Cosleeping in Context

Sleep Practices and Problems in Young Children in Japan and the United States

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Objective: To determine the relationship between cosleeping and sleep problems in cultures with very different sleep practices.

Design: Interview study.

Setting: Families in urban Japan and the United States identified through pediatric and other professional contacts.

Participants: Parents of healthy 6- to 48-month-old children (56 Japanese parents and 61 white US parents). All children had been breast-fed and lived in 2-parent, middle-class households.

Intervention: None

Main Outcome Measure: Sleep practices and sleep problems.

Results: More Japanese than US children coslept 3 or more times per week (59% vs 15%, P < .001). Japanese children regularly slept all night with their parents (vs 11% of US cosleepers, P < .001). Japanese and US children did not differ in part-night cosleeping (7% vs 13%, P = .37). Most Japanese children had adult company and body contact as they fell asleep, and fathers slept separately in 23% of families. A greater proportion of US children had regular bedtime struggles and night waking. Within the US sample, cosleeping was associated with more bedtime struggles (P < .001), night waking (P < .01), and overall stressful sleep problems (P < .01). In the Japanese sample, cosleeping was associated only with night waking (P < .05); however, the proportion of cosleeping Japanese children with frequent night waking was at the level reported for US children who slept alone (30% vs 23%, P = .47).

Conclusions: Cultural differences seem to influence the relationship between sleep practices and sleep problems. The experience of the Japanese families indicates that cosleeping per se is not associated with increased sleep problems in early childhood.


Editor's Note: This study nicely shows how culture influences behavior. Since the world has grown so small, we need to keep that in mind when making judgments about "normality."
Catherine D. DeAngelis, MD

From A Professional Corporation, Pacific Palisades, Calif (Dr Latz); the Department of Psychiatry, MetroHealth Medical Center, Case Western Reserve University School of Medicine, Cleveland, Ohio (Dr Wolf); and the Department of Pediatrics and Communicable Diseases and the Center for Human Growth and Development, University of Michigan, Ann Arbor (Dr Lozoff).
MATERIALS AND METHODS

SAMPLE SELECTION

The Japanese data were collected in 1983 as a medical student summer project for one of us (S.L.). To meet the challenges of conducting research in Japan as a foreigner in a limited period, the sample was enrolled through personal introductions from professional contacts in and around Tokyo. The characteristics of this Japanese sample dictated which US families who participated in the coauthors’ studies4,13 from the same period in the greater Cleveland area would be appropriate in the comparison group. To match the ethnic homogeneity of the Japanese group, the near-universal presence of a father in the home, and breast-feeding, we selected from the US samples all those white children from 2-parent families who had been breast-fed. Fifty-six Japanese children and 61 US white children met the selection criteria; all were healthy children between 6 and 48 months of age who had been breast-fed and who lived in 2-parent households.

The Japanese sample in general would be considered “new middle class.”14 In contrast to the old Japanese middle class, in which a family business was often operated from the home and involved both parents, fathers in the new middle class are mostly salaried, managerial-level employees or professionals who work away from home, often with long work weeks. The highly educated fathers in our sample averaged 80 to 100 hours per week away from home. The US sample was middle-class to upper middle-class white families with college-educated parents who had managerial and professional occupations. Fathers averaged 43 to 53 hours per week away from home.

Table 1 compares demographic variables in the US and Japanese samples. The samples were similar with respect to the age, sex, and birth order of the children, the number of household members, the mother’s education level (averaging at least some college study), and the percentage of working mothers. The groups differed in other respects. On average, the Japanese children were breast-fed for a shorter period, lived in houses with fewer rooms and greater household density (ie, the number of family members per room), were more likely to have a grandparent in the home, and had fathers with somewhat more education (even though a college-level education was normal in both samples).

PROCEDURE

The same interview protocol was used for both the US and Japanese samples; it focused on actual happenings in the month preceding the interview.4,15 The US interviews were conducted by an experienced social worker at routine pediatric appointments for well children and averaged 45 minutes. Two independent coder-raters coded the responses with 95% agreement. Japanese mothers were interviewed in their homes by one of us (S.L.) and an experienced Japanese translator for an average of 1 hour, 15 minutes. The Japanese interviewer coded responses independently of the US coder-raters. The few disagreements were discussed and resolved to yield the final codes for data analysis.

DATA ANALYSIS

The statistical approach was influenced by several considerations. We wished to assess differences between cultures and between cosleeping and non-cosleeping families, and the interaction of culture and cosleeping within the same statistical analysis for each outcome measure or background variable. Thus, the models contained 2 factors—culture and cosleeping—and their interaction. Most variables of interest were categorically distributed, but some had continuous distributions. To employ comparable analytic techniques for both types of variables, we analyzed variables with continuous distributions by analysis of variance and those with categorical variables by log-linear analysis, using the models specified above. In reporting results, differences between the US and Japanese samples are discussed first, followed by differences between

RESULTS

COSLEEPING

Cosleeping was more common in the Japanese sample in terms of both the proportion of children who coslept and the extent of cosleeping when it occurred (Figure 2). With respect to regular cosleeping (either all night or part night), more Japanese children coslept 3 or more times per week in the month prior to the interview (59% vs 15% of the US children, Fisher 2-tail exact test: P < .001). All cosleeping Japanese children regularly slept all night with the parents, compared with only 11% of US children (Fisher 2-tail exact test: P < .001). Japanese and US samples did not differ in terms of part-night cosleeping (7% vs 13%, Fisher 2-tail exact test: P = .37).

FAMILY CHARACTERISTICS AND RELATIONSHIPS TO COSLEEPING

Cosleeping, regardless of nationality, was associated with certain family characteristics. Children who coslept were 7 months older than non-cosleepers, on average (F1, 113 = 10.3, P < .01). The number of people in the household was greater among cosleeping than non-cosleeping families (F1, 113 = 8.5, P < .01); however, neither household density nor the presence of grandparent(s) in the home differentiated cosleeping from non-cosleeping families within a given sample. That is, US cosleepers and non-cosleepers were similar with respect to household density and grandparental presence; Japanese cosleepers and non-cosleepers also did not differ on these factors. All grandparents in both samples slept in their own rooms.

The gender of cosleeping children varied as a function both of nationality and cosleeping. Sixty-one percent of Japanese cosleeping children were girls, compared with 35% of Japanese non-cosleepers. This differed significantly from the United States (log-linear χ2 = 4.7,
non-cosleepers and cosleepers, and, finally, the interaction of cosleeping and culture. Unless otherwise indicated, all χ² values refer to results of log-linear analyses.

The measures central to our cross-cultural comparison are described below.

**Sleep Practices**

Questions about parental management of a child’s sleep concerned the most frequently recommended approaches in the US child-care literature, as typified by Spock and echoed by other authorities. The study coded data on the following practices: setting a regular time for bed, establishing a bedtime routine, having the child fall asleep alone, handling bedtime protests and night waking firmly, not offering a bottle in bed, locating the child’s bed outside the parental bedroom, and refraining from cosleeping for all or part of the night.

**Cosleeping**

We defined cosleeping as parents and children sleeping in body contact with each other. In the Japanese sample, there was widespread use of the futon, traditional bedding that is rolled out at night in the family sleep area. To help us evaluate parent-child body contact during the night, we specifically asked mothers whether child and parent(s) were in body contact (rather than lying near each other on a futon) and whether they were asleep. We also asked mothers to sketch the sleeping arrangements. Common arrangements in the Japanese sample are shown in Figure 1.

We questioned mothers about cosleeping in terms of the number of nights it occurred in the preceding month and the average number of hours of cosleeping per night. We categorized cosleeping as absent, rare (cosleeping only in extraordinary circumstances), occasional (more than once a month but less than 3 times a week for all or part of the night), regular part night (3 or more times a week for part of the night), and regular all night (3 or more times a week for all of the night). To make the analyses similar to other studies, children who coslept occasionally or in extraordinary circumstances were grouped with non-cosleepers. Children who coslept regularly (all night or part of the night) were considered to be cosleepers. We also considered the child’s usual sleeping place, that is, a separate room, in the same room as the parents but with a separate bed or bedding, or in the parental bed. For each arrangement we also considered the presence of siblings.

**Sleep Problems**

We framed the definition of sleep problems in neutral terms as the frequency of unwanted behaviors at bedtime and during the night. Interview questions were phrased so that a mother could express dissatisfaction without calling her child’s behavior a “problem.” We asked our subjects such questions as: “How often did your child wake you up at night during the past week?” “A lot of young children don’t like going to bed. What about (child’s name)?” “What would you like to be different about your child’s sleep habits?” Mothers in both cultures appeared comfortable in answering these questions, but the possibility of underreporting, perhaps especially in the Japanese sample, must be kept in mind.

The raters coded the reported frequency and severity of 2 behaviors—bedtime protests and night waking. Information was elicited on awakenings that involved the parents, not simply on the normal arousals at transitions between rapid eye movement and non–rapid eye movement sleep. All-night video recordings have shown that parents are accurate in reporting the frequency of night waking that involves them. An overall sleep problem was considered to be present if bedtime protests and/or night wakings occurred regularly (3 or more nights per week), accompanied by distress or conflict for child or parents. Because of the difficulty in interpreting the degree of distress reported by mothers in very different cultures, we emphasize analyses of problematic sleep behaviors simply by regularity of occurrence.

P<.05), which showed a reverse distribution (33% of cosleepers were girls, compared with 58% of non-cosleepers).

**OTHER SLEEP PRACTICES**

The US and Japanese samples differed in the approach to children’s sleep in other respects. More US children did not have a regular bedtime (16% vs 9% among the Japanese, log-linear χ² = 3.7, P<.05). A greater proportion of Japanese children had adult contact at bedtime (68% vs 16% in the US sample, log-linear χ² = 11.8, P<.001) and fell asleep in body contact with an adult (64% vs 13% of US children, log-linear χ² = 13.6, P<.001).

United States families were more likely to offer body contact other than cosleeping when children woke at night (61% vs 9% among Japanese families, log-linear χ² = 6.6, P<.01) (Table 2).

Some sleep practices of cosleeping families differed from those of non-cosleepers regardless of nationality. Children who coslept were more likely to have adult company at bedtime (69% vs 25% of non-cosleepers, log-linear χ² = 9.0, P<.01) and to fall asleep in body contact with an adult (67% vs 21% of non-cosleepers, log-linear χ² = 9.5, P<.01).

Some relationships between cosleeping and sleep practices varied by culture. United States children who coslept were more likely to fall asleep outside their own bed (67% vs 6% of non-cosleepers), a pattern rarely observed among the Japanese (3% among cosleepers vs 9% among non-cosleepers, log-linear χ² = 8.7, P<.01). A greater proportion of cosleeping than non-cosleeping US children fell asleep with adult company at bedtime (56% vs 10%), but in the Japanese sample, most children had adult company when falling asleep regardless of cosleeping (73% among cosleepers vs 61% among non-cosleepers, log-linear χ² = 3.7, P<.05). Typically, Japanese mothers reported that they lay down with their young child until the child fell asleep and then got up for the rest of the evening.

There were other noteworthy differences. While nearly all US children slept in beds, most Japanese children (88%) slept on futons. Sixty-two percent of the US children had their own bedroom, 33% had their own bed.
in a room shared with a sibling(s), 2% shared a bed with a sibling, and only 3% had their bed in the parents’ room. In contrast, 68% of the Japanese children had a bed or futon in the parental bedroom, 18% had their own bedroom, and 14% shared a room with a sibling. Japanese children were thus much more likely to have their bed or futon in the parental bedroom (68% vs 3% of the US sample, log-linear $x^2 = 18.8, P < .001$). Almost all Japanese children with a bed or futon in the parental bedroom slept in body contact with parents during the night.

Another striking difference was that Japanese parents did not necessarily sleep in the same room. The father slept separately in 23% of the families in the Japanese sample, a pattern not reported in any of the US families. Only 29% of the Japanese families reported the typical US sleeping arrangement of a parental bedroom consisting solely of bed(s) for mother and father.

**SLEEP PROBLEMS**

Data on the associations between regular cosleeping and sleep problems are reported in Table 3, using log-linear modeling. A greater proportion of US than Japanese families reported that the child had frequent bedtime protests (26% vs 20%, log-linear $x^2 = 5.6, P < .05$), regular night waking (30% vs 20%, log-linear $x^2 = 5.6, P < .01$), or an overall stressful sleep problem (25% vs 13%, log-linear $x^2 = 7.4, P < .01$). Across samples, children who regularly coslept had a higher proportion with bedtime protests (36% vs 16%, log-linear $x^2 = 9.6, P < .01$), regular night waking (38% vs 17%, log-linear $x^2 = 9.6, P < .01$), and overall stressful sleep problems (29% vs 13%, log-linear $x^2 = 7.9, P < .01$). However, there was a suggestive trend that the association of regular cosleeping and bedtime struggles varied as a function of culture ($x^2 = 3.2, P < .07$). Therefore, the associations between cosleeping and sleep problems were further examined to determine the strength of association using Fisher 2-tail exact test analyses in pairwise comparisons.

Cosleeping was associated with more bedtime protests, night waking, and overall stressful sleep problems in the US sample but only with increased night waking in the Japanese sample—at a level similar to that observed in the US sample.

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**Table 1. Association of Background Variables With Culture, Cosleeping, and Interaction of Cosleeping and Culture**

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>United States</th>
<th>Japan</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. in sample</td>
<td>61</td>
<td>56</td>
<td>75</td>
<td>42</td>
<td>52</td>
<td>9</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>Female, No. (%)</td>
<td>33 (54)</td>
<td>28 (50)</td>
<td>38 (51)</td>
<td>23 (55)</td>
<td>30 (58)</td>
<td>3 (33)</td>
<td>8 (35)</td>
<td>20 (61)*</td>
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<tr>
<td>Firstborn, No. (%)</td>
<td>30 (49)</td>
<td>29 (50)</td>
<td>42 (56)</td>
<td>16 (38)†</td>
<td>27 (52)</td>
<td>3 (33)</td>
<td>15 (65)</td>
<td>13 (39)</td>
</tr>
<tr>
<td>Grandparent(s) in home, No. (%)</td>
<td>2 (3)</td>
<td>11 (20)†</td>
<td>5 (7)</td>
<td>8 (19)</td>
<td>2 (4)</td>
<td>0 (0)</td>
<td>3 (13)</td>
<td>8 (24)</td>
</tr>
<tr>
<td>Mother employed outside home, No. (%)</td>
<td>16 (26)</td>
<td>11 (20)</td>
<td>19 (25)</td>
<td>8 (19)</td>
<td>14 (27)</td>
<td>2 (22)</td>
<td>5 (22)</td>
<td>6 (18)</td>
</tr>
<tr>
<td>Age, y‡</td>
<td>25.0 ± 10.6</td>
<td>30.3 ± 9.5</td>
<td>24.9 ± 10.7</td>
<td>32.3 ± 7.9†</td>
<td>23.5 ± 10.4</td>
<td>33.8 ± 7.2</td>
<td>28.1 ± 11.0</td>
<td>31.9 ± 8.1</td>
</tr>
<tr>
<td>Breast-feeding, mo‡</td>
<td>9.1 ± 5.3</td>
<td>6.1 ± 4.2§</td>
<td>8.0 ± 5.2</td>
<td>7.0 ± 4.7</td>
<td>9.0 ± 5.5</td>
<td>9.9 ± 4.1</td>
<td>5.8 ± 3.6</td>
<td>6.3 ± 4.6</td>
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<tr>
<td>Mother’s education, y‡</td>
<td>14.2 ± 2.4</td>
<td>14.6 ± 1.9</td>
<td>14.6 ± 2.1</td>
<td>14.2 ± 2.3</td>
<td>14.3 ± 2.3</td>
<td>14.0 ± 3.0</td>
<td>15.3 ± 1.5</td>
<td>14.2 ± 2.1</td>
</tr>
<tr>
<td>Father’s education, y‡</td>
<td>14.6 ± 2.9</td>
<td>16.0 ± 2.1</td>
<td></td>
<td>15.3 ± 2.5</td>
<td>15.3 ± 2.8</td>
<td>14.8 ± 2.7</td>
<td>13.4 ± 3.7</td>
<td>16.3 ± 1.6</td>
</tr>
<tr>
<td>No. in household‡</td>
<td>4.1 ± 1.0</td>
<td>4.2 ± 1.3</td>
<td>3.9 ± 1.0</td>
<td>4.6 ± 1.3§</td>
<td>4.1 ± 1.0</td>
<td>4.6 ± 1.0</td>
<td>3.6 ± 0.9</td>
<td>4.6 ± 1.3</td>
</tr>
<tr>
<td>No. of rooms in house‡</td>
<td>7.1 ± 2.3</td>
<td>4.9 ± 1.4</td>
<td>6.2 ± 2.1</td>
<td>5.7 ± 2.2</td>
<td>7.0 ± 2.0</td>
<td>7.9 ± 3.7</td>
<td>4.6 ± 1.3</td>
<td>5.2 ± 1.4</td>
</tr>
<tr>
<td>Household density¶</td>
<td>0.63 ± 0.02</td>
<td>0.86 ± 0.2</td>
<td>0.68 ± 0.2</td>
<td>0.85 ± 0.2</td>
<td>0.62 ± 0.2</td>
<td>0.66 ± 0.2</td>
<td>0.81 ± 0.2</td>
<td>0.9 ± 0.2</td>
</tr>
</tbody>
</table>

*P < .10.
†P < .05.
‡Values are mean ± SD.
§P < .01.
¶Number in household divided by number of rooms.

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**Figure 1.** Typical sleeping arrangements in Japanese families.

**Figure 2.** Cosleeping patterns in the US and Japanese samples.
among non-cosleeping US children. Graphic representations of these results focus on the frequency of problematic sleep behavior rather than the overall stressful sleep problem rating, given the difficulty in comparing degree of distress or conflict in different cultures. Figure 3 shows the relationship between regular cosleeping and bedtime struggles in the US and Japanese samples. Pairwise comparisons indicate that a higher proportion of US cosleepers had frequent bedtime struggles than Japanese cosleepers or non-cosleepers in either the United States or Japan. The proportion of Japanese cosleepers with frequent bedtime struggles was similar to that of non-cosleepers in both the United States and Japan. Figure 4 shows the relationship between regular cosleeping and night waking for the 2 samples. A higher proportion of US cosleepers had frequent night waking than any of the other groups. Japanese children who did not cosleep on a regular basis had a lower proportion of night waking than either the US non-cosleepers or Japanese cosleepers; the latter groups had a similar proportion with night waking.

Qualitative information also suggested cultural differences in mothers’ views of their child’s bedtime protests or night waking. Almost without exception, Japanese mothers identified “missing mother” as the cause of these behaviors and concluded that being with the child was the appropriate response. In contrast, most US mothers recognized the difficulties the child had regarding night-time separation but seemed certain that adjustment to separation was desirable. United States mothers more frequently reported upset and distress associated

Table 2. Association of Sleep Practices With Culture, Cosleeping, and Interaction of Cosleeping and Culture

<table>
<thead>
<tr>
<th>Sleep Practices</th>
<th>United States</th>
<th>Japan</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
<th>United States</th>
<th>Japan</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
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<tbody>
<tr>
<td>No. in sample</td>
<td>61</td>
<td>56</td>
<td>75</td>
<td>42</td>
<td>52</td>
<td>9</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>No regular time for bed, No. (%)</td>
<td>10 (16)</td>
<td>5 (9)</td>
<td>8 (11)</td>
<td>7 (17)</td>
<td>6 (12)</td>
<td>4 (44)</td>
<td>2 (9)</td>
<td>3 (9)</td>
</tr>
<tr>
<td>No bedtime routine, No. (%)</td>
<td>11 (18)</td>
<td>11 (20)</td>
<td>17 (23)</td>
<td>5 (12)</td>
<td>10 (19)</td>
<td>1 (11)</td>
<td>7 (30)</td>
<td>4 (12)</td>
</tr>
<tr>
<td>Child falls asleep out of bed, No. (%)</td>
<td>9 (15)</td>
<td>3 (5)</td>
<td>5 (7)</td>
<td>7 (17)</td>
<td>3 (6)</td>
<td>6 (67)</td>
<td>2 (9)</td>
<td>1 (3)†</td>
</tr>
<tr>
<td>Bed in parents’ room, No. (%)</td>
<td>2 (3)</td>
<td>38 (68)‡</td>
<td>12 (16)</td>
<td>28 (67)</td>
<td>2 (4)</td>
<td>0 (0)</td>
<td>10 (43)</td>
<td>28 (85)‡</td>
</tr>
<tr>
<td>Adult company at bedtime, No. (%)</td>
<td>8 (16)</td>
<td>38 (68)‡</td>
<td>19 (25)</td>
<td>29 (69)†</td>
<td>5 (10)</td>
<td>5 (56)</td>
<td>14 (61)</td>
<td>24 (73)†</td>
</tr>
<tr>
<td>Adult body contact at bedtime, No. (%)</td>
<td>8 (13)</td>
<td>36 (64)‡</td>
<td>16 (21)</td>
<td>28 (67)†</td>
<td>4 (8)</td>
<td>4 (44)</td>
<td>12 (52)</td>
<td>24 (73)†</td>
</tr>
<tr>
<td>Bottle in bed, No. (%)</td>
<td>12 (20)</td>
<td>5 (9)</td>
<td>13 (17)</td>
<td>4 (10)</td>
<td>11 (21)</td>
<td>1 (11)</td>
<td>2 (9)</td>
<td>3 (9)</td>
</tr>
<tr>
<td>Protests not firmly handled, No. (%)</td>
<td>32 (52)</td>
<td>40 (71)†</td>
<td>43 (58)</td>
<td>28 (67)</td>
<td>23 (44)</td>
<td>6 (71)</td>
<td>20 (88)</td>
<td>21 (65)†</td>
</tr>
<tr>
<td>Body contact (other than cosleeping)</td>
<td>37 (61)</td>
<td>5 (9)</td>
<td>41 (55)</td>
<td>6 (14)</td>
<td>34 (66)</td>
<td>3 (33)</td>
<td>3 (13)</td>
<td>2 (7)</td>
</tr>
<tr>
<td>for night waking, No. (%)</td>
<td></td>
<td></td>
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Table 3. Association of Sleep Problems With Culture, Cosleeping, and Interaction of Cosleeping and Culture

<table>
<thead>
<tr>
<th>Sleep Problems</th>
<th>United States</th>
<th>Japan</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
<th>United States</th>
<th>Japan</th>
<th>Non-cosleeping</th>
<th>Cosleeping</th>
</tr>
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<tbody>
<tr>
<td>No. in sample</td>
<td>61</td>
<td>56</td>
<td>75</td>
<td>42</td>
<td>52</td>
<td>9</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>Bedtime struggles ≥3 times per week, No. (%)</td>
<td>16 (26)</td>
<td>11 (20)†</td>
<td>12 (16)</td>
<td>15 (36)†</td>
<td>9 (17)</td>
<td>7 (78)</td>
<td>3 (13)</td>
<td>8 (24)†</td>
</tr>
<tr>
<td>Night waking ≥3 times per week, No. (%)</td>
<td>18 (30)</td>
<td>11 (20)†</td>
<td>13 (17)</td>
<td>16 (38)†</td>
<td>12 (23)</td>
<td>6 (67)</td>
<td>1 (4)</td>
<td>10 (30)†</td>
</tr>
<tr>
<td>Stressful sleep problems ≥3 times per week, No. (%)</td>
<td>15 (25)</td>
<td>7 (13)†</td>
<td>10 (13)</td>
<td>12 (29)†</td>
<td>9 (17)</td>
<td>6 (67)</td>
<td>1 (4)</td>
<td>6 (18)</td>
</tr>
</tbody>
</table>

*P<.05.
†P<.01.
‡P<.001.

Figure 3. Regular cosleeping and frequent bedtime protests. All significance values are based on the 2-tailed Fisher exact test. The proportion of children with bedtime protests 3 or more nights per week was significantly higher among US cosleepers than among the other groups (compared with Japanese cosleepers, P<.01; compared with US non-cosleepers, P<.001; compared with Japanese non-cosleepers, P<.001). The proportion of Japanese cosleepers with frequent bedtime protests was similar to that of Japanese and US non-cosleepers (P>.30).
with bedtime protests and night waking, although affect is hard to interpret across cultures.

What are the study’s major findings regarding the relationship between cosleeping and sleep problems in 2 industrial societies? The most striking finding is that the Japanese mothers noted so little night waking and bedtime protest in their cosleeping children. Even though cosleeping children reportedly awoke more often than solitary sleepers within the Japanese sample, the proportion of Japanese cosleeping children reportedly awoke more often than did US non-cosleepers (P < .05), but the proportion was similar to that of US non-cosleepers (P = .47). Fewer Japanese non-cosleepers showed frequent night waking than did US non-cosleepers (P < .05).

Our results confirm earlier observations that cosleeping is not an isolated aspect of a family’s approach to their child’s sleep. In both the US and Japanese samples, cosleeping was closely associated with parental presence and body contact at bedtime as well as during the night. This observation suggests that the concept of “sleep onset associations” may be useful across cultures. The concept is that infants, upon awakening at the normal rapid eye movement/non–rapid eye movement transitions during the night, need to reproduce the conditions at bedtime to return to sleep readily. Thus, if a young child falls asleep in body contact with a parent at bedtime, the child may have trouble returning to sleep after waking during the night unless the parent again offers his or her presence and body contact. The consistency with which Japanese parents in our study provided body contact at bedtime and their close proximity during the night may mean that their infants returned to sleep with minimal disruption of the parents’ sleep. In contrast, either parent or child had to get out of bed to achieve cosleeping in all but 1 of the US cosleeping families. This pattern seems inherently to entail more sleep disruption, especially if parents attempt to avoid or delay cosleeping or are resentful or ambivalent when it occurs.

Early work on the traditional Japanese approach to young children’s sleep sensitized the field to the possibility of cultural influence. Psychiatrist Takeko Doi was among the first to illuminate the unique quality of Japanese interpersonal dependency, identifying and translating the concept of amae (“the feeling of dependency coupled with the expectation of indulgence”). Amae helps in understanding some Japanese interpersonal relationships, of which the mother-child relationship is prototypical. The emphasis on amae dependency in Japanese childrearing contrasts with values in the United States, where parents try to foster early independence in their children.

The 2 cultures endow the child as an organism differently. In Japan, the infant is seen more as a separate biological organism who from the beginning, in order to develop, needs to be drawn into increasingly interdependent relationships. In America, the infant is seen more as a dependent biological organism who, in order to develop, needs to be made increasingly independent of others,22(p13)

Both cultures acknowledge that isolating a child at night is stressful but interpret the experience differently. In the United States, solitary sleep is thought to engender independence in children and ensure privacy for parents. These values supersede the child’s perceived need. United States values of self-reliance and self-assertion lead mothers to encourage more play with objects and more attention to the environment than is seen in Japan. Nighttime counterparts may be found in the use of pacifiers and transitional objects to encourage infants to fall asleep alone. The Japanese acknowledge the same developmental struggle with separation, but, in accord with the child’s need, emphasize the value of dependence as the primary socializing experience. The Japanese word for a common cosleeping arrangement demonstrates this value. “The custom of the child sleeping between the parents is referred to as kawa. Kawa is the Japanese character for a river flowing between 2 banks and kawa is therefore used to refer to the child sleeping between the protective support of the 2 parents.” Other cultures or subgroups seem to have a similar emphasis. Thus, the balance between interdependency and autonomy is a useful framework in considering cultural differences in childrearing practices.

Many other observations, both old and new, amplify the understanding of cultural differences in sleep practices (see Stevenson et al for many helpful recent reviews). Mother-child and mother-father bonds are given different emphasis within the family unit in different cultures. In Japan, the mother-child bond may be the most intimate family relationship, while in the United States, the marital bond is often considered preeminent. Marriage systems reflect this difference. Despite the increase in Japanese love marriages instead of traditional arranged marriages in recent years, marriage remains
a union of 2 families. In the United States, the romantic involvement of father and mother is primary, and family connections are often incidental. Sleep practices are clearly influenced by such cultural differences.

Demands of the workplace are also important. The long workday of the Japanese father limits contact with family members. Our observation that a quarter of Japanese fathers slept separately may indicate that they arrive home late, leave early, and expect uninterrupted sleep. This arrangement intensifies the intimacy of the mother-child relationship. Changes in modern Japan that diminish the influence of extended family and community also contribute to this intensification. Assumptions about mothering and the nature of children are additional factors that influence sleep practices. In recent decades, US mothers have taken jobs outside the home in increasing numbers and have had to balance the competing demands of children, husband, and career as a consequence. Although women are also entering the workforce in Japan, the traditional Japanese woman has made motherhood a top priority.

The Japanese approach to engaging the child in cultural goals, such as interconnectedness and good behaviors, is “never go against the child,” a reflection of the high cultural value placed on harmonious relationships. Regardless of whether Japanese infants are more irritable, a point of some controversy, temperamental differences, close body contact, and limited time away from the mother may influence the nature of infant attachment in Japan such that even brief separations could produce considerable distress. Japanese mothers are always held responsible for their young infant’s unhappiness, whether it is expressed in sickness, fussing, or crying. To avoid criticism by husband and neighbors, Japanese mothers do whatever is possible to keep the infant calm and happy and, thereby, avoid disturbing others.

One way to prevent or reduce infant irritability may be to increase body contact. In fact, the Japanese consider a great deal of body contact and affection optimal for young children. This emphasis extends beyond the family: Japanese children in day-care centers nap in close proximity to each other, and day-care providers often lie down to pat and soothe them until they sleep. These approaches are uncommon in the United States and, in some states, may be illegal.

There are important cautions to consider in such cross-cultural research. For instance, we used the same definition of regular cosleeping for both samples, but the families’ actual behavior differed by culture. One hundred percent of regularly cosleeping Japanese children slept in body contact with their parents all night, every night. In contrast, only 11% of regularly cosleeping US children did so. Thus, regular cosleeping, though defined in a uniform way, represented a different pattern of sleep behavior in the 2 cultures. Furthermore, the outcome measures in our study focused solely on night waking and bedtime protest in early childhood. The study does not address the possibility of problematic correlates of cosleeping later on.

Our samples were necessarily restricted. As the Japanese sample was obtained in the course of a brief medi-
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