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Stephen M. Weimer, Theresa L. Dise, Patrice B. Evers, Myriam A. Ortiz, Wodajo Welidaregay and William C. Steinmann

Clin Pediatr (Phila) 2002; 41: 433
DOI: 10.1177/000992280204100609

The online version of this article can be found at: http://cpj.sagepub.com/cgi/content/abstract/41/6/433
Prevalence, Predictors, and Attitudes Toward Cosleeping in an Urban Pediatric Center

Stephen M. Weimer, MD1,2  
Theresa L. Dise, MD1,2  
Patrice B. Evers, MD1,2  
Myriam A. Ortiz, MD1,2  
Wodajo Welldaregay, DrPH2  
William C. Steinmann, MD2

Summary: Cosleeping is the normative practice in many of the world’s societies but is not endorsed by the Consumer Products Safety Commission or by the American Academy of Pediatrics. A survey was performed on 101 caregivers in an urban setting, designed to assess the prevalence of cosleeping and parental attitudes for this practice. Cosleeping rate was 88% with predictors being as follows: single parent (p=0.006), high school or less education (p=0.035), 2 or fewer rooms used for sleeping (p=0.023). A majority (65%) stated that cosleeping was acceptable.  

Introduction

During the last decade, much attention has been paid to sleep issues concerning children. In 1992, the American Academy of Pediatrics (AAP)1 recommended that healthy, full-term infants be placed on their back or sides to sleep in order to reduce the risk of sudden infant death syndrome (SIDS). After further supportive information was obtained, the AAP began the “Back to Sleep” national educational campaign in 1994 to promote nonprone sleeping for healthy infants.2 Since its introduction, the SIDS rate in the United States has declined by 38%.3 However, the “Back to Sleep” program did not address the controversial issue of cosleeping, also known as bed sharing, where a child sleeps on the same mattress as an adult within touching distance.

The overall prevalence of cosleeping in the United States is not known. Studies of various populations within the United States have shown cosleeping rates of 15% to as high as 70%.4-11 However, these surveys were conducted before the Consumer Product Safety Commission (CPSC) recommendations were published. Also, no recent survey has assessed caregivers’ attitudes about cosleeping. The authors hypothesize that despite the CPSC recommendations, cosleeping may be a common and acceptable practice in the urban population we serve. The authors consider this study to be the first to assess prevalence, predictors, and attitudes of caregivers toward cosleeping in an urban pediatric center, following the CPSC recommendations.

Methods

This prospective, descriptive survey of caregivers was designed...
to assess knowledge, attitudes, and practices of cosleeping with children less than 5 years of age in an urban indigent population. No uniform definition of cosleeping exists. This survey defined cosleeping as the presence of a child sleeping on the same mattress as an adult, within touching distance, for any length of time. Following institutional review board approval, informed consent was obtained from the caregivers of the children surveyed. From March through May 2000, the parents and guardians of 101 patients between the ages of 2 weeks and 5 years were surveyed upon presentation for well-child or sick-child visits in the pediatric clinic of the Medical Center of Louisiana (Charity Hospital Campus) in New Orleans, Louisiana. Sample size was based on review of previous cosleeping population studies in the medical literature.\(^4\)\(^1\)\(^1\) Study participants were chosen systematically by selecting, during the study period, every third patient in the appropriate age range, as they presented to the clinic each day. Five parents and guardians refused to participate owing to time constraints. The survey was administered by 5 staff pediatricians who read the questions to the parents or guardians, marked the responses on the survey sheets, and consulted with the caregiver and child in the examination room after the clinic visit was concluded. Before the study, the survey instrument was pretested on 10 caregivers, and revisions were made to the instrument to enhance its ease of administration.

The investigator-administered survey assessed the following questions: How common is cosleeping in children under age 5 years? What are the predictors of cosleeping in this age group? What are the attitudes of these parents and guardians about cosleeping?

Demographic information was collected including age and race of the child, and age, race, income, marital status, and educational level of the primary caregiver. Multiple choice questions assessed the following: the number of rooms used for sleeping, reasons for cosleeping, and what sleep problems the child was having, if any. Open-ended questions assessed the following: the number of children in the home, whether the child had his or her own bed and room to sleep in; the frequency of cosleeping in the previous month and week; whether the caregiver had coslept with the child last night; whether the child’s physician had discussed sleeping arrangement with them; medical reasons the parent may have for cosleeping; what age the caregiver would encourage the child to sleep separately; and at what age would the child be “too old” to cosleep. An open-ended question assessed caregivers’ attitudes toward cosleeping. Survey questions were based on findings and information from reports on cosleeping reported in the medical literature.\(^4\)\(^1\)\(^1\)

Microsoft Excel was used for data entry. A coding book was developed. Results were analyzed using SPSS software. The Explore, frequencies, and correlation procedures were used.

**Results**

In the 101 completed surveys, 99% of caregivers had a child under age 5 years living with them. The ages of the children were as follows: 40% were less than 6 months of age, 10% were 7 months–1 year of age, 25% were 1–2 years of age, 6% were 2–3 years of age, and 16% were 3–5 years of age. Many of the caregivers surveyed were the mothers of the child (93%), and most (97%) were the primary caregivers. A majority (53%) of the caregivers were single parents, and African-Americans accounted for 93%. Ages of caregivers were as follows: 27% were 16–20 years of age, 47% were 21–30 years of age, and 22% were 31–40 years of age. Caregivers’ educational levels were as follows: 33% of those surveyed had less than a high school education, 33% were high school graduates, and 23% had some college education. Most caregivers (82%) had annual household incomes of less than $25,000, with 13% having annual incomes of $26,000–$35,000. Sleeping arrangements were the following: 8% of households had 1 room for sleeping, 40% of households had 2 rooms for sleeping, 40% of households had 3 rooms for sleeping, and 12% of households had 4 or more rooms for sleeping. Most of the children (84%) had their own bed for sleeping, and 35% had their own room for sleeping.

The prevalence of cosleeping was high, with 88% of respondents reporting yes when asked if a child had ever slept with an adult. Ages of children and percent of caregivers who had ever coslept are listed in Table 1. During the previous month, 21% of caregivers had slept less than 7 days with the child, 18% had slept 7–21 days with the child, and 46% had slept 22 days or more. Most of the caregivers (83%) had slept with the child the last night previous to the study. When asked about sleep difficulties with their child, 56% of caregivers responded frequent night awakening was a problem, and 29% of
Table 1

PREVALENCE OF COSLEEPING BY AGE OF CHILD

<table>
<thead>
<tr>
<th>Age of Child</th>
<th>Percent of Caregivers Who Ever Coslept</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 months</td>
<td>85%</td>
</tr>
<tr>
<td>6 months−1 year</td>
<td>80%</td>
</tr>
<tr>
<td>1−2 years</td>
<td>100%</td>
</tr>
<tr>
<td>2−3 years</td>
<td>100%</td>
</tr>
<tr>
<td>3−5 years</td>
<td>87%</td>
</tr>
</tbody>
</table>

Table 2

PREDICTORS OF COSLEEPING

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single parent</td>
<td>0.271</td>
<td>0.006</td>
</tr>
<tr>
<td>High school or less education</td>
<td>0.210</td>
<td>0.035</td>
</tr>
<tr>
<td>Two or fewer rooms used for sleeping</td>
<td>0.227</td>
<td>0.023</td>
</tr>
</tbody>
</table>

Table 3

CAREGIVER’S REASONS FOR COSLEEPING

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coslept with other children</td>
<td>15.7</td>
</tr>
<tr>
<td>Child was ill</td>
<td>12.0</td>
</tr>
<tr>
<td>Not enough bedrooms</td>
<td>9.6</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>9.6</td>
</tr>
<tr>
<td>Caregiver slept with their parents when young</td>
<td>8.4</td>
</tr>
<tr>
<td>Other</td>
<td>41.0</td>
</tr>
</tbody>
</table>

caregivers reported sleep refusal was a problem. Only 32% of caregivers responded that their doctor had ever discussed their child’s sleeping arrangements with them.

In predicting cosleeping, the variables shown to have a significant correlation with the child cosleeping with an adult are listed in Table 2. Being a single parent (p=0.006) and having a high school education or less (p=0.035) were significantly correlated with cosleeping. Having 2 or fewer rooms in the home being used for sleeping (p=0.023) was also significantly correlated with cosleeping.

When caregivers were asked about their attitudes toward cosleeping, a majority (65%) responded that it was acceptable to sleep with children. When deciding to cosleep, the most common reasons caregivers chose from the survey list are listed in Table 3. When asked if any medical reason had prompted cosleeping, 25% responded in the affirmative. In response to when the child would be encouraged to sleep separately, the caregivers’ most frequent responses were as follows: 17% said 1 year of age, 24% said 2 years of age, and 13% said 3 years of age. Responding to how old is “too old” for cosleeping, the caregivers’ most frequent responses were the following: 12% said 1 year of age, 16% said 3 years, 12% said 4 years, and 24% said 5 years.

Discussion

Cosleeping remains the normative practice in many of the world’s societies and among immigrants to the United States. The popularity of cosleeping has decreased in the United States during the last 2 centuries, for a variety of reasons. Hospital nurseries often separate mother-infant pairs for significant amounts of time after birth. Infant formulas enable newborns to be separate from mothers for feedings. Larger family homes enable the parents to sleep separate from infants. In addition, many sleep experts emphasize separate sleep arrangements, despite a paucity of data to support such recommendations.

In the years 1996–1997, numerous peer reviewed articles were published on possible bene-
fits of cosleeping in relation to SIDS. Benefits of cosleeping suggested by these authors included the following: increased non-prone infant sleep, enhanced maternal monitoring of infant, increased infant respiratory drive, promotion of breastfeeding, and more frequent infant arousals.12,16-19 In response to speculation about these possible benefits of cosleeping, the AAP released a bed sharing policy statement in 1997. The AAP emphasized that there were no scientific studies that show cosleeping reduced the incidence of SIDS, and some studies showed increased incidence of SIDS in certain cosleeping circumstances (parental cigarette, alcohol, or drug use). Therefore, the AAP stated there was no basis to recommend cosleeping as a strategy to reduce SIDS.20

In October 1999, the Consumer Product Safety Commission (CPSC) released a study of retrospective data collected from January 1990 through December 1997, attributing 515 deaths of children under age 2 years to complications of being placed in adult beds (i.e., overlying by caregiver, suffocation, or strangulation in structures of the bed). The CPSC recommended educating parents that children under age 2 years should sleep only in cribs that meet federal and voluntary safety standards.21 Criticisms of this study include the lack of details on the infant’s sleep position and caregiver’s use of drugs, alcohol, or tobacco—all known risk factors for overlying and SIDS. No relative risk was assessed by the CPSC, and the data were based on anecdotal and often subjective death certificate data.14,22

In the years following the CPSC recommendations, several retrospective studies have been published, which appear to support their position. Using death scene information and medical examiner examinations from January 1994 to December 1997, Kemp et al.23 in St. Louis, Missouri, determined that 47% of sudden and unexpected infant deaths involved a shared sleep surface. Thogmartin et al.24 retrospectively reviewed medical examiner data from January 1986 through September 1999 in Palm Beach County, Florida, and discovered that 40% of expected infant deaths during this time were bedsharing. Criticisms of both of these studies include the lack of a control group and relative risk, as well as no data on the caregivers’ drug, alcohol, or tobacco usage. A retrospective review of 84 SIDS cases from October 1992 through January 1996 in a high risk population in Cleveland, Ohio, demonstrated that bedsharing was strongly associated with younger age of death among SIDS victims.25 This study has been criticized for a lack of control group, no standard death scene investigation, lack of information on sleep position, and the high rate of drug, alcohol, and tobacco use in this population, which could have confounded results.

In the wake of this controversy, the AAP took a new “middle ground” approach to cosleeping in its newest SIDS policy statement. The AAP stated there were insufficient data to conclude that cosleeping under carefully controlled conditions was clearly hazardous or safe. The AAP considered potentially harmful cosleeping situations to include the following: nonprone sleeping, soft bedding, loose covers on a bed, a bed pushed against a wall, and the presence of a nonparent in bed with the child. In addition, parental tobacco, alcohol, or drug use while cosleeping was considered hazardous by the AAP.26

Support for this moderate approach comes from a recent Alaska Division of Public Health report.27 Medical records, autopsy reports, and death scene data from 130 SIDS deaths in Alaska from January 1992 to December 1997 were reviewed. Only 1 bed-sharing death occurred in a supine infant in the presence of a nondrug-using parent on an adult nonwater mattress. The public health message adopted by Alaska is now that infants should sleep in an infant crib or with a nonsmoking, unimpaired caregiver on an adult nonwater mattress.27

The present study assessed the prevalence, predictors, and attitudes toward cosleeping in an urban pediatric center in the wake of the CPSC recommendations. Despite the recent CPSC recommendations, the cosleeping rate in this survey was 88%, with 46% of caregivers cosleeping more than 22 days in the last month. This rate was much higher than in previous studies. Using 1983 data collected in Cleveland, Ohio, Latz et al.19 showed 15% of children coslept 3 or more times per week. In 1984, Lozoff et al.1 reported routine cosleeping rates of 35% in whites and 70% in African-Americans in Cleveland, Ohio. Schachter et al.5 in 1989 reported frequent, all-night cosleeping rates of 21% in Hispanic-Americans living in Harlem, New York City. In the survey by Madansky and Edelbrock5 in Worcester, Massachusetts, in 1985 and 1986, 55% of caregivers reported at least occasional cosleeping. In a United States military population survey in Hawaii, Forbes and Weiss5 reported 50% of caregivers had coslept with their child when the father was absent. Data col-
Cosleeping in an Urban Pediatric Center

Collectively reviewed by Gibson et al. from 1995 through 1997 in Philadelphia revealed a cosleeping rate of 46% in the predominantly African-American caregivers surveyed. A survey of African-American new mothers by Flick et al. in St. Louis from June 1996 to March 1998 discovered 61% had shared a bed in the 2 weeks before the survey. The authors hypothesize several explanations for the high rates of cosleeping (88%) seen in the present survey. High numbers of single parents, African-American caregivers, and caregivers with lower educational levels were surveyed. These demographic variables have been associated with cosleeping in previous studies.4,7,10

Sleep problems reported by caregivers in the present survey (56% night awakening and 29% sleep refusal) were similar to past studies.4,6,9 The medical literature has been inconclusive in regard to whether cosleeping causes or is the result of sleep problems.4,9 The authors of this study were unable to determine a causal relationship between cosleeping and sleep problems.

Predictors of cosleeping in the present study that had a significant correlation with cosleeping were the following: single parents, having a high school or less education, and having 2 or fewer rooms for sleeping. Many of these predictors were found in past cosleeping surveys. Both Schachter et al. and Madansky and Edelbrock found cosleeping more common in single-parent families. Lozoff4 reported cosleeping was associated with lower educational status of the caregiver. Therefore, if single parents, caregivers with lower education, and families with fewer rooms for sleeping are more likely to engage in cosleeping, then perhaps clinicians should counsel these groups about safe cosleeping practices. However, only 32% of the children's physicians in the present study had discussed the child's sleeping arrangements. The authors hypothesize that recent contradictory information in the medical literature and/or lack of adequate clinic time are possible explanations for the lack of discussion of sleep arrangements.

The limitations of this study are its small sample size, involving only an urban pediatric center with mostly indigent African-American patients. Therefore, the results may not be generalizable to other populations. The oral survey format has limitations. The physician administration of the survey could have biased caregivers. The passing of time could have affected caregiver's recall of discussion with the child's physician about sleep arrangements. However, this study clearly provides the most recent assessment of not only the prevalence of cosleeping in an urban population but also the predictors of and attitudes toward cosleeping of those surveyed.

The findings of this study, along with the often contradictory evidence regarding the benefits and dangers of cosleeping documented in the medical literature, suggest the American Academy of Pediatrics needs to further investigate this issue and develop a sound evidence-based policy statement. In drafting its policy statement, the AAP should solicit input from, but not limited, to anthropologists, SIDS and sleep experts, lactation consultants, child psychiatrists, and developmental experts, as well as pediatricians. In concert, further cosleeping studies are needed to evaluate the prevalence, attitudes, and practices of wider socioeconomic and cultural groups. Prospective studies are needed to assess the benefits and risks of cosleeping and the impact of safe cosleeping counseling. Then, a reasonable and rational cosleeping policy statement and recommendations could be drafted, and clinicians would be able to sensibly discuss cosleeping with caregivers.

Acknowledgment

We acknowledge Dr. Marlo Smith, who participated as a survey administrator.

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