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Couple Psychoeducation for New Parents:
Observed and Potential Effects on Parenting

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Abstract

The transition to parenthood is a substantial challenge for many couples, and the extent to which the partners can support each other and their relationship is strongly related to the sensitivity and responsiveness of their parenting of their infant. This paper critically analyses the links between the couple relationship and parenting of infants, and reviews the research evaluating couple psychoeducation (CP) to assist couples' parenting of their infant. It is concluded that CP has considerable potential to enhance couples' adaptation to parenthood and enhance the sensitivity and responsiveness of parenting of new infants.

Couple Psychoeducation for New Parents:
Observed and Potential Effects on Parenting

Elise slowly rocks her eight-week-old baby Connor. It is 4 am, and she has been up for more than an hour, feeding, changing and trying to soothe him. It is the third night in a row that Connor has been difficult to settle after a nighttime feed. Elise's husband Ross walks over sleepily and asks, "Can't you soothe him? Have you tried feeding him?"

Elise is irritated. "Of course I have, and changed him and walked him around for an hour. Here Ross, you do something for once."

Ross: "Me? I can't. After last night I have to get some sleep. I have to be at work early."

Elise: "And like I don't have to get to work? Come on Ross, I'm exhausted."

As Ross and Elise speak their voices rise in volume, and baby Connor escalates his crying. Elise starts to cry and Ross sighs and retreats back to bed.

The vast majority of children live with, and are brought up by, their biological parents. Infant care can be highly demanding, and like Elise and Ross, many couples struggle to adapt to parenthood. In this paper, we evaluate whether couple psychoeducation (CP) can assist couples to adapt to parenthood and better meet the physical and psychological needs of their infant child. Couple psychoeducation (CP) for new parents has been defined by Petch and Halford (2008 p. 1128) as: "any educational attempt to enhance couple relationship functioning or parenting, or to prevent relationship deterioration, after the birth of a first child". CP places particular emphasis on enhancing couple interaction, and parent-infant interaction, based on the assumption that these paths of interaction reciprocally influence each other.

It is established that CP prevents the deterioration in relationship satisfaction that often occurs across the transition to parenthood (Petch & Halford, 2008). However, there has been

limited attention to the effects of CP on parenting outcomes. This review is intended to fill that gap. The paper begins with an overview of the importance of sensitive-responsive parenting to meet the psychological needs of infants, and then examines the association between the quality of the parents' couple relationship and parenting of infants. A review of CP for the transition to parenthood is provided, with a focus on the effects on parenting. The paper concludes with guidelines for the content of CP for the transition to parenthood programs likely to benefit parenting.

The Importance of Sensitive-Responsive Parenting of Infants

Sensitive, responsive parenting can be defined as parents' prompt, contingent and appropriate reactions to their children combined with positive expressions of affection (Ainsworth, Bell & Stayton, 1994; National Institute of Child Health and Human Development (NICHD) Early Childhood Care Research Network, 2006; Tamis-LeMonda & Bornstein, 2002). The vast majority of research on sensitive, responsive parenting focuses on mothers, though recent research highlights that sensitive, responsive parenting by fathers is also important to infant development (Elliston, McHale, Talbot, Parmley, & Kuersten-Hogan, 2008). Much more research is needed on the effects of father's parenting of infants, but in the absence of such evidence this paper necessarily focuses more on mother's parenting.

Sensitive-responsive parenting by the mother predicts early childhood cognitive and language development (Allhusen et al., 2001; Brooks-Gunn, Han, & Waldfogel, 2002), and self-regulation of arousal and emotion (Belsky, Youngblade, Rovine, & Volling, 1991). There is also substantial evidence that sensitive-responsive parenting enhances parent-infant attachment security. Meta-analyses show significant correlation between sensitive-responsive parenting by mothers and parent-infant secure attachment, with moderate effect sizes ranging from $r = .24$ to $.32$ (Atkinson et al., 2000; De Wolff & van IJzendoorn, 1997; Goldsmith & Alansky, 1987). Sensitive and responsive parenting predicts future parent-child attachment

(Cox, Owen, Henderson, & Margand, 1992). Meta-analyses of randomised controlled trials of behavioural parenting programs with infants aged from 0 to 54 months show that they enhance maternal sensitive-responsive parenting ($d = 0.33$, $p < .001$), which in turn is associated with enhanced infant attachment security ($d = 0.39$, $p < .01$; Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003).

A myriad of positive psychological and biological child outcomes have been predicted by secure attachment to mothers. Psychologically, secure attachment predicts later social competence (e.g., positive peer-relations, Cohn, Patterson, & Christopoulos, 1991; Sroufe & Fleeson, 1986), more autonomy, less dependent behaviour, greater emotional regulation, fewer behavioural problems, and greater likelihood of developing close, warm relationships in adulthood (Cassidy & Shaver, 1999; Kochanska, 2001; Lamb, 2004; Rothbaum et al., 2000; van IJzendoorn & Sagi, 1999; Sroufe, Egeland, & Carlson, 1999; Thompson, 1998, 1999). In contrast, a greater proportion of insecurely attached children have behavioural problems, poor problem-solving capacity, and low self-esteem (American Association for Marriage and Family Therapy, 2002). Sensitive-responsive parenting by mothers both predicts secure attachment, and mediates its association with many of these positive child outcomes (NICHD Early Child Care Research Network, 2006).

A child's infancy seems an important time for the development of sensitive-responsive parenting. The specific behaviors that constitute developmentally appropriate parenting responsiveness change rapidly in the first two years of life. For example, warmth and affection are particularly important in very young infants, whereas richness of parental verbal content becomes more important in the second and subsequent years of life (Landry, Smith, Swank, & Guttentag, 2008). However, the overall level of maternal parenting sensitivity and responsiveness during infancy is systematically related to later maternal parenting sensitivity and responsiveness (Bornstein, Tamis-LeMonda, Hahn, & Hayes, 2008). From infancy

through to early childhood when children are entering elementary school, mothers with low parenting sensitivity-responsiveness decline further in sensitivity-responsiveness, whereas mothers with at least moderate sensitivity-responsiveness tend to sustain or increase that sensitivity-responsiveness (Hirsh-Pasek & Burchinal, 2006). Children who experience the highest, stable level of maternal sensitivity-responsiveness show better language and academic achievement, whereas those with low and deteriorating parenting sensitivity-responsiveness have the worst outcomes (Hirsh-Pasek & Burchinal, 2006).

There are neuro-developmental processes that might account for the seemingly powerful long-term influence of sensitive-responsive parenting of infants. Infancy is a critical period for brain development, with rapid development that biologically-oriented researchers have suggested is shaped by sensitive-responsive parenting (Bornstein, 1989; Puckett & Black, 2005; Richter, 2004). Specifically, sensitive-responsive parenting combined with adequate environmental stimulation influences neuronal development by: (a) building neural connections as a result of stimulation (Schore, 2001), and (b) charging neural connections with either a positive or negative affective state (e.g., stimulation which elicits infant positive affect becomes stored, or “wired” as a positive experience; Siegel, 1999; Schore, 1997). Secure attachment in infancy, which is closely related to sensitive-responsive parenting, buffers against the damaging effects of cortisol released during stress and trauma in later childhood (Gunnar, 1998). Conversely, infants who experience unresponsive parenting or neglect and maltreatment can exhibit high cortisol levels in later childhood, even when life circumstances for these children had been stabilised and improved for several years (e.g., De Bellis et al., 1999; Gunnar, Morison, Chisholm, & Schuder, 2001).

Couple Relationships and Parenting of Infants

The Effect of Parenthood on the Couple Relationship

Most couples report that the birth of their first child is associated with feelings of joy and pleasure (Gottman & Notarius, 2000). Parenthood brings many rewards, including: (a) fulfilment of strong desires to reproduce; (b) fulfilment of social expectations; (c) a sense of achievement; and (d) fun, affection and companionship; and is often seen as a symbol of love and stability in the couple relationship (Feeney, Hohaus, Noller, & Alexander, 2001). At the same time, approximately 50% of couples report deterioration in relationship satisfaction after having a baby (Belsky & Kelly, 1994; Feeney et al., 2001; Shapiro, Gottman, & Carrere, 2000). A recent meta-analysis reported that average relationship adjustment is substantially lower among parents of young infants than couples at other life stages (Twenge, Campbell, & Foster, 2003). There has been some debate about the extent to which this deterioration in relationship satisfaction is attributable to parenthood itself, as couples that do not have children also report deteriorating satisfaction across the early years of marriage, which is when most couples have their first child (see Petch & Halford, 2008). However, a recent study compared the trajectories of satisfaction in couples who were having a child and those who were not, and found there was an abrupt decline in satisfaction trajectory associated with the transition to parenthood, particularly for women (Doss, Rhoades, Stanley, & Markman, 2009).

The abrupt decline in couple relationship satisfaction associated with parenthood is likely related to the demands of caring for a newborn. Many couples are surprised by the reality of caring for an infant that requires constant, 24-hour care, and is totally dependent upon the couple for food, shelter, clothing and love (Vanzetti & Duck, 1996). Although most newborns sleep 16-20 hours a day, their sleep pattern is haphazard and when awakened they typically require feeding or parental soothing (Anders, Halpern, & Hua, 1992; Sadeh, 1996). Fatigue and exhaustion are typically high among parents of infants (Killien, 1998; Newman,

2000), and extreme for the 13-35% of parents of infants and toddlers with sleep disturbances (Kuhn & Weidinger, 2000).

Parents typically state that the most distressing aspect of infant care is coping with crying, which occurs on average 2 hours a day (or more, in the case of the 20% of infants who are diagnosed with colic) up until the age of 3 months, after which time crying usually slowly reduces in duration (Ahlborg & Strandmark, 2001; Brazelton, 1962; Lindberg, Bohlin, & Hagekull, 1991; Lupton, 2000). Infant feeding is another challenge. Although more than 85% of women can successfully breastfeed, the demands of breastfeeding for the mother are quite high (Fairbank, O'Meara, Renfrew, Woolridge, Sowden, & Lister-Sharp, 2000). Only 60-70% of women breastfeed at birth, and about 30% breastfeed until 6 months (Blyth, Creedy, Dennis, Moyle, Pratt, & De Vries, 2002). Transient feeding problems are common and chronic feeding problems affect 25-35% of infants (Manikam & Perman, 2000).

Along with infant care demands, there are at least five other major changes that new parenthood brings, which seem to contribute to deteriorating couple relationship satisfaction. First, gender roles become more traditional (Cowan & Cowan, 2000). Care of an infant adds approximately 35 to 40 hours of work per week to the average couple household (Craig & Bittman, 2005). Irrespective of occupational status, women perform two to three times more of this additional work than men (Bianchi, Milkie, Sayer, & Robinson, 2000; Shelton & John, 1996). While fathers' participation is modest in infant-related chores, they often increase their hours of paid work after the birth of a child (Aldous, Mulligan, & Bjarnason, 1998; Bianchi et al., 2000).

Second, there is less time for couple-focused communication free from distraction, less self-disclosure, less praise, and increased negativity and conflict (Belsky & Kelly, 1994; Cowan, Cowan, Heming, & Miller, 1991; Gottman & Notarius, 2000). Third, most couples report a decline in disposable income (Thomas & Sawhill, 2005), often associated with

increased costs, and sometimes decreased income as the woman changes to working part-time or not at all. Particularly for couples on modest incomes, the financial squeeze can substantially erode their opportunities for individual and shared leisure activities (Thomas & Sawhill, 2005), which might explain why low income is associated with marked deterioration in relationship satisfaction across the transition to parenthood (Doss et al., 2009). Fourth, there is reduced frequency and quality of couple time (Belsky, Spanier, & Rovine, 1983). Finally, almost all new mothers report some discomfort or pain in their initial experiences of intercourse after childbirth, and combined with the tiredness associated with infant care, most couples report a decline in their sexual relationship. Up to 50% of women and 20% of men report reduced sexual responsiveness for 6-12 months postpartum, and one third of couples report continuing sexual problems 3-4 years after birth (Von Sydow, 1999).

Almost all couples experience some role strain from the competing demands of work, being a spouse and parenting (Feeney et al., 2001), and women tend to be more affected than men (Pancer, Pratt, Hunsberger, & Gallant, 2000; Thompson & Walker, 1989). The impact of parenthood is higher among women than men at least partly because pregnancy, birth and breastfeeding place major physical demands on women's bodies (Cowan & Cowan, 2000). In addition, women are more likely than men to be the primary caregiver of their infant (Pancer et al., 2000), and often feel that the task of protecting the foetus, infant, and growing child are primarily their responsibility (Stern, 1998).

The accumulation of hormonal, physical and psychological changes experienced by women across the transition to parenthood probably causes the mild depression, frequently termed the 'baby blues', experienced by 80% of mothers in the 2 weeks after birth (Halbreich, 2005; Hoffbrand, Howard, & Crawley, 2001). There are higher rates of depression (between 10-30%) and other psychological disorders in women with young children than at any other time period in women's lives (Webster, Linnane, Dibley, & Pritchard, 2000).

There seems to be a reciprocal influence of maternal depression and the quality of the couple relationship. Maternal reports of parenting stress, depression and worry are lower when couple relationship satisfaction is high and when women perceive their male partner as supportive (Feldman, Greenbaum, Mayes, & Erlich 1997; Florsheim et al., 2003; Wicki, 1999). If maternal depression does develop, recovery is predicted by a satisfying and supportive couple relationship (Pope, Evans, McLean & Michael, 1998). Conversely, maternal depression predicts deteriorating relationship adjustment (Belsky & Kelly, 1994).

The Association of the Couple Relationship and Parenting of Infants

The couple relationship is well recognized as a key determinant of the quality of the family life and parenting of young children (Erel & Burman, 1995). Meta-analytic studies of the couple dyad and parent-child dyad indicate that there is a consistent inter-relationship between couple relationship functioning and parent-child interactions, with average effect sizes ranging from $d = .46$ to $.62$ (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Specifically, mutually satisfying, low-conflict couple relationships covary with satisfying and positive parent-child relationships, whereas negative couple relationships covary with negative parent-child relationships (Cox, Paley, Payne, & Burchinal, 1999; Erel & Burman, 1995). Parents in satisfied couple relationships are more likely to engage in optimal parenting practices, such as acceptance, support, and consistent and appropriate discipline (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). In contrast, negative couple relationship functioning such as low mutual support, relationship distress, couple conflict, separation and divorce, are risk factors for child depression, withdrawal, conduct disorder, insecure attachment, poor social competence and peer relationships, health problems, and academic under-achievement (Amato, 1996; Cowan & Cowan, 1990; Cummings & Davies, 1994; Easterbrooks, 1988; Hetherington, 1988). Couple conflict, particularly if aggressive and hostile, is especially detrimental to child outcomes, and has been shown to reduce parental

involvement and support, appropriate disciplinary practices and parental consistency of response (Krishnakumar & Buehler, 2000). Thus, supportive, mutually satisfying, and low-conflict couple relationships enhance the wellbeing of the entire family system. However, the vast majority of this work on the association of the couple relationship and parenting focuses on children aged 3 years and upward. In this review we analyze the evidence on how couple relationships relate to sensitive-responsive parenting in the first year of an infant's life.

The observed average decline in relationship satisfaction, and increase in couple conflict, associated with the transition to parenthood move couple relationships in directions associated with negative parenting practices of young children. Consistent with the general findings on the association of the couple relationship with parenting of children, chronic couple conflict predicts low sensitivity and responsiveness of parenting of infants in the first year of life (Owen & Cox, 1997), and this association is particularly strong when the infant is exposed directly to couple conflict (Crockenberg, Leerkes, & Lekka, 2007). There are several pathways by which couple conflict might interfere with sensitive-responsive parenting of infants. First, the conflict distracts parents from attending to the infant, and increases the parents' negative affect and physiological arousal in ways likely to interfere with higher-order problem solving (Bradbury & Fincham, 1987), which likely delays the parents' response to the infant and reduces the sensitivity of that response. Moreover, couple conflict is associated with more infant crying (Lehtonen, Huhmeta, Saleva, & Korvenanta, 2002), and infant crying is stressful to parents and predicts deteriorating relationship satisfaction (Meijer & van den Wittenboer, 2007). Thus, there is the potential to create an escalating cycle of negativity and upset between the parents, and between the parents and the infant. Third, low relationship satisfaction and high conflict are associated with disagreement between the partners about the sharing of parenting and household responsibilities (Elliston et al., 2008), which in turn

predicts deteriorating relationship satisfaction, particularly for women (Feeney et al., 2001), and is likely to be associated with further escalation of couple conflict.

A fourth possible mechanism for the association of couple conflict and insensitive parenting is that the mother and father use functionally similar responses toward their partner and offspring when interacting. Withdrawal when discussing areas of difficulty in the relationship predicts those areas of difficulty remaining unresolved, the deterioration of couple relationship satisfaction, and further conflict (Heyman, 2001). Male withdrawal during couple discussion of parenting responsibilities predicts fathers withdrawing during triadic (mother, father, infant) conjoint play (Elliston et al., 2008). Furthermore, fathers who withdraw from parenting report that their female partners are critical of their parenting skills, which might lead to further couple conflict (Elliston et al., 2008). Interestingly, couple conflict before the birth, and infant exposure to parental conflict after birth, predict the infant withdrawing during interaction with parents, and showing distress when exposed to novelty at 6 months of age (Crockenberg, Leerkes, & Lekka, 2007).

Parenting and the couple relationship occur in a broader context, and this context might influence both the couple relationship and parenting. For example, it is known that interpersonal stress at work is associated with increases in negative parenting of infants, particularly by women (Costigan, Cox, & Cauce, 2003). The extent of negative spillover from work to family is partially a function of the extent to which employing organizations utilize family-friendly work practices and policies (Brough, O'Driscoll, & Kaliath, 2005). For example, short periods of maternity leave (< 12 weeks) or paternity leave (< 7 days) are associated with low couple relationship satisfaction and less competent parenting (Feldman, Sussman, & Zigler, 2004), and many firms fail to provide these levels of parental leave.

In contrast with the preceding suggestions of how couple distress and conflict interact with insensitive parenting, high couple relationship satisfaction is associated with sensitive

and responsive parenting by both mothers and fathers (Barnett, Deng, Mills-Koonce, Willoughby, & Cox, 2008). Furthermore, there is a moderate association between maternal and paternal parenting sensitivity (Barnett et al., 2008). The mechanisms by which the couple relationship and sensitive parenting interact are elucidated in observational studies of triadic interactions between father, mother and infant. Couple co-parenting is when the parents jointly and collaboratively interact with the infant, and couple relationship satisfaction reliably predicts the extent of observed coparenting of infants (Gordon & Feldman, 2009; Schoppe-Sullivan, Mangelsdorf, Brown, & Szewczyk Sokolowski, 2007). The positive association of high couple relationship satisfaction and co-parenting is strongest in couples with an infant rated by observers as of being of a fussy, irritable temperament (Schoppe-Sullivan et al., 2007). Furthermore, co-parenting predicts later paternal positive engagement with the infant (Gordon & Feldman, 2009), which in turn predicts future female relationship satisfaction (Feeney et al., 2001).

Overall, the findings on couple relationship satisfaction, couple conflict, sensitive parenting of infants, and maternal adjustment suggest that these factors are mutual, reciprocal influences on each other. High relationship satisfaction seems to be associated with a virtuous cycle of paternal and maternal sensitive parenting, positive co-parenting, secure infant attachment, and parental resilience, even in the face of an infant with difficult temperament. Furthermore, parents in satisfying, low-conflict relationships report a higher sense of parenting competence, and lower maternal stress and worry (Feldman et al., 1997; Florsheim et al., 2003; Wicki, 1999). In contrast, distressed couples might become trapped in an escalating cycle of conflict, insensitive parenting, and a lack of effective co-parenting, which could be exacerbated by having an infant with difficult temperament. This would likely increase the risk of their child being insecurely attached, distressed by novelty and likely to withdraw from interaction with the parents.

Figure 1 depicts schematically an ecological model of parent-infant interaction, with a particular focus on how couple interaction can be a key influence. At the outermost level of influence are socio-cultural variables, which provide the context in which relationships occur. Previously in this paper, we outlined a range of influences on the nature of the couple relationship, with particular focus on how those variables then influence parenting. For example, the couple relationship and parenting are influenced by the availability of parental leave, affordable quality child care, and the level of social support for the couple from family and friends (Larson & Holman, 1994). Life events include major life events (e.g., the birth of the child, and others like a change of job) and daily uplifts and hassles (e.g., being praised by the boss, getting caught in traffic, or an argument with a co-worker).

Stressful life events and daily hassles each predict deteriorating relationship satisfaction, and higher levels of inter-partner conflict (Story & Bradbury, 2004), which are known to be associated with parent-infant interaction (Owen & Cox, 1997). As depicted in the diagram, some life events are shared by the couple, whereas other life events are experienced specifically by one partner.

Individual characteristics of the partners are relatively stable individual differences that partners bring to the relationship, such as negative family-of-origin experiences, low partner education, psychological disorder, and certain personality variables, each of which predicts deteriorating relationship satisfaction (Bradbury & Karney, 2004; Holman, 2001). For example, parental divorce in the family of origin is associated with increased risk for relationship deterioration (Sanders, Halford, & Behrens, 1999). Similarly, a prior history of depression in one of the partners predicts high risk for depression in that partner during the postnatal period, and although postnatal depression is more common in new mothers than new fathers, it is still a significant problem for new fathers (Lee, Yip, Leung, & Chung, 2004; McMahon, Barnett, Kowalaenko, & Tennant, 2005). Parental postnatal depression is strongly

associated with deteriorating relationship satisfaction and insensitive maternal parenting (Grace, Evindar & Stewart, 2004). Individual characteristics of the infant, such as a fussy temperament, also influence parent-child interaction (Schoppe-Sullivan et al., 2007).

Couple interaction includes the partners' behavior, thoughts and feelings during interaction. For example, positive couple communication and shared realistic relationship expectations both predict sustained relationship satisfaction and stability (Bradbury & Karney, 2004; Holman, 2001). These same variables seem likely to predict sustained relationship satisfaction across the transition to parenthood, and are in turn associated with engaged, sensitive and responsive parenting. An advantage of providing parenting information to couples is that this can foster couples' shared and realistic parenting expectations, knowledge and competence. Divergent expectations can lead to couple conflict, especially when the less-educated father is advised about 'what to do' by the mother (Tomlinson, Bryan, & Esau, 1996). Since parenting is typically a joint couple endeavour, and both partners are valuable influences in the child's development, educating the couple on parenting, and focusing on couple issues that impact on parenting practices, seem likely to enhance interventions for the transition to parenthood.

Couple Psychoeducation to Assist New Parents

The focus in the current paper is reviewing the effects of couple psychoeducation on parenting of infants. However, the reciprocal relationships between the couple relationship, individual parent adjustment, and parenting led us to include studies that assess the effects of CP on the couple relationship or individual parent adjustment. Although we consider individual parental adjustment, we have excluded consideration of trials of programs that had the primary aim of treating or preventing recurrence of psychological disorder in parents (usually mothers), such as postnatal depression or substance abuse, unless there was a specific focus on the couple relationship. Individual interventions for high-risk mothers are typically

used only when indicated as appropriate, if a parent has a psychological disorder or prior history of such a disorder, and such indicated interventions have been well-reviewed elsewhere (e.g., Boath, Bradley, & Henshaw, 2005; Ogrodniczuk & Piper, 2003). The specialized content addressing the needs of individuals with psychological disorders is often of limited relevance to the general population of couples having a child together.

Multiple search strategies were used to maximise the probability of locating relevant CP studies. First, the computerised databases PsychInfo, Proquest (Psychology, Nursing), and Ovid were searched using terms psycho-education, intervention, prevention AND parenting, infant, care-giving, attachment, couple, and relationship. Second, the references from relevant papers located through database searches were examined. Third, references were identified through citations from meta-analytic and review papers (e.g., Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; Boath, Bradley, & Henshaw, 2005; Cowan & Cowan, 1995).

Table 1 summarizes 11 trials of CP at the transition to parenthood. Nine of these trials were randomized controlled trials, and two (Bryan, 2002; Diemer, 1997) were quasi-experimental. It is difficult to interpret the results of the quasi-experimental studies as differences between the couples in each condition might explain any observed effects, so this review will focus primarily on the findings of the randomized controlled trials. All of the 9 randomized trial studies were universally offered to new parent couples. Most (7/9) assessed couple relationship satisfaction as an outcome, though Doherty et al. (2006), and Feinberg and Kan (2008) did not. Five of the nine studies assessed individual adjustment of one or both parents on aspects of psychological adjustment, which seems likely to affect parenting, such as maternal anxiety or perceived social support. Five of nine studies assessed parenting directly, but only Doherty et al. (2006) assessed observed parenting. The other four studies that assessed parenting relied on self-report of constructs like parenting competence, effective sharing of parenting, and parenting stress.

The nature of the educational programs was quite diverse. The intensity of the education programs ranged from a single one-hour session (Coffman, Levitt, & Brown, 1994), through a two-day weekend workshop (Shapiro & Gottman, 2005), to 24 weekly two-hour group sessions (Cowan & Cowan, 1992). The typical program (5/9) involved between 5 and 10 sessions that were each of between one and two hours duration. Although most programs included some education about the couple relationship, individual coping, and parenting, the major focus of the topics covered in the programs varied considerably. For example, Doherty et al. (2006) placed substantial emphasis on infant care by fathers, while Cowan and Cowan (1995) and Petch, Halford and Creed (in press) focused on both the couple relationship and parenting. The programs also varied greatly in the learning processes used. Some programs were exclusively a mix of didactic information and discussion (e.g., Coffman et al., 1994), whereas other programs made substantial use of modelling, practice and feedback on specific couple relationship and/or infant care skills (e.g. Petch et al., in press; Shapiro & Gottman, 2005).

Of the seven programs that assessed effects of CP on couple relationship satisfaction within a randomized controlled trial, five found positive benefits and two did not. The five programs that produced a benefit for couple relationship satisfaction (Kermeen, 1995; Midmer, Wilson, & Cummings, 1995; Petch et al., in press; Schulz, Cowan & Cowan, 2006; Shapiro & Gottman, 2005) all had a major content focus on the couple relationship. Of the two studies with null findings, both had very brief (a total of two hours or less) programs of didactic presentation and discussion with no skill training (Coffman et al., 1994; Hawkins et al., 2006). Three studies did not provide data in a form that allowed estimation of effect sizes of interventions (Kermeen, 1995; Midmer et al., 1995; Shapiro & Gottman, 2005). However, there was a large effect size of the interventions on observed couple interaction (Petch et al, in press); and moderate effect size impact on couple relationship satisfaction (e.g. Petch et al., in

press; Schulz et al., 2005). Thus, randomised controlled published studies suggest that CP of at least 10 to 12 hours duration, which specifically addresses the couple relationship, enhances the couple relationship across the transition to parenthood.

Of the five studies that evaluated individual parent adjustment in a randomized controlled trial, four found that CP enhanced adjustment (Buist et al., 1999; Feinberg & Kan, 2008; Midmer et al., 1995; Shapiro & Gottman, 2005). The only study with null findings was one of the very brief programs (Coffman et al., 1994). Only one study reported intervention effect sizes, which ranged from small to moderate (Feinberg & Kan, 2008). Consistent with the findings on couple relationship satisfaction, there seems to be a reliable effect of CP on individual partner adjustment when the program is of adequate intensity.

Of the five studies that assessed the effects on parenting of CP within a randomized controlled trial, only two found positive effects (Doherty et al., 2006; Feinberg & Kan, 2008). However, two of the studies with null findings were those with programs of a very brief duration (Coffman et al., 1994; Hawkins et al., 2006), and these two programs also had null effects on the other outcomes they assessed. Petch et al. (in press) found no difference between CP and a maternal support program on reported parenting stress, but both CP and the comparison program included infant care guidance, and parents in both conditions reported very low levels of parenting stress. In the most rigorous evaluation of the effects of CP on parenting, Doherty et al. (2006) found that active skills training in parenting and couple relationship skills enhanced the quality of father-infant interaction (small to moderate effect size) and increased the time made available by fathers to interact with their infants. Feinberg and Kan (2008) noted that intervention resulted in a moderate effect size reduction in parent-child dysfunctional interactions. In sum these findings suggest that CP likely can enhance parenting, but achieving such effects requires quite an intensive intervention with a focus on developing parenting knowledge and skills.

Limitations of Existing Research

In most studies of CP, rates of declining to participate were substantial, ranging from 20-60% of approached couples. However, these are rates of declining participation in research studies, which often require considerable time from participants. Future research needs to evaluate the acceptability of CP to couples during routine care, when the demands on participants are restricted to participation in the program itself. It is noteworthy that the rates of declining participation in research on CP at the transition to parenthood are substantially lower than the 70-75% of marrying couples that do not participate in routinely offered premarital CP (Halford, O'Donnell, Lizzio, & Wilson, 2006). This suggests that CP at the transition to parenthood is potentially an important window of opportunity to enhance couple access to relationship education. At the same time, the samples of couples recruited into studies of CP have been predominantly Caucasian, and have under-represented couples with low formal education and low income. People with low formal education, low income or ethnic minority status are also under-represented in those attending antenatal education (Fabian et al., 2004). The generalizability of the benefits of CP observed in the existing studies to minority, less educated and economically disadvantaged parents is important but unknown. Testing this generalizability is currently the subject of several large-scale trials (Halford et al., 2008).

The selection of an appropriate comparison condition for evaluating CP has been a source of controversy in the literature (Halford et al., 2008). A no-intervention control provides a measure of the absolute effects of CP, but might dissuade participants who desire antenatal education from participating in the study, or lead control participants to seek other education during study participation. In most existing studies the professional contact in CP has been substantially longer than for the control comparison conditions, and hence any additional effects of CP could be attributable to the extra professional contact.

With the one notable exception of Cowan and Cowan's (1992) study, which had 5-year follow-up reported by Schulz et al. (2006), all other studies of CP effects have been limited to follow-ups of one year or less after the birth. Longer follow-up is needed to evaluate whether couples show sustained benefits from CP. Although a number of studies have found that CP had some advantages over usual antenatal care, the higher professional contact made CP more costly than standard care. There needs to be evaluation of the cost-effectiveness of CP in addition to further testing of its efficacy.

Future Directions in Offering Effective Couple Psychoeducation

Proposed Content of Future Interventions for the Transition to Parenthood

Content of future psychoeducation for the transition to parenthood should be based on potentially modifiable risk factors that predict adjustment, and these modifiable risk factors fall into three broad classes: (1) parenthood-specific factors, (2) context, and (3) couple processes (Petch, 2006). Table 3 presents key risk factors, grouped into these three classes, which we recommend as targets for couple psychoeducation at the transition to parenthood. For each risk factor we describe, based on the literature reviewed earlier in this article, the rationale for targeting that factor. Table 3 also presents example activities that couples could complete in order to gain knowledge and skills in each key risk factor area. For example, lack of sensitive and responsive infant care is a parenthood-specific risk factor, and education that includes skill training in interpreting infant states of arousal enhances parenting sensitivity and competence (e.g., Ammaniti et al., 2006; Heinicke et al., 1999). Lack of social support is a contextual risk factor, and promoting the effective seeking and use of social support by new parent couples is an example of addressing that key contextual factor. Finally, negative communication is a couple processes risk factor, and programs that include communication skills training enhance couple adjustment (e.g., Petch et al., in press; Shapiro & Gottman, 2005).

Targeting Couples at Risk

As noted earlier, about half of all couples report no decline in relationship satisfaction across the transition to parenthood, and few ongoing problems with infant care. CP for the transition to parenthood might only be necessary for some couples. Establishing which couples benefit from CP is an important future goal for research. With large samples it would be possible to assess a range of risk factors for future adjustment difficulties and test whether these risk factors moderate the effects of psychoeducation on couple, individual, and parenting outcomes. For example, negative family-of-origin experiences (e.g., parental divorce, parental alcohol abuse), and a history of psychological disorder (Halford, Sanders, & Behrens, 2000; Sanders, Halford, & Behrens, 1999) predict declining relationship satisfaction. Low antenatal relationship satisfaction also predicts declining postnatal satisfaction (e.g., Cowan et al., 1991; Cox, Owen, Lewis, & Henderson, 1999; Knauth, 2000). These assessed risk factors might be the basis of selective targeting of these couples for more education and support across the transition to parenthood.

One caveat to the recommendation of selectively targeting education at couples assessed as high-risk for future adjustment problems is that our accuracy in predicting relationship outcome is still modest. Some published studies have claimed to predict, with high accuracy over a number of years, outcomes such as whether couples stay together or separate (up to 95% correct classification) (e.g., Gottman, Coan, Carrere, & Swanson, 1998; Gottman & Levenson, 1999). However, these predictions were based on algorithms derived post hoc, once the outcomes were known, and the equations produce much less accurate predictions when applied to independent samples (Heyman & Slep, 2001). The utility of selective targeting of education is determined in part by the accuracy with which we can identify those couples most likely to benefit.

A stepped-care approach might allow selective targeting of couples while not over-relying on assessment of risk factors that have limited predictive accuracy. In a stepped-care approach all couples could receive a minimum level of intervention (e.g., complete a brief assessment that provides a report on couple and parenting strengths and challenges, plus perhaps some brief information about adjusting to parenthood). This minimal intervention could be very cheap to deliver and could be used to help couples evaluate whether they desire further education or support. Couples could be offered a brief program of 4 to 6 sessions focused on skill-training in couple processes and parenting skills, with an option for a further, more intensive program that might involve home-visiting for couples assessed as being at high risk for adjustment problems.

Delivery of Transition to Parenthood Programs

One significant challenge in delivering CP for the transition to parenthood is making programs accessible to couples. The immediate postpartum period is often very busy for couples and attendance at clinic or hospital group sessions is often low (Petch & Halford, 2008). Home-visiting programs for couples enhance couple engagement but come at a considerable cost associated with the professional travel, and the large number of sessions required, to provide effective home visiting (Petch & Halford, 2008). Programs that are at least partially self-administered at home, such as that evaluated by Petch et al. (in press), might provide some of the benefits of ease of couple access that exists with home visits, but at less cost. Self-administered program content eliminates travel demands, which is convenient for couples, and can make participation possible in otherwise inaccessible programs for couples living in remote areas (Halford & Simons, 2005). Self-administered programs have been successfully applied to enhancing both couple relationships (Halford, Moore, Wilson, Dyer & Farrugia, 2004) and parenting (Webster-Stratton, 1988). Moreover, self-directed programs allow for privacy, flexible scheduling, self-pacing and self-control, which appeals to

many people who prefer this mode of psychoeducation to attending face-to-face sessions (Doss, Rhoades, Stanley, & Markman, 2009). However, self-directed programs usually need some support from professional educators to sustain engagement and ensure skill development (Laurillard, 2002). More research is needed to evaluate the effectiveness of self-administered CP for new parent couples, and what forms of professional support (e.g., telephone calls, emails, some home visits) might enhance program effectiveness.

Conclusions

Four methodological refinements in future research would greatly enhance evaluation of the value of CP in enhancing adjustment to parenthood. First, as noted earlier, there is considerable heterogeneity in couple's adjustment to parenthood, and this heterogeneity is a potentially important phenomenon that warrants research. Growth Mixture Modeling is a longitudinal data analytic procedure in which latent classes of trajectory are included in prediction models (Muthen, 2002), and recent applications of GMM in psychological research highlight the ability of this statistical procedure to model meaningfully different classes of longitudinal change (e.g., O'Donnell, Elliott, Lau, & Creamer, 2007). Describing the nature and predictors of classes of trajectory of adjustment to parenthood might well inform which couples might benefit from CP.

Second, given the importance of enhancing the couple relationship and parenting, programs need to be assessed for their effects in both of these domains. Third, given the importance of the development of skills in CP, future evaluation research needs to include measures of skill acquisition in the couple relationship and parenting. This would enable testing of whether programs produce a change in targeted skills, and whether such skill acquisition mediates other outcomes, such as sustained couple relationship satisfaction.

A fourth important methodological refinement is to compare the effects of CP with other forms of support for new parent couples. For example, it might be cost-effective to provide

practical support to new parent couples, such as subsidizing the costs of domestic workers to assist with the heavy workload associated with infant care, or subsidizing costs of child care to enhance opportunities for positive shared couple time. It is already known that providing respite care for parents of infants with a developmental disability helps reduce parental stress (Chan & Sigafos, 2001). Similar forms of practical assistance might help many couples with high parenting stress, particularly those on low incomes that are unable to purchase such assistance, and reduced stress might enhance couple relationship satisfaction, parenting sensitivity and parenting competence.

In summary, there is compelling evidence that the couple relationship is a key influence on the parenting of infants, particularly with respect to the development of sensitive and responsive parenting early in life. CP of adequate duration that includes relationship skills training does seem to prevent the deterioration in relationship satisfaction often evident in new parent couples, and to enhance individual parents' adjustment. There is some evidence that CP can enhance parenting, but further research is needed to establish which couples benefit, and whether CP is cost-effective relative to other forms of supporting new parents.

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Table 1 Trials of Couple-focused Psychoeducation for the Transition to Parenthood

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|-------------------------------|--|---|--|--|--|
| Bryan (2002) | Universal, non-randomised convenience sample | 133 pregnant couples INT = 48; Control = 85 Unreported uptake Attrition 21% at follow-up. | ENRICH inventory and the Children & Parenting subscale of PREPARE inventory; 10 month follow-up. | INT = comparison plus three couple psychoeducational sessions Comparison: standard prenatal classes | Both groups increased in relationship satisfaction pre- to post-intervention, but effects lost by follow-up. |
| Buist, Westley, & Hill (1999) | Selective randomised | 38 high-risk pregnant women | Maternal mental health, social | 10 group sessions of parenting information | INT women reported a decrease in anxiety at 6 weeks and control |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|---------------------------------|---------------------------------|---|--|---|---|
| | controlled trial | INT = 20; Control = 18 55.9% uptake Attrition 38.5% at follow-up. | support, relationship adjustment; 6-month follow-up. | and group discussion. Control: Standard 6-session antenatal classes. | women a decrease in satisfaction with social support at 6 months. |
| Coffman, Levitt, & Brown (1994) | Universal cluster randomisation | 141 couples INT ~ 48; Control ~ 53 ~ 70% uptake Attrition 28% | Relationship satisfaction, affect, attitude toward infant, support | INT = 1-hour group and couple discussion of mutual support expectancies. Control = 1-hour group and couple discussion of child sex-role behaviours | No intervention effects |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|----------------------|--|---|--|--|--|
| Cowan & Cowan (1992) | Universal randomised controlled design | 72 couples INT = 24; Control = 24 | DAS, couple separations. Assessed prenatally (2 nd trimester), 3, 6, 18 months postpartum. 3½ and 5½ year follow-ups. | INT consisted of 24 weekly group sessions focused on the couple relationship and parenting expectations. | At 18-month postpartum assessment INT group reported stable relationship satisfaction, and reduced rate of couple separations compared to control (0% separated in INT group compared to 12.5% separations in control). At 5.5 year follow-up intervention couples reported less decline in relationship satisfaction compared to control couple ($r = .3$). |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|----------------|---|--|--|--|---|
| Diemer (1997) | Universal quasi- experimental design | 83 pregnant couples INT = 43; Control = 40 78% uptake Attrition ? | Brief symptom inventory (men only), coping measures scale (men only), social network support scale (men only), supportive behaviours questionnaire, conflict tactics scale. | INT = 8 father-focused antenatal classes which included discussion of postpartum coping skills and support needs. Comparison: 8 standard antenatal classes | INT fathers reported a significant decrease in psychological distress, increase in social support seeking, and increase in household chores participation. |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|-------------------------------------|--|--|---|--|--|
| Doherty, Erickson, & Larossa (2006) | Universal randomised controlled design | 132 couples INT = 65; Control = 67 Unreported uptake Attrition 15% at follow-up. | 5 minute father-infant free-play interaction (6 & 12 months postpartum), Parental responsibility self-report, time spent with child diaries. | Eight parenting and couple relationship information, group discussion and skill-training sessions. | INT fathers scored higher on overall quality of father-infant positive interaction (effect size of .47 at 6 months and .31 at 12 months) and were more available to their child (additional 42 minutes per workday) compared to control fathers. |
| Feinberg & Kan (2008) | Universal randomized controlled | 169 couples INT = 89; Control = 80 | Self-reports of co-parenting support and undermining, | INT = 8 group sessions across antenatal and perinatal period, couple | At post-test INT had more co-parental support ($d = .35$ mother, $d = .54$ father) and less parent- |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|---|--|---|--|---|---|
| | trial | 80.23% uptake, attrition 15% of participants Attrition attended 1/4 or less of scheduled session | parenting based closeness, parent-child dysfunctional interaction, parental depression and anxiety | communication, problem solving, mutual support and emotional self-management focused on co-parenting. Control: no treatment | child dysfunctional interaction ($d = .34$ mother, $d = .70$ father) and less maternal depressive ($d = .56$) and anxious ($d = .38$) symptoms than control. |
| Hawkins, Fawcett, Carroll & Gilliland, 2006 | Universal randomised controlled design | 155 couples INT 1 = 51; INT 2 = 55 Control = 49 66% uptake | Self report of relationship adjustment, strengths and satisfaction, | INT 1 = five sessions of brief antenatal group relationship education with homework activities from workbook. | No significant intervention effects. |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|----------------|---|---|---|---|---|
| | | Attrition 24% at follow-up | parenting adjustment; 9-month postpartum follow-up | INT 2: same as INT 1, but delivered as self-paced education and not in antenatal classes. | |
| Kermeen (1995) | Universal, randomised controlled design | 139 pregnant couples INT = 74; Control = 65 Unreported uptake Attrition 17% at follow-up. | ADAS (relationship adjustment); Sexual relationship scale of ENRICH inventory. | INT = comparison plus unreported number of sessions focused on psychological and emotional health of couple relationship. Control: seven 2-hour antenatal classes. | INT couples reported significantly better sexual relationships pre- and post-partum compared to comparison. |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|---|--|--|--|--|---|
| Matthey, Kavanagh, Howie, Barnett, & Charles (2004) | Selective randomised controlled trial | 268 couples INT 1= 78; INT 2 = 89 Control =101 78% uptake. Attrition 27% at follow-up. | Mental health (total distress, anxiety, depression), partner and social support, parenting competence, self- esteem, partner awareness; 6- month postpartum follow-up. | INT 1 = Extra antenatal information (written and verbal) and discussion class on couple adjustment. INT 2 = Extra antenatal information (written and verbal) and education class on baby play. Control: Usual 6-session antenatal classes. | At 6 weeks INT 1 women with low self-esteem reported higher self-reported positive mood compared to control (p<.01), higher sense of parenting competence compared to control (p<.01), and higher satisfaction with partner support (89%) compared to control (59%), but effects were lost by follow-up. No significant group differences |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|--|---|---|---|---|--|
| | | | | | in rates of depression or anxiety. No intervention effects for men. |
| Midmer, Wilson, & Cummings (1995) | Universal randomised controlled design | 70 couples INT = 41; Control = 29 54% uptake Attrition 26% at follow-up. | Mental health (anxiety), relationship adjustment, postpartum role adjustment; 6- month postpartum follow-up. | Two extra antenatal information, skill- training and group discussion classes focused on mental health, role changes, couple adjustment, parenting, and support. Control: Usual 6-session antenatal classes. | INT women reported reduced anxiety compared to prenatal scores and compared to control women ($p < .005$). INT couples reported less decline in relationship satisfaction and greater postpartum adjustment compared to control couples ($p < .05$). |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|-------------------------------------|--|--|---|---|--|
| Petch, Halford, & Creedy (in press) | Universal randomised controlled design | 71 couples INT = 35; Comparison = 36 40% uptake Attrition 35% at follow-up | Relationship adjustment, mental health, parenting, couple communication observation; 11-month postpartum follow-up on self-report data. | Six sessions of relationship and parenting skill-training, education, written information and support. Comparison: Six sessions of information and support phone calls to mother only. | Fewer INT women reported a significant decline in relationship adjustment (17%) compared to control women (49%)($d = .35$). INT women reported greater effort in maintaining their relationship ($d = .22$). INT couples demonstrated less negative communication behaviours compared to control couples at post-assessment ($d = .54$ to $.75$). No INT effects on mental health |

| Author(s)/Year | Design | Participants | Outcome | Intervention | Key findings |
|--------------------------|--|--|--|--|--|
| | | | | | and parenting. |
| Shapiro & Gottman (2005) | Universal randomised controlled design | 38 couples INT = 18; Control = 20 Unreported uptake Attrition ~10% at follow-up. | Relationship quality, mental health, couple communication observation; 12 months postpartum follow-up. | Extra two-day antenatal classes providing relationship information, education, group discussion and skill-training, parenting information. | No immediate INT effects, but at follow-up INT couples reported higher relationship satisfaction ($p < .05$), and showed less hostile affect ($p < .001$), and INT women reported lower depression symptoms compared to control couples. |

Table 3.

Suggested Content and Rationale for the Content of Couple-focused Education Programs for the Transition to Parenthood

| Variable | Topic | Rationale for Topic | Example Activities |
|----------------------------------|--|---|---|
| Parenthood - specific Factors | Infant Care (e.g., infant feeding, sleep, crying, safety) | - Infants with sleep or feeding difficulties, excessive crying or irritable temperament, increase parenting stress. | (a) Provide skill-training in basic infant care tasks. (b) Provide skill-training in strategies to promote infant affect regulation. |
| | Parenting Expectations (e.g., gender role) | - Unrealistic or divergent expectations of sharing infant care are associated with low mutual support, low affection in parent-child interaction, maternal distress, less father involvement with child, perceived inequity, couple conflict and relationship dissatisfaction. | (a) Individual partners complete a checklist of who will do key infant care tasks (e.g., crying, settling) & household tasks (e.g., cooking, cleaning), which couples discuss and negotiate shared parenting expectations. |
| Parenting | | - Parenting efficacy predicts low parental stress, | (a) Educate on normal variations in infant |

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|---------------------|---|---|---|
| | Competence / Self-Efficacy (e.g., sensitive and responsive parenting) | high parenting satisfaction, and positive perceptions of parenthood. - Parenting competence predicts secure parent- child attachment. | behaviour (e.g., varying patterns of a sleep for different-aged infants). (b) Provide skill-training in interpreting infant arousal, over-stimulation, and interacting with different aged infants. |
| Context | Social Support (e.g., friends and extended family) | - Low social support predicts relationship distress, low maternal self-efficacy, insensitivity, postnatal depression, and parenting stress, and exacerbates the negative effects of low parenting competence. | (a) Couples develop a list of support needs, how well they are met, and problem- solve ways to access additional social support. |
| Couple Processes | Communication and conflict management. | - Couple criticism and hostility predict decline in relationship satisfaction, low paternal sensitivity and insecure infant attachment. | (a) Practice effective couple communication and conflict management skills. |
| | Mutual Support | - Husband support is associated with maternal | (a) Couple lists the support desired from |

| | | |
|--|--|---|
| (e.g., level of partners' practical, emotional support). | parenting efficacy, low stress, and couple affection and intimacy. - Maternal support is associated with relationship satisfaction and father involvement in childcare. | each other and how well partner is currently meeting these mutual support needs. (b) Couple practices implementing new or additional mutual support behaviours. |
| Affection and Intimacy (e.g., caring behaviour, sexual satisfaction) | - Affection and intimacy predict increased maternal warmth and sensitivity and paternal satisfaction and involvement in infant care-giving. | (a) Couple lists caring behaviours they give and receive from each other; encourage increasing caring behaviours in the relationship. (b) Identify common post-partum sexual difficulties and problem-solve how couple can address difficulties. |

