created for professional publication.

Domain 2. Content

Generic criteria for evaluating content require websites to provide links to the evidence base for the information or advice on the pages and links to further information,
frequently asked questions, or digests of relevant research. For interactive learning, websites should also include opportunities to ask questions or contribute experiences as well as to take part in values clarification or decision-making exercises. As discussed above, to be specific for new fathers the website content will need to be tailored to take account of the perspective, concerns, values, abilities and prior knowledge of new fathers.

How these criteria might apply to web-based support for new fathers can be illustrated by assessing the quality of website support for fathers facing a serious, but common, situation where their wife or partner has postnatal depression (PND, termed postpartum depression (PPD) in the USA). In the case of a father whose wife or partner has PND important features of his experience will include discovering that she has a mental illness, coping with her mood changes, managing the physical household tasks and the family and community social networks, and the father’s own wellbeing (Benazon & Coyne, 2000; Bifulco et al., 1998; Burke, 2003; Chang et al., 2007). Websites retrieved by entering the search terms “fathers” and “postpartum” or “postnatal” and “depression” into Google were examined to illustrate the application of authority, content and ease of use criteria to evaluate websites for new fathers.

The BBC, Britain’s national broadcasting body, maintains a parenting website (British Broadcasting Corporation, 2007) that includes a page for fathers on PND. The text, positioned around an image of a mother looking at a photo of a baby, offers a number of brief points, each less than 200 words. The difference between PND and the “baby blues” is explained, a list of symptoms is provided, and fathers are urged neither to ignore their partner’s mood nor to make her feel guilty, but to take the baby for a period to give the mother a rest. It is strongly suggested that fathers accept offers of help from relatives or friends. The text also explains that the causes of PND are largely unknown and that fathers can also be depressed.

Overall this web page scores highly on the HWSG criteria of credibility, disclosure and ease of use. The information provided is tailored to the situation of new fathers; it suggests his actions are to support and assist his wife or partner who is experiencing depression and, although little attention is given to his relationship with the baby, the father’s own mental health is raised for consideration. However, judged against the
criteria for effective support described in the chronic illness area the page is far from satisfactory. No “Assessment Aids”, “Discussion Groups” or “Personal Accounts from other fathers” are provided and no “Expert Advice” is available to fathers who may access the page. Although the text is presented in brief points (as recommended for websites to facilitate information absorption (Spool, Scanlon, Synder, & DeAngelo, 1999) the information lacks extension to allow fathers to pursue their understanding in a more detailed discussion. The BBC PND page includes links to other web sites, (Fathers Direct - the National Information Centre on Fatherhood, 2007; National Health Service, 2007); however, these links do not provide further information on the topic of PND which is tailored specifically to new fathers faced with a spouse or partner with depression.

In reviewing empirical studies of the quality of health information on the internet, Eysenbach (2002) points to the difficulty in evaluating a single web page—or even a single website—since links provide access to a universe of health information and consumers frequently search across websites. Taken to the extreme, this would make it impossible to evaluate any site without evaluating the entire internet. In reality, web users do not search beyond the first few URLs derived from a search so that pages can be evaluated by considering the effectiveness or quality of the immediate links provided (Eysenbach & Kohler, 2002). The BBC PND page for fathers, for example, provides links which open to general home pages for the National Health Service (NHS) and Fathers Direct (a charity advocating for fathers and supporting those who work with fathers). The Fathers Direct home page, while clearly about fathers, provides only program descriptions, policy briefs and research reports primarily on fathers who may themselves be depressed. Searching in the NHS home page for “postnatal depression” leads to general medical information on depression and support groups for mothers.

Although the evaluation criteria for assessing health information were developed largely with text-based information in mind, the requirements for credibility in sourcing information, options for extended discussion and for interactive learning can also be applied to multimedia sites found on the internet. One of the largest parenting websites, the US based Babycenter website of Johnson & Johnson (BabyCenter, 2006), provides video segments specifically on a new father’s role in the case where his spouse or partner has depression. The two-and-a-half minute segment describes the features of
mothers’ baby blues and of PND. Recommendations to fathers are similar to those found on the BBC website: take the baby outside, encourage the mother to get help, ask about her feelings and what else could be done to help. A second segment explains the symptoms for new fathers’ depression and offers a similar list of remedial actions, such as “get more sleep” and “eat well and exercise”.

While the video segments are able to model fathers taking care of their partners, their babies and themselves, and the “Dad to Dad” segment conveys that “ordinary dads” endorse the suggested actions, the quality of the information in terms of extended information or interactive learning is limited. The Babycenter website includes interactive pages titled “Get Answers”, where fathers are able to ask questions of experts and contribute questions and advice to other fathers. However, in the case of PND these interactive facilities do not guarantee that support will be forthcoming. Searching for “postpartum depression” and “fathers” in the “Answers for all stages” section of the website retrieves multiple pages of questions, almost entirely from mothers. In the first 50 questions only two are from fathers. They ask for advice on general fathering (“How can I feel more competent as a new dad? Since having our baby, my wife expects me to do everything. How should I handle it?”) The mothers ask a variety of questions to do with their own depression and, most frequently, their spouses’ lack of support.

There is also an interactive “Babycenter Bulletin Boards” page where fathers can place requests and access advice from other fathers. The advice gained through this avenue consists of similar advice to that already presented in the video segment. For example, one series of postings offering advice for dealing with a depressed mother suggested asking the mother what would help, offering a massage or doing more housework. In response the following post appeared:

This is my first time being a DAD. I was reading on what you guys did to cheer up your wives and I tried them. But she seems to be still cranky! What do I do?

The only suggested action in response to this posting was:

Try a change of scenery; a fun outing. Buying her crap and bringing her food won't help. It'll only make her feelings about her body worse.
Overall, both the BBC and the Babycenter websites provide useful information on the diagnosis of PND/PPD and some practical advice for fathers who are attempting to help their spouse or partner cope with the depression. However, even with the addition of interactive channels for fathers to hear from experts and other fathers little additional support is provided. In part, this may reflect the lack of professional and community attention to fathers’ role in peri-natal depression. However, if this is the case then it behoves the websites to develop fathers’ questions or contributions through extra effort and redesign of the site to make it clear to fathers that they can find answers to their questions (see “Ease of Use” criteria below) and to encourage fathers to contribute. It cannot be assumed that because a website is available that it will be accessed by all groups of parents. An evaluation of a popular Swedish parenting website found that 13.5% of members were male and 86.5% female (Sarkadi & Bremberg, 2004).

In the case of the “Babycenter Get Answers” section, for example, participation by fathers is extremely low; all answers to the first 50 questions were from mothers or experts. Other websites demonstrate that contributions from fathers are possible to develop. The PostpartumDads website, (Postpartum Support International, 2007), a volunteer-based outreach project affiliated with Postpartum Support International (www.postpartum.net), contains dozens of detailed, instructive stories from fathers who have successfully coped with a depressed spouse and new baby. The paucity of extended information for fathers on the topic of PND in the interactive sites within the Babycenter website also suggests a need to develop interconnected sets of web pages offering information in depth and interaction through a variety of channels. The emerging new media channels such as mySpace and YouTube (myspace, 2007; YouTube, 2007) and fathers’ blogs such as Dad Talk, Fatherville and Brand New Dad (Dad Talk, 2007; Fatherville.com, 2007; Brand New Dad, 2007) may facilitate fathers’ exchange of information through text or multimedia, but these channels lack any reference to credible health information or explanation.

Domain 3. Ease of Use

A frequent point of confusion for fathers seeking information and support is the way that pages that are tailored for mothers are misleadingly advertised as for fathers. This is unlikely to be a deliberate ploy by website designers but may reflect the widely
accepted conflation of “parent” with “mother” (HM Treasury & Department for Education and Skills, 2007). For example, the Babycenter website has “Chat” topics available in one hour or half-hour slots from early morning until midnight seven days a week. Parents can register without cost online and join any chat session. Links on this website direct fathers to this page.

Over one week (24–30 April 2006, selected at random) a total of 168 “Topic Groups” were listed. Topic headings or descriptors used in the paragraph for each topic make the target audience clear; the majority of topics were described as for “parents”. For example from 9.00 to 10.00 am on a Tuesday the topic is “Birth Club: February 2002 parents” with the description “Connect with parents of February 2002 babies every Tuesday, and share parenting stories as your children grow”. However, 14 mother-specific groups were clearly recognisable by title or descriptor as for mothers. Captions indicating that the discussion was for mothers were: stay-at-home mom; other nursing moms; other moms struggling with being down; single mom; first trimester moms; second trimester moms; third trimester moms; other moms who are breastfeeding toddlers; formula-feeding moms; big, beautiful moms-to-be; moms 35 and older; moms on bed rest; other nursing moms; and military moms. The only mention of fathers on the page was in the paragraph “Whether you are a single mom on purpose or happened to get pregnant and have no support from the baby’s father, being pregnant and single can be a challenge”. It is possible for a father accessing the site to join one of the 133 “parenting” topics, but experience would tell him that most contributors would be mothers. In spite of the direction within the website sending fathers to the chat facility, there is no straightforward way for a father to access other fathers in discussion. Support from mothers may offer encouragement to fathers but it does not qualify as peer support because of the specificity of the new father’s role. This is not to suggest that pages should not be designed for mothers, or for parents, but that mislabelling of these pages as “for fathers” may obstruct fathers who wish to locate support services addressed to their own situation.

Guidelines

New fathers require information and support, and addressing new fathers’ needs may improve the wellbeing of father and the family. However, social arrangements
surrounding fathers’ role may prevent frequent contact with health service providers so that the internet may provide a useful source of information and support. Existing websites in parenting, health or family life education areas may present information and support that is difficult to locate, that offers limited resources for fathers or that ignores the particular needs of new fathers. Four domains of criteria are suggested to enable web designers and professionals working with fathers to judge the probable effectiveness of a website in meeting the needs of new fathers.

1. **Tailoring**
   a) Is information offered specifically to meet the perspective of new fathers?
   b) Are the interconnected elements of a new fathers’ role addressed: his support for the mother; his relationship with the infant; and providing, managing and protecting tasks within the family?
   c) Are the views of new fathers utilised on the site?
   d) Is the viewer able to communicate with other fathers in similar circumstances?

2. **Authority/Credibility**
   a) Does the health-related information and advice made on the site meet the standards of recognised bodies such as the HWSG?
   b) Are fathering “experts” clearly differentiated from medical and other professionally qualified advisers?
   c) Are the financial and other arrangements for father contributors to the site clearly documented?

3. **Content**
   a) Are fathers able to access further reading on the topics related to new fathers?
   b) Are clear links provided to evidence and research on the topics discussed?
   c) Are interactive features, “Ask an Expert”, peer support, personal stories and opportunities for fathers to contribute to the site included or linked to the site?

4. **Ease of Use**
   a) Are aids for searching for new fathers’ material provided on the site?
   b) Do pages described as for “parents” include father-specific information?
The criteria suggested here provide guidance for website developers and for those preparing information and support programs targeting new fathers. Further research is now required into how fathers respond to web-based support and into the health and social consequences for the families of fathers accessing support.

4.3 Conclusion

At the time surrounding the birth of a child, fathers need information and support in relation to their developing infant and to their role as a father. Websites accessible through the internet suggest a promising avenue for delivering support; however, the quality of the websites is not assured and there is currently no guidance on the suitability or value of available sites for new fathers. While established codes for assessing health web pages offer some guidance, websites addressing fathers’ role-defined tasks (such as providing emotional support to their partners) necessitate additional criteria. New fathers have a unique perspective incorporating four main elements: connecting with his infant; supporting the mother of his infant; supporting his family during the period around the birth; and maintaining his own wellbeing. These aspects should be reflected in the provision of information and support through web pages on the site or through links to other sites or organisations which also reflect an awareness of new fathers’ perspectives. As well as information, new fathers require access to interactive support which may include personal accounts from fathers, chat rooms or bulletin boards, self-assessment or decision-making aids and information and advice from health experts or knowledgeable professionals. Interactive support should also be tailored to fit new fathers’ perspectives.

In Chapter 5, the principles arising from the examination of web-based information for fathers are utilised to design email packages with web-links for new fathers. An interactive support service linking the fathers to a professional health team (Child & Family Health Nurse, Paediatrician and midwife) and to groups of other fathers is tested in a randomised control design to examine the effects of support on father-infant attachment.
5.0 Introduction

Fathers’ lack of contact with services surrounding pregnancy, birth and postnatal care limits services’ knowledge of fathers’ information preferences; evidence is required on effective modes of communication with new fathers. In previous chapters a range of needs of new fathers were identified and the quality and nature of the web-based support available were assessed. The randomised control trial of information and support for new fathers that is described in this chapter attempts to address a number of questions surrounding the provision of web-based and email support to new fathers. Fathers in the intervention groups were supplied with a range of supports: a “starter” DVD; email information on a choice of topics; participation in a fathers’ email support group; and access via email to a dedicated health professional. Those in the control groups received only the email information support and the starter DVD. The study thus contrasts fathers receiving a range of support with those fathers being emailed information. The primary measure is the level of father–infant attachment. It was hypothesised that fathers in the intervention group are expected to have a greater increase in their attachment (measured antenatal and postnatal) than fathers in the control group. As well as measuring attachment change, several other important questions are also investigated:

- Which topics do expectant fathers find interesting?
- What type of questions do they put to a health professional dedicated to supporting fathers?
- Will technologically-literate new fathers make use of a pre-arranged email group to seek support from other fathers?

Before describing the study the issue of how father–infant attachment is to be measured is discussed.
5.1 Measuring father–infant attachment

The primary aim of this research is to investigate whether providing support and information to new fathers will improve their attachment relationship with their infants. As reported in Chapter 2, while extensive use has been made of the Strange Situation Procedure (SSP) in assessing dyadic attachment relationship, questions have been raised as to its suitability to measure infant–father attachment. However, quite apart from gender considerations, the narrow age range of infants that can be assessed (approximately eight months to two years) and the time-consuming style of conducting the SSP procedure have been identified as important limitations (Bretherton, Biringen, Ridgeway, Maslin, & Sherman, 1989; Condon & Corkindale, 1998). In addition, researchers’ exclusive focus on the SSP has been criticised for ignoring the care-giving side of the attachment process, one identified as crucial to understanding and promoting secure attachment relationships between parents and infants (Bretherton et al., 1989).

The search for tools to facilitate the assessment of mother–infant attachment prior to delivery and without cumbersome observation procedures has led to the development of self-report measures applicable to mothers from pregnancy through infancy. These measures take the perspective of the care-giving parent in parent–infant attachment and use the term “bonding” to reflect the active parental component (Brockington et al., 2001; Muller, 1994; Robson & Mandel, 1985; Taylor, Atkins, Kumar, Adams, & Glover, 2005). While the scores on some instruments can be matched with the attachment categories (secure, avoidant, dismissive, disorganised) derived from SSP, the results from the new instruments are reported as continuous scores. As in other areas of infant mental health and parenting, the self-report measures have been developed to assess mother–infant attachment, and only recently has consideration been given to the use of these instruments with fathers.

Cranley (1981) proposed a Maternal-Fetal Attachment Scale (MFAS) to measure antenatal attachment and comprising five subscales: “Differentiation of Self from Fetus”; “Interaction with the Fetus”; “Attributing Characteristics to the Fetus”; “Giving of Self”; and “Role Taking”. This scale has been widely used in researching mothers’ antenatal attachment (Beck, 1999). However, concerns have been raised about the
validity of the MFAS and the utility of the five subscales. Measures of anxiety, for example, have been reported as having a positive correlation, a negative correlation and no correlation with MFAS scores (Muller, 1992). Muller & Ferketich (1993), using factor analysis on two samples (n=371, 310), found that the factors derived from the women’s responses differed between samples and that neither of the sets of factors corresponded to the five factors in the original scale. Condon (1985; 1993) has also critically reviewed the MFAS, finding that research using the scale produced results not “in accord with either prevailing theory or common sense” (1993, p. 169). In particular he pointed to the confusion within the scale between the mother’s emotional involvement with the developing baby and her reaction to the pregnancy.

The need to refine existing self-report scales for mothers to improve their validity is only one concern in evaluating instruments to assess fathers’ attachment. Equally important is the thoroughness of the adaptation process, which researchers report as having been utilised to redesign mother-focused questions to be suitable for fathers (Roggman, Fitzgerald, Bradley, & Raikes, 2002). Self-report father–infant attachment measures described in the literature reveal a range of adaptation strategies, from making no adjustments for fathers to attempting parallel development of mother and father versions. An early scale consisted of a set of nine questions focusing on the pregnant woman’s affective response to her baby (fetus) (Leifer, 1977). Subsequent studies applied exactly the same questions and scoring to fathers (Ferketich & Mercer, 1994, 1995). Minimal adaptation was applied to the MFAS discussed above when the mother’s scale was redesigned to apply to fathers (Weaver & Cranley, 1983). It was assumed that “the man’s process of antepartal attachment is similar to that of the women”; the only alteration to the questions was to add “wife” where necessary, as in “I enjoy watching my wife’s tummy jiggle as the baby kicks inside” (Weaver & Cranley, 1983, p. 69). In this case, the assumption of equivalent experiences for pregnant women and their partners was also applied to the concepts that the questions in the scale were intended to tap. The question quoted above referring to the man’s enjoyment of his wife’s tummy jiggling was considered by the researchers to be evidence of his “differentiation of self from fetus” implying that the father’s sense of symbiosis with the fetus in his wife’s womb is identical to that experienced by a mother carrying the fetus inside her. A later study of fathers’ antenatal attachment dispensed with even these considerations and used the MFAS unchanged to examine fathers’ attachment, except
that the item “I feel my body is ugly” was deleted (Ferketich & Mercer, 1995). In some cases no information on what exactly was asked of the fathers was provided. Edhborg et al. (2005) examined early indicators of depression and bonding among fathers and mothers by asking subjects to complete the Postpartum Bonding Questionnaire (PBQ) devised to detect bonding difficulties in mothers after the birth (Brockington et al., 2001). While the study reports on fathers’ scores on the PBQ no mention is made of adaptation of the scale to apply to fathers, a concern since one of the statements in the scale is “I feel trapped as a mother”.

In a number of the studies using the father-adapted versions, correlation coefficients (Cronbach’s reliabilities) of 0.66 to 0.88 are reported as evidence of the scale’s reliability (Ferketich & Mercer, 1994, 1995; Weaver & Cranley, 1983). However, a high correlation among items making up a scale does not demonstrate validity of a scale (DeVellis, 2003). While it seems reasonable that the growing bond with the baby would involve positive emotions, urges to protect, and fascination with the baby’s development in both mothers and fathers, it is also undeniable that there will be differences between the perspective of a woman carrying the fetus for nine months and the man accompanying and supporting her during that time. Since the items derived for mothers in the original scales were selected on the basis of high inter-item correlation, it is not surprising that using the same questions with minor alterations can produce scales for fathers with reasonable reliability coefficients. What is not clear from the literature describing the development and use of these scales is whether they take sufficient account of any differences between “father–infant bonding” and “mother–infant bonding” or the ways that fathers might articulate or identify their affectionate response; for example, in contrast to those employed by mothers.

Condon (1993) proposed a model of parent-to-infant emotional attachment for female and male parents as a set of five “dispositions”: to know; to be with; to avoid separation or loss; to protect; and to gratify needs (p. 170). A scale using 27 items (mothers) and 25 items was constructed based on this theoretical framework. Factor analysis of the responses of 112 expectant couples attending an Australian teaching hospital reduced the item pool to 19 for mothers and 16 for fathers (Condon, 1993). Two factors were identified for both mothers and fathers. The quality of attachment was identified through questions asking about the expectant parent’s closeness or distance
from the fetus or tenderness or irritation, while intensity was identified through
questions asking how often parents think about, dream about, talk to or palpate the
fetus. The final alpha coefficients for each factor in excess of 0.8 suggest an acceptable
internal consistency for each factor. While many items are similar, questions for
mothers refer to the “the baby inside me” while those for fathers use “the baby”. Five
questions are exclusively used for mothers and two for fathers; thinking about baby
names and wondering what sort of person the baby will grow into.

In a separate study Condon and Corkindale (1998) derived 31 questionnaire items
from unstructured interviews with mothers of infants under one year of age. An item
analysis of responses from 65 fathers to these questions produced a 19 item Paternal
Postnatal Attachment Scale (PPAS) identifying fathers’ feeling and thinking about the
baby over a two week period. The Maternal Postnatal Attachment Scale (MPAS) and
the PPAS have 11 common items, including questions relating to positive and negative
feelings, pride, enjoyment, sadness, relief, patience, resentment and ownership. There
are also six unique items in the PPAS assessing fathers’ feelings of boredom,
confidence in understanding the baby, interest in and absorption with the baby, and
desire to be involved.

In view of the above analysis it was decided to use the Paternal Antenatal
Attachment Scale (PAAS) (16 items, Condon et al, 1993) for the antenatal measure of
father–infant attachment and the 19 item PPAS (Condon & Corkindale, 1998) as the
postnatal attachment measure. The PAAS, in contrast to the other scales discussed
above, was derived from responses of fathers rather than simply adapted from a scale
based on mothers’ responses. The PPAS is derived in part from the PAAS and is the
most suitable for comparison with PAAS scores.

5.2 Design of the study

The randomised design was used to assess the possible benefits of targeted support
through professional contact and discussion group for new fathers. Fathers from
antenatal groups being conducted by hospitals in Newcastle, NSW, and Hobart,
Tasmania, were randomly allocated to intervention (network) and control groups in order to test the effect of additional information and support on father-infant attachment.

In a second comparison the antenatal and postnatal changes of all of the fathers in both Newcastle and Hobart (the Newcastle Study fathers) were compared to changes among fathers recruited before birth through different hospitals by a separate study based in Adelaide (The Adelaide Study fathers). Questions relating to fathers’ reaction to, and use of, information packages, health professional advice via email and electronic discussion groups were also explored. In the following sections the materials developed for the study and the email support systems are explained before the research questions and hypotheses are described.

5.2.1 Materials and support for fathers

The elements included in the support for new fathers were:

1. A DVD presentation introducing the research project and providing preliminary information on father-infant bonding.
2. Information provided by email on a range of topics of interest to new fathers.
3. A dedicated health professional service to answer questions by email.
4. An email-based peer support group.

A DVD presentation and a set of Microsoft Word documents suitable for emailing to fathers were created for the project. All fathers entering the study were provided with the DVD and all fathers were offered the email information packages containing a summary of web-based information for new fathers.

**DVD presentation**

A “starter pack” was mailed to all participants comprising a DVD with video clips illustrating the connection between infants’ intimate relationships and brain development, some basic parenting skills (settling) and demonstrating the nature of
father–infant bonding. The brain-relationship connection was written and presented by the researcher (Richard Fletcher) while the segments on settling and father–infant bonding were taken (with permission) from two commercially available video products featuring fathers. The accompanying briefing sheet explained the procedures for completing the online survey and the receipt of email information. A three-page summary of the three segments presented on the DVD was included (see Appendix 5.1)

**Information packages**

Given the paucity of information designed for fathers in the peri-natal period the choice of topics to include in the list offered to fathers is somewhat arbitrary. Both public health perspectives and father–infant role perspectives were utilised. In some fields, such as initiating and sustaining breastfeeding and recovery from postnatal depression, evidence is available linking the father’s role in support of the mother with improved outcomes for mother and infant. The literature on the challenges faced by new fathers suggests that topics such as baby games and father–infant bonding would be of interest to fathers and may facilitate closer connection between the fathers and the fetus or baby (Anderson, 1996; Brotherson, Dollahite, & Hawkins, 2005). The list of potential topics was field tested by asking fathers attending antenatal classes led by the researcher to prioritise areas of interest or to suggest topics. Over a period of approximately 15 months approximately 300 fathers were involved in the testing. The draft materials were then piloted with expectant fathers and discussed with other male and female educators conducting educational sessions for expectant fathers. The seven topics offered to fathers in the study were: Father-baby games (*What games can I play with my new baby? What can new babies do apart from eat, sleep and make a mess?*); Fathers helping breastfeeding (*How many times will we be feeding? What about storing breast milk? How can I help?*); Father-infant bonding (*How does father-infant bonding work? How does the bond with my baby make a difference?*); Fathering a fussy baby (*Is there a good way to get them to sleep? How much sleep is normal? What tricks are there?*); Sex after the birth (*How long will it be before we can have sex again? What is usual? What about if she has some surgery?*); Post natal depression (*How can I recognise that my partner is depressed? How long is it likely to last? What are some important things for me to do?*); and Work-family balance (*Switching off and being available. How big a job is fathering anyway?*)
Having selected the topics, the preparation of the email packages involved searching the internet to identify appropriate sites for the fathers. The email packages were initially conceived as brief guides to available resources on the internet. However, searches through parenting websites using search engines to identify pages including fathers (dads/male carers/male parents) and babies (infants/birth/pregnancy) provided clarification about the limitations of the information available. As discussed in Chapter 4 the information available to new fathers via the internet has the following features:

- There are more websites than any father can possibly visit. A Google search using the keywords “fathers” and “babies” produces a listing of over two million websites.

- “Parenting” sites include information for fathers as one item on the menu (often as “Dad’s Corner”) among several headings. Information links under the “Dad’s Corner” heading contain few pages for fathers.

- Fathering-specific websites typically attempt to address fathers with children across the age range and offer general advice about “being a good dad” rather than addressing specific parenting issues from a father’s perspective.

- Brief advice for fathers with infants is available on government and non-government health-oriented sites but rarely has links to more extensive discussion.

- Fathers’ voices are unusual on the parenting sites. Apart from fathers who are also experts or sites which advocate for fathers’ rights in custody disputes, contributions by fathers about their experiences are minimal.
- Discussion groups for fathers are far less numerous than those for mothers and contain less frequent and less extensive postings than do mothers’ groups.
In the light of these findings pilot packages were redesigned as Microsoft Word documents containing short purpose-written articles (by the researcher, Richard Fletcher) and including brief excerpts from websites. The final packages included links to websites (except for Father-Infant Bonding and Work-family Balance, for which no appropriate websites could be located) but were designed as stand-alone, father-oriented introductions to the topic indicated.

**Example: Father-baby games**

The email contained an introductory paragraph as follows:

**GAMES TO PLAY WITH BABIES**

*Although mothers and fathers play many similar games, the way that men and women play with babies is often different. A father’s interaction with babies is often more energetic and moves more quickly between calming, restful activities and highly stimulating, exciting activities. If the dad is sensitive to what the baby enjoys then babies can use dad’s high energy play to learn to regulate their own emotions. On the other hand, learning how to slow down and tune in to the baby is the basic task for all dads. Research suggests that babies benefit from the different styles of interaction that they get from mothers and fathers.*

Fathers were directed to an attached Microsoft Word document with the following text:

*The basic idea*

Games with young babies are very easy as far as equipment goes. You are already the perfect game machine for your baby. You are the expert because the baby is fascinated by you, the dad. Your face, the way you breathe, the way that your hair feels, the way you smile or twist your mouth, all of these things are very interesting to your baby.

*Like a tennis match*

Think of it like a special sort of tennis match. You have two players who take turns but the light is very bad and you cannot be sure where the ball is coming from. In a game with your baby you have to concentrate and try to see what is going on. You are the pro here, and your baby is a very promising young player. You wiggle your nose or poke out your tongue and then see if your baby does the same.
Remember that you are playing with a fairly junior player and so you have to make allowances. He or she might not get it perfectly, they try to poke out their tongue but it might only just come out past their lips a little bit. But you can see they are trying so you take that as a pretty good return. You try another serve just like the one before. Since you want this player to improve their game, you are happy to repeat the stroke many times while they get the hang of it. You’ll know when they get tired of this particular stroke because they will stop returning.

**Advanced play**

Advanced play is when you wait to see what sort of stroke the baby will play and then you return it. This is a bit harder and even for professional players like fathers it takes practice and patience. If you watch carefully your baby will try a new activity, it might be scrunching up their eyes or opening their mouth wide. Then you can try imitating it and see what happens.

**Feeling silly**

Probably the hardest part of playing games with babies is feeling silly. With real babies you often get it wrong and they don’t give you a high five. You probably will end up nodding your head and opening your mouth like a goldfish and your baby will do nothing or look the other way. Then you might feel stupid, especially when other adults are looking at you. There is no sure fire way to avoid this. It’s part of fathering. If you want what is best for your baby you’ll keep going (even when you feel a bit like an idiot). You can be confident that you and your baby will get into synch.

Brief descriptions of four websites, with examples and links, were provided: games linked to babies’ development (Happy babies, 2007); games to play while in the car (MomsMinivan, 2001); directions for baby massage (Fisher-Price, 2007); and online computer interaction games for babies (Fisher-Price, 2007).

The Evaluation form for each package asked for responses to five questions on a four-point scale from “Strongly Agree” to “Strongly Disagree”: Q1. “This document gave me new information”; Q2. “I intend to discuss the information with my wife/partner”; Q3. “I am satisfied with the quality of this information” Q4. “Because of this information I have decided to do some things differently” Q5. “I visited one (or more) of the websites” (see Appendix 5.7)
Professional support

Fathers’ need for information will increase exponentially once the baby is born and they are faced with the reality of their infant’s demands for care. In NSW, midwives provide much of the practical information surrounding the partners’ role at the birth and Child & Family Health Nurses (C&FHN) provide information and support to parents after the arrival of the infant. For the study described below, professional advice was offered through a dedicated C&FHN with a midwife and paediatrician as back-up. The medium of email contact was chosen for several reasons. Having telephone support available over the length of the research project would require many hours of “on call” professional time and would suggest a “crisis” or acute care modality. Email support requires fathers to identify their needs and also automatically makes available a written record of the information sought and provided.

Peer support

The limited evidence available on fathers’ use of the internet suggests that fathers will be unlikely to spontaneously engage in voluminous postings to parenting chat rooms or discussion boards. For this research project fathers in the intervention groups were enrolled into a confidential email discussion group (The Blackboard system on the University of Newcastle’s website) with four to 10 other fathers who also had attended antenatal classes, usually the same class. Fathers were invited to comment about their experience of the birth as a starting point for their own discussion. The C&FHN monitored the email groups to offer clarification on health issues only if they were raised or only if she had concerns about the information being circulated.

5.3 Research questions and hypotheses
Primary research questions

1. *Will the provision of information and support for fathers commencing before the birth result in higher levels of father–infant attachment measured at two months post birth?*

Primary hypotheses

1. Fathers who participate in the Network Group (intervention group) will report significantly greater increases in their attachment scores than fathers in the Control Group at eight weeks following their infants’ birth.

2. Fathers who participate in the Newcastle Study (intervention and control group) will report significantly greater increases in their attachment scores than fathers in a control group drawn from the Adelaide Study.

Secondary hypotheses

1a. Father’s concurrent depression (measured by the Edinburgh Depression Scale, or EDS), marital adjustment (measured by the Dyadic Adjustment Scale) and parenting satisfaction (measured by the Paternal Self-efficacy Scale) will be significantly associated with the father’s attachment (measured by the PPAQ at eight weeks following their infants’ birth).

1b. Fathers in the intervention (Network) group will report significantly higher rates of use of family-related services at eight weeks following their infants’ birth, compared to fathers in the control group.

Secondary research questions

2. *Will the provision of email and web-based support commencing before the birth affect the father’s use of family-related services at eight weeks following their infant’s birth?*

3. *Do depression, number of psychosocial needs, marital adjustment and father-infant attachment measured before birth predict father’s postnatal*
Are concurrent depression, marital adjustment and parenting competence related to father’s postnatal attachment score

Additional research questions

1. Will expectant fathers respond to an offer of information delivered by email?

2. What type of questions would expectant fathers put to a health professional dedicated to supporting fathers?

3. Will technologically-literate new fathers make use of a pre-arranged email group to seek support from other fathers?

4. Are technologically-literate new fathers making use of the internet to access information related to their fathering role?

5.3.1 Study factors

Father–infant attachment

This factor will be measured via an online self-report survey by:

Father’s scores on the Paternal Antenatal Attachment Scale (PAAS) (Condon, 1993) measured approximately two months before the birth and fathers’ scores on the Paternal Postnatal Attachment Scale (PPAS) (Condon & Corkindale, 1998) measured approximately two months after the birth. Both scales have reported good reliability (Cronbach alpha) of $\geq 0.8$ (Condon, 1993; Condon, Corkindale & Boyce, in press).

Use of family support services

This factor will be measured via an online self-report survey by:

The number of contacts (phone or in person) made by fathers to the services available to support families in the city or surrounding areas of Newcastle or Hobart (primary
health care, welfare, Indigenous and specific infant-care services) by the conclusion of the study.

**Depression**

This factor will be measured via an online self-report survey by:

Fathers’ scores on the EDS (Cox & Holden, 2003) measured approximately two months before and two months after the birth. Reports using this scale find an internal consistency (Cronbach alpha) exceeding 0.8 (Murray & Carothers, 1990).

**Psychosocial Needs**

This factor will be measured via an online self-report survey by:

Questions 11–24 on the Strengths and Needs of Fathers Survey (see Chapter 3) measured approximately two months before the birth.

**Parenting satisfaction**

This factor will be measured via an online self-report survey by:

Fathers’ scores on the Paternal self-efficacy scale (adapted from (Teti & Gelfand, 1991)) by substituting “father” for “mother” in one question) measured approximately two months after the birth.

**Attitude toward help-seeking**

This factor will be measured via an online self-report survey by:

Fathers’ scores on the Attitudes Toward Seeking Professional Psychological Help scale (Fischer & Farina, 1995) measured approximately two months before the birth.

5.3.2 Subjects
Expectant fathers attending antenatal education classes in Newcastle and Hobart provided the sampling frame for the survey. The source population comprised those attending classes at: Newcastle Private Hospital during November 2005, December 2005, March 2006, April 2006 & May 2006; and Royal Hobart Hospital and Calvary Hospital during the months March to May 2006. The total number attending the classes included in the study in all hospitals over this period was 258.

Letters describing the research project and inviting participation were handed out to individuals during the early part of their Parenting Preparation course. As part of the Parenting Preparation course for couples, a separate male-only fathers’ discussion group was held, usually for one or two hours. During this session any questions from the expectant fathers relating to the research project could be addressed. A box for returns was provided and a reply paid envelope was included with the letter. (See Appendices 5.2 and 5.3).

**Non-equivalent control group**

During the course of the study, data became available from an unrelated investigation of a random sample of expectant fathers drawn from hospital populations in locations apart from Newcastle and Hobart. The men were recruited through their female pregnant partners attending antenatal clinics at two Australian teaching hospitals (not those used in this thesis). Baseline assessments were performed at 23 weeks gestation and at three months after the birth. The assessments included initial demographic information and a number of the scales used in the thesis study. During the pregnancy the men completed the Paternal Antenatal Attachment Scale, the Dyadic Adjustment Scale, the Edinburgh Depression Scale and the Paternal Postnatal Attachment Scale. The researchers concerned, who are based in Adelaide (hence ‘the Adelaide Study’), agreed to supply the de-identified data file for the fathers in their study. The University of Newcastle Ethics Committee approved the use of the data for comparison with the fathers in this (Newcastle) study (approval H-134-1105). See Section 5.4.6 for discussion.

**5.3.2.1 Sample size**
A sample size of 76 was estimated as necessary for evaluating the primary research question by taking into account the following:

The principal hypothesis to be tested in this research is that the intervention group will demonstrate significantly greater change in their attachment scores as measured on the Antenatal Father-Infant Attachment Scale and Postnatal Father-Infant Attachment Scale (Condon & Corkindale, 1998) than will the control group.

Previous research with fathers in South Australia conducted by Professor John Condon also utilised the Antenatal Father-Infant Attachment Scale and Postnatal Father-Infant Attachment Scale. Professor Condon’s data indicates that the standard deviation for the fathers’ postnatal attachment score is nine points. He also suggests the range of 4–8 points as suitable for measuring clinically significant differences (Condon. J. pers comm. 22/12/2005).

Under the null hypothesis of no difference in outcomes between the intervention and control groups, in order to be able to detect a difference of six points (d) in the outcomes and using nine points as the estimate of the standard deviation (SD) then the number of fathers required for each group is given by

\[ n = \frac{2(z_{\alpha/2} + z_{\beta})^2 SD^2}{d^2} \]  

(Dawson-Saunders & Trapp, 1990). For a two sided test with \( \alpha = 0.05 \) and a power of \( 1 - \beta = 0.80 \), \( z_{\alpha/2} = 1.96 \), \( z_{\beta} = 0.84 \):

\[ n = 2(1.96 + 0.84)^2 9^2 / 6^2 = 35 \]

As groups of expectant fathers were randomised a correction for clustering effect is required given by \( N^* = \text{DEFF} \times N \) where: \( \text{DEFF} = \text{design effect} = [1+ ((\text{average size of cluster} - 1) \times \text{intra-cluster correlation})]; N = \text{sample size calculated.} \) As there are no previous studies reporting an intra-cluster correlation and similarities within clusters will be minimal, an intra-cluster correlation of 0.01 was assumed. The average size of each cluster (antenatal classes) is approximately eight fathers.

The required sample size with an estimated average group size of eight is:

\[ N^* = [1 + (8 - 1) \times 0.01)] 35 = 38 \]

That is, 76 fathers will be required for the study (38 per group).
5.3.3 Procedure

The antenatal groups were randomised using the following procedure. Each group was allocated a number from a list of randomly generated numbers between 0 and 1. If the allocated random number was less than 0.5 then group 1 was assigned as an intervention group. If the random number selected was greater than 0.5, the group was assigned as a control group.

Control Groups
Expectant fathers were invited to help test an email- and web-based information package for fathers. Fathers who completed the consent form were sent an introductory letter accompanied by a “New fathers Information Project” DVD. A test email was also sent to ensure that the correct email address had been obtained. Participants then completed the online survey and selected three information packages to be emailed to them. Previous experience with fathers accessing information suggested that having all seven packages would be considered “overload”. Once fathers completed their final survey they were offered all the remaining packages. When the evaluation form was returned for each package the next package was sent usually within two days. Once the final package evaluation was received a thank you email was sent and a reminder was sent about the final survey approximately six weeks to two months after the birth.

Intervention (Network) groups
Expectant fathers were invited to help test an email- and web-based information package for fathers. Fathers who completed the consent form were sent an introductory letter accompanied by a “New fathers Information Project” DVD. A test email was also sent to ensure that the correct email address had been obtained. Participants then completed the online survey and selected three information packages to be emailed to them. When the evaluation form was returned for each package the next package was sent usually within two days. Once the final package evaluation was received a thank you email was sent and a reminder was sent about the final online survey (The Final Survey) approximately six weeks to two months after the birth.

Participants in the intervention group were also sent a second email within three weeks of completing the online registration containing a confidential email address with
an introductory letter introducing the team of professionals available for inquiries (Appendix 5.14). A second email prompt was sent after the expected birth if no questions had been received. Intervention-group fathers were also assigned to a small discussion group (between two and seven participants) on a University of Newcastle-based electronic discussion board. For each discussion board an initial prompt question was posted “How did it go? What did you do? What did you think about the whole event?” Participants were advised that the C&FHN would be “sitting in” on the discussion to contribute only in the case where specific baby-health questions arose (see letter introducing fathers’ group, Appendix 5.15).

All participants received a request to complete an online survey (Appendix 5.12) approximately two months after the birth.

5.3.4 Statistical analysis

Student’s t-test, paired t-test and Chi-square test were used to compare group differences in sample characteristics and in scores on measures of marital adjustment, depression, help-seeking and needs. Multiple regression analysis—stepwise model building using adjusted R-squared (Pagano & Gauvreau, 2000)—was used to assess the relationship between independent factors, such as the depression score measured before birth and father–infant attachment measured after birth. For testing concurrent associations between father–infant attachment and depression, marital adjustment and parenting satisfaction, Pearson correlation was used. Kruskal-Wallis and Mann-Whitney tests were used to analyse non-normal data. Analyses were performed using SPSS version 14.2 (SPSS Inc, 2006).

5.4 Results

Of the 258 fathers who attended the antenatal classes 137 returned a consent form (only those with access to the internet were eligible) and 105 completed the online registration form (see Figure 5.1 below). The sample of fathers (n=105) who responded were predominantly (52%) in managerial, professional or semi-professional occupations, the majority (82%) were married and most (75%) had tertiary education qualifications. Table 5.1 compares the socio-demographic characteristics of the
respondents to those of a national sample of fathers with children under two years of age.
Figure 5.1  Study design

258 expectant fathers attending antenatal classes are invited to participate

137 complete a consent form and are randomly allocated by Antenatal Group into Network (intervention) or Control conditions

16 Network groups – 67 fathers
51 complete initial online survey
Fathers receive DVD, email information + C&FH Nurse email support + email fathers’ group
39 complete final online survey

17 Control groups – 70 fathers
54 complete initial online survey
Fathers receive DVD, email information
34 complete final online survey

105 fathers give up to three preferences for information packages

67 fathers complete evaluations of emailed information packages
Table 5.1 Comparison of Newcastle respondents (N=105) with the national birth data (Age) and a national sample of fathers with children under two years of age (Education and Occupation)

<table>
<thead>
<tr>
<th>Study factor</th>
<th>Newcastle sample (fathers from antenatal classes)</th>
<th>National sample (ABS 2003** Children &lt; 2 yrs)</th>
<th>p-value***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (average)</td>
<td>33</td>
<td>33*</td>
<td>-</td>
</tr>
<tr>
<td>Education (%)</td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>University/TAFE</td>
<td>75</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Yr 12 complete</td>
<td>14</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Less than Yr 12</td>
<td>11</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Occupation (%)</td>
<td></td>
<td></td>
<td>0.58</td>
</tr>
<tr>
<td>Professional/Semi-professional</td>
<td>52</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>38</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Unskilled</td>
<td>10</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

* ABS Births 2004
** ABS unpublished data 2003
*** Note: Assume no error in national sample due to large sample and many data sets combined

The Australian Bureau of Statistics (ABS) publishes the age of fathers in its regular reporting of births in Australia (Australian Bureau of Statistics, 2004) but does not regularly collect data on the characteristics of fathers. The national Midwives Data Collection, containing information collected by hospital staff as part of the minimum national data set, includes mothers but not fathers (Fletcher et al., 2004).

From the published data on fathers for Australia only the mean age (32.8 years) is available (Australian Bureau of Statistics, 2004). For this research study additional unpublished data relating to fathers was retrieved from the 2003 Family Characteristics Survey (FCS) by the ABS. Unfortunately, these data have two major limitations: the closest approximation to new fathers are fathers defined as natural, adoptive and step-fathers with a child under two years; and the data on occupation and education levels are linked to the FCS records from the Labour Force Survey carried out in the same year. Due to some mismatches and sample design issues within the ABS data sets occupation data and education level data are not available for 18% of FCS fathers. The data presented in Table 5.1 under ‘national sample’ are the best approximations on the
characteristics of new fathers.

The comparison of the national sample with those fathers from the study sample gives an indication of the how representative the study fathers are of all new fathers. The average ages and occupation levels are similar in the two populations; however, those not gaining post-secondary qualifications are under-represented in the study sample. As there are no nationally available figures for the remaining characteristics of the fathers it is impossible to say how well the participants in this research match the population of all new fathers.

5.4.1 Response of fathers to email materials

Topics selected by new fathers

When completing their online survey, fathers indicated which three out of seven topics they wished to receive information on. Table 5.2 presents the choices of the 105 fathers who completed the online survey.

Table 5.2 Information topics chosen by fathers (N=105): Three from a list of seven*

<table>
<thead>
<tr>
<th>Topic</th>
<th>Number of fathers choosing</th>
<th>Percentage of fathers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father–infant bonding</td>
<td>85</td>
<td>81%</td>
</tr>
<tr>
<td>Father-baby games</td>
<td>77</td>
<td>73%</td>
</tr>
<tr>
<td>Fathering a fussy baby</td>
<td>49</td>
<td>46%</td>
</tr>
<tr>
<td>Work-family balance</td>
<td>38</td>
<td>36%</td>
</tr>
<tr>
<td>Postnatal depression</td>
<td>30</td>
<td>29%</td>
</tr>
<tr>
<td>Fathers helping breastfeeding</td>
<td>17</td>
<td>16%</td>
</tr>
<tr>
<td>Sex after the birth</td>
<td>17</td>
<td>16%</td>
</tr>
</tbody>
</table>

*Total packages chosen in this table is 313; two fathers chose only two packages
Overall response to the topics

It was necessary for fathers to complete and return the evaluation form from each topic email in order to be sent the next topic. Of the 105 who completed the initial online survey (and were sent the DVD starter pack and the first topic on their list) 38 did not return the evaluation form from the first email package, 18 received only two email packages and 49 received all three. In Table 5.3 the responses of the fathers are given under the four categories offered in the evaluation document. A fifth column reports on the percentage of approval (“Strongly Agree” plus “Agree”). The number of fathers indicating that they followed the address given in the package to a website is also given in the table.

Table 5.3 Summary of responses to the evaluation questions for information packages (N= 149 responses from 67 fathers)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
<th>Agree or Strongly Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. This document gave me new information.</td>
<td>55 (37%)</td>
<td>86 (58%)</td>
<td>8 (5%)</td>
<td>0 (0%)</td>
<td>95%</td>
</tr>
<tr>
<td>Q2. I intend to discuss the information with my wife/partner.*</td>
<td>80 (54%)</td>
<td>64 (43%)</td>
<td>4 (3%)</td>
<td>0 (0%)</td>
<td>97%</td>
</tr>
<tr>
<td>Q3. I am satisfied with the quality of this information.*</td>
<td>40 (27%)</td>
<td>102 (68%)</td>
<td>6 (4%)</td>
<td>0 (0%)</td>
<td>96%</td>
</tr>
<tr>
<td>Q4. Because of this information I have decided to do some things differently.*</td>
<td>16 (11%)</td>
<td>100 (67%)</td>
<td>32 (21%)</td>
<td>0 (0%)</td>
<td>78%</td>
</tr>
<tr>
<td>Websites</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5. Visit website(s)? **</td>
<td>60 (65%)</td>
<td>32 (35%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*One father did not complete this question
**Two packages had no websites links.

The number of fathers evaluating the topics ranged from 44 (Father-baby Games) to six (Sex after the birth), thus preventing direct comparisons of approval across topics. However, there was a noticeable variation in the percentage of fathers indicating that they would do something different, from 93% of fathers evaluating Father-baby Games to 50% of those evaluating Postnatal Depression. At the foot of the response page the final question was “Any other comments about the information?” Out of the 149 email
responses, 70 (47%) included comments. Responses received were approximately proportional to the number responding to each topic; many were brief and expressed similar approval (63) or concerns (7). Main themes manifest in the approving comments were as follows: usefulness “has allowed myself to remain calm during crying” (23%); interesting or new “really made me think how I am to our baby” (19%); and reinforcing or boosting confidence “has given me a lift in confidence to develop my own style of fathering” (14%). Critical comments (17%) related mainly to insufficient information: “more specific examples of interaction with the baby would be good” and “didn’t really seem to be much meat in it”.

Three questions in the final online survey requested feedback on the packages: “The information packages sent to me were useful in my role as a father”; “The information packages helped me to find the information that I needed when I needed it”; and “My wife/partner also found the information packages useful”. Responses on a four-point scale from “Strongly Disagree” to “Strongly Agree” were recorded. Table 5.3a gives the responses to the three questions from fathers (73) who completed the online survey. The information packages were found to be useful by most fathers (94%), contained information when it was needed (93%) and were also useful for the wife or partner of the father (89%).

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
<th>Agree or Strongly Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Useful in my role as a father (N=67)</td>
<td>11 (16.4%)</td>
<td>52 (77.6%)</td>
<td>2 (3.0%)</td>
<td>2 (3.0%)</td>
<td>63 (94.0%)</td>
</tr>
<tr>
<td>Q2. Find information when needed (N=67)</td>
<td>5 (7.5%)</td>
<td>57 (85.1%)</td>
<td>3 (4.5%)</td>
<td>2 (3.0%)</td>
<td>62 (92.6%)</td>
</tr>
<tr>
<td>Q3. Wife/partner found it useful (N=65)</td>
<td>4 (6.2%)</td>
<td>54 (83.1%)</td>
<td>5 (7.7%)</td>
<td>2 (3.1%)</td>
<td>58 (89.3%)</td>
</tr>
</tbody>
</table>

5.4.2 Fathers’ use of the New Fathers Email Support Group

Expectant fathers allocated to the network side of the study at enrolment (51) were sent an introductory email inviting them to use the password-protected email bulletin board
to communicate with other fathers. The numbers of fathers utilising the bulletin board for their group are shown in Table 5.4. The University of Newcastle’s password-protected bulletin board was selected to ensure confidentiality for those fathers contributing. However, the complicated steps required to register, locate the discussion thread and make a posting—and a number of unforeseen technical difficulties—made it difficult or impossible for some fathers to participate.

<table>
<thead>
<tr>
<th>Group No</th>
<th>Fathers in group</th>
<th>Entries to board</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>Passwords not available in time</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>0*</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>0*</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>0*</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

*access was blocked due to technical problem

Overall, 41 per cent (16/39) of network-group fathers contributed to the email discussion. How many fathers in this group read the emails of others is not known. All entries by fathers related to the birth and were directed at the group in general or to the nurse who was “sitting in” on the group. The descriptions of the birth, some over 1,000 words long, contained details of the father’s reaction, including frank descriptions of feelings and concerns during the last stages of labour and delivery. While reactions to the birth were self-disclosing, few comments were made directly to other fathers’ stories, and the only question directed to other fathers in the group “How is feeding going with everyone?” brought no response. The C&FHN who sat in on the email discussions to be able to contribute if topics arose where misinformation was shared made no comments in any of the groups as there were no instances of misinformation.
Fathers who were enrolled in the network group were also asked to complete two further questions on the usefulness of the email discussion group: “Having the email group was helpful to me in my role as a father”; and “Having an email group like this one would be of benefit to expectant dads”. Responses on a four-point scale from “Strongly Disagree” to “Strongly Agree” were recorded. Table 5.4a gives the responses to the two questions from the network-group fathers who completed the online survey. Slightly more than half of the fathers (52.1%) judged the email group to be unhelpful in their own role; however, almost three-quarters agreed that such a group would benefit expectant fathers.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree (%</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
<th>Agree or Strongly Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Email group helpful in my role as a father (N=32)</td>
<td>9.4%</td>
<td>37.5%</td>
<td>40.6%</td>
<td>12.5%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Q2. Email group benefit expectant dads (N=30)</td>
<td>23.3%</td>
<td>50.0%</td>
<td>16.7%</td>
<td>10.0%</td>
<td>73.3%</td>
</tr>
</tbody>
</table>

5.4.3 Response to the email discussion group and to the professional advice

Fathers allocated to the network side of the study were sent an introductory email explaining the nature of the professional email advice service and inviting them to send questions or comments to the C&FHN. Of the 51 fathers enrolled 19 (37 %) contacted the nurse. The 27 de-identified emails were examined and coded for theme. Topics were divided evenly between information on the birth (11) and updates on waiting for the birth (11), although postnatal emails were generally longer and contained more detailed information and questions. Difficulties described in the emails included problems of sore or cracked nipples (3), difficulty with sleep and settling (5) and requests were made for information on nipple care, swaddling, dummy use, “sloppy poos”, feeding technique and normal breastfeeding. Although some emails were perfunctory several included information on the emotional response of the fathers: “suspected that I’d be happy but did not expect to be unable to hold back a tears” or “more tired and exhausted and happier then I think I have ever been”. The descriptions were not always positive in tone: “I imagine the baby is going to cut seriously into my
surfing time on the weekends which will be a real bastard”. More commonly the fathers reported the emotional difficulties of their wives or partners (“…is really down in the dumps with her milk coming in and the blues” or “…is down at the moment and is also crying a fair bit”) and before the birth: “my wife is going stir crazy at home”. While some fathers reported mothers as coping well, others were unsure and several mentioned that their return to work might put a strain on the arrangements for the care of the new infant. One father requested telephone advice (denied due to the study design) and several fathers emailed thanks for the information supplied. No questions required assistance from the other members of the professional advice team. Responses in the final evaluation to the statement “having the health professional to email was helpful to me in my role as a father” are shown in Table 5.4b below. A majority of fathers (70%) found the health professional contact by email to be helpful in their role as father.

Table 5.4b Responses from Network group fathers (N=39) to final evaluation questions on the usefulness of email support services

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
<th>Agree or Strongly Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. Health professional email helpful in my role as a father (N=30)</td>
<td>20.0%</td>
<td>50.0%</td>
<td>20.0%</td>
<td>10.0%</td>
<td>70.0%</td>
</tr>
</tbody>
</table>

Three of the fathers completing the survey who marked the box “disagree” commented in emails that they thought that it was reassuring or useful to have such a service available but, since their own situation had gone well, they had not personally benefited from the service.

The email support was also evaluated by the nurse, who read and responded to the emails. She did not find the email contact to be sufficiently interactive and was frustrated at the absence of cues available from face-to-face and telephone-service delivery, and the lack of feedback on the overall effect of her advice (See the full report Appendix 5.13).
5.4.4 Comparison of network and control groups

A total of 33 groups were randomly allocated to control (17 groups) and to network (16 groups). Twenty-five of the groups were conducted in Newcastle and eight in Hobart. Approximately half of the men attending the antenatal classes approached to be in the study agreed to participate in the research, and completed a consent form (137/258). Of these men 105/137 completed the first online survey providing demographic information and selecting information packages for the study and 69.5% (73/105) completed the final online survey. Four control groups and four network groups came from Hobart; 13 control and 12 network groups came from Newcastle. Table 5.5 sets out the numbers of fathers available, the number enrolling in the study and the number and percentage (of those who initially enrolled) completing the first and final online survey in the control and network groups. Table 5.6 compares the demographic characteristics of fathers enrolled in the control groups with those enrolled in the network groups.

Table 5.5 Comparison of Network and Control group fathers enrolling, registering online and completing the online survey

<table>
<thead>
<tr>
<th>Group type</th>
<th>Number of groups</th>
<th>Fathers in groups</th>
<th>Enrol in study (%)</th>
<th>Complete first survey (% of enrolled)</th>
<th>Complete final survey (% of enrolled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network</td>
<td>16</td>
<td>132</td>
<td>67 (50.8 %)</td>
<td>51 (76.1%)</td>
<td>39 (58.2%)</td>
</tr>
<tr>
<td>Control</td>
<td>17</td>
<td>126</td>
<td>70 (55.6%)</td>
<td>54 (77.1%)</td>
<td>34 (48.6%)</td>
</tr>
</tbody>
</table>

There was no significant difference in the percentage of men who completed the first survey between the network (76.1%) and control (77.1%) groups (p=0.88). Similarly, there was no significant difference in the percentage of men who completed the final survey between the network (58.2%) and control (48.6%) groups (p=0.26).

There was no significant difference in the mean age of men from the network (mean=32.5, SD=4.4) and control (mean=33.2, SD=5.8) groups (p=0.54).
Table 5.6 Marital, language, employment, Aboriginal, first child, education and occupation status of control fathers (N=54) compared with network fathers (N=51) who provided demographic information (percentages)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control (N=54) (%)</th>
<th>Network (N=51) (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td>0.52</td>
</tr>
<tr>
<td>Married</td>
<td>46 (89.2)</td>
<td>41 (83.3)</td>
<td></td>
</tr>
<tr>
<td>De-facto</td>
<td>8 (10.8)</td>
<td>10 (16.7)</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td>0.97</td>
</tr>
<tr>
<td>English</td>
<td>53 (98.1)</td>
<td>50 (98.0)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1 (1.9)</td>
<td>1 (2.0)</td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td>0.34</td>
</tr>
<tr>
<td>Full-time</td>
<td>51 (94.4)</td>
<td>47 (94.0)</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>2 (3.9)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Casual</td>
<td>1 (1.9)</td>
<td>2 (4.0)</td>
<td></td>
</tr>
<tr>
<td>Unemployed benefits</td>
<td>0</td>
<td>1 (2.0)</td>
<td></td>
</tr>
<tr>
<td>Aboriginal</td>
<td></td>
<td></td>
<td>0.33</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>1 (1.9)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Non-Aboriginal</td>
<td>53 (98.1)</td>
<td>51 (100.0)</td>
<td></td>
</tr>
<tr>
<td>First Child</td>
<td></td>
<td></td>
<td>0.64</td>
</tr>
<tr>
<td>First child</td>
<td>51 (94.4)</td>
<td>47 (92.2)</td>
<td></td>
</tr>
<tr>
<td>Not first child</td>
<td>3 (5.6)</td>
<td>4 (7.8)</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td>0.70</td>
</tr>
<tr>
<td>Left before Higher School Certificate</td>
<td>5 (9.3)</td>
<td>6 (11.8)</td>
<td></td>
</tr>
<tr>
<td>Higher School Certificate</td>
<td>8 (14.8)</td>
<td>5 (9.8)</td>
<td></td>
</tr>
<tr>
<td>TAFE or University</td>
<td>41 (75.9)</td>
<td>40 (78.4)</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td>0.73</td>
</tr>
<tr>
<td>Manager</td>
<td>7 (13.0)</td>
<td>8 (15.7)</td>
<td></td>
</tr>
<tr>
<td>Professionals or associate</td>
<td>20 (37.0)</td>
<td>22 (43.1)</td>
<td></td>
</tr>
<tr>
<td>professionals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trades or advanced clerical</td>
<td>13 (24.1)</td>
<td>8 (15.7)</td>
<td></td>
</tr>
<tr>
<td>Intermediate clerical, intermediate production, elementary clerical or labourer</td>
<td>14 (25.9)</td>
<td>13 (25.5)</td>
<td></td>
</tr>
</tbody>
</table>

There were no statistically significant differences between the network and control fathers for all demographic variables.

5.4.5 Tests of Study Hypotheses

Hypothesis 1. Fathers who participate in the Network Group (intervention group) will report significantly higher increases in their attachment scores than fathers in the Control Group at eight weeks following their infants’ birth.
The attachment scores were measured before the birth using the PAAS, which has a range of 16–80, and after the birth using the PPAS, with a range of 19–95. Change in the fathers’ attachment scores was calculated by converting the PAAS and PPAS to percentages before subtracting the PAAS percentage from the PPAS percentage. Of the 79 men who completed the antenatal attachment scale six (three from interventions, three from control) missed some questions on the postnatal scale and so were excluded from the analysis. Table 5.7 compares the change in mean attachment scores of Network Group and Control Group fathers.

Table 5.7  Mean antenatal and postnatal attachment scores (as a percentage of the total score) and change in percentage attachment scores of control fathers (N=34) compared with network fathers (N=39)

<table>
<thead>
<tr>
<th></th>
<th>Antenatal PAAS score as % of total score (/80)</th>
<th>Postnatal PPAS score as % of total score (/95)</th>
<th>Change in attachment score (PPAS% - PAAS%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (SD) (N=34)</td>
<td>81.4 (7.4)</td>
<td>83.3 (8.0)</td>
<td>2.2 (7.6)</td>
</tr>
<tr>
<td>Network (SD) (N=39)</td>
<td>78.1 (7.2)</td>
<td>76.3 (9.3)</td>
<td>-1.9 (7.2)</td>
</tr>
</tbody>
</table>

There was no significant difference in the mean change in attachment score of men from the network (mean=-1.9, SD=7.2) and control (mean=2.2, SD=7.6) groups (p=0.89).

Although the difference between the means is not statistically significant (p> 0.05) the direction of change is opposite to that predicted, the mean attachment score of the Control Group has increased while that of the intervention group has decreased. This result supports the null hypothesis that the provision of antenatal information and support as described in the above chapter does not increase father–infant attachment two months after the birth. However, features of the study design, such as the sample size, may have limited the ability of this study to detect a change or other factors to do with the fathers in the Network and Control groups may have influenced the degree of change in attachment score. It is also possible that the intensity of the intervention was insufficient to influence the fathers’ connection with their infants.
To test for the possibility of a Type II error the power of the t-test used to assess Hypothesis 1 was calculated. For the sample size of 73, with a difference in means of 4.1 and an average standard deviation of 7.3 for the two Network and Control groups, the power of the test to detect a significant difference ($\alpha=0.05$) is 90.2%. This figure is above the conventional power requirement of 80% and suggests that the lack of a significant difference found for this hypothesis is not due to the limited sample size.

**Multiple regression analysis**

It is possible that although the Network and Control groups did not differ significantly on demographic factors their change in attachment pre- and post-birth may have been due to factors unrelated to the intervention. Table 5.8 shows the results of multiple regression analyses of the change in attachment scores on the independent variables assessed during pregnancy with a variable representing the Intervention-Control group entered into the regression as the first step. The multiple regression analysis was carried out in the following sequence: the Change in Attachment Score was regressed separately onto each variable measured before birth (demographics, EDS, DAS, PAAS, Psychosocial Needs and Help Seeking) (i.e. univariate regression analyses). Those variables that were significant predictors ($p<0.25$) were then entered into a multiple regression model, in a forward-stepwise approach, with the variable representing the Intervention-Control entered as the first step. Variables were retained in the model if the variance explained (i.e. adjusted $R^2$) increased when the variable was added to the model (Pagano & Gauvreau, 2000, p. 454).

The final regression contained four variables, including Intervention-Control. The strongest predictor of subsequent father–infant attachment was father–fetal attachment. Interestingly, the coefficient for intervention/control was not statistically significant. That is, there is no difference between the intervention and control groups in terms of change in attachment score, after adjusting for the potential confounders (i.e. father–fetal attachment and dyadic adjustment). The regression equations explained approximately 18% of the variation in change in attachment score ($R^2$). Note that the inclusion all other pregnancy variables only increased the amount of explained variation by a further 2% (i.e. $R^2 = 20\%$).
Table 5.8  Multiple regression analyses of postnatal attachment scores on independent variables assessed during pregnancy

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Crude Coefficient</th>
<th>p-value</th>
<th>Adjusted Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention/Control</td>
<td>-0.17</td>
<td>0.89</td>
<td>-0.09</td>
<td>0.45</td>
</tr>
<tr>
<td>Father–Fetal Attachment</td>
<td>-0.26</td>
<td>0.03</td>
<td>-0.40</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Dyadic Adjustment</td>
<td>0.20</td>
<td>0.10</td>
<td>0.27</td>
<td>0.03</td>
</tr>
<tr>
<td>Help Seeking</td>
<td>0.25</td>
<td>0.04</td>
<td>0.30</td>
<td>0.02</td>
</tr>
</tbody>
</table>

The PAAS includes two subscales measuring the quality of the father–infant attachment and the time spent in attachment mode (Condon, 1993). Including these subscales in place of the global father–fetal attachment score increased the variance explained by the regression equations to 25%. Table 5.8a shows the results of multiple regression analyses of the change attachment scores on the independent variables assessed during pregnancy with Intervention-Control entered into the regression as the first step and Subscale T (time spent in attachment mode) replacing the global attachment score used in Table 5.8a. Again, the coefficient for intervention/control was not statistically significant indicating no difference between the intervention and control groups in terms of change in attachment score, after adjusting for potential confounders (time spent in attachment mode, dyadic adjustment and help seeking).

Table 5.8a  Multiple regression analyses of postnatal attachment scores on independent variables assessed during pregnancy (Subscale T replacing Father–fetal attachment)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Crude Coefficient</th>
<th>p-value</th>
<th>Adjusted Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention/Control</td>
<td>-0.17</td>
<td>0.89</td>
<td>-0.07</td>
<td>0.53</td>
</tr>
<tr>
<td>Subscale T</td>
<td>-0.37</td>
<td>&lt;0.01</td>
<td>-0.47</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Dyadic Adjustment</td>
<td>0.20</td>
<td>0.10</td>
<td>0.26</td>
<td>0.02</td>
</tr>
<tr>
<td>Help-seeking</td>
<td>0.25</td>
<td>0.04</td>
<td>0.29</td>
<td>0.01</td>
</tr>
</tbody>
</table>

There has been debate on the appropriateness of adjusting for baseline values when analysing change scores (Glymour, Weuve, Berkman, Kawachil, & Robins, 2005). Table 5.9 shows the results of multiple regression analyses of the change in attachment scores on the independent variables assessed during pregnancy with Intervention-Control entered into the regression as the first step and Antenatal Attachment score removed. The final regression contained two variables, including Intervention-Control. The strongest predictor of change in father–infant attachment in this model is the expectant father’s help-seeking. Again, the coefficient for intervention/control was not
statistically significant, so there is no difference between the intervention and control groups in terms of change in attachment score, after adjusting for dyadic adjustment and number of needs. The regression equations explained 3.5% of the variance and including all other pregnancy variables explained an additional 3.3%.

Table 5.9  Multiple regression analyses of postnatal attachment scores on independent variables assessed during pregnancy (Father–fetal attachment score not included)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Crude Coefficient</th>
<th>p-value</th>
<th>Adjusted Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention/Control</td>
<td>-0.17</td>
<td>0.89</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Help-seeking</td>
<td>0.25</td>
<td>0.04</td>
<td>0.25</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Since the above regression analyses show that factors other than demographic characteristics may influence a father’s final attachment score the antenatal scores of Network and Control fathers were compared on the following measures: marital satisfaction (DAS), depression (EDS>9), needs (total number of needs identified) and attachment (PAAS). The attachment score was further divided into the two subscales Quality of Attachment and Time Spent in Attachment Mode. Table 5.10 lists the mean, standard deviation, test statistic and significance for Network and Control group fathers for each variable.

Table 5.10  Comparison of mean scores of Network (N=39) and Control group (N=34) fathers for marital satisfaction (DAS), depression (EDS>9), needs (total number of needs identified), help seeking, total attachment (PAAS), attachment subscale - quality (AttQ) and attachment subscale – time (AttT) assessed during pregnancy

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Network Mean (SD)</th>
<th>Control Mean (SD)</th>
<th>Test statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS</td>
<td>26.8 (4.0)</td>
<td>26.9 (5.3)</td>
<td>0.08 (69)</td>
<td>0.94</td>
</tr>
<tr>
<td>EDS&gt;9</td>
<td>0.14 (0.3)</td>
<td>0.12 (0.3)</td>
<td>0.18 (70)</td>
<td>0.86</td>
</tr>
<tr>
<td>Needs</td>
<td>1.8 (1.4)</td>
<td>1.6 (1.5)</td>
<td>0.66 (69)</td>
<td>0.51</td>
</tr>
<tr>
<td>Help-seeking</td>
<td>19.0 (5.1)</td>
<td>18.3 (4.4)</td>
<td>-0.56 (67)</td>
<td>0.57</td>
</tr>
<tr>
<td>PAAS</td>
<td>62.5 (5.8)</td>
<td>65.1 (5.9)</td>
<td>1.9 (71)</td>
<td>0.06</td>
</tr>
<tr>
<td>AttQ</td>
<td>34.5 (2.9)</td>
<td>36.0 (2.4)</td>
<td>2.4 (71)</td>
<td>0.02*</td>
</tr>
<tr>
<td>AttT</td>
<td>18.8 (3.4)</td>
<td>19.8 (3.4)</td>
<td>1.2 (71)</td>
<td>0.22</td>
</tr>
</tbody>
</table>

* Significant at 0.05
Of the variables measured during pregnancy only the Quality subscale of the PAAS was significantly different for network (mean= 34.46, SD=2.4) and control (mean=36.00, SD=2.9) groups (p=0.02). However, when the regression of the change in attachment score was regressed onto the Quality subscale as part of the stepwise regression described for Table 5.9a the addition of the Quality subscale was not significant (Standardised beta coefficient = -0.07, p=0.56). The difference in the Network and Control groups’ scores on the Quality of Attachment measured before birth does not predict a difference in the final attachment scores of the two groups.

It is also possible that the participation in the intervention was too limited to have an effect. For example, a number of the fathers in the intervention Network Group who had access to the C&FHN, and who were allocated to a fathers’ email group, did not take advantage of either. To test for the possible effect of lack of participation those fathers who did not participate in the extra support services were discounted in the computations of results from the Network Group and, in a separate analysis, reallocated to the Control Group. This analysis is an attempt to explore the efficacy of participation rather than an alternative analysis of the randomised groups (see Hollis & Campbell, 1999), for a discussion of acceptable variations to “intention to treat” analyses). However, the identification of Network-allocated fathers who did not participate is restricted due to the confidentiality of the emails to the C&FHN. Fathers who did not participate were identified as those who were eligible but who did not participate in the email discussion group (see Table 5.4). When those fathers in the network group who did not participate in the email discussion were removed from the analysis the difference between the means of the network fathers (mean = 2.9, SD = 8.4) and control fathers (mean = 1.9, SD = 7.2) remained non-significant (p = 0.63). Grouping the network fathers who did not participate in the emails with the control group fathers also did not produce a significant difference (mean = 1.6, SD = 6.7) when tested against the means of the network fathers (mean = 2.9, SD = 8.4; p=0.50).

Finally, consideration was given to an alternative measure of fathers’ involvement in the intervention—the number of packs (from one to three) received by the fathers. Since fathers only received packs once they had completed and returned an evaluation it is possible that fathers in the control or intervention group differed in their involvement in
the project as reflected in the number of packs received. To test for this effect the association between number of packs and change in attachment score was tested for network and control fathers; the difference was not statistically significant for the whole group (Kruskal-Wallis Control = 0.31 DF =2, p = 0.86) nor for either group analysed separately (Kruskal-Wallis Control = 1.33 DF =2, p = 0.51; Kruskal-Wallis Network = 0.28 DF =2, p = 0.87).

Hypothesis 1a Father’s concurrent depression (measured by the EDS), marital adjustment (measured by the Dyadic Adjustment Scale) and parenting satisfaction (measured by the Paternal Self-efficacy Scale) will be significantly associated with father’s attachment (measured by the PPAQ at eight weeks following their infants’ birth).

Table 5.11 lists the correlation coefficients for the fathers in the Newcastle sample (N=73) for the three variables: Marital adjustment; Depression; and Paternal self-efficacy measured after the birth.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pearson Correlation</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital adjustment (DAS)</td>
<td>0.381</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Depression (EDS)</td>
<td>-0.308</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Paternal self-efficacy</td>
<td>0.614</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Fathers’ score on the PPAS is positively associated with DAS and Paternal self-efficacy, but is negatively associated with EDS. All three variables were statistically significantly correlated with the fathers’ score of the PPAS.
Hypothesis 1b  Fathers who participate in the Network Group and Control Group will report significantly different rates of use of family-related services at eight weeks following their infants’ birth.

In the final survey fathers indicated which of 16 local family support services that they had personally contacted and how many contacts they had made (up to six contacts). Six of the available services were not indicated as contacted by any fathers: Drug & Alcohol, Barkuma, Mental Health Services, Relationships Australia, Aboriginal Liaison and Salvation Army. For those services that were contacted Table 5.12 shows the number of fathers contacting and number of contacts made after the birth for control fathers (N=34) and network fathers (N=39).

Table 5.12  Number of fathers contacting family support services, and number of contacts made after the birth for control fathers (N=34) and network fathers (N=39). Total number of contacts is given in parentheses

<table>
<thead>
<tr>
<th>Services</th>
<th>Control fathers contact N=34 (total contacts)</th>
<th>Network fathers contact N=39 (total contacts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Support</td>
<td>0 (0)</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Lifeline</td>
<td>1 (1)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>19 (33)</td>
<td>14 (30)</td>
</tr>
<tr>
<td>Community Health</td>
<td>11 (25)</td>
<td>11 (19)</td>
</tr>
<tr>
<td>Child &amp; Family Health Nurse</td>
<td>13 (33)</td>
<td>14 (29)</td>
</tr>
<tr>
<td>Mensline</td>
<td>1 (1)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Centrelink</td>
<td>8 (9)</td>
<td>10 (15)</td>
</tr>
<tr>
<td>Parentline</td>
<td>4 (4)</td>
<td>1 (6)</td>
</tr>
<tr>
<td>Karitane</td>
<td>3 (3)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Tressilian</td>
<td>4 (8)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Total</td>
<td>64 (117)</td>
<td>52 (102)</td>
</tr>
</tbody>
</table>

Each father could contact 10 services, giving the total number of service contacts as 10n: Control 340, Network 390. The difference between the proportions 64/340 (0.19) and 52/390 (0.13) is significant (p = 0.04) at 5% significance level. The total number of possible contacts recorded for each father for each of the 10 services is six. The total possible contacts is 60n: Control 2,040, Network 2,340. The difference between the proportions 117/2,040 (0.06) and 102/2,340 (0.04) is significant (p = 0.04) at 5%
significance level. Fathers in the Control Group were significantly more likely to contact family support services than were fathers in the Network Group.

Two possible confounders for the difference in use of services were tested: fathers’ willingness to seek help may have influenced the outcome and those fathers who had been involved with the project the longest may have had more time to contact services. Fathers completed a Help-seeking scale prior to the birth to identify those who might be more likely to use services. The number of services used by both Network and Control fathers was not significantly associated with their Help-seeking score (Mann-Whitney z = -1.30, p = 0.19) and there were no significant differences between mean Help-seeking scores for Control (mean = 18.3, SD = 4.4) and Network fathers (mean = 19.0, SD = 5.1) on this measure (p = 0.58).

When the total number of weeks that the father had been “in” the project was tested against the measure of service contacts a significant correlation was found between the number of weeks and the total number of contacts for fathers in the total sample (Spearman’s rho = -0.25, p= 0.03). However, when comparing Control and Network fathers the correlation was significant only for those in the Network Group (Spearman’s rho Control = -0.13, p= 0.48; Spearman’s rho Network = -0.44, p= 0.01).

5.4.6 Non-equivalent Control Group: data from the Adelaide study

Although the intervention group in the study received additional attention in the form of a fathers’ support group and professional support when compared to the Control Group, in some ways all of the men in this study were supplied with extra resources. At the point of enrolment all the men were attending a male-only fathers’ discussion group offered as part of standard antenatal care at their respective hospitals. However, these groups are not regularly offered across antenatal classes in Australia and depend on local enthusiasm and special funding to continue. In addition, all the men in the study were posted a DVD with information about father–infant bonding and were emailed packages of information on up to three topics of their choice related to new fatherhood. It is possible that these extra resources had an affect on the father–infant bond irrespective of the additional groups involving the intervention fathers.
Hypothesis 2         Fathers who participate in the Newcastle study (cases) will report significantly higher increases in their attachment scores than fathers in the Adelaide study (controls) at eight weeks following their infants’ birth.

5.4.6.1 The Adelaide sample

The male participants for the Adelaide study were recruited through their female partners. Consecutive women (of between 12 and 20 weeks gestation) who attended the antenatal clinics were requested to discuss the information sheet with their male partner and ask them to return the consent form in a reply paid envelope. Follow-up phone calls were made to the woman if no reply was forthcoming.

Nine hundred and four consent forms were issued to women, 448 (49.6%) were returned by the male partner, 312 first assessments (average 23 weeks gestation) were completed and 265 returned the three-month postnatal survey. Comparisons between the men from the Adelaide and Newcastle studies are shown in Table 5.13.
Table 5.13  Socio-demographic characteristics of the Newcastle study sample (N=73) compared to the Adelaide study sample (N=265)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Newcastle (N=73)</th>
<th>Adelaide (N=265)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (SD)*</td>
<td>32.9 (5.2)</td>
<td>29.3 (5.0)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Marital status (%)*</td>
<td></td>
<td></td>
<td>0.02</td>
</tr>
<tr>
<td>Married</td>
<td>86.3</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td>De-facto</td>
<td>13.7</td>
<td>21.9</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>0.0</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>0.0</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Language (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>97.2</td>
<td>97.3</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2.8</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Employment (%) **</td>
<td></td>
<td></td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Full-time</td>
<td>95.8</td>
<td>86.8</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>1.4</td>
<td>9.9</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>2.8</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Aboriginal (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aboriginal</td>
<td>1.4</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Non-Aboriginal</td>
<td>98.6</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Education (%)*</td>
<td></td>
<td></td>
<td>0.02</td>
</tr>
<tr>
<td>Left before Higher School Certificate</td>
<td>11.0</td>
<td>23.9</td>
<td></td>
</tr>
<tr>
<td>Higher School Certificate</td>
<td>13.7</td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>TAFE or University</td>
<td>75.3</td>
<td>57.8</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Occupation (%)</td>
<td></td>
<td></td>
<td>0.23</td>
</tr>
<tr>
<td>Manager</td>
<td>15.1</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>Professionals or associate professionals</td>
<td>37.0</td>
<td>32.3</td>
<td></td>
</tr>
<tr>
<td>Trades or advanced clerical</td>
<td>21.9</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>Intermediate clerical, intermediate production, elementary clerical or labourers</td>
<td>26.0</td>
<td>30.7</td>
<td></td>
</tr>
</tbody>
</table>

* Significantly different p <0.05
** Significantly different p <0.01

The two samples differed significantly in several respects. The Newcastle fathers were older (mean= 32.9, SD= 5.2) than the Adelaide fathers (mean=29.3, SD=5.0) and more were married (86.3%;74.7%). Newcastle fathers had higher education qualifications (p=0.02) and were more likely to be in full-time employment (95.8%; 86.8%, p<0.01) than the Adelaide fathers.

Hypothesis 2 was tested by comparing the change in attachment scores over the antenatal–postnatal period of the Newcastle and Adelaide fathers. Table 5.14 compares the antenatal and postnatal attachment scores (as a percentage of the total score) and change in percentage attachment scores of Newcastle Study and Adelaide Study fathers.
Table 5.14  Mean antenatal and postnatal attachment scores (as a percentage of the total score) and change in percentage attachment scores of Newcastle Study fathers (N=73) compared with Adelaide Study fathers (N=265)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Antenatal PAAS score as % of total score (/80)</th>
<th>Postnatal PPAS score as % of total score (/95)</th>
<th>Change in attachment score (PPAS% - PAAS%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newcastle: Mean (SD)</td>
<td>73</td>
<td>79.6 (7.4)</td>
<td>81.7 (9.0)</td>
<td>2.2 (7.6)</td>
</tr>
<tr>
<td>Adelaide: Mean (SD)</td>
<td>265</td>
<td>78.9 (8.1)</td>
<td>84.4 (8.9)</td>
<td>5.5 (9.1)</td>
</tr>
</tbody>
</table>

Fathers from the Adelaide Study (mean=5.5, SD=9.1) reported significantly greater gains in attachment scores than fathers in the Newcastle Study (mean=2.2, SD=7.6) (p<0.01).

To test for the possibility that differences in the characteristics of the two samples might have influenced the final attachment score, a series of regressions were performed (with postnatal attachment score as the dependent variable) and the demographic factors in Table 5.13, as well as the study factors Marital Adjustment (DAS), Depression (EDS) measured in both samples before the birth as the independent variables. Table 5.15 shows the results of multiple regression analyses of the change in attachment scores on the independent variables assessed during pregnancy, with a variable signifying the Newcastle or Adelaide subjects (called Newcastle/Adelaide) entered into the regression as the first step. The final regression contained two variables, including Newcastle–Adelaide. The only significant predictors of subsequent change in father–infant attachment were Newcastle–Adelaide and antenatal father–fetal attachment. The regression equations explained approximately 20.3% of the variance, and including all other pregnancy variables increased this by only 4%.

Table 5.15  Multiple regression analyses of change in attachment scores of Newcastle and Adelaide samples on independent variables assessed during pregnancy

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Crude Coefficient</th>
<th>Crude p-value</th>
<th>Adjusted Coefficient</th>
<th>Adjusted p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newcastle–Adelaide</td>
<td>-0.16</td>
<td>&lt;0.01</td>
<td>-0.14</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Father–fetal Attachment</td>
<td>-0.43</td>
<td>&lt;0.01</td>
<td>-0.43</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>
The regression coefficients for Newcastle–Adelaide (-0.14) suggests that Adelaide fathers had a significantly greater increase in attachment score compared to Newcastle fathers. However, the analysis demonstrates that the difference in outcome scores of the Newcastle and Adelaide samples was influenced by the antenatal attachment scores, which may explain why the outcome was not in the expected direction.

5.5 Discussion

The degree to which fathers will make use of tailored family support services has rarely been explored in the research on parenting. It has been assumed that fathers lack either the time or the motivation (or both) to utilise health and family support services to the same extent that mothers do. In this research all fathers attending antenatal classes in three hospitals were informed of the research project and issued with consent forms to enrol. Those who consented and completed the online enrolment form were sent packages of information along with a short introductory DVD and an offer of further information on completion of a short evaluation form. Fathers in the intervention group were also offered a dedicated health professional to answer questions and were allocated to an email discussion group with other fathers.

Father’s reaction to these opportunities can be gauged in a number of ways. The initial enrolment in the study (53.1%) provides an approximate guide for estimating the number of fathers in the population who may be interested in electronic information and support. The sample was atypical in having higher levels of education and job status than the general population of new fathers in the community. However, the socioeconomic differences relate to access rather than interest. There is no evidence that fathers without tertiary education, for example, have less interest in the wellbeing of their children or have fewer encounters with common difficulties associated with sleep, feeding and settling of newborn babies. Fathers with lower incomes and with less years of education are less likely to have access to the internet; hence the stipulation that participants have access to email and internet may have excluded many of the fathers in the antenatal classes (approximately 33% of males over 15 years have no internet access at home or at work, Australian Bureau of Statistics, 2006). Of those who completed the consent form, 77% also completed the online survey and were sent the first email package of information. Just over half of these men (51%) then returned evaluations and
were sent subsequent information on subjects of their choice. As there was no material
incentive for the men to consent, go to the webpage and complete the survey or receive
multiple email packages these numbers are encouraging. While the fathers in this study
are not representative of all new fathers, the results suggest that tailored information
delivered in an electronic format may be of interest, and therefore be a feasible means of
support, for a substantial segment of new fathers in our communities.

Overall, the father’s assessment of the materials was very positive; 96% evaluated
the quality of the emailed information as satisfactory and a similar percentage rated the
packages overall as useful to their role. Given the wide availability of web-based
material it is also significant, that in 95% of cases, fathers reported that the information
provided was “new”. These responses suggest that fathers’ apparent lack of interest in
“parenting” information may be due, in part, to the perceived lack of father-specific
information. The most popular topics were those that related to fathers’ direct
interaction with the infant. The stimulus of the starter pack DVD may have influenced
the choice of Father–infant bonding as a topic, but the popularity of father-baby games
also reflects the widely reported preferred interaction style of fathers (Kazura, 2000;
Kromelow et al., 1990; Lamb, 1977c; MacDonald & Parke, 1986). It is also clear that,
although the information was specifically directed to fathers, the fathers did not see
themselves acting in isolation with their infant. In almost every case the fathers intended
to discuss the information with their wife or partner and almost 90% in the final survey
reported that the information was useful to their partner. A comment on the sex-after-
the-birth package—“I now have access to the information that both my wife and I have
been wondering about but unable to find satisfactory answers”—suggests that in some
cases the couple, rather than the father, were the recipients of the information. The fact
that 78% of fathers also indicated that they would parent differently as a result of the
information indicates that these men comprise a group who may be influenced by
tailored information in their approach to raising a new baby.

The least popular topics, breastfeeding and sex after birth, are both known to be
important issues for fathers, breastfeeding from a public health perspective and sexual
activity as a central ingredient of the couple relationship. Breastfeeding is widely
endorsed as a key strategy for improving infant health, and fathers’ influence on
initiation and maintenance of breastfeeding has been documented in numerous studies
The lack of appeal of this topic for fathers suggests that the current extensive promotion of breastfeeding for new infants has not impacted on fathers’ views of breastfeeding as an activity that is an important part of their role. The package on resuming sexual relationships was also infrequently selected even though the resumption of sexual relationships is an essential step in the transition to parenthood for men and women, and many concerns remain unresolved 12 months after the birth (Condon et al., 2004; Pastore, 2007; Polomeno, 1998). The minimal response to the sexuality topic among these men during the antenatal period may be due to the (overly) optimistic expectation that sexual relations will resume at the same levels of frequency and satisfaction as before conception.

Further research will be required to identify key factors in the portrayal of topics such as fathers’ role in supporting breastfeeding and resuming sexual relations after the birth that make information on these topics appealing to new fathers. Future studies should randomise the order of topics in the list presented to fathers to gain a clearer indication of fathers’ interests.

The two interventions offered to those fathers in the network group also provided an indication of possible avenues for supporting new fathers. The University of Newcastle’s Blackboard system was selected to host the fathers’ discussions as it was able to be password-protected and so could ensure that the fathers’ contributions would be confined to the group (unless one of the group members forwarded material on). The degree of uptake of the email discussion group in this study was hampered by the complexity of the logging-on process and by technical difficulties in setting up a number of the groups with addresses and passwords; it is uncertain how many fathers might have contributed had the system been more user-friendly. It is also not clear what benefit fathers gained, if any, from participating in the email groups. Judging from the content of the emails, no fathers entered into dialogue with others and entries were restricted in the main to one-off descriptions of the birth. However, in the final evaluation 47% of fathers reported the email groups were helpful in their role as fathers and over 70% thought that groups like these would benefit other new fathers. Given the lack of interactive participation by the fathers these results are surprising. It is possible that simply having a forum dedicated to fathers’ views of the birth provides positive
recognition of a father’s role; future research might profitably explore fathers’ reflections on the significance of having contributed to a forum for fathers.

As no technical difficulties were identified in the fathers’ use of the Child & Family Health Nurse email service, the take up rate of 37% gives an indication of the extent of interest among new fathers in this study in contacting the health professional by email. In view of the limitations of this sample it remains suggestive that a substantial proportion of fathers may have questions or wish to communicate with a health professional where one is available specifically for fathers. The problems raised by fathers were predictable from the known prevalence of problems facing new parents: nipple soreness, settling the baby to sleep and postnatal depressed mood are well documented as common problems for new mothers. Sore nipples was the most frequently cited reason, after babies difficulties for stopping breastfeeding (Ahluwalia, Morrow, & Hsia, 2005), and cracked nipples are an important risk factor for mastitis in breastfeeding mothers (Kinlay, O’Connell, & Kinlay, 2001). A substantial proportion of parents (approximately 30%) will have a significant problem settling their infant to sleep (Armstrong et al., 1994) and 10–20% of mothers will suffer from depression (Milgrom et al., 1999). The fathers’ concerns, therefore, are not unexpected. However, it is significant that fathers had concerns to discuss, even though in Newcastle and Hobart (where the study groups were located) there are existing services offering information and face-to-face support. (These services include general practitioners and home visiting by Child and Family Health Nurses to new mothers, and national non-government agencies such as the Australian Breastfeeding Association which offers telephone advice and support on all aspects of breastfeeding (Australian Breastfeeding Association, 2007).) This study did not assess how effectively queries were dealt with by the email service or how the advice from this project complemented (or conflicted with) advice from other sources. Further investigations of ways to meet fathers’ concerns will be required.

The primary hypothesis predicted that new fathers provided with an email discussion group and a dedicated health professional email service would show significantly higher increases in attachment scores than a control group of fathers without extra support. Judging by the demographic variables assessed at the commencement of the study the randomisation process was successful in forming two
equivalent groups who differed only in their exposure to the intervention. The two
groups were also not significantly different on the measures of depression, needs, global
antenatal attachment, marital adjustment and help-seeking measured by the antenatal
survey.

The change in attachment scores for the two groups over the duration of the study
were, on average, small, and when the mean change for the groups was compared no
significant difference was found. Estimating the power of the statistical test employed
suggested that this result was not due to the limited sample size. The possibility that
factors apart from the intervention influenced the outcome was also tested. While the
global attachment scores of the two groups were also not significantly different the
control group did score significantly higher ($p=0.02$) than fathers in the network group
on the quality of attachment subscale. Including this variable in a multiple regression
analysis of change in attachment scores, however, failed to demonstrate a confounding
role for the subscale.

The possibility that the level of fathers’ involvement in the intervention might have
varied to such an extent that it influenced the outcome was also considered. Although a
number of measures of involvement were considered none proved powerful enough to
register an effect on the change in attachment score.

A second investigation compared the measures of change in attachment scores of the
total group of fathers in the study (the Newcastle Study) with a second group of fathers
(the Adelaide Study) recruited for a different research project but assessed with
equivalent measures before and after birth. In this comparison the effect of information
and support supplied to all fathers in the Newcastle study was hypothesised to lead to a
significantly greater increase in attachment than would be found among fathers in the
Adelaide Study who, it could reasonably be expected, did not have access to such
support. This hypothesis was not supported. Fathers from the Adelaide Study reported
significantly greater gains in attachment scores than fathers in the Newcastle Study.

In this case, however, the initial attachment score was identified as a confounder so
that the greater improvement in attachment score among Adelaide Study fathers may be
due to differences in antenatal attachments scores rather than indicating a negative effect of the support provided to fathers in the Newcastle Study on fathers’ attachment.

A related area of interest was the possible effect of providing email and web support for fathers on their use of common family-assistance services. For participants in Newcastle and Hobart a local directory of services was compiled and fathers in the study indicated which services they had contacted (their partner contacting the service was not considered a contact) and how many times they were utilised. The 73 fathers in the completed study made more than 200 contacts with support services, although 35% (25/73) made no contacts. The lack of contact may reflect lack of knowledge rather than unwillingness to use these services. While the range of services contacted is not unexpected—General Practitioners, Community Health and Child & Family Health Nurses being the most popular services—the contact rates for more specialised services for newborns may underestimate fathers’ willingness to contact support services. A cross-sectional survey of new fathers (n=212) in the same region found that six months after the birth 59% of fathers had not heard of the Tresillian Help Line and 83% did not know of Karitane (Fletcher et al., 2004). Overall the number of services contacted and the total contacts made by the fathers in the control group was significantly greater than that for the network group. While no measure of infant temperament or mothers’ wellbeing was incorporated in this study, so that the extent of need for support arising from family characteristics and cannot be gauged, the fathers’ willingness to seek help was found not to differ significantly between the groups. The lower level of service use among network fathers suggests that the provision of extra support via email may have reduced the need for fathers to make use of other sources of support.

The results of the randomised control trial and of the comparison of the Newcastle and Adelaide study groups, taken together, suggest that the provision of information packages and support via professional email advice and a fathers’ email group do not improve fathers’ attachment to their infants over the months surrounding the birth. The possible confounding factors that may have influenced these results have been considered above. It is also possible, however, that the use of the two Condon scales to capture the changes in father–infant attachment may not be sufficiently sensitive to changes in father–infant attachment. These scales were considered to be the best available measures of father–infant attachment, and the postnatal scores in this study
correlated positively with self-efficacy and marital adjustment and negatively with distress, as would be expected (see Table 5.11). However, the PAAS and PPAS have not been validated against any of the established observational measures of infant–carer attachment. Apart from validation of the scales, to date there have been no published studies which use the PAAS and the PPAS to gauge change in attachment in the months spanning the birth. Habib and Lancaster (2005) have reported change in father–infant attachment from the first trimester to six months post-birth in an Australian sample using antenatal PAAS but using a newly modified version of the PAAS for the postnatal measure. Discussion in the literature of the attachment process also suggests caution in expecting rapid changes in fathers’ attachment over a brief intervention. If the father’s emotional attachment to his unborn baby and then his infant is a measure of his inner working model of attachment then it is unlikely to be easily transformed (Bowlby, 1951; Bretherton et al., 2005), even though the fathers in this sample exhibited considerable change in their attachment scores (converting the pre- and post-scores to Z scores more than one-quarter of all fathers in the study changed their scores by more than one standard deviation). Understanding the mechanisms of change, even to the point of describing the important elements involved, will require further research.

The fathers in this sample have particular characteristics which limit the generalisability of these results to the wider population of new fathers. The men whose views are reported here were highly educated, in managerial, professional or skilled occupations, and with access to computer email and internet. However, these characteristics also accentuate the implications for services wishing to support new fathers. The existence of information on the internet did not guarantee that these technologically literate fathers would be able to locate father-relevant material. In fact, the scope of information available makes the task of finding useful information more difficult. For example, searching for the terms “father” and “baby” using a popular search engine such as Google retrieves over two million websites, far more than any individual can view. Since almost four in five of these men were willing to change their approach to parenting when provided with tailored information, the provision of more father-specific guides to existing resources would seem to be a promising health promoting strategy. In the health arena web portals have been established to address the oversupply of health information via the internet by filtering, for example, commercially-focused information or extraneous web pages (Fricke, 2005). Portals
designed for new fathers may be useful ways to provide father-specific and general information to those with access to internet.
CHAPTER 6 CONCLUSION

6.0 Introduction

This thesis considered the role of fathers within the context of early intervention approaches to supporting families. Questions investigated included the assessment of fathers before the birth, the information and support needs of new fathers and the use of electronic media to deliver support to fathers in the period surrounding the birth. The conclusions of the thesis are summarised under four headings: “The theoretical basis for conceptualising fathers’ needs” (from Chapter 2); “Needs identified through a cross-sectional survey of expectant fathers” (from Chapter 3); “Information and support available to new fathers through the internet” (from Chapter 4); and “The impact of tailored information and support on father–infant attachment” (from Chapter 5). The limitations of each element of the research are explained and the implications of the findings and recommendations for future actions are detailed.

6.1 Major findings of the study

6.1.1 The theoretical basis for conceptualising fathers’ needs

Infants seek to form, and do form, attachments to their fathers analogous to those formed with their mothers. Like infant–mother attachment, infant–father attachment can be classified into “secure”, “avoidant”, “ambivalent” or “disorganised”, with the most favourable emotional and behavioural outcomes linked to secure and the most damaging to infants classified as disorganised in their attachments. Also, the way that fathers develop a secure infant–father attachment is through the experience of numerous, satisfying interactions between the two where the infants’ needs are recognised and appropriate responses made. There is also clear evidence of the negative effect of fathers’ depression on preschoolers’ emotional and behavioural development (a similar effect to that found in mothers but one that is independent of mothers’ mental health status).

Where fathers and mothers differ is in the conceptualisation of attachment (father-infant attachment has a particular salience for describing fathers’ relationships with
infants given the greater social component of fathers’ role) and in three key areas with important implications for the way that services offer support: in the event of an impaired infant–mother relationship the secure attachment to the father may act as a buffer against maladaptive infant development; the quality of playful interactions is an important feature of fathers’ positive connection with their infant; and the identification of new fathers’ needs cannot be accomplished without considering the fathers’ position as mate to the mother who carries and delivers the infant and then, in most cases, as mate to the mother who provides the neonates’ nutrition and who provides the majority of nurturing care.

6.1.2 Identifying the needs of expectant fathers through a cross-sectional survey

An important aspect of supporting new fathers is to identify their needs. Of the 14 psychosocial need areas included in the survey, four were indicated by more than 20% of respondents: not being confident to understand babies’ cries; not feeling confident to settle the baby; experience of stress in the last year; and worry about mess. More than one in 10 fathers indicated needs in four or more of the areas, and fathers in this sample identified similar levels of need to the mothers in a non-equivalent comparison group for matching questions. In addition to the needs identified through psychosocial questions 15.5% of the respondents scored above the cut-off (6/7) on the Edinburgh Depression Scale. These responses, taken together, suggest that fathers, at the time of the birth, have needs in regard to their ability to cope with the stresses of new parenthood and the skills and knowledge to care for their new baby.

Few differences were found in the percentages of older and younger fathers identifying the individual psychosocial needs. Similarly, when comparing the responses of “blue-collar” fathers to those from “white-collar” occupations few differences were observed in the needs nominated by the two groups. Blue-collar fathers were more likely than white-collar fathers to have not planned their pregnancy, less likely to be confident and more likely to score above the cut-off on the EDS. Public hospital fathers, when compared to private hospital fathers, were also more likely to say that their pregnancy was unplanned, to expect to have financial difficulties and were less likely to be confident. In the case of those fathers who were distressed, however, there were consistent differences in the frequency of needs indicated by the two groups. Compared
to non-distressed fathers distressed fathers were more than twice as likely to have had stressors in the previous 12 months, more than twice as likely to worry if things get messy and three times more likely to have had treatment for emotional problems. Distressed fathers also indicated significantly more needs in their levels of response to questions about their confidence and their access to a confidante. The multiple regression analysis found that, while some needs were linked to characteristics such as age or distress, the odds ratios were small so that the prediction of the profile of fathers for particular needs is generally weak. In two cases, however, the odds ratios marked a clear association: blue-collar fathers and public hospital fathers were three times more likely than white-collar fathers or those attending private hospitals to have an unplanned pregnancy. The responses to the telephone survey indicated that the questions were acceptable to expectant fathers.

6.1.3 Information and support available to new fathers through the internet

Websites accessible through the internet suggest a promising avenue for delivering support; however, the quality of the websites is not assured and there is currently no guidance on the suitability or value of available sites for new fathers. While established codes for assessing health-related web pages offer some guidance, websites addressing fathers’ role-defined tasks (such as providing emotional support to their partners) necessitate additional criteria. New fathers have a unique set of informational needs incorporating four main elements: connecting with their infant and ensuring his or her wellbeing, supporting the mother of their infant; supporting their family during the period around the birth, and, maintaining their own wellbeing. These aspects can be matched against web pages retrieved with popular search engines to provide an evaluation tool for assessing existing websites or assist in designing web pages appropriate for new fathers. As well as information, new fathers require access to interactive support, which may include personal accounts from fathers, chat rooms or bulletin boards, self-assessment or decision-making aids and information and advice from health experts or knowledgeable professionals. Interactive support may also be tailored to fit new fathers’ perspectives.

6.1.4 The impact of tailored information and support on father–infant attachment
The results of the randomised control trial suggest that tailored information delivered in an electronic format may be of interest, and therefore be a feasible means of support, for a substantial segment of new fathers in our communities. Overall, the father’s assessment of the materials was very positive: 96% evaluated the quality of the emailed information as satisfactory and a similar percentage rated the packages overall as useful to their role. Given the wide availability of web-based material it is also significant that in 95% of cases fathers reported that the information provided was “new”. These responses suggest that fathers’ apparent lack of interest in “parenting” information may be due, in part, to the perceived lack of father-specific information. The most popular topics—father–infant bonding and father-baby interaction—suggest that fathers are attracted to information that relates to their direct interaction with the infant. The low numbers selecting breastfeeding and sex after birth suggest that an issue thought to be important by health professionals may not be taken up by new fathers when it is offered. Also, although the information was specifically directed to fathers, almost all fathers in the study intended to discuss the information with their wife or partner. The fact that 78% of fathers also indicated that they would parent differently as a result of the information indicates that these men comprise a group who may be influenced by tailored information in their approach to raising a new baby.

The two interventions offered to fathers in the network group provided an indication of possible avenues for supporting new fathers. Although none of the fathers enrolled into the discussion groups entered into dialogue with other fathers almost half of the fathers reported the email groups were helpful in their role as fathers and almost three-quarters thought that groups like these would benefit other new fathers. The numbers of fathers (37%) seeking assistance from a health professional by email also suggests that this type of support may be utilised by new fathers.

The primary hypothesis predicted that new fathers provided with an email discussion group and a dedicated health professional email service would show significantly higher increases in attachment scores than a control group of fathers without extra support. Although the intervention and control group appeared to have been well matched and differed only in their exposure to the intervention, when the mean change for the groups was compared, no significant difference was found. Several potential confounding factors were investigated through statistical analysis; however,
none were found to have confounded the results. The most likely explanations for the finding were that the intervention was insufficient to affect father–infant attachment (either too few contacts or contacts of limited intensity), that the measure used to detect change in attachment was unsuitable, or that providing information and support is not sufficient to alter father–infant attachment. A second investigation compared the measures of change in attachment scores of the total group of fathers in the study (the Newcastle Study) with a second group of fathers (the Adelaide Study) recruited for a different research project but assessed with equivalent measures before and after birth. Contrary to the hypothesised greater increase in attachment among Newcastle as opposed to Adelaide fathers, those from the Adelaide sample reported significantly greater gains in attachment scores than fathers in the Newcastle sample. In this case, however, the initial attachment score was identified as a confounder so that the greater improvement in attachment score among Adelaide Study fathers may be due to differences in antenatal attachments scores rather than indicating a negative effect of the support provided to fathers in the Newcastle Study on fathers’ attachment.

The results of the randomised control trial and of the comparison of the Newcastle and Adelaide study groups, taken together, suggest that the provision of information packages and support via professional email advice and a fathers’ email group do not improve fathers’ attachment to their infants over the months surrounding the birth.

6.2 Limitations of the thesis

There are a number of limitations to borne in mind when viewing the findings from each of the chapters of the thesis described above. They are discussed here under the headings for each chapter.

6.2.1 Developing the theoretical basis for the thesis

The theoretical literature pertaining to new fathers’ needs and father–infant connection is vast and expanding. As noted in the most recent edition of the authoritative *The Role of the Father in Child Development* (Lamb & Tamis-Lamonda, 2004), whereas in years past it was possible to produce inclusive reviews of the research on fathers and fatherhood, anthologies today are forced to try to articulate major themes or interests
since it would be impossible to reference the entire field. The consideration of father–infant connection, reported in Chapter 2 of this thesis, is also limited in that the topic deserves an entire thesis to adequately consider the relevant literature.

6.2.2 Identifying expectant fathers’ needs through a cross-sectional survey

The results of the cross-sectional survey should be interpreted with caution for three reasons: the number of fathers completing the survey; the untested nature of the instrument; and the lack of a measure of seeking assistance for the issues identified in the survey.

The major finding from this survey—that new fathers may have needs in regard to infant care and in coping with the stress of a new baby—should be considered tentative. The number of fathers responding to the invitation to complete the survey was 29.4%. Although this figure is similar to other reports of survey responses from fathers (for example, Condon et al., 2004), the lack of information on the majority of fathers attending the antenatal classes where the survey was conducted limits the generalisability of the findings. As well, since not all fathers attend antenatal classes and the classes sampled in this survey were from one region in Australia, the results may not apply to other groups of expectant fathers. These limitations also apply to the acceptability of the survey instrument. While the Edinburgh Depression Scale is a validated measure for detecting probable depression the psychosocial questions in the survey were constructed specifically for this thesis. Although those responding to the telephone survey indicated that the questions were acceptable, the content of the survey may have contributed to the low response rate. Finally, while deriving evidence of need from self-report surveys is accepted practice in health research (Fletcher et al., 2002) the fathers in this survey were not asked if they would like help with the issues listed so that it cannot be inferred that fathers would actively seek assistance for any of the needs identified in the survey.

6.2.3 The analysis of internet information and support for new fathers
The analysis of information available for new fathers was accomplished by systematic searches using search terms such as “father” and “baby” with established search engines and by identifying popular parenting websites. An important finding of the investigation was the limited nature of web-based support that is tailored to the needs of new fathers. However, since the search was not exhaustive and other search terms may have led to different websites which may have more appropriate information for new fathers, these findings may not apply to all available web pages. Also, the search strategies used in practice by fathers are not known, so it cannot be assumed that new fathers searching for information would discover the same websites as those reviewed in this thesis.

6.2.4 The impact of tailored information and support on father–infant attachment

An important feature of the study was to gauge fathers’ reaction to the information and support offered through electronic communication channels. While fathers’ assessments of the packages were very positive, only 64% of those receiving the information packages returned evaluation surveys; hence, caution should be exercised in generalising from these results to all new fathers. Also, 59% of expectant fathers attending the antenatal classes did not complete the online enrolment to take part in the study. Not all fathers in the classes were eligible, however, due to the apparent discomfort in the fathers when indicating their access to internet in the pilot study this information was not sought from all those attending the antenatal classes who were invited to participate. Although general estimates are available for adult male access (Australian Bureau of Statistics, 2006) the accuracy of the study would have been improved if the number of fathers prevented from participating due to lack of internet access were known. As well, although an estimate of 80% is reported (New South Wales Standing Committee on Social Issues, 1998) the proportion of fathers attending antenatal classes remains uncertain. The fathers electing to take advantage of the email contact with the C&FH nurse (41%) and the email fathers group (37%) provided generally favourable judgements of the two initiatives; however, the views of those who did not participate (technical difficulties prevented participation in some cases) are not reported and the small numbers involved suggest that the favourable result is tentative at best.
In addition to the limitations of the response rate, the examination of the major hypothesis of the study—that information and support would increase father–infant attachment,—is limited by the untested nature of the father–infant attachment measure (the two paternal attachment scales). Although judged to be the best available measure the two scales have not been used to measure change in father–infant attachment previously, lending some uncertainty to the null finding.

6.3 Implications and recommendations

The findings reported in this thesis support the growing body of evidence suggesting that fathers are influential in promoting infant and child wellbeing. What this thesis adds is a coherent (although preliminary) theoretical basis for advancing services to new fathers, a framework for evaluating internet-based information for fathers, empirical evidence of the needs of new fathers and the acceptability of screening questions and internet-based support for new fathers.

While the theoretical approach described in Chapter 2 is neither wholly original, in that it summarises research by many others, nor complete, it nevertheless provides a basis for expanding existing peri-natal services to include fathers. When services are found to exclude fathers they rarely do so intentionally; the most common scenario is one where services designed for mothers are widely assumed to be meeting the families’ needs (Fletcher, 2004). As Macdonald et al. (2005, p. 393) noted in their evaluation of infant mental health services:

Although many of the service providers talked about “parents”, implying that they served both mothers and fathers, in reality the majority worked predominantly with mothers and there were no services that specifically addressed the needs of fathers.

While the difficulties in changing service provision in health care are well recognised (May, Mair, Dowrick, & Finch, 2007), a theoretical basis is an essential element in guiding new developments (Borkowski et al., 2007). The dissemination of a plausible theory of father–infant interaction which identifies fathers’ sensitive, responsive parenting as an independent contributor to infant wellbeing while retaining
the importance of fathers’ support of the mother, may build momentum for developing father-specific services. The ongoing provision of a unit on “Fathers Role” within the postgraduate Infant Mental Health course (based on the theoretical discussion contained in Chapter 2) offered by the New South Wales Institute of Psychiatry, suggests that an understanding of fathers’ role is of interest to health professionals. The topic of father-infant relationships could be included in other undergraduate and postgraduate courses that include the support of families in their course content. The evidence summarised in this thesis also suggests that services for parents of infants should not assume that supporting mothers is sufficient to address the total of infant and family needs.

Recommendations

Recommendation 1
That educators of health professionals review the course material provided to students to ensure that the importance fathers’ role in infant development is reflected in the course content and learning tasks.

Recommendation 2
That services aimed at supporting parents be informed of the evidence base for fathers’ importance in infant development so that they may review their service to identify and implement father-inclusive practices.

The introduction of universal psychosocial assessment for mothers (NSW Government, 2007), placed alongside the increasing evidence of fathers’ important role in infant development, creates an opportunity to identify new fathers’ needs through a father-specific assessment process. While there are many staffing, referral and resources issues implied in the assessment of new fathers, having a set of evidence-based, psychosocial questions which have been found to be acceptable to some fathers is an important step in developing a credible assessment tool. Since the commencement of the research reported in this thesis the South Australian Government has introduced a “Pathways to Parenting” questionnaire to be used at the universal home visit soon after the birth of a child. Although the questionnaire is directed to “the primary carer”, several psychosocial questions similar to those used in this research are included for the “partner (if present)”. National peri-natal screening initiatives such as the beyondblue
National Action Plan Perinatal & Infant Mental Health (beyondblue, 2007) will also provide forums for discussion of assessment procedures for fathers. However, due to the acknowledged limitations of the study reported here, initial efforts should include research to refine and expand the psychosocial questions and explore their acceptability and implementation with diverse groups of fathers.

The use of the Edinburgh Depression Scale (EDS) with new fathers also requires further investigation. Among new fathers in the sample from Newcastle hospitals, scoring above six (the male-specific cut-off for distress) on the EDS was associated with significantly greater needs in areas such as worry, treatment for emotional problems, lack of confidence and access to a confidante. An important question for researchers will be the degree to which the psychosocial factors and EDS score above the male-specific cut-off point can be shown to influence outcomes for fathers and families after the peri-natal period.

**Recommendation 3**
That the use of psychosocial questions (such as the ones discussed in Chapter 3) in parallel with the EDS be investigated with fathers from diverse backgrounds to (a) establish the acceptability and validity of the measures and (b) identify suitable procedures for using the questions and the EDS in routine clinical practice.

The demonstration that fathers have a vital role in family wellbeing and that new fathers have unmet needs point to the need for effective channels for information and support of new fathers. Guidelines are presented in this thesis for judging the quality of new quality of parenting, fathering and health-related websites from the point of view of new fathers. The evaluation framework contained in the guidelines will assist web developers and designers to build father-appropriate web pages. The conceptual clarification contained in the guidelines also provides a framework for evaluating existing web-based and DVD resources on offer to professionals working with fathers and families. During the term of this thesis the Australian Government, based on the results of a national Parenting Information Project (2004), funded the development of a national parenting website (Raising Children Network) to provide information to
parents of children birth to eight years. The website developers have contracted the author as “fathering” consultant to provide advice on the material presented.

**Recommendation 4**
That major Australian websites addressing parents of infants be informed of the guidelines for “Information and Support of New Fathers” developed here.

**Recommendation 5**
That managers of parenting and health websites be encouraged to monitor fathers’ access to and utilisation of all website domains, and to set targets to lift fathers’ participation in levels similar to those of mothers.

While further research will be required to identify services with the potential to significantly increase fathers’ attachment to their infants, the study reported in this thesis has identified two promising avenues for supporting fathers: emailed information (containing website links); and email-based professional support. As well, fathers’ preference for topics emphasising father-infant interaction provides useful information to those attempting to develop accessible material for new fathers. While intentions are not sufficient to predict behaviours (Ajzen & Fishbein, 1980) evidence that many new fathers are prepared to consider new approaches to their fathering role is also significant. In contrast, fathers’ lack of interest in information on breastfeeding or sexual relations identifies an important perception barrier for those wishing to reach this group with health promotion messages.

**Recommendation 6**
That web-based parenting materials and services tailored to new fathers’ needs be developed and tested to evaluate their efficacy in supporting positive father-infant relationships.
References


Appendix 3.1 Strengths and Needs of Fathers Survey

**STRENGTHS AND NEEDS OF FATHERS BEFORE THE BIRTH SURVEY**

A. QUESTIONS ABOUT YOU

1. Your age (in years) ............
2. Country of birth..............................................................
3. Language spoken at home.................................................
4. Occupation.............................................................................
5. Is this your first child? Yes ☐ No ☐
6. How many months until your baby is due? ........
7. Marital Status: married ☐ single ☐ defacto ☐ separated ☐
8. Aboriginal/Torres Strait Islander? Yes ☐ No ☐
9. Current employment: Full time work ☐
   Part-time work ☐
   Casual work ☐
   Unemployed/on benefits ☐
10. Education : Left before attaining school certificate ☐
    School certificate ☐
    Left before attaining HSC ☐
    HSC ☐
    TAFE/university ☐

Please answer the following questions by ticking the box of the answer that comes closest to your view

11. In the last 12 months have you had any major stressors, changes or losses recently such as financial problems, someone close to you dying or any other major worries?
   Yes ☐ No ☐ Not sure ☐

12. Do you have someone that you can talk to (apart from your wife/partner) if you have stresses or worries?
   Yes ☐ No ☐ Sometimes ☐

13. Generally, do you consider yourself a confident person?
   Yes ☐ No ☐ In some ways ☐

14. Does it worry you if things get messy or out of place?
   Yes ☐ No ☐ Sometimes ☐

15. Are you currently receiving or have in the past received, treatment for any emotional problems?
   Yes ☐ No ☐

B. QUESTIONS ABOUT YOUR ROLE AS A FATHER

16. Was this pregnancy planned?
   Yes ☐ No ☐ Partly ☐

17. Did you consider your wife/partner not continuing with the pregnancy?
   Yes ☐ No ☐ Maybe ☐
After the birth of my baby

18. I would like my baby to be breastfed
   ✔ Yes  ☐ No  ☐ Don’t know

19. I expect to have time off to be at home
   ☐ Not possible
   ☐ A couple of days
   ☐ A week
   ☐ More than a week

20. I will be able to provide financial support for my family
   ✔ Yes, easily
   ☐ Yes, if nothing too unexpected happens
   ☐ With difficulty but we’ll probably manage
   ☐ Not sure where the money is coming from

21. If my wife/partner needs someone for emotional support
   ☐ I will find it easy to support her
   ☐ I will try to support her
   ☐ I will rely on help from relatives and friends
   ☐ I will figure that out after the birth

22. When its time for sleep I expect to be able to settle my baby down
   ✔ Easily
   ☐ Probably
   ☐ Possibly
   ☐ Not sure until I try

23. When my baby cries I will be able to tell what the crying means (e.g. hunger, tired, bored, “letting off steam” etc.)
   ☐ All the time
   ☐ Most times
   ☐ Sometimes
   ☐ Not sure until I try

24. I will be able to tell if my wife/partner becomes depressed
   ☐ Definitely
   ☐ Maybe
   ☐ Not sure at this stage
   ☐ Probably not

C. QUESTIONS ABOUT HOW YOU HAVE BEEN FEELING OVER THE LAST WEEK

Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed:

I have felt happy
   Yes, all the time
Appendix 3.1 Strengths and Needs of Fathers Survey

Yes, most of the time
No, not very often
No, not at all

This would mean: “I have felt happy most of the time” during the past week.
Please complete the other questions the same way.

IN THE PAST 7 DAYS

25. I have been able to laugh and see the funny side of things.
   As much as I always could
   Not quite so much now
   Definitely not so much now
   Not at all

26. I have looked forward with enjoyment to things.
   As much as I ever did
   Rather less than I used to
   Definitely less than I used to
   Hardly at all

27. I have blamed myself unnecessarily when things went wrong.
   Yes, most of the time
   Yes, some of the time
   Not very often
   No, never

28. I have been anxious or worried for no good reason.
   No, not at all
   Hardly ever
   Yes, sometimes
   Yes, very often

29. I have felt scared or panicky for not very good reason.
   Yes, quite a lot
   Yes, sometimes
   No, not much
   No, not at all

30. Things have been getting on top of me.
   Yes, most of the time I haven't been able to cope at all
   Yes, sometimes I haven't been coping as well as usual
   No, most of the time I have coped quite well
   No, I have been coping as well as ever

31. I have been so unhappy that I have had difficulty sleeping.
   Yes, most of the time
   Yes, sometimes
   Not very often
   No, not at all

32. I have felt sad or miserable.
   Yes, most of the time
   Yes, quite often
   Not very often
Appendix 3.1 Strengths and Needs of Fathers Survey

No, not at all

33. I have been so unhappy that I have been crying.
   Yes, most of the time
   Yes, quite often
   Only occasionally
   No, never

34. The thought of harming myself has occurred to me.
   Yes, quite often
   Sometimes
   Hardly ever
   Never

Thank you for completing this survey.
Please send it back in the enclosed stamped addressed envelope. Postage is free on this envelope when you send it back to the University of Newcastle.

If you are willing to be contacted to comment on this survey, please see below.
We would also like to contact fathers in a week or two to know what you thought of the questions, if they were helpful and to hear if you have any suggestions for improvements. Your answers will be confidential and no information about you will be given to any other person or organisation. If you are willing to be interviewed by phone please complete the section below. The interview will take approximately 15 minutes.

[ ] I am willing to be telephoned for a follow-up interview to discuss these questions.
Name........................
Telephone Number ....................
Best times to contact me for a follow-up interview ...............................
Information Statement for the Research Project:

STRENGTHS AND NEEDS OF FATHERS BEFORE THE BIRTH

Version 2. August 2nd 2004

You are invited to take part in the research project identified above which is being conducted by Richard Fletcher from the Family Action Centre at The University of Newcastle. Richard Fletcher is conducting the research as part of his PhD degree under the supervision of Professor Graham Vimpani from the Faculty of Health at The University of Newcastle.

What is the purpose of the study?
The purpose of the project is to identify the issues facing fathers at the birth of a new baby. There is a growing recognition that fathers can play a significant role in ensuring the best outcomes for infants and children. Little is known about what issues come up for fathers during the pregnancy or how they perceive the challenges before them once the baby is born. The results of this survey will be used to identify what services might be useful for fathers as they approach a new period in their lives.

Who can participate?
We are seeking men whose wives/partners will soon be having a baby to participate in this research. You have been given this survey at the time of booking into the hospital or your wife/partner has been handed the document to pass on to you. We are interested in all fathers who are soon to have a new baby, even if this is not your first baby, we would like you to complete the survey.

What do I have to do?
The survey will take about twenty minutes to complete. It asks you a number of questions about how you have been the last two weeks, and how you would rate your confidence and who you might talk to about family issues. You are also asked what you think will happen once the baby is born. Your answers to all of these questions are confidential. If you complete the survey and return it, no one will know your identity. The results will be collated and analysed to see what new fathers say are the important issues for them during the pregnancy.

We also want to know if the questions made sense and what the fathers thought about the survey. There is an optional section at the end of the survey to complete if you are willing to be telephoned later to ask about what you thought of these questions, and if you have suggestions to improve the survey. The telephone interview will take about ten minutes. If you choose to participate by returning the survey, you are not obliged to agree to a telephone interview.
Appendix 3.2 Information letter

**Participation is voluntary**
Participation in any part of this research is entirely your choice. Whether or not you decide to participate, your decision will not disadvantage you in any way and will not affect you or your family’s access to services.

**Complaints**
This project has been approved by the University’s Human Research Ethics Committee, Approval No. H- and by the Hunter Area Research Ethics Committee of Hunter Health, Reference H-881-0904

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, telephone (02 49216333, email Human-Ethics@newcastle.edu.au or to Dr Nicole Gerrand, Professional Officer, Hunter Area Research Ethics Committee, Hunter Health, Locked Bag 1, New Lambton NSW 2305, telephone (02) 49214950, email Nicole.Gerrand@hunter.health.nsw.gov.au

Yours sincerely

Richard Fletcher
Team Leader, Engaging Fathers Project
Lecturer, Family Action Centre
Faculty of Health

Graham Vimpani
Professor
Discipline of Paediatrics and Child Health
Appendix 3.3 Telephone Survey

**Strengths and Needs of Fathers Survey - Telephone Survey**

Interviewer:
Participant ID:
Date:
Time started:
Time finished:

**INTRODUCTION**
Good … (morning / afternoon / evening). My name is ……. from the Family Action Centre at the University of Newcastle. Could I please speak to ……….. (participant’s name)?

[connected through to participant]
Good … (morning / afternoon / evening), ……… (participant’s name). My name is ……. the Family Action Centre at the University of Newcastle. I am calling to follow up a Needs of Fathers survey that you completed recently and suggested this time to call.

Are you still available?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Continue</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Make a new appointment</td>
</tr>
</tbody>
</table>

This survey will take about 15 minutes and all responses are confidential.

You can withdraw from the interview at any time without an explanation. All questions are optional and there are no incorrect answers.

The information you give us today will be used in a study to determine the level and the type of needs of fathers around the time of the birth.

Once the study is completed, this survey will be destroyed.

Meanwhile, this survey will be kept in a secure place by the chief investigator.

Do you have any questions before we start the interview?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Provide answers. If you don’t have the answers, propose the option to continue the interview and to arrange a phone call from the chief investigator as soon as the interview is completed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

**RESPONSE TO SURVEY**
Firstly, I would like to ask you for your reaction to the questions in general.

1) Did any of the questions bother you?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Identify specific question and note comments.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

Appendix 3.3 Telephone Survey

2) Did any of the questions miss the mark?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Identify specific question and note comments and suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

3) Did the questions bring up any issues or concerns for you?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Identify concerns related to specific questions. Ask if any use was made of the Who to Contact -Dads List. Identify any problems in this list or referral.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

4) Is there anything else that we should be asking?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Note question areas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

5) Do you think that most fathers would answer these questions honestly?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Ask for reasons and if this applies to particular questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

6) Do you think that the *Who to Contact -Dads List* will be useful to you in the future?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Ask how it might be useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

7) Finally, is there anything you would like to add about the needs of fathers that we haven’t covered in this survey?

8) Would you like a summary of the research to be sent to you when it is completed? If so please supply your email or postal address. Thank you for your contribution to this survey.
DEAR PARENT EDUCATOR

Attached is the information sheet for the research project **STRENGTHS AND NEEDS OF FATHERS BEFORE THE BIRTH.** As the letter explains the idea of the survey is to identify what expectant fathers see as their needs and their strengths in the period before the birth.

The survey will take place at John Hunter Hospital, Belmont Hospital and Newcastle Private Hospital. November 2004 – February 2005

**THE PACKAGE**

The survey package comes in a plain envelope addressed TO THE EXPECTANT FATHER. Inside is a copy of the survey, a covering letter and a stamped addressed envelope for returning the survey. There is also a Dads Contact sheet which lists services such as community health and mental health services so that if the expectant father wishes to, he can seek help. In the pilot, men took 5-6 minutes to complete the survey.

**YOUR ROLE**

The idea is to hand then to all expectant fathers who attend your Parent Education session. You do not have to explain anything about the survey if it is not convenient. But you may want to explain why you are handing out the package to the dads.

Here is a suggested explanation.

*This package contains a survey that is being conducted through the hospital to identify fathers needs so that services for fathers can be developed. It is an anonymous survey that is posted back to the university.*

*It has questions about what fathers see as their strengths and about how they are finding becoming a dad either for the first time or becoming a dad again. Many of the questions in the survey about stresses and coping are already asked of mothers by midwives at the booking in visit.*

*The idea of supporting dads is to have a team supporting the new baby, that is why we want dads to be in the picture. It is not preferring dads over mums or the other way around, but we want the team behind this new baby.*

**SOME QUESTIONS**

What about fathers who already have children? We want these dads in the survey too.
Appendix 3.4 Parent Educator Information letter

What if the mother is alone? It may be that her partner is not available. If she is not in contact with the father or does not wish him to be included then we would respect her wishes and not give her an envelope (she always has the option of ditching it once she gets home).

**What is vitally important for the research is that they are handed to the participants. Please do not leave them in a pile by the door and ask people to take one.**

We also need to know exactly how many were given out, for example, maybe a couple didn’t turn up that night, please record the numbers that did receive the survey.

**BACKGROUND INFORMATION FOR HOSPITAL STAFF**

**Strengths and Needs of Fathers Before the Birth survey**

The Survey is anonymous. It comprises the 10 question Edinburgh Depression Scale, plus demographic questions (9) and psychosocial questions (14). It will be given to couples (or to the expectant mother if she is by herself) booking in at the John Hunter, Newcastle Private and Belmont Hospitals. The survey will be addressed to “The Expectant Father” and will be returned anonymously to the researcher (Richard Fletcher) at the University for analysis.

An optional section on the survey identifies the respondent and gives permission for him to be telephoned to provide feedback on the acceptability and suitability of the survey questions. These interviews will be conducted approximately one week after receipt of the completed survey.

Richard Fletcher (Doctoral Candidate)
Prof Graham Vimpani Clinical Chair, Kaleidoscope in Greater Newcastle (Supervisor)

**Background**

The psychosocial assessment of pregnant women has been identified as a key component of NSW Health framework for mental health services. The NSW Integrated Perinatal & infant Care (IPC) project, which commenced in South West Sydney in 1999, provides assessment during pregnancy and referral to early intervention services. The assessment instrument consists of the Edinburgh Depression Scale (EDS) and an additional 13 psychosocial questions which are completed at the time of booking in to the antenatal clinic at the hospital. The assessment instrument is not considered to be a screening tool but an aide to identifying women at risk of poor parenting adaptation (including depression and anxiety) early in the pregnancy (Matthey et al., 2002).

While perinatal services have traditionally focused on mothers and infants the role of fathers in children’s development and family wellbeing is increasingly being recognised. The NSW Parenting Partnerships framework, which includes the IPC, includes as a key principle that “all parenting programs consider as best practice develop strategies for promoting relationships between father and child as well as mother and child” (p13). The assessment of fathers would enable families to gain support when it is needed by either or both partners, improving parenting capabilities when children are most vulnerable to impaired relationships with primary carers. Fathers, for example could be supported to better negotiate their partner’s depression and engage more responsively with their infants. The need to address father’s mental health is also suggested by studies showing that up to 50% of partners of depressed mothers are themselves suffering from depression (Goodman 2004).

Specific areas of vulnerability in expectant fathers include anxiety and depression, which may not be recognised by either the men or their close associates and for which the men may not ordinarily seek assistance (Cochran, 2000). However depression may effectively be identified in men by the EDS which has been validated on an Australian sample of new fathers (Matthey et al. 2001). Other areas canvassed in the survey, such as willingness to be supportive of the new infant and the mother, awareness of the symptoms of postnatal depression in mothers, and financial worries, have yet to be tested in an Australian population of fathers. An additional question on attitude to breastfeeding is indicated by the consistent evidence that father’s views can affect mother’s decisions to initiate breastfeeding and weaning. Although the factors to be measured in the survey have been identified as influential in the quality of parental support for children postnatally there is no information on prevalence of these concerns among
Appendix 3.4 Parent Educator Information letter

new fathers, what referrals men might see as appropriate or how men might respond to offers of assistance.

Estimating the level and type of need among new fathers is particularly important if current services lack spare capacity or may be unprepared to assist in the case of fathers. In the IPC trial (n=562) 18% of women were referred and a further 13% declined a referral even though they agreed that a referral was appropriate. This survey will provide estimates of areas of need among new fathers. It will also indicate question acceptability and identify potential areas for intervention to support fathers early in the pregnancy when assistance may be most effective in preventing poor outcomes in families with new infants.

Yours sincerely

Richard Fletcher  
Team Leader, Engaging Fathers Project  
Lecturer, Family Action Centre  
Faculty of Health

Graham Vimpani  
Professor  
Discipline of Paediatrics and Child Health
## Appendix 3.5 Contact Sheet for Dads

### Who to Contact - Dads List

<table>
<thead>
<tr>
<th><strong>Telephone Assistance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifeline</strong> - 24a Bryant St, Tighes Hill 2297</td>
</tr>
<tr>
<td><strong>PHONE:</strong> For appointments: 49615355.</td>
</tr>
<tr>
<td>For 24 Hour Phone Counselling: 131114 (local call cost)</td>
</tr>
<tr>
<td><strong>WEBSITE/ EMAIL:</strong> <a href="http://www.lifeline.org.au">www.lifeline.org.au</a> or <a href="mailto:lifeline@hunterlink.net.au">lifeline@hunterlink.net.au</a></td>
</tr>
<tr>
<td><strong>HOURS:</strong> Phone counselling: 24 hours, 7 days.</td>
</tr>
<tr>
<td>Face-to-face counselling: Mon-Fri 9-5pm</td>
</tr>
<tr>
<td>Lifeline provides trained, professional counsellors for confidential face-to-face counselling and over the telephone. Common themes of discussion include relationship and family concerns, depression and anxiety, grief and trauma, and many more. However these topics are not fixed. The counsellor(s) will take their lead from you and address the topics you are concerned about.</td>
</tr>
<tr>
<td><strong>FEE:</strong> Local call cost however may be higher or varied if calling from a payphone or mobile phone</td>
</tr>
</tbody>
</table>

| **Men’s Line** - 1300 789978 (local call cost) |
| **WEBSITE/ EMAIL:** www.menslineaus.org.au |
| **HOURS:** 24 hours, 7 days |
| Professional and confidential short term telephone counselling specifically for men who are dealing with the separation of their family; who are non-residential parents and seeking a more active role with their children; or who are experiencing present relationship difficulties. |
| **FEE:** Local call cost however may be higher or varied if calling from a payphone or mobile phone |

| **Tresillian** – 24 hours parenting information and counselling service |
| **PHONE:** 97875255 – 1800637357 (freecall outside of Sydney) |

| **Karitane** – 24 hour parenting information and counselling service |
| **PHONE:** 97941852 – 1800 677961 (freecall outside of Sydney) |

| **Parent Line** – 132055 (local call cost anywhere in NSW) |
| Telephone advice and information service for parents of children aged 0 to 18 years, living in NSW. It is open for any parent including those of non-English speaking background (telephone interpreter service) hearing impaired parents (TTY phone) Confidential help for parents who wish to speak to a counsellor. |
| Hours: 9.30am – 4.30 pm Monday to Saturday – except public holidays |

| **Drug and Alcohol Counselling Services** |
| **PHONE:** Cessnock 49910507 |
| Dungog 49921266 |
| Kurri Kurri 49372200 |
| Maitland 49312000 |
| Singleton 65719248 |
| Raymond Terrace 49872078 |
| Upper Hunter 65432677 |
| Hunter Health provides counselling on drug and alcohol related issues for individuals, couples and families. It also provides education, training, consultation to other services and workers, and information and referrals for the Methadone and Community Detox programs |

| **Financial Counselling** |
| **Centrelink** – 186 Vincent St Cessnock 2325 |
| 226 High St Maitland 2320 |
| 157 – 159 John St Singleton 2330 |
| 31a Sturgeon St Raymond Terrace 2324 |
| **PHONE:** 131021 |
| **WEBSITE/ EMAIL:** www.centrelink.gov.au |
| **HOURS:** Mon-Fri 8-5pm |
| You do not have to be receiving Centrelink payments to use this service. Centrelink financial information service is a free, confidential service run on the Centrelink premises, though independent of Centrelink itself. Provides financial information, and offers budgeting skills and better knowledge in maximising the use of your income. Free seminars/ workshops are also provided and are advertised within local newspapers. |
| **FEE:** Free service |

| **Salvation Army** – Family Welfare Bureau |
| Newcastle Cnr King and Union St Newcastle West 2302 **PHONE:** 49292300 |
Appendix 3.5 Contact Sheet for Dads

<table>
<thead>
<tr>
<th>Location</th>
<th>Address/Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maitland High St</td>
<td>318 High St 2320 PHONE: 49338484</td>
</tr>
<tr>
<td></td>
<td>Financial counselling as well as budgeting advice</td>
</tr>
</tbody>
</table>

**Worried? Feeling Like You’re Losing It?**

| Community Health                 | 58 Stronach Ave, East Maitland 2323: 49312000    |
|                                  | View St, Cessnock 2325: 49910438                  |
|                                  | Lang St Kurri Kurri 2327: 49363282               |
|                                  | Olgivie St Denman 2328: 65472202                 |
|                                  | McKenzie St Merriwa 2329                        |
|                                  | Park St Gresford 2311: 49389207                  |
|                                  | Stafford St Scone 2337: 65402136                 |
|                                  | Boonal St Singleton 2330: 65719248               |
|                                  | Port Stephens St Raymond Terrace 2324: 49872078  |
| PHONE: Community Health          | Community Health Referral and Information Centre 49257899 |
| HOURS:                           | 8:30-5:30pm                                      |
| Provides a free counselling service assisting people with such difficulties as relationship issues, parenting difficulties and stress and depression concerns, to name a few. When you call you will be asked for information about you to help decide who to refer you to. You can ask for a male or female psychologist. |
| FEE:                             | Free (part of a public health scheme)             |

**Parenting**

| Family Support Services          | Cessnock: 5 Hall St, Cessnock 2325: 49904507 (8:30-4pm Mon-Fri) |
|                                  | Maitland: 19 Galway Bay Drv, Ashtonfield 2323: 49338200 (9:30-3:30pm Mon-Fri) |
|                                  | Port Stephens: 3 Phillips Rd, Raymond Terrace 2324: 49874674 (9:30-3:30pm Mon-Fri) |
| PHONE:                           | 1300130147 (Free call for directory of after hours GP's in the Hunter Region) |
| WEBSITE/ EMAIL:                  | www.nswfamilyservices.asn.au/                    |
| Groups and individual counselling are provided. Groups are run each quarter and in particular two groups are consistently run: After Separating, which revolves around issues arising for recently separated fathers and for their children; and Hey Dads, which is specifically around parenting issues and enhancing skills as a father. (Groups may vary across the different agencies from time-to-time). Only male counsellor is at the Newcastle West premises. He is prepared to chat with fathers about any concerns whatsoever. |
| FEE:                             | Free service                                     |

**Relationships Australia**

| 4 Hedda Rd Broadmeadow 2292      | PHONE: 49693977                                   |
|                                 | WEBSITE/ EMAIL: www.relationships.com.au or relatehun@matra.com.au |
|                                 | HOURS: 9-5pm After hours available Wed + Thurs evenings, however calls are only taken between 9-5pm) |
| Individual, couple and family counselling is provided on the premises, online or over the phone. Relationship education programs are frequently run aiming to enhance participants’ parenting and family skills, family safety awareness and violence prevention techniques. Counselling can allow for, where sought, mediation between parent and child or between parent and partner. |
| FEE:                             | Is calculated depending on client’s gross income. Discounts available for pensioners etc. |

**General Practitioners**

| John Hunter Hospital             | PHONE: 1300130147                                  |
|                                 | WEBSITE/ EMAIL: www.hunter.health.nsw.gov.au/servs_facil/after_hours.htm |
|                                 | The service is available for all people who are unwell or injured and for whom medical assistance is necessary prior to the next working day. |
|                                 | FEE: No fees for the hospital clinics, however private GP’s may charge a variable service fee. |

**Aboriginal**

| Barkuma Aboriginal Neighbourhood Centre | 76 Lang St Kurri Kurri 2327 |
| PHONE: 49371094 EMAIL: barkumanc@hotmail.com | Provides assistance as well as crisis support to aboriginal people in the Cessnock LGA. Offers employment preparation programs for young Aboriginal people, women and men. The service also runs an extensive cultural |
Appendix 3.5 Contact Sheet for Dads

education program for indigenous young people.

<table>
<thead>
<tr>
<th>Aboriginal Health Liaison Officers – John Hunter Hospital</th>
<th>Lookout Rd Lambton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: 49214182</td>
<td></td>
</tr>
<tr>
<td>Mental Health: 49214924</td>
<td></td>
</tr>
<tr>
<td>Lower Hunter 49312000</td>
<td></td>
</tr>
<tr>
<td>Upper Hunter 65422065</td>
<td></td>
</tr>
<tr>
<td>Aboriginal Health Liaison Officers provide assistance and general support for Aboriginal people who are being cared for by Hunter Health – John Hunter Hospital</td>
<td></td>
</tr>
</tbody>
</table>

**Still stuck for somewhere to get help?**
Call the Engaging Fathers Project at the Family Action Centre and we'll do our best to sort something out.

Phone Richard on 49216401.
## Table of responses fourteen questions (Q11 to Q24) (N= 307)

<table>
<thead>
<tr>
<th>Psychosocial Question</th>
<th>Sometimes /Not sure</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11 Major stressors in the last 12 months</td>
<td>195</td>
<td>104</td>
</tr>
<tr>
<td>Q12 Someone to talk to</td>
<td>34</td>
<td>221</td>
</tr>
<tr>
<td>Q13 Are you a confident person</td>
<td>6</td>
<td>216</td>
</tr>
<tr>
<td>Q14 Worry if things get messy</td>
<td>100</td>
<td>63</td>
</tr>
<tr>
<td>Q15 Treatment for any emotional problems</td>
<td>263</td>
<td>42</td>
</tr>
<tr>
<td>Q16 Pregnancy planned</td>
<td>34</td>
<td>221</td>
</tr>
<tr>
<td>Q17 Considered not continuing with pregnancy</td>
<td>284</td>
<td>18</td>
</tr>
<tr>
<td>Q18 Want baby breastfed</td>
<td>3</td>
<td>286</td>
</tr>
<tr>
<td>Q19 Expect time off</td>
<td>9</td>
<td>198</td>
</tr>
<tr>
<td>Q20 Provide financial support for my family</td>
<td>3</td>
<td>148</td>
</tr>
<tr>
<td>Q21 Provide emotional support</td>
<td>3</td>
<td>144</td>
</tr>
<tr>
<td>Q22 Settle baby</td>
<td>3</td>
<td>144</td>
</tr>
<tr>
<td>Q23 Understand crying baby</td>
<td>162</td>
<td>105</td>
</tr>
<tr>
<td>Q24 Recognize depression</td>
<td>0</td>
<td>187</td>
</tr>
</tbody>
</table>

### Details:
- **Q11**: Major stressors in the last 12 months.
  - No: 195, Sometimes/Not sure: 8, Yes: 104
- **Q12**: Someone to talk to.
  - No: 34, Sometimes/Not sure: 52, Yes: 221
- **Q13**: Are you a confident person.
  - No: 6, Sometimes/Not sure: 85, Yes: 216
- **Q14**: Worry if things get messy.
  - No: 100, Sometimes/Not sure: 144, Yes: 63
- **Q15**: Treatment for any emotional problems.
  - No: 263, Sometimes/Not sure: -, Yes: 42
- **Q16**: Pregnancy planned.
  - No: 34, Sometimes/Not sure: 52, Yes: 221
- **Q17**: Considered not continuing with pregnancy.
  - No: 284, Sometimes/Not sure: 3, Yes: 18
- **Q18**: Want baby breastfed.
  - No: 3, Sometimes/Not sure: 15, Yes: 286
- **Q19**: Expect time off.
  - Not possible: 9, A couple of weeks: 33, A week: 65, More than a week: 198
- **Q20**: Provide financial support for my family.
  - Not sure where the money is coming from: 3, With difficulty but we’ll probably manage: 36, Yes, if nothing too unexpected happens: 170, More than a week: 97
- **Q21**: Provide emotional support.
  - I will figure that out after the birth: 3, I will rely on help from relatives and friends: 11, I will try to support her: 144, I will find it easy to support her: 148
- **Q22**: Settle baby.
  - Not sure until I try: 120, Possibly: 62, Probably: 103, Easily: 21
- **Q23**: Understand crying baby.
  - Not sure until I try: 162, Sometimes: 63, Most times: 79, All the time: 2
- **Q24**: Recognize depression.
  - Probably: 0, Not sure: 14, Maybe: 105, Definitely: 187
Appendix 3.7 Responses to fourteen questions including intermediate values

Non-parametric p-value is given across all three responses (yes, maybe/sometimes, no) where they occur.

Hypothesis 1. Older expectant fathers (> 32 years) and younger expectant fathers (≤ 32 years) will identify significantly different needs.

Table 1  Comparison of percentage of older (N=119) and younger (N=188) expectant fathers identifying each need

<table>
<thead>
<tr>
<th>Question</th>
<th>Old% (N=119)</th>
<th>Young% (N=188)</th>
<th>Old-Young</th>
<th>Parametric p-value</th>
<th>Non-parametric p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>31.9</td>
<td>35.1</td>
<td>-3.2</td>
<td>0.56</td>
<td>0.78</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>16.8</td>
<td>7.4</td>
<td>9.4</td>
<td>0.02</td>
<td>0.12</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>3.4</td>
<td>1.1</td>
<td>2.4</td>
<td>0.21</td>
<td>0.66</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>22.7</td>
<td>19.1</td>
<td>3.6</td>
<td>0.66</td>
<td>0.49</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>19.3</td>
<td>10.2</td>
<td>9.1</td>
<td>0.03</td>
<td>-</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>13.8</td>
<td>7.6</td>
<td>6.2</td>
<td>0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>6.8</td>
<td>5.3</td>
<td>1.5</td>
<td>0.62</td>
<td>0.98</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>0.9</td>
<td>1.1</td>
<td>-0.2</td>
<td>0.85</td>
<td>0.31</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>4.3</td>
<td>2.1</td>
<td>2.2</td>
<td>0.33</td>
<td>0.48</td>
</tr>
<tr>
<td>Provide financial (not sure)</td>
<td>0.0</td>
<td>2.5</td>
<td>-2.5</td>
<td>-</td>
<td>0.63</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>1.7</td>
<td>0.5</td>
<td>1.2</td>
<td>0.37</td>
<td>0.27</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>36.4</td>
<td>41.0</td>
<td>-4.6</td>
<td>0.72</td>
<td>0.80</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>54.2</td>
<td>52.1</td>
<td>2.1</td>
<td>0.72</td>
<td>0.53</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>7.6</td>
<td>2.7</td>
<td>4.9</td>
<td>0.07</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Hypothesis 2. White collar fathers and blue collar fathers (defined by occupation) will identify significantly different needs.
Appendix 3.7 Responses to fourteen questions including intermediate values

Table 2 Comparison of percentage of blue collar (N=137) and white collar (N=162) expectant fathers identifying each need

<table>
<thead>
<tr>
<th>Question (response indicating need)</th>
<th>Blue% (N=137)</th>
<th>White% (N=162)</th>
<th>Difference Blue - White</th>
<th>Parametric p-value</th>
<th>Non-parametric p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>28.5</td>
<td>37.7</td>
<td>-9.2</td>
<td>0.09</td>
<td>0.12</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>13.0</td>
<td>9.5</td>
<td>-2.5</td>
<td>0.34</td>
<td>0.89</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>1.5</td>
<td>2.5</td>
<td>-1.0</td>
<td>0.52</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>24.7</td>
<td>15.3</td>
<td>9.4</td>
<td>0.04</td>
<td>0.17</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>11.2</td>
<td>14.0</td>
<td>-2.8</td>
<td>0.18</td>
<td>-</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>15.4</td>
<td>4.4</td>
<td>11.0</td>
<td>&lt;0.001**</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>1.9</td>
<td>0.0</td>
<td>1.9</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>1.9</td>
<td>0.0</td>
<td>1.9</td>
<td>0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>3.1</td>
<td>2.2</td>
<td>0.9</td>
<td>0.38</td>
<td>0.55</td>
</tr>
<tr>
<td>Provide financial (difficulty)</td>
<td>0.6</td>
<td>0.7</td>
<td>-0.1</td>
<td>0.9</td>
<td>0.03</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>0.6</td>
<td>1.5</td>
<td>-0.9</td>
<td>0.48</td>
<td>0.14</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>37.7</td>
<td>41.9</td>
<td>-4.2</td>
<td>0.45</td>
<td>0.20</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>49.4</td>
<td>57.4</td>
<td>-8</td>
<td>0.16</td>
<td>0.09</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* < 0.004

Hypothesis 3 “Distressed fathers” and “non-distressed fathers” (defined by EDS score) will identify significantly different needs.

Table 3 Comparison of percentage of distressed (N=47) and non-distressed (N=256) expectant fathers identifying each need
Appendix 3.7 Responses to fourteen questions including intermediate values

<table>
<thead>
<tr>
<th>Question</th>
<th>Distressed% EDS &gt;6 (N=47)</th>
<th>Not distressed% EDS &lt;6 (N=256)</th>
<th>Difference Distressed-Not distressed</th>
<th>Parametric p-value</th>
<th>Non-parametric p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>68.1</td>
<td>28.1</td>
<td>40.0</td>
<td>&lt;0.001**</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>17.0</td>
<td>10.2</td>
<td>6.8</td>
<td>0.24</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>8.5</td>
<td>0.8</td>
<td>7.7</td>
<td>0.06</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>42.6</td>
<td>16.0</td>
<td>26.6</td>
<td>&lt;0.001**</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>32.6</td>
<td>10.6</td>
<td>22.0</td>
<td>&lt;0.001**</td>
<td>-</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>10.6</td>
<td>11.3</td>
<td>-0.7</td>
<td>0.89</td>
<td>0.11</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>8.5</td>
<td>5.5</td>
<td>3.0</td>
<td>0.48</td>
<td>0.24</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>0.0</td>
<td>1.2</td>
<td>-1.2</td>
<td>0.08</td>
<td>0.37</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>6.4</td>
<td>2.4</td>
<td>4.0</td>
<td>0.27</td>
<td>0.02</td>
</tr>
<tr>
<td>Provide financial (difficulty)</td>
<td>4.3</td>
<td>0.4</td>
<td>3.7</td>
<td>0.19</td>
<td>0.37</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>2.1</td>
<td>0.8</td>
<td>1.3</td>
<td>0.54</td>
<td>0.01</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>31.9</td>
<td>40.6</td>
<td>-8.7</td>
<td>0.24</td>
<td>0.21</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>51.1</td>
<td>53.5</td>
<td>-2.4</td>
<td>0.76</td>
<td>0.99</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* < 0.004

Hypothesis 4. Fathers in this survey attending a private hospital will identify significantly different needs to those attending the nearby public hospital.

Table 4  Comparison of percentage of public hospital fathers (N=152) and private hospital fathers (N=155) identifying each need
### Appendix 3.7 Responses to fourteen questions including intermediate values

<table>
<thead>
<tr>
<th>Question</th>
<th>Public% (N=152)</th>
<th>Private% (N=155)</th>
<th>Difference Public - Private</th>
<th>Parametric p-value</th>
<th>Non-parametric p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stressors in the last 12 months (yes)</td>
<td>36.2</td>
<td>31.6</td>
<td>4.6</td>
<td>0.40</td>
<td>0.39</td>
</tr>
<tr>
<td>Someone to talk to (no)</td>
<td>12.5</td>
<td>9.7</td>
<td>2.8</td>
<td>0.43</td>
<td>0.64</td>
</tr>
<tr>
<td>Are you a confident person (no)</td>
<td>2.6</td>
<td>1.3</td>
<td>1.3</td>
<td>0.40</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Worry if things get messy (yes)</td>
<td>19.7</td>
<td>21.3</td>
<td>-1.6</td>
<td>0.54</td>
<td>0.80</td>
</tr>
<tr>
<td>Treatment for any emotional problems (yes)</td>
<td>16.0</td>
<td>11.6</td>
<td>4.6</td>
<td>0.28</td>
<td>0.27</td>
</tr>
<tr>
<td>Pregnancy planned (no)</td>
<td>18.5</td>
<td>4.5</td>
<td>14.0</td>
<td>&lt;0.001**</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Considered not continuing with the pregnancy (yes)</td>
<td>8.7</td>
<td>3.2</td>
<td>5.5</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Want baby breastfed (no)</td>
<td>2.0</td>
<td>0.0</td>
<td>2.0</td>
<td>0.08</td>
<td>0.54</td>
</tr>
<tr>
<td>Expect time off (no)</td>
<td>5.3</td>
<td>0.6</td>
<td>4.7</td>
<td>0.02</td>
<td>0.45</td>
</tr>
<tr>
<td>Provide financial (difficulty)</td>
<td>1.3</td>
<td>0.6</td>
<td>0.7</td>
<td>0.55</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Provide emotional support (figure out later)</td>
<td>0.7</td>
<td>1.3</td>
<td>-0.6</td>
<td>0.57</td>
<td>0.90</td>
</tr>
<tr>
<td>Settle baby (not sure)</td>
<td>41.1</td>
<td>37.4</td>
<td>3.7</td>
<td>0.51</td>
<td>0.96</td>
</tr>
<tr>
<td>Understand crying baby (not sure)</td>
<td>51.0</td>
<td>54.8</td>
<td>-3.8</td>
<td>0.50</td>
<td>0.40</td>
</tr>
<tr>
<td>Recognize depression (probably not)</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Score &gt; 6 on EDS</strong></td>
<td>16.7</td>
<td>14.4</td>
<td>2.3</td>
<td>0.58</td>
<td></td>
</tr>
</tbody>
</table>

* < 0.004
Appendix 4.1 Web search details

**Information and support available - preliminary questions**

Initial questions relating to fathering information are:

4. Do search engines retrieve similar numbers and types of pages for searches with mothers and fathers in relation to babies?

5. Do search engines retrieve very different sources when the Australian search option is selected compared to results from searching the WWW?

6. Do the terms used in the search, for example ‘father’ or ‘dad’, ‘baby’ or ‘infant’ significantly alter the results?

7. What type of information is retrieved when search terms such as ‘fathers’ are linked with ‘babies’?

**Method**

The first 30 links retrieved through the searches were reviewed and categorised into one of five types: information, news item, research report, product or commercial service, not relevant.

- **Information** pages contained information or advice relating to pregnancy, infants or children with specific reference to fathers.

- **News** pages were identified as produced by a media organization and reported events concerning fathers or new services or research about fathers.

- **Product** pages included baby products targeting fathers or books or media products for or about fathers.

- **Research** pages were identified by URL addresses from academic journals, conferences or research institutions.

- **Not relevant** pages contained the word ‘father’ but within a context unrelated to fathers role with infants (for example “the father of modern linguistics”).

**Search No 1.** Do search engines retrieve similar numbers and types of pages for searches with mothers and fathers in relation to babies?

Search terms ‘new fathers’, new mothers, ‘mothers babies’ and ‘fathers babies’ were entered into Google to search the World Wide Web (WWW). The first 30 addresses from each search were reviewed to identify the type of pages available.
Appendix 4.1 Web search details

<table>
<thead>
<tr>
<th>URL address</th>
<th>Google Search</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Mothers</td>
<td>New Fathers</td>
<td>Mothers Babies</td>
<td>Fathers Babies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WWW</td>
<td>WWW</td>
<td>WWW</td>
<td>WWW</td>
<td></td>
</tr>
<tr>
<td>Total available*</td>
<td>87,600,000</td>
<td>43,100,000</td>
<td>20,000,000</td>
<td>4,920,000</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>14</td>
<td>17</td>
<td>7</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>News item</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not relevant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total viewed</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>*approximate numbers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While there are clearly many more web pages available for mothers, the type of pages available in the addresses ranked most highly (the first 30) are similar for searches using 'new mothers' and 'new fathers' and ‘fathers babies’. The higher number of Research pages retrieved for ‘mothers babies’ may reflect the strength of the research activity on mothers and babies.

Note: Entering the search term ‘new parents’ retrieved approximately 594,000,000 addresses while the term ‘parents babies’ retrieved approximately 41,000,000 addresses.

Search No 2. Comparison of ‘Australian’ (AUS) and ‘World Wide Web’ (WWW) searches and of fathers and ‘babies’ with fathers and ‘infants’ in the search terms.

In this search ‘fathers’ and ‘babies’; ‘fathers’ and ‘infants’; terms were used to search Australian sites (AUS) and also sites anywhere on the World Wide Web (WWW). Pages were viewed and categorised into: information; news; products; research; or, not relevant.

<table>
<thead>
<tr>
<th>URL address</th>
<th>Google Search</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fathers Babies</td>
<td>Fathers Babies</td>
<td>Fathers Infants</td>
<td>Fathers Infants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AUS</td>
<td>WWW</td>
<td>AUS</td>
<td>WWW</td>
<td></td>
</tr>
<tr>
<td>Total available*</td>
<td>101,000</td>
<td>4,920,000</td>
<td>95,500</td>
<td>5,710,000</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>14</td>
<td>17</td>
<td>15</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>News item</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Not relevant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total viewed</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>*approximate numbers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The larger number of pages available when using a WWW search is not unexpected. The weighting of available page types is similar across the four conditions and although more pages were found using
Appendix 4.1 Web search details

infants the differences were not large. Since this table contains only the results from a preliminary classification no statical tests were performed.

Search No 3. Comparison of ‘Australian’ (AUS) and ‘World Wide Web’ (WWW) searches and of ‘fathers’ with ‘dads’ in the search terms.

In this search ‘new fathers’ and ‘new dads’ were used to search Australian sites (AUS) and also sites anywhere on the World Wide Web (WWW). Pages were viewed and categorised into: information; news; products; research; or, not relevant.

<table>
<thead>
<tr>
<th>URL address</th>
<th>Google search</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Dads AUS</td>
</tr>
<tr>
<td>Total available*</td>
<td>254,000</td>
</tr>
<tr>
<td>Information</td>
<td>11</td>
</tr>
<tr>
<td>News item</td>
<td>7</td>
</tr>
<tr>
<td>Product</td>
<td>10</td>
</tr>
<tr>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Not relevant</td>
<td>2</td>
</tr>
<tr>
<td>Total viewed</td>
<td>30</td>
</tr>
</tbody>
</table>

*approximate numbers

The term ‘new father’ retrieves considerably more pages than ‘new dad’ both for Australian and WWW searches. While the type of page retrieved using these two terms is not dissimilar for WWW searches (as judged by the first 30 URL addresses retrieved) the balance of news pages to information pages is clearly different for the two searches of Australian sites.

Search No 4. Comparison of Google (WWW), Yahoo and MSN searches using ‘fathers’ + ‘babies’ as the search terms.

In this search ‘fathers’ and ‘babies’ were entered into Google (WWW), Yahoo and MSN and the results categorised as in Searches above.

<table>
<thead>
<tr>
<th>URL address</th>
<th>Fathers Babies Google</th>
<th>Fathers Babies Yahoo</th>
<th>Fathers Babies MSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total available*</td>
<td>4,920,000</td>
<td>2,430,000</td>
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<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

*approximate numbers
Appendix 4.1 Web search details

** addresses linked to the same page of information were recorded as one page

Clearly Google retrieves more pages than either of its competitors and MSN appears to have a preponderance of Product pages (judged on the first 30 pages retrieved).

Note: The Australian web search engine *ninemsn* reports on their website that they have the largest online audience in Australia; 7.69 million visits each month, as at January 2006, representing 74 per cent of all Australians online use. However *ninemsn* returned no information sites when the terms “fathers” and “babies” were entered. The sites listed consisted of one featured site – shopping for baby products, four sponsored sites – all shopping for products and five “top sites” – all of them for shopping for products. Similarly the *Yahoo* ‘local’ option returns limited sites with product information when searching ‘fathers’ and ‘babies’.
Appendix 5.1 Summary of DVD sent to all participants

New Fathers Information Project

Summary of DVD material

*Most of the dads have found this DVD played normally however some DVD machines have had trouble playing it. To avoid some dads missing out on the information all together this summary is provided to let you know what is covered on the DVD. Of course you cannot see the video footage for yourself, but it gives you some idea of the information provided.*

Introduction

Knowing what is going on and having ideas from other dads can also help to get through the tough times with less stress. So the things that we cover in this project include some of the difficulties that can happen. What do you do when you see that mum is trying to breastfeed but it hurts? And how do you recognize Post Natal Depression?

Some things that happen when a new baby arrives are not bad or not even a big deal for everybody, but they do have to be sorted out. How will you get back to having regular sexual relationships? What are the special techniques for settling that suit your baby? How will things be arranged for returning to work? This DVD and the packages that you get by email contain information on these topics. I hope that you find it useful and that being part of this research project helped you and your family as well as helping the research.

There are three information sections for you to watch. The first one shows three common reasons babies cry. The second and third parts show ‘tuning in’.

**Why your baby is crying**

Babies cry because they might be hungry, he or she might have wind in the tummy, or they may be tired. What is useful about this video, which was made by midwives in Brisbane especially for fathers, is that you are also shown what the signs are to look for so that you will be better able to figure out what your baby needs.

It’s useful to know what to look for. But as everybody knows all babies are different and you have to tune in to your baby to really notice what their signals are. Applying the same rule to different babies doesn’t work. So what is ‘tuning in’?

‘Tuning In’ is covered in the next two parts of this DVD. First we explain how what you do as a father from Day 1 can affect your babies’ brain development. In this section you are given a snapshot of the new brain science that now suggests that fathers as well as mothers have a big influence on how your babies will handle
Appendix 5.1 Summary of DVD sent to all participants

stress and difficulty when they are older. Fathers as well as mothers can bond with their babies and have a positive influence on their development.

**New research about babies’ brain development**

Three very important discoveries have been made over the last twenty years:

1. Babies brains start to form pathways of connections (neurons linking up) from the day that they are born.
2. The neural connections that are formed early in life (from Day1.) affect the way that each person will handle stress and difficulty as they grow up.
3. Fathers, as well as mothers, have a big role to play in shaping your babies’ brain.

How do we know this? Well, partly because we have better ways to look into people’s brains to see how they work.

Here is an example. We can now scan a person’s brain while they are doing a task. This boy at the computer (in the DVD) is trying to solve a problem. By mapping his brain activity researchers can tell which part of the brain are being used. Studies like this one have demonstrated that male and female brains are quite different in the areas used for problems. But it also suggests that the way that fathers interact with their infants will be different to the way that mothers interact.

**Forming pathways in the brain**

When neurons link up they form connections to make pathways or patterns through the brain. Babies make billions of these connections for everything from seeing and hearing to working out that when they get wrapped up and laid down then its time to sleep.

Even basic functions such as sight need to have pathways of neurons. One of the first things that baby does is look around. When the baby sees light in the first months, the signal goes to the back of its eyes and the pathway for looking and vision is established. If a baby has cataracts in its eyes when it is born, then the cataracts must be removed so that the vision pathways can develop. If the baby has a cataract removed from one eye then the good eye must be covered so that the brain is forced to use the cataract eye and thus re-start the vision development that was delayed while the brain was relying on the good eye. If the cataracts are left too long, even removing them will not help because the babies’ eyes have not developed the neural pathway to see properly.
Appendix 5.1 Summary of DVD sent to all participants

But in fact babies make many more connections than they need, so some have to be pruned. How does the baby know which connections to let go? Basically, the baby saves the ones that are used often enough. The pathways that are regularly activated are the ones that stay.

**Tuning in**

Tuning in is one of the important tasks that fathers have with their new babies. Tuning in is one of the keys to bonding: forming a strong, secure attachment between you and the infant. The good news is this is exactly what the baby wants to happen too. In fact babies are programmed to look for your face, to really connect with your eyes and to recognize the shape of your nose and the way you hold your mouth. Babies are trying from the very first hours to get a clear picture in their mind of every detail of your face. That’s why it is called “tuning in”. It’s not something that you have to force babies to do. You both have the same goal here. You are both trying to make a great connection.

**How does this relate to fathering?**

When you play with your baby and tune in to what the baby is telling you so that you are also developing an important pathway in your babies’ brain. When you interact with the baby so that it practices getting excited and then calming down, you help to make the connections in the babies’ brain for paying attention, for remembering things and for regulating excitement. When the baby can rely on you for comfort and soothing as well as play and fun, then the patterns in the brain are set for the future. When you play with a baby and really respond to him or her you are not just playing, you are giving him, or her, the best start possible in life.

**Here is a graphic from the DVD.**

![Slide: R. Fletcher, L. Hahn. Photo: Bijou Blicks](image)

We have known about the importance of mothers bonding with babies for some time. Mother-baby bonding is crucial for babies, that is why we take action as soon as there is Post Natal Depression, because the baby is affected, not just the mother (and of course the father). But recent research has shown that father-baby
Appendix 5.1 Summary of DVD sent to all participants

bonding is also important for the baby to grow well. The old picture was that fathers should support the mum while she bonded. Now we see that fathers and babies need to bond as well.

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Professor Graham Vimpani, John Hunter Children’s Hospital, 2305. Phone: 49213673
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.2 Information letter Control Group

FACULTY OF HEALTH
SCHOOL OF MEDICAL PRACTICE & POPULATION HEALTH
DISCIPLINE OF PAEDIATRICS & CHILD HEALTH

PROFESSOR GRAHAM VIMPANI
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PROFESSOR DIANA KEATINGE
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Diana.Keatinge@newcastle.edu.au

New Fathers Information Project – information statement

My name is Richard Fletcher; I am a PhD student at the University of Newcastle. I have qualifications in health research and infant mental health and I have worked with fathers in many settings over many years. Graham Vimpani, who is a professor of Paediatrics at the University is my supervisor. Diana Keatinge, who is a professor of Paediatric, Youth & Family Health Nursing, at the University of Newcastle is a co-investigator on this project. Our aim is to:

- Test an email service to give fathers information
- Find out what sort of information fathers want
- Find better ways to support fathers through the birth of their baby and afterwards
- Contribute to better outcomes for babies and families by supporting fathers

We would be grateful if you could assist in this research by agreeing to look at the packages of information and give us your opinions on their usefulness and accessibility. This antenatal group has been selected at random to be offered the Information packages for this pilot study. Other antenatal groups have been selected (also at random) to be offered an email discussion group and online health professionals as well as the information packages. At the end of the pilot study the results from the two groups will be compared.

If you decide to participate in this research you will receive a DVD starter package containing information on how fathers can bond with their baby, settling your baby ideas and information about how a father’s role has changed. We will then communicate by email. The correspondence from us will consist of emails and postal reminders that the emails have been sent.

Version 3 October 2005
Professor Graham Vimpani, John Hunter Children’s Hospital, 2305. Phone: 49213673
Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.2 Information letter Control Group

Any information you provide will be treated in strict confidence. All correspondence will be stored securely. You may discontinue your participation in this study at any time, or decline to answer any questions.

Who can participate?
We are seeking expectant fathers who are attending an all-male antenatal education session to participate in the research.

What do I have to do?
You have three options. You can:
- Sign the consent form and place it in the box provided at the Fathers Session later in the course and the DVD package will be sent to you by mail. A survey will also be sent by email.
- Take this letter and the forms home to think about it. If you return it later you will be sent the DVD package of materials and the survey.
- Do nothing.

If you agree to be involved you will receive a DVD starter package containing information on how fathers can bond with their baby, settling ideas and information about how a father’s role has changed. You will also be emailed a survey to complete and given a list of information packages to select from. You will also be notified by mail that the email has been sent to allow for errors in the email address. The survey asks about you (your age and occupation) your thoughts about the developing baby, your relationship, how you have been feeling over the last week and your role as a father.

A set of information packages will be sent to you by email with a short evaluation for you to fill in and return to us. Approximately two months after the birth you will be sent a second survey to fill in and return. The second survey covers similar material to the first survey but recognising that you now have a baby and asks about which support services you have used. Your answers to all of the questions are confidential. Your answers are given a code number so that no one apart from the researchers will be able to identify who gave which answers. The results will be collated and analysed together so that no individual answers will be identified. We want to see what new fathers say are the important information topics during and after the pregnancy.

Privacy and confidentiality
The information that you provide to the project will be used solely for identifying information needs for new fathers. The results will be submitted as part of a PhD thesis and for publication in scientific journals. Participant’s identifying information will be destroyed once the data has been recorded. The completed surveys will be held at a secure location until the thesis has been marked and then they will be destroyed. The electronic data (without names) will be kept in a secure location for five years.

Risks and benefits
Participants cannot be assured of benefiting personally from being involved in this study but the information provided in the packages may be useful in your role as father. You may also benefit from hearing how other fathers are managing and by having a dedicated health professional to ask questions of. Some of the survey questions that we send to you ask for personal information. In the event that these questions raise concerns you are advised to contact your general practitioner or Lifeline on 131114.

Version 3 October 2005
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Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.2 Information letter Control Group

**Participation is voluntary**

Participation in any part of this research is entirely your choice. Whether or not you decide to participate, your decision will not disadvantage you in any way and will not affect you or your family’s access to services. If you decide to withdraw from the study, you have the option of withdrawing all data relating to you. At the conclusion of the research a summary of how all the fathers evaluated the packages and how the two groups compared will be sent to those who indicate that they would like to receive it.

**Questions during the research**

Please do not hesitate to contact Richard Fletcher on the number above to discuss your participation.

Yours sincerely

[Signatures]

**Richard Fletcher**
Team Leader, Engaging Fathers Project, Lecturer, Family Action Centre, Faculty of Health

**Diana Keatinge**
Professor, Paediatric, Youth & Family Health Nursing, Kaleidoscope, HNEH & the University of Newcastle

**Graham Vimpani**
Professor, Discipline of Paediatrics and Child Health, Kaleidoscope, HNEH & the University of Newcastle

**Complaints**

This project has been approved by the University’s Human Research Ethics Committee, Approval No. H-134-1105.

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, telephone (02 49216333, email Human-Ethics@newcastle.edu.au

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Appendix 5.3 Information letter Intervention (network) Group

FACULTY OF HEALTH
SCHOOL OF MEDICAL PRACTICE & POPULATION HEALTH
DISCIPLINE OF PAEDIATRICS & CHILD HEALTH

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PROFESSOR DIANA KEATINGE
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FACULTY OF HEALTH,
THE UNIVERSITY OF NEWCASTLE NSW 2308
Phone: (02) 49216010, Fax: (02) 49216301
Diana.Keatinge@newcastle.edu.au

New Fathers Information Project – information statement

My name is Richard Fletcher; I am a PhD student at the University of Newcastle. I have qualifications in health research and infant mental health and I have worked with fathers in many settings over many years. Graham Vimpani, who is a professor of Paediatrics at the University is my supervisor. We have received funding from the Hunter Children’s Research Foundation to undertake research on fathers information needs. Our aim is to:

- Test an email system for connecting up new fathers who are busy
- Find out what sort of information fathers want
- Find better ways to support fathers through the birth of your baby and afterwards
- Contribute to better outcomes for babies and families by supporting fathers

We would be grateful if you could assist in this research by

a) looking at some packages of information and give us your opinions on their usefulness and
b) linking up by email with other fathers from your group to contribute your thoughts on preparing for the birth, the arrival of your new baby, and going back to work. You will also be able to send questions by email to a team of health professionals set up for this project.

If you decide to participate in this research you will receive a DVD starter package containing information on how fathers can bond with their baby, settling your baby ideas and information about how a father’s role has changed. We will then communicate by email. The correspondence from us will consist of emails and some postal reminders that the emails have been sent.

Version 3 October 2005
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Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.3 Information letter Intervention (network) Group
This antenatal group has been selected at random to be offered the information packages, the email discussion group and online health professional contact. Other antenatal groups have been selected (also at random) to be offered only the information packages. At the end of the pilot study the results from the two groups will be compared.

Any information you provide will be treated in strict confidence. All correspondence will be stored securely. You may discontinue your participation in this study at any time, or decline to answer any questions.

Who can participate?
We are seeking expectant fathers who are attending an all-male antenatal education session to participate in the research.

What do I have to do?
You have three options. You can:

- Sign the consent form and place it in the box provided at the Fathers Session later in the course and the DVD package will be sent to you by mail. A survey will also be sent by email.
- Take this letter and the forms home to think about it. If you return it later you will be sent the DVD package of materials and the survey.
- Do nothing.

If you agree to be involved you will be emailed a survey to complete and given a list of information packages to select from. You will also be notified by mail that the email has been sent to allow for errors in the email address. The survey asks about you (your age and occupation) your thoughts about the developing baby, your relationship, how you have been feeling over the last week and your role as a father.

The Information packages
Your first package includes the DVD, information about the project and a list of Information Packages to choose from. The information packages that you select will then be sent to you by email with a short evaluation form to fill in and return to us. Approximately two months after the birth you will be sent a second survey to fill in and return. Your answers to all of the questions are confidential. Your answers are given a code number so that no one apart from the researchers will be able to identify who gave which answers. The results will be collated and analysed together so that no individual answers will be identified. We want to see what new fathers say are the important information topics during and after the pregnancy.

The Email group with other fathers
You will be joined up to a special email group with the other fathers from your antenatal class. Only the fathers from your group and the Child & Family Health nurse [name supplied] will be able to read the emails. [name supplied] will only comment on what you have written if she thinks there is some useful information to add. Otherwise the group is just for the fathers to see what other dads are doing. At the end of the research [name supplied] will delete all the names and identifying words and then the emails will be put together to see what issues fathers think are important.

Asking questions of the health professional
[name supplied] will also be available for any questions that you may have about the baby or parenting. Please read the separate sheet headed “Do you have a question? An email inquiry service for new fathers” attached to this information letter

Privacy and confidentiality
The information that you provide to the project will be used solely for identifying information needs for new fathers. The results will be submitted as part of a PhD thesis and will also be submitted for publication in scientific journals. Participant’s identifying information will be destroyed once the data from the returns has

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Appendix 5.3 Information letter Intervention (network) Group
been recorded. The completed surveys will be held at a secure location until the thesis has been marked and then they will be destroyed.

**Risks and benefits**
Participants cannot be assured of benefiting personally from being involved in this study but the information provided in the packages may be useful in your role as father. You may also benefit from hearing how other fathers are managing and by having a dedicated health professional to ask questions of. Some of the survey questions that we send to you ask for personal information. In the event that these questions raise concerns you are advised to contact your general practitioner or Lifeline on 131114.

**Participation is voluntary**
Participation in any part of this research is entirely your choice. Whether or not you decide to participate, your decision will not disadvantage you in any way and will not affect you or your family’s access to services. If you decide to withdraw from the study, you have the option of withdrawing all data relating to you. At the conclusion of the research a summary of how all the fathers evaluated the packages and how the two groups compared will be sent to those who indicate that they would like to receive it.

**Questions during the research**
Please do not hesitate to contact Richard Fletcher at any time to discuss your participation.

Yours sincerely

Richard Fletcher

Team Leader, Engaging Fathers Project, Lecturer, Family Action Centre, Faculty of Health

Diana Keatinge
Professor, Paediatric, Youth & Family Health Nursing, Kaleidoscope, HNEH & the University of Newcastle

Graham Vimpani
Professor, Discipline of Paediatrics and Child Health, Kaleidoscope, HNEH & the University of Newcastle

**Complaints**

This project has been approved by the University’s Human Research Ethics Committee, Approval No. H-134-1105.

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au

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Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Version 3. October 2005

Consent Form for NEW FATHERS INFORMATION PROJECT

Consent Form

I have read the information sheet in regards to the NEW FATHERS INFORMATION project. I understand that the project will be conducted as described in the Information Statement, a copy of which I have retained. I have had the opportunity to have questions answered to my satisfaction and I agree to participate in the study. I understand that when this Consent Form is received by the researchers I will be sent a survey by email and information packages by email.

I understand that:

1. I may choose to withdraw from the study at any time and I do not need to explain my decision.

2. My name will not be used and the information I give will not allow me to be identified to any person outside the researchers.

3. The findings of the NEW FATHERS INFORMATION study may be published in journal articles or presented at conferences in an anonymous format.

Name …………………………………………………

Postal address ……………………………………………………………………… Postcode ………..

Email address …………………………………………………………………………………

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Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.4 Consent form

Browser most often used by me ..............................................................

I would like a copy of the summary of the research results emailed to me at the conclusion of the research project. □ No □ Yes

Signed _________________________              Date ___________________

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New Fathers Information Project

Do you have a question? An email inquiry service for new fathers

For three months, a team of health professionals will be available to answer your email questions about any aspect of the pregnancy or birth or your life as a parent after the birth. This is not an emergency service. Nor is it to replace your normal care by your obstetrician, general practitioner midwife or child and family health nurse. However, since most fathers do not attend most of the visits with health professionals this email service is being tested to see if fathers find it useful.

What do I have to do?
Once you agree to be part of the New Fathers Network study you will receive a DVD package by post and a short survey to complete. As soon as you return the survey you will be sent the email address introducing the team (Midwife (Name to be supplied) Child & Family Health Nurse (Name to be supplied) and Paediatrician (Name to be supplied) and giving you the email address to send your questions to.

How will it work?
You will be given an email address which goes directly to a registered nurse, who is also a child and family health (C&FH) nurse with experience in both antenatal and postnatal care. The nurse will read your question and answer it herself if that is appropriate. The nurse may also consult with the midwife or paediatrician if necessary but without revealing your name or contact details. She will then email you an answer.

Can the questions be from me and my wife/partner?
Yes, it doesn't matter how you decided the question, you can still ask it.

What if I am just after information?
That is also fine. As long as it is something to do with the baby and family issues relating to him/her your family we will do our best to answer it.

Is this service confidential?
Yes, with one exception. If the information in your email suggests that there are serious safety concerns for you, your baby or another family member, then the health care worker must report this to the appropriate service (including a general practitioner where appropriate).

Who will read my email?
Only the C&FH nurse will have your name and email address. If she consults with the midwife or paediatrician they will not know your identity. At the end of the research time, all the names and any identifying features will be removed from the questions and all the email content put together to identify what issues fathers want to know about.

What if I change my mind?
Participants can withdraw from the research project at any time and they do not have to give a reason.
Appendix 5.6 Letter to mothers

A letter to mothers about the New Fathers Information Project

Dear Mums

You will probably notice that information is being handed out to the expectant dads in your antenatal group about New Fathers Information Project. The New Fathers Information Project is a research study which aims to:

- Test an email service to give fathers information
- Find out what sort of information fathers want
- Find better ways to support fathers through the birth of their baby and afterwards
- Contribute to better outcomes for babies and families by supporting fathers

The research is being conducted by Richard Fletcher, a PhD student at the University of Newcastle. Graham Vimpani, who is a professor of Paediatrics at the University is supervising the research and Diana Keatinge, who is a professor of Paediatric, Youth & Family Health Nursing, at the University of Newcastle is a co-investigator on the project.

Why Dads?

There is a world-wide trend to recognize that both mothers and fathers should take responsibility for babies, infants and children. There is also research evidence demonstrating that babies do best when both mothers and fathers are involved.

What does this research study involve?

Fathers who decide to go into the study will get information packages to evaluate. The packages are about information that helps fathers connect to the baby and support the mother (that’s you).

Is the information available to mothers?

There is nothing secret about the packages or the information in them. The packages are directed at fathers because most of the information available to new parents concentrates on the mother’s role.

New Fathers Information Project

Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Graham Vimpani,, John Hunter Children's Hospital, 2305. Phone: 49213673
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010

Version 1 October 2005
Appendix 5.7 Evaluation questions for each email package sent to fathers

**QUESTIONS ABOUT THIS INFORMATION PACKAGE**

1. The information package (Name of Package) has been/will be useful in my role as a father.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

2. The information package (Name of Package) helped me to find the information that I needed when I needed it

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

3. My wife/partner also found the information package (Name of Package) useful

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

4. What I most liked about the package

5. Improvements you would suggest to make the packages more useful

Please send me the next package

☐ Yes

☐ No thanks

Comment ?
Appendix 5.8 Postal alert fathers to final online survey

New Fathers Information Project

Hi

By now you will be an expert in babycare and understanding all the cries and gurgles and you’ll be enjoying those terrific smiles too I expect. So you are probably no longer a “new dad” but more like a “new dad with lots of recent experience”.

We are still keen to hear from you one more time. For the research to work we need all the dads to complete the final online survey. So I am writing to ask if you would please go this web address and fill out the survey there. Just like before this is confidential since only your identification number is used on the survey.

We have built in a reward for completed surveys too. All completed surveys will go in the draw for a $200 gift voucher for either Bunnings Hardware or Dick Smith Electronics. Fathers will indicate which certificate they would prefer when they complete the online survey.

The draw will take place at the conclusion of the survey period on the 28th September. All code numbers from the returned final surveys will be copied onto paper slips and the winning code number will drawn by Prof. Graham Vimpani (or his nominee) at John Hunter Hospital. The winner will be notified by mail and sent the gift certificate.

Here is the address for the survey

Your identification number for this survey is the same as the last one.

Here is your identification number

Thanks for helping with the research. We really hope to have a great information system in place for all new dads in the future.

Richard
## Who to Contact - Dads List

<table>
<thead>
<tr>
<th><strong>Who to Contact - Dads List</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Telephone Assistance</strong></td>
</tr>
<tr>
<td><strong>Lifeline Hobart Inc.</strong> General Office Enquiries</td>
</tr>
<tr>
<td><strong>Volunteer Training</strong></td>
</tr>
<tr>
<td><strong>Telephone:</strong> (03) 6228 0313</td>
</tr>
<tr>
<td><strong>Email:</strong> <a href="mailto:info.south@lifelinetasmania.com.au">info.south@lifelinetasmania.com.au</a></td>
</tr>
<tr>
<td><strong>HOURS:</strong> Phone counselling: 24 hours, 7 days.</td>
</tr>
<tr>
<td>Lifeline provides trained volunteer counsellors for confidential face-to-face counselling and over the telephone. Common themes of discussion include relationship and family concerns, depression and anxiety, grief and trauma, and many more. However these topics are not fixed. The counsellor will take their lead from you and address the topics you are concerned about.</td>
</tr>
<tr>
<td><strong>FEE:</strong> Local call cost however may be higher or varied if calling from a payphone or mobile phone</td>
</tr>
</tbody>
</table>

| **Men's Line** - 1300 789978 (local call cost) |
| **WEBSITE/EMAIL:** www.menslineaus.org.au |
| **HOURS:** 24 hours, 7 days |
| Professional and confidential short term telephone counselling specifically for men who are dealing with the separation of their family; who are non-residual parents and seeking a more active role with their children; or who are experiencing present relationship difficulties. |
| **FEE:** Local call cost however may be higher or varied if calling from a payphone or mobile phone |

| **Financial Counselling** |
| **Anglicare Tasmania** |
| **Phone** 1800 24 32 32 | **18 Watchorn Street, Hobart** |
| The Financial Counselling service provides information, options, support and advocacy for individuals, families and groups concerning finance, credit and debt and assists clients to explore, develop and implement strategies for resolving financial difficulties. |
| Financial counselling appointments are free of charge. |

| **Worried? Feeling Like You're Losing It?** |
| **Tools for Men (Anglicare)** |
| One on One Counselling |
| Contact Les Whittle: Phone 6234 3510 or 1800243232 |
| **Fee for service** |

| **Men's Health** |
| The focus on Men's Health acknowledges the role that men play in not only their own health as grown men, but in the health and wellbeing of their children and partners. |
| There are a number of support services in Tasmania that provide men with access to information and support networks, although some of these services may not be identified as 'Men's Health Services' they are certainly able to provide what many men are seeking. |
| These services can provide information relating to relationships, communication, referrals to appropriate services, support and education. |

| **More Information** |
| **Advocacy and Support Networks** |
| **Tasmanian Men's Health and Wellbeing Association Inc.** |
| Providing information and other resources relating to Men's Health and Well Being to increase |
### Appendix 5.9 Who to Contact Sheet (TAS)

Awareness in the community.
Telephone (03) 6223 6900

---

**Who to Contact - Dads List**

<table>
<thead>
<tr>
<th><strong>Parenting</strong></th>
</tr>
</thead>
</table>
| **Good Beginnings Australia** - 6 Washington Street  
South Hobart  
Phone: 6223 5810  
130 Springfield Ave  
West Moonah 7009  
6273 5405 |
| **Dads Connect (Tasmania)**  
Contact Dale Rahmanovic: 0419 557 854 or drahmanovic@bigpond.com |
| FEE: All free services |
| Most local Neighbourhood Houses in greater Hobart also have a Family Support Service |

| **Relationships Australia** – 20 Clare Street, Newtown, 7008  
PHONE: 6211 4050  
WEBSITE/ EMAIL: www.relationships.com.au  
HOURS: 9-5pm |
| Individual, couple and family counselling is provided. Relationship education programs are frequently run aiming to enhance participants’ parenting and family skills. Counselling can allow for, where sought, mediation between parent and child or between parent and partner.  
FEE: Is calculated depending on client’s gross income. Discounts available for pensioners etc. |

<table>
<thead>
<tr>
<th><strong>General Practitioners</strong></th>
</tr>
</thead>
</table>
| **After Hours GP Services – After Hours Doctor**  
252 Main Road  
Derwent Park  
Ph. 1300 731 788  
Mon – Fri 6pm-10pm  
Sat – Sun & public holidays 9am – 10pm |
| Royal Hobart Hospital Phone: 6228 8308  
FEE: No fees for the hospital clinics, however private GP’s may charge a variable service fee. |

<table>
<thead>
<tr>
<th><strong>Aboriginal</strong></th>
</tr>
</thead>
</table>
| **Aboriginal Family Support & Care Program**  
Palawa House  
56 Patrick St  
Hobart  
Phone: 6231 3527 |
Appendix 5.9 Who to Contact Sheet (TAS)

New Fathers Information Project
Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Graham Vimpani, John Hunter Children’s Hospital, 2305. Phone: 49213673
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.11 Antenatal survey online

**New Fathers Information Project - Telephone Survey**

Interviewer:  
Participant ID:  
Date:  
Time started:  
Time finished:  

**INTRODUCTION**  
Good … (morning / afternoon / evening). My name is ……. from the Family Action Centre at the University of Newcastle. Could I please speak to …………. (participant’s name)?  
[connected through to participant]  
Good … (morning / afternoon / evening), ……… (participant’s name). My name is ……. the Family Action Centre at the University of Newcastle. I am calling to follow up the New Fathers Information Project survey that you completed recently and suggested this time to call.

Are you still available?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>Continue</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Make a new appointment</td>
</tr>
</tbody>
</table>

This survey will take about 20 minutes and all responses are confidential.
You can withdraw from the interview at any time without an explanation. All questions are optional and there are no incorrect answers.
The information you give us today will be used to determine the level and the type of needs of fathers around the time of the birth.
Once the study is completed, this survey will be destroyed.
Meanwhile, this survey will be kept in a secure place by the chief investigator.

Do you have any questions before we start the interview?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>Provide answers. If you don’t have the answers, propose the option to continue the interview and to arrange a phone call from the chief investigator as soon as the interview is completed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Continue</td>
</tr>
</tbody>
</table>

Appendix 5.11 Antenatal survey online

Interview schedule for answers to packages; Father Infant Bonding, Sex After the Birth, Fussy baby, Games to Play With New Baby, Work Family Balance, Breastfeeding.

**QUESTIONS ABOUT THE INFORMATION PROVIDED**

**Q1. This document gave me new information**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree or Agree</td>
<td>What was new about this information?</td>
</tr>
<tr>
<td>Disagree or Strongly Disagree</td>
<td>What sort of information were you hoping for?</td>
</tr>
</tbody>
</table>

**Q2. I intend to discuss the information with my wife/partner**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree or Agree</td>
<td>Did you discuss the information with her before you completed the form?</td>
</tr>
<tr>
<td>Disagree or Strongly Disagree</td>
<td>Have you discussed much about your role with the baby before this time?</td>
</tr>
</tbody>
</table>

**Q3. I am satisfied with the quality of this information**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree or Agree</td>
<td>What parts make you trust that this information is OK?</td>
</tr>
<tr>
<td>Disagree or Strongly Disagree</td>
<td>What is lacking in the information?</td>
</tr>
</tbody>
</table>

**Q4. Because of this information I have decided to do some things differently**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree or Agree</td>
<td>Which things are you thinking that you will do differently?</td>
</tr>
<tr>
<td>Disagree or Strongly Disagree</td>
<td>Could you say if there is something lacking in this information?</td>
</tr>
</tbody>
</table>

**Q5. I visited one (or more) of the websites**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>What did you think of the website?</td>
</tr>
<tr>
<td>No</td>
<td>Is that because the information in the email was enough?</td>
</tr>
</tbody>
</table>

**Q6. Any other comments about the Information?**

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>INTERVIEW QUESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any</td>
<td>Would you like to say more about this information?</td>
</tr>
<tr>
<td>None</td>
<td>Is that because the information in the email was enough?</td>
</tr>
</tbody>
</table>

IS THERE ANYTHING ELSE THAT YOU WOULD LIKE TO ADD?
Appendix 5.11 Antenatal survey online

*not all survey forms include this question

Thank you for your contribution to this survey.

New Fathers Information/Network Project Version 1 August 2005

NOTE: THIS SURVEY WILL BE REFORMATTED FOR USE ONLINE

BEFORE THE BIRTH survey

A. QUESTIONS ABOUT YOU

1. Your age (in years) …………
2. Country of birth...........................................................................................................
3. Language spoken at home..........................................................................................
4. Occupation..................................................................................................................
5. Is this your first child?  Yes ☐ No ☐
6. How many months until your baby is due? ……..
7. Marital Status:  married ☐ single ☐ defacto ☐ separated ☐
8. Aboriginal/Torres Strait Islander? Yes ☐ No ☐
9. Current employment:  Full time work ☐ Part-time work ☐ Casual work ☐ Unemployed/on benefits ☐
10. Education :  Left before attaining school certificate ☐ School certificate ☐
    Left before attaining HSC ☐ HSC ☐
    TAFE/university ☐

Please answer the following questions by ticking the box of the answer that comes closest to your view

11. In the last 12 months have you had any major stressors, changes or losses recently such as financial problems, someone close to you dying or any other major worries?  
    Yes ☐ No ☐ Not sure ☐

12. Do you have someone that you can talk to (apart from your wife/partner) if you have stresses or worries?  
    Yes ☐ No ☐ Sometimes ☐

13. Generally, do you consider yourself a confident person?  
    Yes ☐ No ☐ In some ways ☐
Appendix 5.11 Antenatal survey online

14. Does it worry you if things get messy or out of place?
   Yes ☐   No ☐   Sometimes ☐

15. Are you currently receiving or have in the past received, treatment for any emotional problems?
   Yes ☐   No ☐   Not applicable ☐

B. QUESTIONS ABOUT YOUR ROLE AS A FATHER

16. Was this pregnancy planned?
   Yes ☐   No ☐   Partly ☐

After the birth of my baby

17. I expect to have time off to be at home
   ☐ Not possible
   ☐ A couple of days
   ☐ A week
   ☐ More than a week

18. I will be able to provide financial support for my family
   ☐ Yes, easily
   ☐ Yes, if nothing too unexpected happens
   ☐ With difficulty but we’ll probably manage
   ☐ Not sure where the money is coming from

19. If my wife/partner needs someone for emotional support
   ☐ I will find it easy to support her
   ☐ I will try to support her
   ☐ I will rely on help from relatives and friends
   ☐ I will figure that out after the birth

20. When its time for sleep I expect to be able to settle my baby down
   ☐ Easily
   ☐ Probably
   ☐ Possibly
   ☐ Not sure until I try

21. When my baby cries I will be able to tell what the crying means (e.g. hunger, tired, bored, “letting off steam” etc.)
   ☐ All the time
   ☐ Most times
   ☐ Sometimes
   ☐ Not sure until I try

22. I will be able to tell if my wife/partner becomes depressed
   ☐ Definitely
   ☐ Maybe
   ☐ Not sure at this stage
   ☐ Probably not

23. I feel uncomfortable watching women breastfeeding their babies
   ☐ Definitely
   ☐ Maybe
Appendix 5.11 Antenatal survey online

- Not sure at this stage
- Probably not

24. I look to my own father as a model of good fathering
   - Definitely
   - Yes, but times have changed
   - Definitely not

C. QUESTIONS ABOUT HOW YOU HAVE BEEN FEELING OVER THE LAST WEEK

Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.


Here is an example, already completed:

I have felt happy
   - Yes, all the time
   - Yes, most of the time
   - No, not very often
   - No, not at all

This would mean: “I have felt happy most of the time” during the past week.

Please complete the other questions the same way.

IN THE PAST 7 DAYS

25. I have been able to laugh and see the funny side of things.
    - As much as I always could
    - Not quite so much now
    - Definitely not so much now
    - Not at all

26. I have looked forward with enjoyment to things.
    - As much as I ever did
    - Rather less than I used to
    - Definitely less than I used to
    -Hardly at all

27. I have blamed myself unnecessarily when things went wrong.
    - Yes, most of the time
    - Yes, some of the time
    - Not very often
    - No, never

28. I have been anxious or worried for no good reason.
    - No, not at all
    -Hardly ever
Appendix 5.11 Antenatal survey online

29. I have felt scared or panicky for not very good reason.
   Yes, quite a lot
   Yes, sometimes
   No, not much
   No, not at all

30. Things have been getting on top of me.
   Yes, most of the time I haven't been able to cope at all
   Yes, sometimes I haven't been coping as well as usual
   No, most of the time I have coped quite well
   No, I have been coping as well as ever

31. I have been so unhappy that I have had difficulty sleeping.
   Yes, most of the time
   Yes, sometimes
   Not very often
   No, not at all

32. I have felt sad or miserable.
   Yes, most of the time
   Yes, quite often
   Not very often
   No, not at all

33. I have been so unhappy that I have been crying.
   Yes, most of the time
   Yes, quite often
   Only occasionally
   No, never

34. The thought of harming myself has occurred to me.
   Yes, quite often
   Sometimes
   Hardly ever
   Never

D. QUESTIONS ABOUT YOUR RELATIONSHIP WITH YOUR WIFE/PARTNER

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

35. Philosophy of life ___
36. Aims, goals, and things believed important ___
37. Amount of time spent together ___

5 4 3 2 1 0
Always Agree Almost Agree Occasionally Disagree Frequently Disagree Almost Always Disagree Always Disagree
Appendix 5.11 Antenatal survey online

How often would you say the following events occur between you and your mate?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Less than once a month</td>
<td>Once or twice a month</td>
<td>Once or twice a week</td>
<td>Once a day</td>
<td>More often</td>
<td></td>
</tr>
</tbody>
</table>

38. Have a stimulating exchange of ideas ___
49. Calmly discuss something together ___
40. Work together on a project ___

41. The dots on the following line represent different degrees of happiness in your relationship. The middle point, “happy,” represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Unhappy</td>
<td>Fairly Unhappy</td>
<td>A Little Unhappy</td>
<td>Happy</td>
<td>Very Happy</td>
<td>Extremely Happy</td>
<td>Perfect</td>
<td></td>
</tr>
</tbody>
</table>

E. QUESTIONS ABOUT YOUR THOUGHTS AND FEELINGS ABOUT THE DEVELOPING BABY
Please tick one box in answer to each question

42. Over the past two weeks I have thought about, or been preoccupied with the developing baby:

- [ ] almost all the time
- [ ] very frequently
- [ ] frequently
- [ ] occasionally
- [ ] not at all

43. Over the past two weeks when I have spoken about, or thought about the developing baby I got emotional feelings which were:

- [ ] very weak or non-existent
- [ ] fairly weak
- [ ] in between strong and weak
- [ ] fairly strong
- [ ] very strong
Appendix 5.11 Antenatal survey online

44. Over the past two weeks my feelings about the developing baby have been:

- [ ] very positive
- [ ] mainly positive
- [ ] Mixed positive and negative
- [ ] mainly negative
- [ ] very negative

45. Over the past two weeks I have had the desire to read about or get information about the developing baby. This desire is:

- [ ] very weak or non-existent
- [ ] fairly weak
- [ ] neither strong nor weak
- [ ] moderately strong
- [ ] very strong

46. Over the past two weeks I have been trying to picture in my mind what the developing baby actually looks like in my partner's womb:

- [ ] almost all the time
- [ ] very frequently
- [ ] frequently
- [ ] occasionally
- [ ] not at all

47. Over the past two weeks I think of the developing baby mostly as:

- [ ] a real little person with special characteristics
- [ ] a baby like any other baby
- [ ] a human being
- [ ] a living thing
Appendix 5.11 Antenatal survey online

48. **Over the past** two weeks when I think about the developing baby my thoughts:
   - [ ] are always tender and loving
   - [ ] are mostly tender and loving
   - [ ] are a mixture of both tenderness and irritation
   - [ ] contain a fair bit of irritation
   - [ ] contain a lot of irritation

49. **Over the past** two weeks my ideas about possible names for the baby have been:
   - [ ] very clear
   - [ ] fairly clear
   - [ ] Fairly vague
   - [ ] very vague
   - [ ] I have no idea at all

50. **Over the past** two weeks when I think about the developing baby I get feelings which are:
   - [ ] very sad
   - [ ] moderately sad
   - [ ] a mixture of happiness and sadness
   - [ ] moderately happy
   - [ ] very happy

51. **Over the past** two weeks I have been thinking about what kind of child the baby will grow into:
   - [ ] not at all
   - [ ] occasionally
   - [ ] frequently
   - [ ] very frequently
   - [ ] almost all the time
Appendix 5.11 Antenatal survey online

52. **Over the past** two weeks I have felt:
- [ ] very emotionally distant from the baby
- [ ] moderately emotionally distant from the baby
- [ ] not particularly emotionally close to the baby
- [ ] moderately close emotionally to the baby
- [ ] very close emotionally to the baby

53. **When I first** see the baby after the birth I expect I will feel:
- [ ] intense affection
- [ ] mostly affection
- [ ] affection, but I expect there may be a few aspects of the baby I will dislike
- [ ] I expect there may be quite a few aspects of the baby I will dislike
- [ ] I expect I might feel mostly dislike

54. **When the baby** is born I would like to hold the baby:
- [ ] immediately
- [ ] after it has been wrapped in a blanket
- [ ] after it has been washed
- [ ] after a few hours for things to settle down
- [ ] the next day

55. **Over the past** two weeks I have had dreams about the pregnancy or baby:
- [ ] not at all
- [ ] occasionally
- [ ] frequently
- [ ] very frequently
Appendix 5.11 Antenatal survey online

- almost every night

56. Over the past two weeks I have found myself feeling, or rubbing with my hand, the outside of my partner's stomach where the baby is:
  - a lot of times each day
  - at least once per day
  - occasionally
  - once only
  - not at all

57. If the pregnancy was lost at this time (due to miscarriage or other accidental event) without any pain or injury to my partner, I expect I would feel:
  - very pleased
  - moderately pleased
  - neutral (ie neither sad nor pleased; or mixed feelings)
  - moderately sad
  - very sad

F. QUESTIONS ABOUT YOUR IDEAS ABOUT PROFESSIONAL PSYCHOLOGICAL HELP
Please tick one box in answer to each question

58. If I was having a mental breakdown, my first inclination would be to get professional attention.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

59. The idea of talking about a problem with a professional psychologist strikes me as a poor way to get rid of emotional conflicts

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

60. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

61. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>
Appendix 5.11 Antenatal survey online

62. I would want to get psychological help if I were worried or upset for a long period of time

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

63. I might want to have psychological counselling in the future

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

64. A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

65. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

66. A person should work out his or her own problems; getting psychological counselling would be a last resort

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>

67. Personal and emotional troubles, like many things, tend to work out by themselves

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly Agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
</table>
Appendix 5.12 Postnatal online survey

New Fathers Information Project  ID number ……………..

NOTE: THIS SURVEY WILL BE REFORMATTED FOR USE ONLINE

Win by Participating! Your time and effort means a lot to us, so we have decided to run a draw for a $200 gift voucher to either Bunnings Warehouse, or Dick Smith Electronics. See last questions

A. QUESTIONS ABOUT YOU

1. How many months and weeks old is your baby? ……..

2. Current employment: Full time work ☐
   Part-time work ☐
   Casual work ☐
   Unemployed/on benefits ☐

B. QUESTIONS ABOUT YOUR ROLE AS A FATHER

3. When your baby is upset, fussy or crying, how good are you at soothing him or her?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

4. How good are you at understanding what your baby wants or needs? For example, do you know when your baby needs to be changed or wants to be fed?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

5. How good are you at making your baby understand what you want him/her to do? For example, if you want your baby to eat dinner or play quietly, how good are you at asking him or her to do that?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

6. How good are you at getting your baby to pay attention to you? For example, when you want your baby to look at you, how good are you at making him or her do it?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

7. How good are you at getting your baby to have fun with you? For example, how good are you at getting your baby to smile and laugh with you?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

8. How good are you at knowing what activities you baby will enjoy? For example how good are you at knowing what games and toys your baby will like to play with?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

9. How good are you at keeping you baby occupied when you need to do housework? For example, how good are you at finding things for the baby to do when you need to clean up?
   Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

10. How good do you feel you are at feeding, bathing and changing your baby?
    Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

11. How good are you at getting your baby to show off for visitors? For example, how good are you at making your baby smile or laugh for people who visit?
    Very good ☐ Good ☐ Not so good ☐ Not good at all ☐

12. In general, how good a father do you feel you are?
Appendix 5.12 Postnatal online survey

<table>
<thead>
<tr>
<th>Very good</th>
<th>Good</th>
<th>Not so good</th>
<th>Not good at all</th>
</tr>
</thead>
</table>

C. QUESTIONS ABOUT HOW YOU HAVE BEEN FEELING OVER THE LAST WEEK

Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.


Here is an example, already completed:

I have felt happy
  Yes, all the time
  Yes, most of the time
  No, not very often
  No, not at all

This would mean: “I have felt happy most of the time” during the past week.

Please complete the other questions the same way.

IN THE PAST 7 DAYS

13. I have been able to laugh and see the funny side of things.
    As much as I always could
    Not quite so much now
    Definitely not so much now
    Not at all

14. I have looked forward with enjoyment to things.
    As much as I ever did
    Rather less than I used to
    Definitely less than I used to
    Hardly at all

15. I have blamed myself unnecessarily when things went wrong.
    Yes, most of the time
    Yes, some of the time
    Not very often
    No, never

16. I have been anxious or worried for no good reason.
    No, not at all
    Hardly ever
    Yes, sometimes
    Yes, very often

17. I have felt scared or panicky for not very good reason.
    Yes, quite a lot
    Yes, sometimes
    No, not much
    No, not at all

18. Things have been getting on top of me.
Appendix 5.12 Postnatal online survey

Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

19. I have been so unhappy that I have had difficulty sleeping.
   Yes, most of the time
   Yes, sometimes
   Not very often
   No, not at all

20. I have felt sad or miserable.
   Yes, most of the time
   Yes, quite often
   Not very often
   No, not at all

21. I have been so unhappy that I have been crying.
   Yes, most of the time
   Yes, quite often
   Only occasionally
   No, never

22. The thought of harming myself has occurred to me.
   Yes, quite often
   Sometimes
   Hardly ever
   Never

D. QUESTIONS ABOUT YOUR RELATIONSHIP WITH YOUR WIFE/PARTNER

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

23 Philosophy of life ___
24. Aims, goals, and things believed important ___
25. Amount of time spent together ___

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always Agree</td>
<td>Almost Agree</td>
<td>Occasionally Disagree</td>
<td>Frequently Disagree</td>
<td>Almost Always Disagree</td>
<td>Always Disagree</td>
</tr>
</tbody>
</table>

How often would you say the following events occur between you and your mate?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Less than once a month</td>
<td>Once or twice a month</td>
<td>Once or twice a week</td>
<td>Once a day</td>
<td>More often</td>
</tr>
</tbody>
</table>

26. Have a stimulating exchange of ideas ___
27. Calmly discuss something together ___
28. Work together on a project ___
Appendix 5.12 Postnatal online survey

29. The dots on the following line represent different degrees of happiness in your relationship. The middle point, “happy,” represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Unhappy</td>
<td>Fairly Unhappy</td>
<td>A Little Unhappy</td>
<td>Happy</td>
<td>Very Happy</td>
<td>Extremely Happy</td>
<td>Perfect</td>
</tr>
</tbody>
</table>

E. QUESTIONS ABOUT YOUR THOUGHTS AND FEELINGS ABOUT YOUR BABY
Please tick one box in answer to each question

30. **When I am** caring for the baby, I get feelings of annoyance or irritation:

- [ ] very frequently
- [ ] Frequently
- [ ] Occasionally
- [ ] very rarely
- [ ] Never

31. **When I am** caring for the baby I get feelings that the child is deliberately being difficult or trying to upset me:

- [ ] very frequently
- [ ] Frequently
- [ ] Occasionally
- [ ] very rarely
- [ ] Never

32. **Over the last two weeks** I would describe my feelings for the baby as:

- [ ] Dislike
- [ ] no strong feelings towards the baby
- [ ] slight affection
- [ ] moderate affection
- [ ] intense affection

33. **I can understand** what my baby needs or wants:

- [ ] almost always
- [ ] Usually
Appendix 5.12 Postnatal online survey

34  Regarding my overall level of interaction with the baby I believe I am:
☐  much more involved than most parents in my position
☐  somewhat more involved than most parents in my position
☐  involved to the same extent as most parents in my position
☐  somewhat less involved than most parents in my position
☐  much less involved than most parents in my position

35  When I am with the baby I feel bored:
☐  very frequently
☐  Frequently
☐  Occasionally
☐  almost never

36  When I am with the baby and other people are present I feel proud of the baby:
☐  very frequently
☐  Frequently
☐  Occasionally
☐  almost never

37  I try to involve myself as much as possible in child care and looking after the baby:
☐  this is true
☐  this is untrue

38  I find myself talking to people (other than my partner) about the baby:
☐  many times each day
☐  a few times each day
☐  once or twice a day
☐  rarely on any one day

39  When I have to leave the baby:
☐  I usually feel rather sad (or it's difficult to leave)
☐  I often feel rather sad (or it's difficult to leave)
Appendix 5.12 Postnatal online survey

I have mixed feelings of both sadness and relief
I often feel rather relieved (and it's easy to leave)
I usually feel rather relieved (and it's easy to leave)

40  When I am with the baby:
I always get a lot of enjoyment/satisfaction
I frequently get a lot of enjoyment/satisfaction
I occasionally get a lot of enjoyment/satisfaction
I very rarely get a lot of enjoyment/satisfaction

41  When I am not with the baby, I find myself thinking about the baby:
almost all the time
very frequently
Frequently
Occasionally
not at all

42  When I am with the baby:
I usually try to prolong the time I spend with him/her
I usually try to shorten the time I spend with him/her

43  When I have been away from the baby for a while and I am about to be with him/her again, I usually feel:
intense pleasure at the idea
moderate pleasure at the idea
mild pleasure at the idea
no feelings at all about the idea
negative feelings about the idea

44  Over the past two months I have found myself just sitting looking at the sleeping baby for periods of five minutes or more:
very frequently
Frequently
a few times
not at all

45  I now think of the baby as:
Appendix 5.12 Postnatal online survey

- [ ] very much my own baby
- [ ] a bit like my own baby
- [ ] not yet really my own baby

46 Regarding the things that we have had to give up because of the baby:
- [ ] I find that I resent it quite a lot
- [ ] I find that I resent it a moderate amount
- [ ] I find that I resent it a bit
- [ ] I don't resent it at all

47 Over the past two months, I have felt that I do not have enough time for myself or to pursue my own interests:
- [ ] almost all the time
- [ ] very frequently
- [ ] Occasionally
- [ ] not at all

48 Usually when I am with the baby:
- [ ] I am very impatient
- [ ] I am a bit impatient
- [ ] I am moderately patient
- [ ] I am extremely patient

F. QUESTIONS ABOUT USING SERVICES

Use of services during the pregnancy and after the birth

Here is a list of the health, welfare and family-related services that are available in the Lower Hunter area. Could you please place an ‘X’ in the box for any service that you contacted during the pregnancy for family-related issues. If you contacted them more than once could you put an ‘X’ for each time you contacted them. ‘Contact’ means that you personally contacted them by phone, email or in person.

- Parent Line
- Karitane
- Tresillian
- Lifeline
- General Practitioner
- Community Health
- Child and Family Health Nurse
- Men’s Line
- Centrelink
Appendix 5.12 Postnatal online survey

Family Support Services
Drug and Alcohol Counselling Services
Barkuma Aboriginal Neighbourhood Centre
Hunter Valley Mental Health Service
Relationships Australia
Aboriginal Health Liaison Officers.
Salvation Army

Other (please specify) .............................................................................................................

G. QUESTIONS ABOUT THIS PILOT PROJECT

49. The information packages sent to me were useful in my role as a father.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

50. The information packages helped me to find the information that I needed when I needed it

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

51. My wife/partner also found the information packages useful

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

52. Improvements you would suggest to make the packages more useful

53. Please comment on what you consider as the most valuable aspects of the project

QUESTIONS FOR THOSE IN THE NETWORK GROUP

54. Having the email group was helpful to me in my role as a father

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

55. Having an email group like this one would be of benefit to expectant Dads.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

56. If you have ticked ‘disagree’ / ‘strongly disagree’ for statement 5 please indicate what would be a better arrangement
Appendix 5.12 Postnatal online survey

57. **Having the health professional to email was helpful to me in my role as a father**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

58. **The main reason that I did not use the health professional email service at all/ as much as I expected was**

59. **Improvements you would suggest to make the health professional email service more useful**

60. **Please comment on what you consider as the most valuable aspects of the health professional email service**

**Information Packs**

Please check the following if you would like the rest of the information packages sent to you. In the research it was important that each dad only had three, but now that you have completed the final survey, we can send the other three, if you would like to see them.

☐ Yes, I would like to received the other information packs.

**Win by Participating!**

Your time and effort means a lot to us, so we have decided to run a draw for a $200 gift voucher to either Bunnings Warehouse, or Dick Smith Electronics.

Your final two decisions in the survey are:

Can we enter you into the draw?

☐ Yes please!
☐ No thankyou

Should I win, I would like a:

☐ Bunnings Voucher
☐ Dick Smith Voucher
Appendix 5.12 Postnatal online survey

Submit the Survey

You have finished the survey! As a final step, you will need to post this form back using the reply paid envelope.


Version 2 October 2005
Professor Graham Vimpani, John Hunter Children’s Hospital, 2305. Phone: 49213673
Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010
Appendix 5.14 Letter introducing health experts

Dear

As part of the New Fathers Information Project you are offered your very own team of health experts to ask questions during the pregnancy and for two months after the birth.

Your email address to ask questions or make comments is Health-Newfathers@newcastle.edu.au. I am attaching a copy of the guidelines for using this service.

I would like to introduce you to the team that is looking forward to hearing from you. Between them, Ruth, Daniel and Anne have plenty of experience with new babies and a great deal of knowledge about how to look after them.

Ruth
I'm the Child & Family Health Nurse you'll be 'chatting' with over the next couple of months. I've been a nurse for about 28 years the last 13 of which have been spent working with parents and their babies & children. I'm also lucky enough to have two sons of my own.

In my time working with families, I've come to realise that most services are geared towards the needs of mums and although dads are very welcome to access these services, there have not been any that specifically cater to their needs. I'm hoping this project will help fill the gap.

My clinical experience gives me a good knowledge base to help answer your questions and although I'm obviously not a father myself, living in a household of males has given me some insight into their strengths and capabilities.

Looking forward to our email 'conversations'.

Daniel
I’ll be the Midwife part of the team. As 'the midwife’ I hope to contribute a midwifery/fatherhood perspective during the research project. I have been working in midwifery since 2001 on the Central Coast and in the Hunter. I am currently employed as a Registered Midwife and work across all maternity areas including; Birthing Suite, Antenatal (before birth) ward, Postnatal (after the birth) ward, Neonatal Intensive Care Unit and Special Care Nursery (NICU & SCN), and; Antenatal Clinics (where you have your pregnancy visits). In each of these areas I have met many families and I particularly enjoy working with dads and their new babies (it's nice to have other blokes around!). Recently (in July 2005) I had the best experience of my life when I became a father myself for the very first time (I couldn't hand this one back!). My wife, Emily, and I have been spending these past months adjusting to the joys and challenges of parenting as we care for Charlotte Grace. As you might guess I've also been figuring out the work-family balance stuff... Not to mention how to fit a surf in every now and again...(and to co-ordinate this with when the surf is pumping!) - very frustrating to have a few hours to surf and you find that the ocean looks more like a lake than a raging sea).

I am excited to be a part of this project - wouldn't it be great for fathers like us to have lots of useful (relevant, proven and up-to-date!) information that we could access easily and reliably.

Anne
I am going to be the Child Health Doctor part of the team to answer your questions during the research project. I have been working for 35 years in hospitals, Community Child Health and in general practice so I
Appendix 5.14 Letter introducing health experts

have seen lots of babies. At the moment I am working with the Neonatal Intensive Care Follow-Up Unit where I see premature babies and also with one of the Health Department teams looking after families who are having difficulty with an infant or child.

In my practice over the years I have noticed that mums are usually the ones who come with their children. Recently however there seems to be more dads coming with the family and that’s great.

So I am looking forward to the progress of this research project and finding out what might be useful to new fathers in this special period of their lives.

Hoping that you are discovering new fascinating things about your baby (and yourself) during this time.

Richard Fletcher
Lecturer, Family Action Centre
Faculty of Health
The University of Newcastle, NSW 2308
Phone +61 2 49216401 Fax +61 2 49218686
Email Richard.fletcher@newcastle.edu.au
Appendix 5.14 Letter introducing health experts

Dear …………

It has taken a while to get it set up but you are now registered in an email group of new dads.

The idea is to make a forum where you can read how other real-live dads with new babies are doing.

What we would like you to do is to log onto the site and add your bit to the discussion. It doesn’t have to be long, and you don’t have to read what the other dads have said (although you might be curious too).

So that the information can only be read by your group you each have a username and password.

Username:……
Password: ……..
The other dads in your group are : ………, …….., ………, & ……….

Ruth Scott also is registered as part of the group. Her role is to contribute only if some specific baby-health questions come up.

HERE ARE THE STEPS TO FOLLOW

STEP 1. Go to this address: https://blackboard.newcastle.edu.au/webapps/login/

You will see a welcome screen like this

Welcome,

Tools
- Announcements
- Calendar
- Tasks
- View Grades
- Send E-mail
- User Directory
- Address Book
- Personal Information

My Announcements

No system announcements have been posted today.

Fathers discussion group3
- Fathers discussion group

STEP 2. Click on the • Fathers discussion group

You will see this page

Announcements
Appendix 5.14 Letter introducing health experts

STEP 3. Click on the Discussion Board/new fathers information group

Then click on The birth from your perspective

Click the reply button to add your comment, then click submit.

To finish just logout or close the window.

Thanks for participating!

Richard

Richard Fletcher, Family Action Centre, The University of Newcastle, 2308. Phone: 49216401
Professor Graham Vimpani, John Hunter Children's Hospital, 2305. Phone: 49213673
Professor Diana Keatinge, The University of Newcastle, 2308. Phone: 49216010