Child Sleep Arrangements and Family Life: Perspectives from Mothers and Fathers

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This study examined solitary sleeping and co-sleeping arrangements in families with a young child. Data were obtained from questionnaires completed by two independent samples, one of mothers (N = 100) and one of fathers (N = 38) of preschool-aged children. Types of family sleep arrangements included children who slept in their own room from infancy, children who shared the parental bed from infancy, and children who returned to bedsharing following a period of solitary sleeping. Mothers and fathers described reasons for family sleep arrangements, attitudes towards sleep arrangements, satisfaction with sleep arrangements, and perceptions of children's sleep-related problems. Survey questions also addressed marital relations, parenting, and well-being. Results indicated that mothers and fathers endorsed similar reasons for their families' sleep arrangements, although reasons differed by the type of sleep arrangement. Satisfaction with sleep arrangements was more likely for mothers and fathers whose attitudes coincided with their actual sleep practices. Parents who experienced more problems with their child's sleep behaviours also reported disharmony in marital and parenting domains. Thus, 'nighttime parenting' was found to be associated with other important domains of family life for both mothers and fathers. Copyright © 2007 John Wiley & Sons, Ltd.

Key words: co-sleeping; bedsharing; children's sleep; fathering; parenting; childhood sleep problems

Recent interest in infants' and young children's sleep arrangements has drawn both public and scientific commentaries on the benefits and risks associated with these arrangements. Research findings often are contradictory and expert advice varies considerably, as do cultural norms. Particular controversy has focused on the practice of parents sharing their bed with their infants and its consequences.

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for children’s safety and development (AAP, 2005; Hayes, Parker, Sallinen, & Davare, 2001; Latz, Wolf, & Lozoff, 1999; McKenna, 2000; Okami, Weisner, & Olmstead, 2002; Rothrauff, Middlemiss, & Jacobson, 2004; Stein, Colarusso, McKenna, & Powers, 2001). In a recent policy statement, the American Academy of Pediatrics (AAP Task Force on Sudden Infant Death Syndrome, 2005) strongly recommended that infants not bedshare when sleeping. They did recommend, however, that infants roomshare (i.e. sleep in a cot/bed located in their parents’ bedroom) to reduce the risk of Sudden Infant Death Syndrome (SIDS). Importantly, a number of leading researchers find fault with the AAP’s censure of all bedsharing and call for more attention to mitigating factors such as maternal smoking (McKenna & McDade, 2005).

Apart from safety issues, others have raised concerns about bedsharing and children’s development. Foremost among these concerns is the possible impediment of young children’s developing autonomy and independence (Brazelton, 1992; Ferber, 1985). Once again, research findings are equivocal. For example, in an earlier study, Keller and Goldberg (2004) found that children who were bedsharers during infancy were perceived by their mothers to be more socially independent as preschoolers than children who slept separately as infants.

Against this backdrop of conflicting recommendations and discordant research findings, the proportion of US families who bedshare with their infants is on the rise. In a recent national study, Willinger, Ko, Hoffman, Kessler, and Corwin (2003) reported that the proportion of infants who routinely slept in an adult’s bed had doubled from 5.5% in 1993 to 12.8% in 2000. In addition, nearly half of all respondents in that study indicated that their infants had spent at least part of the night on an adult bed or mattress during the previous 2 weeks. For many families, bedsharing is a culturally normative practice (Latz et al., 1999; Lozoff, Askew, & Wolf, 1996) and provides an excellent example of the impact of culture on parenting (Bornstein, 2002). For other families, bedsharing is consistent with a parenting philosophy that endorses close physical contact between parents and children (Sears, 1999). Although we know that parental attitudes and beliefs are related to actual parenting behaviours in many contexts (Bornstein, 1995, 2002), we know little about their role in family sleep arrangements.

Studying parents’ attitudes, beliefs, and satisfaction with family sleep arrangements may elucidate why some children sleep in their own room while others sleep in their parents’ room or bed. To the extent that this topic has been examined, most of the empirical research has focused on mothers’ views and behaviours regarding their child’s sleep arrangements. Mothers who share their bed with their infants, for example, frequently cite the ease of breastfeeding, infant irritability and settling difficulties, infant illness, and desire for closeness and security as reasons for this sleep arrangement (Ball, 2002; Ball, Hooker, & Kelly, 1999; Hayes et al., 2001; Latz et al., 1999). Recently, several investigators have focused on cross-cultural differences in parenting attitudes and family sleep arrangements (Javo, Ronning, & Heyerdahl, 2004; Rothrauff et al., 2004). Reports from a structured interview on child-rearing practices among Norwegian and Sami mothers and fathers indicated that parents’ attitudes towards bedsharing practices differed across these two groups (Javo et al., 2004). In comparison, Rothrauff and her colleagues (2004) did not find significant differences between Austrian and American mothers in their parenting attitudes and family sleep arrangements. Further, parenting attitudes did not differ across sleep groups among American mothers in their sample. In a study of American mothers, Keller and Goldberg (2004) found that maternal attitudes towards sleep location
were consistent with the child’s actual sleep location: co-sleeping mothers felt more positively towards bedsharing and solitary sleeping mothers favoured young children sleeping in their own room. The absence of fathers in the Rothrauff et al. (2004) and Keller and Goldberg (2004) studies, however, indicates that more is known about mothers’ than fathers’ attitudes as they pertain to family sleep arrangements.

There is a paucity of research on fathers’ role in family sleep arrangements. Other than the study by Javo et al. (2004) noted above, only one other study examines the role of fathers and family sleep arrangements. In a study by Ball, Hooker, and Kelly (2000) fathers were found to respond positively to bedsharing, even when it was not anticipated. Prior to the birth of their child, most fathers in this study did not expect to share a bed with their infant, but at 3–5 months post-birth, the vast majority had shared their bed with their infant, at least occasionally. Fathers, particularly first-time fathers, described their fears of rolling over on their infant and of disrupted sleep due to the infant’s presence in the bed, but once they adjusted to bedsharing, these fears were alleviated. Moreover, most fathers appeared to enjoy the experience, and did not consider the presence of their infant in bed as an intrusion on their marital relationship (Ball et al., 2000).

Although the sample was small, Ball and colleagues’ research demonstrates the importance of examining fathers’ reactions to bedsharing arrangements and suggests that this domain of parenting is not solely a maternal prerogative. Research by Javo and colleagues, while informative regarding cross-cultural differences in fathers’ views towards sleep arrangements, did not examine differences in fathers’ attitudes across sleep arrangements. To date, there is a dearth of information on fathers and family sleep arrangements, and the range of related marital and parenting factors has been limited in scope.

Whereas there is scant research on fathers and children’s sleep arrangements, a substantial body of research attests to fathers’ distinct and influential role in the family (Parke, 2002; Pleck & Masciadrelli, 2004). Most of this research indicates that fathers’ positive quality interactions and greater parental role commitment confer benefits for children (e.g. Aldous & Mulligan, 2002; Amato & Rivera, 1999). Furthermore, fathers’ quality of parenting is affected by other family dynamics. There is strong evidence that positive fathering and satisfying marriages coincide (e.g. Belsky, 1984; Corwyn & Bradley, 1999; Doherty, Kouneski, & Erickson, 1998; Goldberg & Easterbrooks, 1984; Pleck & Masciadrelli, 2004).

For example, findings from a large-scale, longitudinal study (NICHD Early Child Care Research Network, 2000) indicate that greater marital intimacy was associated concomitantly with greater paternal sensitivity to their child at 36 months. However, one recent study of New Zealand young adult parents did not find the expected association between relationship quality and the quality of fathers’ parenting with their 36-month-old child during a videotaped task (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005). It may be important to consider which aspects of marriage and which aspects of fathering are being examined: for example, fathers’ marital satisfaction was associated more with parental satisfaction than with fathers’ actual involvement in parenting (Bouchard & Lee, 2000). Furthermore, mothers’ views of the marital relationship and their marital satisfaction are associated with fathers’ involvement (Bonney, Kelley, & Levant, 1999).

One area of family life that highlights both marital and parenting issues is the domain of nighttime parenting. Child behaviours such as night wakings call for parental response, and thus may encroach on marital relations. Children’s bedtime routines and nighttime behaviours may be differentially perceived as
problematic, depending upon parental attitudes and expectations, as well as the type of family sleep arrangement (Latz et al., 1999). This highlights an area where parents’ beliefs and attitudes about sleep arrangements may also influence their experiences of nighttime parenting. For example, nighttime behaviours may trigger fathers’ involvement and may impinge negatively on marital relations and other aspects of family life. On the other hand, in families where parents enjoy strong marital relations and are committed to the parenting role, children’s nighttime behaviour may not be perceived as problematic. Certainly, given the interdependence of family life, investigation of mothers’ and fathers’ views on nighttime parenting warrants attention.

In summary, while there is evidence that bedsharing rates have been increasing in the US, little research has addressed both fathers’ and mothers’ attitudes and beliefs about family sleep arrangements. Taking a family systems view of nighttime parenting, fathers certainly are an important part of the equation. The debate over child’s sleep arrangements may add to both mothers’ and fathers’ concerns of where their child should sleep. Conflicting information on sleep arrangements from paediatricians and laypersons as well as mixed empirical findings call for a need for further investigation in these areas.

THE CURRENT STUDY

To gain a broader understanding of factors associated with mothers’ and fathers’ experiences of their infant/child’s sleep arrangements, data were collected for two separate samples, one of mothers and one of fathers. Both samples focused on family sleep arrangements, with sleep groups determined by retrospective accounts of the child’s sleep location at various ages in infancy and early childhood. Independent samples of mothers and fathers were asked about their attitudes and reasons for sleep arrangements as well as problems and satisfaction with their child’s sleep location and behaviours. Additional scales tapped marital quality, spousal support for parenting, parenting commitment, role satisfaction, father involvement, and maternal well-being.

We investigated differences in marital, parenting, and sleep issues according to specific sleep group classifications. In accord with a number of investigators (Keller & Goldberg, 2004; Lozoff et al., 1996; Madansky & Edelbrock, 1990; Ramos, Youngclarke, & Anderson, 2007), we distinguished ‘early’ (or intentional) co-sleeping families from ‘reactive’ co-sleeping families. The term ‘reactive’ describes children who begin or resume co-sleeping in the second or third year of life following an extended period of solitary sleeping. A primary objective of the current investigation was to understand the fathers’ role in nighttime parenting. This objective was met by focusing on responses in the mothers’ survey that addressed father and partner issues, and by presenting data from fathers themselves. When comparable data were available, we contrasted mothers’ and fathers’ responses.

METHOD

Participants

Mothers

Participants in this study consisted of a convenience sample of 100 mothers of preschool-aged children. The children they reported on ranged in age from 36 to
69 months ($M = 55.0, S.D. = 8.3$). Slightly more children were female (53%) than male; 36% were the only child and 34% were the oldest. Mothers’ age ranged from 22 to 49 years ($M = 36.9, S.D. = 5.2$). Fifty-nine mothers were of European descent (59%), 19 were Asian or Asian-American (19%), 15 were from other ethnic groups (15%), which included mothers of Middle Eastern, Latino, and mixed heritage backgrounds, and seven did not indicate their ethnic background (7%). Educational level was relatively high: 81% of the mothers had at least a 4-year college degree. All mothers in the study sample were either married (93%) or living with a partner (7%). Families were middle to upper-middle-class (modal income ranged from $100,000 to $140,000). Slightly more than half of the mothers did not work outside of the home (51%); of those employed, 27% worked part-time and 22% worked full-time.

**Fathers**

A separate convenience sample of fathers participated in this study. All fathers ($N = 38$) were married (it should be noted that these fathers were not spouses drawn from the mothers sample, but were part of a separate sleep study). Fathers’ age ranged from 22 to 51 years ($M = 39.0, S.D. = 5.2$). The sample was ethnically diverse with 18 European-Americans (47%), four Europeans (11%), six Asians (16%), and six Middle Easterners (16%); the remaining 10% included one African-American and one Latino (5%), and two fathers who did not indicate their ethnic background (5%). The sample was well educated: 32% achieved a college degree ($n = 12$) and another 53% had a post-secondary college degree ($n = 20$). The sample was middle to upper-middle-class (modal income ranged from $100,000 to $140,000). Fathers’ occupational prestige (Nakao & Treas, 1994) was high ($M = 56.6, S.D. = 12.6$). Children ranged in age from 36 to 58 months ($M = 47.4, S.D. = 5.6$) and were nearly evenly divided between girls and boys. Approximately one-third of the children were first-born (34%), 16% were the only child, and the remainder were second or later born (50%).

**Procedure**

Mothers and fathers were recruited on separate occasions from several preschools and daycare centers in Southern California. Following study approval from the IRB and each site’s director, recruitment involved distribution of an initial letter to parents that described the study and invited each parent to participate. Survey packets were distributed several days later, and parents who consented to participate returned the surveys in a sealed envelope to a drop-box at the preschool/centre.

**Measures**

**Sleep Practices Questionnaire (SPQ)**

The Sleep Practices Questionnaire (SPQ) (Keller & Goldberg, 2004) was the primary assessment tool used to glean information from both samples about family sleep and sleep-related issues from infancy to preschool age. The questionnaire tapped child’s sleep location over time, reasons for sleep arrangements, parental attitudes towards bedsharing and solitary sleeping, satisfaction with sleep arrangements, and perceived problems with sleep behaviors.
Sleep arrangements

Determination of child’s sleep arrangement followed Keller and Goldberg (2004), which asked mothers where their child usually slept at 6, 12, 24, and 36 months of age—in their own room, in the parental bed, or in the parental bedroom. A shortened version of the SPQ for fathers emphasized sleep location at 6 and 12 months, as well as where their preschool-aged child usually slept during the previous 2 weeks. The pattern of responses to the sleep location items from infancy to preschool age formed the basis for classification into one of the four sleep groups.

Solitary sleepers were children who slept in their own room prior to 12 months of age (with the majority of solitary sleepers in their own room by 6 months) and continued that arrangement into toddlerhood and preschool-age. Early bedsharers were children who slept in the parents’ bed for part or all of the night during the first year; most early bedsharers continued this arrangement at least into the second year. Early co-sleepers were children who, during the first year, either shared the parents’ bedroom exclusively or alternated between the parents’ room and parents’ bed. Many early co-sleepers continued this arrangement at least into the second year. Reactive co-sleepers began co-sleeping following an extended period of solitary sleeping. That is, these children either were solitary sleepers during the first year who then began sharing the parents’ bed or room for part or all of the night during the second or third year, or these were early bedsharers or roomsharers who returned to the parent’s bed following an extended period of solitary sleeping. Sleep groups in the father sample were defined in a similar manner, but the small sample size required us to combine the early bedsharers and early co-sleepers into one group.

Reasons for family sleep arrangements

The SPQ included a section with a dichotomized checklist of 18 items as possible reasons for family sleep arrangements at 12 months of age. Sample reasons included ‘I slept better’ and ‘It made me feel closer to my child emotionally.’

Satisfaction with sleep arrangements

In the mother sample, maternal satisfaction with sleep arrangements was assessed for three points during early childhood. One score was calculated to reflect satisfaction over time. Mothers were asked to indicate how satisfied they were with their child’s sleep arrangements at 12, 24, and 36 months on a Likert-type scale (1 = not at all satisfied to 5 = definitely satisfied). Discrepancy scores between 24 and 12 months, and 36 and 24 months then were computed. These scores were used to reflect gradual or consistent positive or negative change scores in satisfaction with their family sleep arrangements on a 5-point scale (5 = positive change in satisfaction between 12 and 24 months, and between 24 and 36 months; 4 = positive change in satisfaction between one time period; 3 = no change in satisfaction; 2 = negative change in satisfaction between one time period; 1 = negative change in satisfaction between 12 and 24 months, and between 24 and 36 months).

Fathers indicated their satisfaction with their child’s current sleep arrangements and with their child’s sleep location at 12 months. The response scale ranged from 1 to 5 (1 = not at all satisfied; 5 = definitely satisfied). To assess changes in fathers’ satisfaction, a change score was calculated by
subtracting fathers’ current satisfaction with their child’s sleep arrangement from their satisfaction at 12 months. Change scores had a possible range of −4 to 4, with negative scores indicating a decrease in satisfaction over time, positive scores indicating an increase in satisfaction over time, and zero indicating no change in satisfaction over time. This procedure differed slightly from the procedure used in the mother sample as fathers indicated satisfaction at two time points only.

**Attitudes towards sleep arrangements**

To assess maternal attitudes towards sleep arrangements, a principal component analysis with Varimax rotation was conducted on a 16-item scale with responses that ranged from 1 to 6 (1 = strongly disagree; 6 = strongly agree). Two components, *attitudes towards bedsharing* (seven items) (e.g. ‘Bedsharing helps develop closeness between the parents and the child’) and *attitudes towards solitary sleeping* (nine items) (e.g. ‘Having 6-month-olds sleep alone is a great way to encourage their independence’), were extracted and used to create two separate scales. Internal consistency was strong for both scales (α = 0.84 and 0.90, respectively) and the scales were negatively correlated with each other (r = −0.73).

The two sleep attitudes scales were slightly modified from the mother survey in order to capture issues related specifically to fathers’ views on solitary sleeping (9 items) and bedsharing (11 items) (e.g. ‘Bedsharing provides the father with a valuable opportunity for intimacy with his child’). Internal consistency was strong (α = 0.90 for solitary sleeping and 0.69 for bedsharing) and the scales were negatively correlated with each other (r = −0.68).

**Child’s sleep behaviours**

Mothers and fathers completed a 15-item scale to report on their child’s sleep issues from infancy to preschool age. Parents rated, on a 7-point response scale, the extent to which they experienced sleep behaviours as a potential problem for them. Responses ranged from 1 to 7 (1 = not at all a problem; 7 = definitely a problem). Items included ‘child resists being alone at bedtime,’ ‘decreased intimacy with your partner,’ and ‘loss of sleep.’ The scale had strong reliability (α = 0.88 for fathers; α = 0.80 for mothers).

**Parenting commitment**

This 11-item scale assessed the centrality of parenting to the self, salience of parenting in relation to other activities, and motivation to perform well as a parent (Greenberger, 1988). Responses ranged from 1 to 6 (1 = disagree very strongly; 6 = agree very strongly). Convergent validity with other parenting scales and divergent validity with parental educational attainment were demonstrated previously on a similar sample of middle-class parents of preschoolers (Greenberger & Goldberg, 1989). Both mothers and fathers completed this scale; α’s were 0.69 and 0.67, respectively.

**Satisfaction with parent role**

A single-item question was used to assess fathers’ satisfaction with their role as a parent. Fathers rated their satisfaction using a 4-point scale (1 = very dissatisfied; 4 = very satisfied).
Fathers’ involvement in caregiving
A single-item question asked fathers to provide the percentage of time they were their child’s primary caregiver. Fathers were asked to indicate the percentage of time, excluding hours that their child was in school or daycare, or with a sitter or asleep, that they were the person available to attend to their child’s needs.

Marital quality
The quality of the marital relationship was assessed in both samples, but different measurement instruments were used for mothers and fathers. For mothers, marital intimacy was assessed using two subscales (12 items total) of the PAIR (Personal Assessment of Intimacy in Relationships; Schaefer & Olson, 1981), which emphasized mothers’ perceived emotional intimacy with partners. Discriminant and convergent validity analyses showed this scale to be effective in determining couples’ intimacy levels (Schaefer & Olson, 1981). Responses were on a 5-point scale (1 = strongly disagree; 5 = strongly agree), and showed excellent internal consistency (α = 0.92). For fathers, an adapted version of Braiker and Kelley’s (1979) four-factor intimate relationship scale was used to assess marital quality. A 20-item scale was used, using three of the original four subscales: Love (e.g. ‘To what extent do you love your partner at this stage?’); Conflict (e.g. ‘How often do you feel angry or resentful towards your partner?’); and Ambivalence (e.g. ‘To what extent do you feel that your relationship is somewhat unique compared to others you’ve been in?’). Fathers responded on a 7-point scale (1 = not at all or never; 7 = very much or extremely) as to the extent to which the item characterized their relationship. As needed, items were reverse coded and then averaged to create a total score (α = 0.88). Higher scores indicated more positive marital quality.

Maternal satisfaction with household division of labour
To assess the extent of maternal satisfaction with the division of labour in the household, we asked a one-item question: ‘In general, how satisfied are you with the way you and your partner divide household tasks?’ Responses were on a 5-point scale (1 = very dissatisfied; 5 = very satisfied).

Spousal support for parenting
Spousal/partner support for mothers’ parenting was assessed using an adapted version of a scale developed by Greenberger, Goldberg, and Hamill (Greenberger, 1988). The current 13-item version of the spousal support for parenting scale reflects the degree to which one perceives respect for one’s decisions, assistance, and praise for choices regarding his/her children (α = 0.89). Sample items included: ‘Praises me for the way I handle the children’ and ‘Helps me when there are problems with the children.’ Mothers indicated how true each statement was of their partner on a 4-point scale (1 = definitely not true; 4 = very true). Due to the significant skew of the partner support for parenting scores, scores were transformed (Tabachnick & Fidell, 2001). For ease of interpretation, scores reported in Tables 2 and 3 are presented such that higher scores indicate higher spousal support for mothers’ parenting.

Spousal role satisfaction
Two items were used to assess spousal role satisfaction. Fathers were asked to rate their overall satisfaction with their relationship and their current satisfaction
with meeting their own standards as a partner. Fathers responded to these two items on a 4-point scale (1 = very dissatisfied; 4 = very satisfied). A mean score was computed such that higher scores indicated more spousal role satisfaction.

**Maternal well-being**

Maternal depressive symptoms were measured by the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). A four-point response scale was used and a mean score was computed. In our non-clinical sample, the responses were skewed in a manner indicating few depressive symptoms; thus, scores were transformed (Tabachnick & Fidell, 2001).

Statistical analyses involved an initial examination of the associations between study variables, followed by a descriptive exploration of reasons for family sleep arrangements using chi-squares. We also used Pearson correlations and a series of one-way analyses of variance (ANOVAs) and analyses of covariance (ANCOVAs) with Bonferroni and Games-Howell post hoc tests to assess aspects of children’s sleep arrangements in relation to parenting and marital measures.

**RESULTS**

Results are presented first for mothers and secondly for fathers. Means and standard deviations for major study measures by gender of parent can be found in Table 1.

**Mothers**

**Demographics**

Several demographic variables were examined in relation to major study variables. Intercorrelations among criterion variables and mothers’ age were significant only in relation to attitudes towards bedsharing (r = 0.28, p < 0.01) and

<table>
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<tr>
<th>Table 1. Means (standard deviations) for study measures</th>
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<tr>
<td><strong>Mothers</strong></td>
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<tr>
<td>Attitudes—bedsharing</td>
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<td>Attitudes—solitary sleeping</td>
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<tr>
<td>Problems with child’s sleep behaviours</td>
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<td>Maternal depressive symptoms</td>
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<td>Marital intimacy (PAIR)</td>
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<td>Partners’ support for parenting</td>
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<tr>
<td>Satisfaction with household division of labour</td>
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<td>Parenting commitment</td>
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| **Fathers**                                             |
| Attitudes—bedsharing                                     | 2.80 (1.00) |
| Attitudes—solitary sleeping                              | 4.12 (0.72) |
| Problems with child’s sleep behaviours                   | 2.47 (1.03) |
| Marital quality (Braiker & Kelley)                       | 5.67 (0.75) |
| Satisfaction with spousal role quality                   | 3.28 (0.55) |
| Involvement in caregiving (%)                            | 28.95 (18.13) |
| Parenting commitment                                    | 4.27 (0.55) |

solitary sleeping ($r = -0.21$, $p < 0.05$). Mothers who were older held more favourable attitudes towards bedsharing and less favourable attitudes towards solitary sleeping.

A series of one-way ANOVAs and $t$-tests were conducted to examine whether study criterion variables differed by ethnicity, maternal educational attainment, and child’s gender. There were no significant associations for these demographic variables with any of the study variables except for child’s gender. Mothers’ depressed mood was modestly higher (0.13 difference) when the preschool-aged child was a girl, $t (95) = -2.08$, $p < 0.05$.

Sleep arrangements

Slightly less than half of the 100 mothers in the final study sample were early bedsharers (45%; $n = 45$) and 31% were solitary sleepers ($n = 31$). The remaining families were evenly divided between reactive co-sleepers (12%; $n = 12$) and early co-sleepers (12%; $n = 12$).

Mothers’ reasons for sleep arrangements at 12 months

When asked to indicate the reasons they chose their child’s sleep arrangement at 12 months of age, mothers across sleep groups did not differ from expected in their endorsement of ‘I slept better,’ $\chi^2 (3) = 5.03$, ns; but they did differ in their endorsement of ‘my partner slept better,’ $\chi^2 (3) = 20.05$, $p < 0.001$. Seventy-seven percent of the mothers of solitary sleepers and 75% of the mothers of reactive co-sleepers selected this item, whereas only 31% of the mothers of early bedsharers and 33% of the early co-sleepers endorsed this item. Approximately 80% of both mothers of solitary sleepers and mothers of early bedsharers reported ‘my child slept better’ as a reason for their sleep arrangements during infancy, whereas only 58% of the reactive co-sleepers and 42% of the early co-sleepers endorsed this item, $\chi^2 (3) = 10.34$, $p < 0.05$.

Mothers of solitary sleepers (42%) indicated that their child’s sleep arrangement was ‘important for my child’s independence.’ Reactive co-sleepers, early bedsharers, and early co-sleepers rarely cited independence as an issue, although these differences were not significant, $\chi^2 (3) = 4.74$, ns. There were significant differences between sleep groups in mothers’ endorsement of ‘privacy with partner’ as a reason for their child’s sleep arrangement, $\chi^2 (3) = 17.16$, $p < 0.01$. Fifty percent of the mothers of reactive co-sleepers and 42% of the mothers of solitary sleepers endorsed this reason, whereas fewer than 10% of the mothers of either early bedsharers or early co-sleepers selected this reason.

On the other hand, more early bedsharers than expected endorsed child-centred reasons that emphasized emotional security (58%), $\chi^2 (3) = 26.40$, $p < 0.001$, and physical closeness to their child (73%), $\chi^2 (3) = 50.37$, $p < 0.001$. Mothers of early bedsharers (58%) also frequently cited ease of nighttime feeding more than expected, $\chi^2 (3) = 33.89$, $p < 0.001$. Both mothers of early bedsharers and early co-sleepers endorsed ‘less stressful for mother’ (53 and 67%, respectively; $\chi^2 (3) = 17.52$, $p < 0.01$), ‘more convenient for mother (69 and 67%, respectively; $\chi^2 (3) = 16.31$, $p < 0.01$). Mothers did not differ from expected on their endorsement of sleep arrangement as safer for their child, $\chi^2 (3) = 5.28$, ns.

Mothers’ satisfaction with sleep arrangements over time

We examined differences across the four sleep groups in changes in satisfaction from 12 to 36 months. Changes in maternal satisfaction with family
sleep arrangements over time differed significantly by sleep group, $F(3, 96) = 5.64$, $\eta^2_p = 0.15$, $p < 0.01$. Further analysis of group means indicated that decline in satisfaction over time distinguished mothers of reactive co-sleepers ($M = 2.17$) from mothers of solitary sleepers ($M = 3.19$) and early bedsharers ($M = 2.98$), but not from early co-sleepers ($M = 2.83$) (Games-Howell post hoc, $p < 0.01$, $p < 0.05$, ns, respectively). Specifically, mothers of reactive co-sleepers were significantly more likely to experience a steady decline in their satisfaction from 12 to 36 months whereas the satisfaction scores of mothers of solitary sleepers and early bedsharers remained rather stable and high. The slight decline for early co-sleepers was not significant (see Figure 1).

Mothers’ attitudes towards sleep arrangements

We assessed whether mothers differed across sleep groups in their attitudes towards bedsharing and solitary sleeping (refer to Table 2). Given the significant association between mothers’ age and attitudes towards sleep arrangements, we used Analysis of Covariance (ANCOVA) to control for the effects of age. Although the sample was ethnically diverse, mothers’ ethnicity was not significantly associated with sleep attitudes and therefore was not included as a covariate. Mothers in the sleep groups differed in their attitudes towards bedsharing, $F(3, 94) = 19.89$, $\eta^2_p = 0.39$, $p < 0.001$, and towards solitary sleeping, $F(3, 94) = 38.11$, $\eta^2_p = 0.55$, $p < 0.001$. Mothers of early bedsharers held the most favourable attitudes towards bedsharing ($M = 4.78$) compared to solitary sleepers ($M = 3.21$, $p < 0.001$) and reactive co-sleepers ($M = 3.96$, $p < 0.05$), but they did not differ significantly from early co-sleepers ($M = 3.96$, ns). Mothers of early bedsharers also held the least favourable attitudes towards solitary sleeping ($M = 2.54$) compared to all other groups ($M's = 4.42$ for solitary sleepers, 4.06 for reactive co-sleepers, $p's < 0.001$; and $M = 3.60$ for early co-sleepers, $p < 0.01$). Interestingly, both reactive and early co-sleepers responded similarly to both types of sleep attitudes scales. Mothers in these two groups held favourable attitudes towards both solitary sleeping and bedsharing.

Maternal sleep attitudes were also related to aspects of mothers’ marital and parenting domains (see Table 3). Mothers whose attitudes favoured bedsharing were more satisfied with the division of household chores, $r = 0.23$, $p < 0.05$, and indicated higher levels of parenting commitment, $r = 0.30$, $p < 0.01$. There was a
Table 2. Study measures by sleep group classification: mothers

<table>
<thead>
<tr>
<th>Sleep groups</th>
<th>Solitary sleepers M (S.D.)</th>
<th>Reactive co-sleepers M (S.D.)</th>
<th>Early bedsharers M (S.D.)</th>
<th>Early co-sleepers M (S.D.)</th>
<th>Post hoc</th>
<th>F (df)</th>
<th>Contrasts(^a)</th>
</tr>
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<tbody>
<tr>
<td>Change in satisfaction over time</td>
<td>3.19 (0.48)</td>
<td>2.17 (0.71)</td>
<td>2.98 (0.69)</td>
<td>2.83 (1.34)</td>
<td>5.64 (3.96)**</td>
<td>R&lt;S, EB^</td>
<td></td>
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<tr>
<td>for sleep location</td>
<td>2.17 (0.71)</td>
<td>2.98 (0.69)</td>
<td>2.83 (1.34)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes—bedsharing</td>
<td>3.21 (0.85)</td>
<td>3.96 (0.78)</td>
<td>4.78 (0.87)</td>
<td>3.96 (1.14)</td>
<td>19.89 (3.94)^***</td>
<td>EB&gt;S^***, EB&gt;R^</td>
<td></td>
</tr>
<tr>
<td>Attitudes—solitary sleeping</td>
<td>4.42 (0.74)</td>
<td>4.06 (0.79)</td>
<td>2.54 (0.73)</td>
<td>3.60 (1.12)</td>
<td>38.11 (3.94)^***</td>
<td>EB &lt; S, R^***, EB &lt; EC^</td>
<td></td>
</tr>
<tr>
<td>Problems with child’s sleep behaviours</td>
<td>2.79 (0.85)</td>
<td>3.34 (0.83)</td>
<td>3.11 (1.14)</td>
<td>3.16 (1.13)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal CES-D depressive symptoms</td>
<td>1.24 (0.14)</td>
<td>1.22 (0.19)</td>
<td>1.21 (0.17)</td>
<td>1.36 (0.22)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital intimacy (PAIR)</td>
<td>3.74 (0.95)</td>
<td>3.73 (0.75)</td>
<td>3.90 (0.78)</td>
<td>3.27 (1.35)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partners’ support for parenting</td>
<td>0.20 (0.11)</td>
<td>0.20 (0.13)</td>
<td>0.20 (0.13)</td>
<td>0.27 (0.16)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with household</td>
<td>3.58 (1.29)</td>
<td>3.00 (1.13)</td>
<td>3.48 (1.27)</td>
<td>2.92 (1.44)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>division of labour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting commitment</td>
<td>4.40 (0.60)</td>
<td>4.58 (0.55)</td>
<td>4.65 (0.53)</td>
<td>4.53 (0.42)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)S, Solitary Sleepers; R, Reactive Co-Sleepers; EB, Early Bedsharers; EC, Early Co-Sleepers.

\(^p<0.05, ^{**}p<0.01, ^{***}p<0.001.\)
trend level association between mothers’ solitary sleep attitudes and parenting commitment such that as solitary sleep attitudes were seen as more favourable, parenting commitment decreased, $r = -0.19, p = 0.06$. In addition, mothers who affirmed bedsharing were less likely to endorse fathers’ sleep quality as a reason for family sleep arrangements, $t(98) = 2.59, p < 0.05$, whereas mothers who held more favourable attitudes towards solitary sleeping were more likely to endorse fathers’ sleep as a reason, $t(98) = -2.57, p < 0.05$.

Mother’s problems with child’s sleep behaviours
We examined the extent to which mothers perceived their child’s sleep behaviours as problematic. Mothers from the various sleep groups did not differ in the degree to which they viewed their child’s sleep issues as problematic, $F(3, 95) = 1.08$, ns. However, child’s sleep issues were related to aspects of mothers’ well-being and family life (see Table 3). Mothers who experienced their child’s sleep issues as problematic also reported more depressive symptoms, $r = 0.28, p < 0.01$, and decreased marital quality, $r = -0.32, p < 0.01$, and tended to experience less spousal support for parenting from their partner, $r = -0.20, p = 0.06$. To assess whether the level of depressive symptoms was driving these last two associations, we examined the partial coefficients. The association between problems with child’s sleep issues and mothers’ marital quality remained significant, $r = -0.23, p < 0.05$; however, spousal support for parenting was no longer significant, $r = -0.10$, ns.

Mothers’ marital intimacy, parenting, and sleep arrangements
Mothers across sleep groups did not differ in their marital intimacy, $F(3, 95) = 0.80$, satisfaction with division of household labour, $F(3, 95) = 1.22$, or in their satisfaction with partner’s support for parenting, $F(3, 95) = 1.11$, ns. Mothers also did not differ in their parenting commitment, $F(3, 96) = 1.25$, ns; however, mothers who reported greater marital intimacy indicated they received more partner support for their parenting, $r = 0.74$, and were more satisfied with the division of household labour, $r = 0.42$, $p's < 0.001$. In addition, mothers’

| Table 3. Intercorrelations among major study variables: mothers |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1. Change in satisfaction over time for sleep location | -0.16 | 0.05 | -0.08 | 0.12 | 0.14 | 0.03 | 0.01 | 0.07 |
| 2. Attitudes—bedsharing | -0.72*** | 0.06 | -0.14 | 0.11 | 0.10 | 0.23* | 0.30** | |
| 3. Attitudes—solitary sleeping | -0.03 | 0.16 | -0.07 | -0.05 | -0.10 | -0.19† | |
| 4. Problems with child’s sleep behaviors | -0.28** | -0.32** | -0.20† | -0.16 | 0.04 | |
| 5. Maternal depressive symptoms | -0.48*** | -0.41*** | -0.26 | -0.31** | |
| 6. Marital intimacy (PAIR) | — | 0.74*** | 0.42*** | 0.25† | |
| 7. Partner’s support for parenting | — | 0.45*** | 0.19† | |
| 8. Satisfaction with household division of labor | — | 0.27** | |
| 9. Parenting commitment | — | |

Note: N’s=95–100.
*p<0.05, **p<0.01, ***p<0.001, †p<0.06.
marital intimacy was associated with their parenting commitment, such that mothers who reported greater marital intimacy also reported higher levels of parenting commitment, $r = 0.25$, $p < 0.05$.

**Fathers**

**Demographics**

Fathers’ occupational prestige, ethnicity, and age were examined in relation to major study variables. Occupational prestige related significantly to sleep groups, $F(2, 35) = 3.98$, $\eta^2_p = 0.19$, $p < 0.05$; in particular, fathers of solitary sleepers held jobs higher in prestige ($M = 61.93$) than fathers of early co-sleepers ($M = 50.97$, $p < 0.05$). Other contrasts were not significant and no other study measures varied by occupational prestige. Compared to fathers in all other ethnic groups, European-American (EA) fathers held more favourable attitudes towards solitary sleeping ($M = 4.33$ for EA; $M = 3.72$ for all others), $t(24.41) = -2.54$, $p < 0.05$, and less favourable attitudes towards bedsharing ($M = 2.54$ for EA; $M = 3.30$ for all others), $t(34) = 2.42$, $p < 0.05$. There were no other significant associations between fathers’ ethnicity and any of the remaining study variables nor was fathers’ age significantly associated with any of the study variables. Child gender, although examined and found not to be non-significant with sleep variables in the sample of mothers, had several missing cases in the fathers’ surveys that precluded a comparable analysis.

**Sleep arrangements**

Based on the sleep group classifications described earlier, which followed the child’s sleep location from infancy to current preschool period, 50% ($n = 19$) of the fathers reported that their preschool child had been a solitary sleeper since infancy, and that 34% ($n = 13$) had been a co-sleeper (i.e. either bedsharer, roomsharer, or a combination of bedsharer and roomsharer). Although the numbers of mothers enabled us to create four sleep groups for that sample, the smaller number of fathers resulted in three groups, with early bedsharers and early co-sleepers combined. The remaining 16% ($n = 6$) were reactive co-sleepers (i.e. slept in their parents’ bed or room following an extended period of solitary sleeping during infancy).

**Fathers’ reasons for sleep arrangements at 12 months**

In an item that was similar to the one completed by mothers, fathers were asked to indicate, from a checklist, which factors influenced their decisions about their child’s sleep arrangements at 12 months. A majority of fathers (over 79% in the solitary sleep group, 83% in the reactive co-sleeping group, and 69% in the early co-sleeping group) indicated that their infants’ sleep arrangement was one that they or their spouse most preferred, and the fathers in the various sleep groups did not differ on these reasons, $\chi^2(2) = 0.60$, ns for own preference; $\chi^2(2) = 0.92$, ns for their spouses’ preference.3

In examining sleep concerns as a reason for sleep arrangements, we found group differences at a trend level with a $3 \times 2$ chi square, $\chi^2(2) = 5.00$, $p = 0.08$, although the $2 \times 2$ analysis with collapsed sleep groups was not significant. Sixty-seven percent of the fathers of reactive co-sleepers, 32% of the fathers of solitary sleepers, but only 15% of the fathers of early co-sleepers endorsed quality of sleep for themselves as a reason for their family sleep arrangements. Spouses’ quality
of sleep and infants’ quality of sleep as reasons for family sleep arrangements did not differ significantly across groups, \( \chi^2 (2) = 0.65, \text{ns} \) and \( \chi^2 (2) = 1.71, \text{ns} \), respectively.

When various child-centred reasons were examined, significant group differences were apparent. Forty-six percent of the fathers of early co-sleepers endorsed ‘seemed easier for my infant’ as a reason for their sleep arrangements, whereas none of the fathers of solitary sleepers and reactive co-sleepers endorsed this item, \( \chi^2 (2) = 13.70, p < 0.01 \). Similarly, for the reason ‘easier for baby to nurse,’ 39% of the fathers of early co-sleepers endorsed this item whereas neither fathers of solitary or reactive co-sleepers endorsed the item, \( \chi^2 (2) = 11.07, p < 0.01 \). For ‘provided a sense of emotional support for infant,’ 46% of the fathers of early co-sleepers endorsed this item and only one father from each of the other sleep groups endorsed the item, \( \chi^2 (2) = 7.85, p < 0.05 \). In contrast, the reason ‘important for my infant’s independence’ was cited by 47% of the fathers of solitary sleepers but by only one father in each of the other sleep groups, \( \chi^2 (2) = 6.43, p < 0.05 \).

**Fathers’ satisfaction with sleep arrangements**

We assessed fathers’ satisfaction over time using change scores from two time points (see Table 4). Fathers across the three sleep groups differed in their satisfaction levels, \( F(2, 35) = 21.19, \eta_p^2 = 0.55, p < 0.001 \). Fathers of reactive co-sleepers reported a considerable decrease in their satisfaction \((M = -2.50)\), whereas fathers of early co-sleepers \((M = 0.15)\) and solitary sleepers \((M = 0.05)\) reported little change in their satisfaction (see Figure 2) (Games-Howell post hoc, \( p’s < 0.01 \)).

<table>
<thead>
<tr>
<th>Sleep groups</th>
<th>Solitary sleepers ( M (\text{S.D.}) )</th>
<th>Reactive co-sleepers ( M (\text{S.D.}) )</th>
<th>Early co-sleepers ( M (\text{S.D.}) )</th>
<th>Post hoc</th>
<th>( F (\text{df}) )</th>
<th>Tests(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers</td>
<td>( 0.53 (0.40) )</td>
<td>( -2.50 (1.22) )</td>
<td>( 0.15 (1.21) )</td>
<td></td>
<td>( F(2, 35) = 21.19 )</td>
<td>R&gt;S, EC(^{**})</td>
</tr>
<tr>
<td>Change in satisfaction over time for sleep location</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes–bedsharing</td>
<td>2.51 (0.77)</td>
<td>2.44 (0.51)</td>
<td>3.51 (1.09)</td>
<td></td>
<td>( F(2, 32) = 3.79 )</td>
<td>EC&gt;S(^{**})</td>
</tr>
<tr>
<td>Attitudes–solitary sleeping</td>
<td>4.31 (0.63)</td>
<td>4.50 (0.47)</td>
<td>3.60 (0.69)</td>
<td></td>
<td>( F(2, 32) = 4.00 )</td>
<td>EC&lt;(S )</td>
</tr>
<tr>
<td>Problems with child’s sleep behaviours</td>
<td>2.13 (0.94)</td>
<td>3.56 (0.98)</td>
<td>2.47 (0.88)</td>
<td></td>
<td>( F(2, 35) = 5.38 )</td>
<td>R&gt;S(^{**}), R&gt;EC(^\dagger)</td>
</tr>
<tr>
<td>Marital quality (Braiker &amp; Kelley)</td>
<td>5.62 (0.75)</td>
<td>5.39 (1.01)</td>
<td>5.85 (0.64)</td>
<td></td>
<td>( F(2, 35) = 0.82 )</td>
<td></td>
</tr>
<tr>
<td>Spousal role satisfaction</td>
<td>3.37 (0.55)</td>
<td>2.75 (0.52)</td>
<td>3.42 (0.42)</td>
<td></td>
<td>( F(2, 34) = 4.02 )</td>
<td>R&lt;S, EC(^{\dagger})</td>
</tr>
<tr>
<td>Involvement in caregiving (%)</td>
<td>29.47 (14.90)</td>
<td>35.00 (21.45)</td>
<td>25.38 (21.36)</td>
<td></td>
<td>( F(2, 35) = 0.58 )</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with parent role</td>
<td>3.37 (0.68)</td>
<td>2.83 (0.98)</td>
<td>3.54 (0.52)</td>
<td></td>
<td>( F(2, 35) = 2.20 )</td>
<td></td>
</tr>
<tr>
<td>Parenting commitment</td>
<td>4.30 (0.53)</td>
<td>4.20 (0.68)</td>
<td>4.26 (0.55)</td>
<td></td>
<td>( F(2, 35) = 0.07 )</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) S, solitary sleepers; R, reactive co-sleepers; EC, early co-sleepers.

\(^{\dagger}\) \( p < 0.05 \), \(^{**}\) \( p < 0.01 \), \(^{\dagger}\) \( p = 0.07 \).
Fathers’ attitudes towards sleep arrangements

We examined the relation between sleep groups and fathers’ attitudes towards sleep arrangements (see Table 4). Fathers’ age was not significantly correlated with sleep attitudes. On the other hand, fathers’ ethnicity was; therefore, we controlled for this variable when comparing sleep attitudes between European Americans and fathers from other ethnicities. Results from ANCOVA indicated that fathers differed across sleep groups in their attitudes towards bedsharing, $F(2, 32) = 3.79, \eta^2_p = 0.19, p < 0.05$, such that fathers of early co-sleepers held more favourable attitudes towards bedsharing ($M = 3.51$) compared to fathers of solitary sleepers ($M = 2.51, p < 0.05$), but did not differ significantly from fathers of reactive co-sleepers ($M = 2.44, ns$).

The association between fathers’ attitudes towards solitary sleeping and sleep groups also was significant, $F(2, 32) = 4.00, \eta^2_p = 0.20, p < 0.05$. Fathers of solitary sleepers held more favourable attitudes towards solitary sleeping ($M = 4.31$) compared to fathers of early co-sleepers ($M = 3.60, p < 0.05$), but did not differ significantly from fathers of reactive co-sleepers ($M = 4.50, ns$).

Fathers’ problems with child’s sleep behaviours

Fathers in the various family sleep arrangements differed in how problematic they viewed their child’s sleep behaviours from infancy through preschool age, $F(2, 35) = 5.38, \eta^2_p = 0.24, p < .01$. As expected, fathers of reactive co-sleepers reported experiencing more problems with their child’s sleep ($M = 3.56$) than did fathers of solitary sleepers ($M = 2.13, p < 0.01$) and tended to differ from early co-sleepers ($M = 2.47, p = 0.07$).

Fathers’ marital quality and sleep arrangements

Fathers in the three sleep groups differed in their spousal role satisfaction, $F(2, 34) = 4.02, \eta^2_p = 0.19, p < 0.05$. Fathers of reactive co-sleepers were least satisfied with their spousal role ($M = 2.75$) compared to fathers of early co-sleepers ($M = 3.42$) and solitary sleepers ($M = 3.37$) ($p’s < 0.05$). Also, fathers who reported relatively small changes in their satisfaction over time tended to report greater satisfaction in their spousal role, $r = 0.31, p = 0.07$, but not in their marital quality, $r = 0.04, ns$. Fathers across sleep groups also did not differ on the
Braiker and Kelley (1979) marital quality scale, $F(2,35) = 0.82$, ns. Furthermore, fathers’ attitudes towards sleep arrangements were not significantly related to any of the marital variables ($r$’s ranged from $-0.10$ to $0.08$, ns) (see Table 4).

Within the marital domain, fathers who reported greater marital quality also indicated more satisfaction with their spousal role, $r = 0.59$, $p < 0.001$. Fathers’ report of problems with their child’s sleep behaviours was inversely related to aspects of their marital relationship (see Table 5). As sleep issues were experienced as more problematic, fathers’ report of satisfaction with their spousal role declined, $r = -0.49$, $p < 0.01$. Additionally, fathers who experienced more problems with their child’s sleep also tended to report lower marital quality, $r = -0.31$, $p = 0.06$.

**Fathers’ parenting and sleep arrangements**

Sleep group arrangements were not significantly associated with fathers’ parenting commitment, $F(2,35) = 0.07$, fathers’ parental role satisfaction, $F(2,35) = 2.20$, or with fathers’ level of involvement in their child’s care, $F(2,35) = 0.58$, all $p$’s > 0.05.

Fathers’ change in satisfaction over time was associated with fathers’ satisfaction in their parent role, $r = 0.36$, $p < 0.05$ but not with fathers’ commitment to parenting ($r = 0.06$, ns). There were no significant associations between fathers’ attitudes towards sleep arrangements and any of the parenting variables, $r$’s = $-0.05$ to $0.20$, ns (see Table 5). However, there were several significant correlations among aspects of fathers’ family life. Fathers’ commitment to parenting was positively associated with their satisfaction in their role as a parent ($r = 0.33$, $p < 0.05$). In turn, fathers who reported greater satisfaction with their parental role also reported greater satisfaction with their spousal role ($r = 0.48$, $p < 0.01$).

**DISCUSSION**

This study provides the first full-scale examination of both mothers’ and fathers’ attitudes and experiences of co-sleeping and other sleep arrangements during the early years of their child’s life. Our findings indicate that fathers and mothers
hold similar views about nighttime parenting. Family sleep arrangements, previously considered the sanction of mothers, emerge as a family matter in which fathers also hold attitudes and beliefs that relate to their satisfaction with their family’s sleep situation. Additionally, sleep matters are not isolated from other domains of family life, but instead are related to aspects of marital quality and parenting for both mothers and fathers.

**Reasons for Sleep Arrangements**

The first aim of our study was to examine the context of family sleep by elucidating the reasons behind mothers’ and fathers’ family sleep arrangements as well as their satisfaction with their endorsed sleep arrangement. The reasons that surfaced in separate samples of mothers and fathers with respect to their child’s sleep arrangements at 12 months were remarkably similar. The types of reasons varied by sleep group classification in both samples. However, the quality of sleep for family members was a similar concern across sleep groups. The vast majority of mothers and fathers indicated that their sleep arrangement was beneficial for their own, and their child’s quality of sleep.

Differences by sleep groups emerged for beliefs about the consequences of family sleep arrangements for children. A large proportion of mothers and fathers of solitary sleepers viewed this arrangement as important for their child’s independence, a belief that has been reported in other studies (e.g. Morelli, Rogoff, Oppenheim, & Goldsmith, 1992) and reputed in the recommendations of paediatric sleep experts (e.g. Ferber, 1985). However, the extant empirical evidence indicates that solitary sleeping in the first year is related to independence in sleep behaviours, but not to independence in other domains, such as self-care and peer relations during preschool (Keller & Goldberg, 2004). Parents who choose solitary sleeping out of concern about compromising their child’s overall independence might benefit from empirically based information about the types of independent behaviours that are related to solitary and co-sleeping arrangements.

A majority of early co-sleeping fathers and early bedsharing mothers indicated physical proximity and emotional closeness as reasons for sleeping together with their child. In addition, a sizable number of mothers of early bedsharers and early co-sleepers noted that their child’s safety was a reason for their sleep arrangement, whereas mothers of solitary sleepers and reactive co-sleepers less frequently cited child safety. These findings are especially interesting in light of the ongoing controversy over the safety of bedsharing (AAP Task Force on Sudden Infant Death Syndrome, 2005; Brenner et al., 2003; McKenna, 2000; McKenna & Volpe, 2007). Our sample of middle-class mothers, along with parents in several other recent studies (Ball, 2002; McKenna & Volpe, 2007), see co-sleeping as a sleep arrangement that promotes infant safety. Of course, to prevent SIDS or entrapment, parents need to be informed that bedsharing must be practiced in a manner that is safe, which excludes, for example, heavy blankets, parental intoxication, smoking, or soft mattresses/couches (Willinger et al., 2003).

**Satisfaction with Sleep**

The stability of satisfaction with family sleep arrangements was examined through retrospective accounts over the period of time from 12 months to
preschool age. A similar, highly satisfied, stable pattern was apparent for mothers of solitary sleepers and early bedsharers and for fathers of solitary sleepers and early co-sleepers, but satisfaction for mothers and fathers of reactive sleepers waned over time. Mothers of early co-sleepers had lower mean levels of satisfaction and a slight but non-significant decline over time. These findings suggest that parents who affirm and continue to practice their preferred sleep arrangements are more likely to remain satisfied. However, changes or instability in family sleep arrangements, which define the reactive group, may produce dissatisfaction, especially if the newly adopted sleep arrangement runs counter to parents’ preferred sleep arrangement. Although the change scores for satisfaction were not collected prospectively, the fact that similar patterns were apparent in both samples supports the plausibility of this interpretation and the validity of the decline in satisfaction. However, it could be that parents who were currently dissatisfied with their child’s sleep arrangement may have recalled previous sleep arrangements as more satisfying than was actually the case. Prospective studies are needed to address this alternative explanation.

Sleep Attitudes

As expected, family sleep arrangements and parents’ attitudes towards co-sleeping and solitary sleeping were consistent for both the co-sleeping and solitary sleeping groups. A notable exception emerged for parents of reactive co-sleepers. Mothers of reactive co-sleepers held rather paradoxical views in that they held favourable attitudes towards both solitary sleeping and bedsharing. In contrast, fathers of reactive co-sleepers were polarized in their attitudes such that they most favoured solitary sleeping arrangements and least favoured bedsharing. If the differences between our mothers and fathers are typical of married couples, there could be conflict when one parent holds more amenable attitudes towards alternative sleep arrangements compared to the other parent. It is of course possible that individuals who are more flexible in their attitudes towards parenting have partners who are similarly flexible, thus minimizing the conflict that can occur. Intra-couple research would be useful to address the consequences of dyadic disparity in attitudes towards family sleep arrangements.

Child’s Sleep Behaviors

Problems with children’s sleep behaviours, such as parents’ loss of sleep, decreased marital intimacy resulting from sleep arrangements, and child’s bedtime struggles, were a concern for both mothers and fathers. In the sample of mothers, the type of sleep arrangement was unrelated to the extent of reported sleep problems. However, fathers of reactive co-sleepers reported experiencing more problems with their child’s sleep behaviours than fathers in the other sleep groups. These latter findings are consistent with those of Ramos et al. (2007), who found that parents of reactive co-sleepers report more problems with their child’s sleep behaviours than parents in other sleep arrangements. In the current study, parental sleep-related attitudes and satisfaction were distinct for the reactive group. Mothers of reactive co-sleepers favoured both co-sleeping and solitary sleep arrangements. Mothers and fathers in the reactive group were less satisfied over time compared to parents of solitary sleepers and early co-sleepers.

These differences corroborate the call to distinguish reactive co-sleeping from other forms of co-sleeping when studying family sleep arrangements.
Parents who end up sharing their bed during the child’s second or third year after a period of solitary sleeping often are responding to their child’s sleep problems, and are turning to co-sleeping as palliative. For these parents, co-sleeping is ‘...likely to yield only a temporary respite from the problem and may set the stage for more significant sleep issues’ (Owens & Witmans, 2004, p. 156). Given the sleep-related attitudinal differences voiced by the mothers and fathers of reactive co-sleepers in our samples, co-sleeping in response to a child’s sleep problem may generate a source of conflict for spouses who do not share the same attitudes about bedsharing.

**Sleep Arrangements and Family Life**

Another aim of our study was to examine aspects of family life in relation to family sleep arrangements. Associations with marital quality and parenting were found for children’s sleep behaviours, sleep groups, and parents’ sleep attitudes. When parents perceived problems around their children’s sleep, associations were found with several aspects of family life. Mothers and fathers reported lower marital quality, and fathers also reported less spousal role satisfaction, as they experienced more problems with their child’s sleep behaviours. Mothers also reported more depressive symptoms and less partner support for their parenting as child sleep problems increased. These associations may reflect a ‘spill-over effect’ in which problems with children’s sleep behaviours carry over to other areas of family life, creating tension between mothers and fathers. The reverse path is also possible: conflict between parents could negatively affect parent–child interaction, thus creating stress for their children. The expression of this stress may manifest itself in bedtime struggles and other sleep difficulties for children, resulting in loss of sleep for parents.

Sleep groups were not related to marital quality or parenting, with the exception of men’s spousal role satisfaction. The reactive co-sleeping group reported lower satisfaction with their spousal role. The lack of differences between the solitary sleeping and early co-sleeping groups may speak of the importance of consensus between fathers’ attitudes towards sleep and their endorsement of their respective sleep arrangement. Thus, when fathers’ preferred family sleep arrangement is in concert with their partners’ expectations, there may be less conflict over this domain of parenting and they may feel a greater sense of mutuality in the marital dyad and in the family. However, problems can arise for reactive co-sleeping families when there is a lack of consensus between parents and their preferred sleep arrangements.

Attitudes towards sleep arrangements were associated with several marital and parenting measures for mothers, but not for fathers. Mothers who felt more favourably towards bedsharing also reported more satisfaction with their partners’ contributions to the household division of labour and had higher levels of parenting commitment than mothers who favoured solitary sleeping. Mothers who favoured bedsharing were not likely to cite the quality of fathers’ sleep as a reason for their sleep arrangement whereas mothers who affirmed solitary sleeping were more likely to endorse this reason. Perhaps mothers of bedsharers feel more supported by their partner because this sleep arrangement requires the active cooperation of both parents and a joint commitment to nighttime parenting. The lack of significant findings between fathers’ sleep attitudes and family life measures may be due to the small sample size, which...
affected the power in the analyses. The constellation of associations in the mother sample suggests that it would be promising to continue this line of inquiry with a larger sample of fathers.

In our study, within the arena of family life, aspects of marital quality and parenting were related for both mothers and fathers. Mothers’ greater marital intimacy was positively related to their parenting commitment as well as associated with their greater satisfaction with the division of household labour and more partner support for parenting. Fathers’ greater marital quality was positively related to their satisfaction with their spousal role, which in turn was related to fathers’ satisfaction in their parent role. These findings confirm previous research, which indicates that high marital quality accompanies positive parenting attitudes and behaviours (Corwyn & Bradley, 1999; Goldberg & Easterbrooks, 1984), whereas marital conflict covaries with more negative parenting (Coiro & Emery, 1998; Dickstein & Parke, 1988).

Limitations

A major limitation was the relatively small number of fathers in the present study. Given the demographic homogeneity and small size of our father sample, particularly in the reactive sleep group, our findings should be interpreted as exploratory and in need of replication. The larger size of our mother sample, however, did allow a fuller examination of distinct sleep groups, and points to the utility of differentiating among types of co-sleeping arrangements. Although the number of co-sleepers in our father sample was smaller than the mother sample, the fact that results from these two separate samples closely mirrored each other lends support to the validity of the distinctions within these sleep groups in both samples.

As with other cross-sectional studies, we are precluded from drawing inferences about causality. The fact that there was consensus between two independent samples on similar topics substantiates the reliability of the results, but the research questions would benefit from examination in a prospective, longitudinal design. Although marital and parenting roles and relationships were examined in the current study, other aspects of family life that might impinge on sleep and be affected by sleep, such as parental employment, were not included. It may be that aspects of parents’ employment interact with marital and parental roles and that these interactions are associated with differences in types and satisfaction with family sleep arrangements.

CONCLUSION

Family sleep arrangements are a complex and integral part of family life and are embedded in a larger system that includes child characteristics and cultural beliefs and values (Latz et al., 1999; Okami et al., 2002; Rothrauff et al., 2004). Our study set out to examine mothers’ and fathers’ experiences in nighttime parenting. Mothers and fathers endorsed remarkably similar reasons for their family sleep arrangements. Satisfaction with sleep arrangements over time was more likely for mothers and fathers in long-term solitary or co-sleeping arrangements and less likely for reactive co-sleepers. Fathers who experienced more problems with their child’s sleep behaviours reported disharmony in several areas of marital relations.
As with other studies on family sleep arrangements, our findings point to the
tfact that sleep arrangements are a multi-faceted issue for contemporary families.
Our exploratory findings do not suggest a unique role for fathers in family sleep-
related matters; nonetheless, they do indicate that fathers’ preferences and
attitudes are important considerations, and sleep issues are interrelated with
other aspects of fathers’ family life. Future studies of nighttime parenting should
include fathers as well as mothers.

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Notes

1. Although early co-sleepers and reactive co-sleepers had the same mean value,
the standard deviation of early co-sleepers was 1.5 times greater than that of
reactive co-sleepers.
2. When partner support was controlled, there remained a significant association
between mothers’ depressive symptoms and sleep issues. Mothers’ depressive
symptoms were not significantly related to the child’s sleep issues when
marital quality was controlled.
3. Analyses using the $3 \times 2$ chi-square analyses produced quite a number of cells
with low expected values. Thus, we also conducted $2 \times 2$ chi-squares and,
when needed, Fisher’s Exact tests. For these analyses, we combined solitary
and reactive co-sleepers groups, as children in both groups were solitary
sleepers at 12 months, and compared these children to early co-sleepers. These
$2 \times 2$ analyses confirmed the reported significant differences in the $3 \times 2$ chi-
square analyses except in one instance. For purposes of comparison with the
mother survey and to present descriptive differences among the three sleep
groups, we present only the $3 \times 2$ chi-square results in the text.

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