INTRODUCTION

In Eastern cultures, co-sleeping is a natural part of parenting. This may seem strange and possibly even dangerous to Western cultures. In the West, parental age, race, marital status, and house income may influence co-sleeping, while co-sleeping, especially bed-sharing, is usually considered to increase the risk of sudden infant death syndrome. In Korea, however, people usually believe that a baby must not sleep alone in an empty room. The differences in the prevalence of co-sleeping between Eastern and Western society may be rooted in differences in child-care philosophies, sleeping habits, and home architecture. In this article, the hazards and benefits of bed-sharing will be reviewed, and differences in co-sleeping will be addressed from a cultural viewpoint.
ards and benefits, the most important being the recognition of Sudden Infant Death Syndrome (SIDS). Much research has been conducted to elucidate its etiology and risk factors, and it is now understood to be associated with mother-child bed-sharing. These findings prompted the American Academy of Pediatrics to issue guidelines warning against bed-sharing, but not room-sharing. In the next section, the hazards and benefits of bed-sharing will be reviewed, and the differences in co-sleeping will be addressed from a cultural viewpoint.

**BENEFIT AND DANGEROUSNESS OF BED-SHARING**

When the issue of co-sleeping first arose, the distinction between room-sharing and bed-sharing was not clearly defined, and studies tended to use the term ‘co-sleeping’ interchangeably to refer to both. However, further investigation started to uncover the difference between sharing a bed and sharing a room, and the terms ‘bed-sharing’ and ‘room-sharing’ are now used instead of the more inclusive ‘co-sleeping.’ In this article, the terms ‘bed-sharing’ and ‘room-sharing’ will be used when possible, and ‘co-sleeping’ will be used as an umbrella term which includes both.

The benefits of bed-sharing may include increased arousals in the infant and mother, facilitation of breast-feeding, and improved parent-child relationships, while the hazards may include increased risk for SIDS, marital discord, and inhibition of independence in the child. However, this categorization is under much debate, as the effects and implications of each factor are not clear, as shall be discussed below.

Bed-sharing has repeatedly been implicated as a risk factor for SIDS, compelling the American Academy of Pediatrics to officially discourage its practice. Although the relationship between bed-sharing and SIDS has not been proven conclusively, epidemiological studies have demonstrated a clear association between the two. Furthermore, reports concerning poor sleep in bed-sharing infants have argued that bed-sharing may have other negative effects. However, recent studies focusing on the context in which bed-sharing is practiced have shown that the same conclusions may not be applicable in every case.

One of the most replicated findings of sleep studies comparing solitary-sleepers and co-sleepers is the increased frequency of awakenings during the night. However, while the finding itself is simple, the implications have caused much controversy. In adults, frequent waking during the night is a sign of poor sleep, which may also hold true for young children. Conversely, some researchers have argued that increased awakening may increase arousal, and help the infant wake up during episodes of breathing difficulty. In this light, increased arousal from bed-sharing could be seen as a protective factor. However, other studies have suggested that these findings may be the results of report bias. No studies have yet been able to clear up this matter.

There have also been several studies investigating bed-sharing in breast-feeding infants. As any mother who has breastfed their child can attest, bed-sharing greatly facilitates breast-feeding. This finding has led to studies comparing bed-sharing between breast-fed and formula-fed infants, with several reports focusing on differences in sleep position. Whereas formula-fed infants were more likely to sleep on their backs and at the level of their mother’s nose or chin, breast-fed infants were more likely to sleep laterally, at the level of their mother’s chest. The difference in sleep level observed was constituted by whether or not the infant was in contact with a pillow, which is a well-known risk factor for SIDS. Breast-fed infants were less likely to sleep on a pillow, and were thus comparatively safer from SIDS. Although the lateral position of the breast-fed infants seemed to be risky at first, researchers found that the infants usually did not have enough space to roll into a prone position due to proximity of the mother’s body. Other studies analyzed polytomography findings from mother-infants pairs who were either bed-sharing or sleeping solitarily. The authors reported that bed-sharing promoted infant arousals, arguing that this may act as a protective factor for SIDS.

Another controversial finding from bed-sharing studies concerns the increased levels of CO2 around the infant, within the so called ‘air-pocket.’ Researchers used a doll equipped with a measurement device to analyze the CO2 concentrations from 3 to 21 cm from the mothers’ nares. They concluded that although the levels were increased compared to room air, they were not high enough to be lethal. In fact, based on past studies, the levels were within the range that has been shown to naturally stimulate respiration and promote normal breathing.

Studies on bed-sharing have also reported increased arousals of the mother. Several researchers investigating sleep parameters in mothers sharing beds with infants showed increased arousals or arousal behavior in the mother, frequently associated with breast-feeding. One study reported reduced duration of slow wave sleep, with a reciprocal increase in stage 1-2 sleep, but no change in rapid eye movement sleep, total sleep time or duration of waking after sleep onset. In this study, the infants usually did not have enough space to roll into a prone position due to proximity of the mother’s body. Other studies analyzed polytomography findings from mother-infants pairs who were either bed-sharing or sleeping solitarily. The authors reported that bed-sharing promoted infant arousals, arguing that this may act as a protective factor for SIDS.

Based on these reports, it may be argued that co-sleeping on the whole, and possibly even bed-sharing, cannot be seen simply as a risky practice that must be avoided in all situations. It seems that the risks of bed-sharing may differ according to the surrounding context or situation. As discussed below, cultural differences may also play a role.
Physical Differences in Bedroom Design

The "bed" and the "carpet" are the most prominent differences in room décor between Western and Korean traditional bedrooms. Beds have been used since ancient times in Western culture. One of the reasons for this is the carpet. Western homes typically used a fireplace or stove for heating, which is effective at heating the air. However, it is unable to heat the floor, and thus, the carpet was developed as a countermeasure. While cold floors can take away body heat very rapidly, this effect can be offset by the carpet, making walking or sitting on the floor much more comfortable. However, the carpet can also be a reservoir for biological contaminants, such as dust mites, dust mite allergens, and molds, which can impair physical health. Furthermore, people in Western cultures usually wear shoes at home, which may aggravate the deleterious effects. Sleeping on a bed can help protect the inhabitants against these effects while also improving the sleeping environment, and thus it gained widespread use. Although fireplaces are no longer very common, the heating systems that have taken their place, for example, radiators and forced air furnaces, are based on the same principles, and are thus focused on heating the air.

The traditional Korean bedroom is built and arranged somewhat differently. The main difference may be found in the heating system, which is called 'Ondol' or warm-stone. In the traditional setting, houses were built to have a hollow space under the floor in which a set of large stone blocks were arranged. The hollow space was part of the exhaust system, with one side opening into the Buddumak (kitchen range or stove) or Agungi (fire furnace), and the other side into the chimney. Hence, hot air and gases from cooking fires passed through the Ondol and heated the floor before being released. The stones increased heat transfer and efficiency. Thus, domestic life was centered around the warm floor, on which people ate, rested, and slept, and there was no need for the development of complex and expensive carpets and beds. In terms of sleeping arrangements, this difference made a big change. Bed-sharing and room-sharing was comparatively much easier since the whole floor, instead of just the bed, could be used for sleeping. Various infant health and safety issues, such as dirty carpets, risk of falling from the bed, risk of suffocation, or strangulation could therefore be avoided. Furthermore, parents did not need to worry about crib-related accidents, as cribs were not needed. The ondol system is still used today, although hot water pipes are employed instead of stones and Buddumaks. The floor is still warm, so although beds are now in wide use, a large number of mothers opt to sleep on the floor with their newborns after birth. This bed-sharing/room-sharing arrangement may go on for several years, sometimes well into elementary school.

Despite being geographically and historically close to Korea, the bedrooms of Japan and China show several key differences. Each has a unique heating system and bedroom arrangement. In Japan, a device called Irori was used for heating. It was a fireplace set up in the middle of the room, used to heat the air. As with Western fireplaces, it was unable to heat the floor, so a Tatami, which is a traditional Japanese mat made from rice straw or woodchips, was used to cover it. Beds were not used, and people slept on the floor. Nowadays, the Irori is still in use (in a modernized form, called a Kotatsu?), but instead of Tatami mats, beds have gained widespread use.

In China, beds have been used for centuries. However, the structure of the traditional bed was very different from that of Western ones. Instead of having separate heating and bedding systems, the two were combined into a bed-stove, or Kang. A typical Chinese Kang consists of a stove, a Kang body (similar to a bed) and a chimney. Hot air and smoke from the stove heated the kang, and the kang heated the air around it. This system is still used in some rural areas, but urbanites are more likely to use modern boilers and radiators to heat their homes, while sleeping on beds.

Compared to the West, room-and bed-sharing is comparatively more prevalent in all three countries, despite the differences in bedroom design mentioned above. The reasons for this are not clear, although parenting methods may play a role.

Parenting

Compared to the individualism of the West, Koreans are culturally collectivistic. The virtue of filial piety runs deep, which includes influences from Confucianism, Taoism and Mahayana Buddhism, and 'family' holds a unique psychological position in the minds of most people. Collective needs, interdependency and conformity are emphasized, while protection and obedience are taught as core values. During parenthood, elimination of risk and providing support are usually given priority. Immense devotion and sacrifice are expected from parents while providing for their children, and these principles are usually highly involved throughout their children’s lives. In practice, children are almost always accompanied by an adult, as can be seen from the Podaegi, a Korean traditional hands-free baby carrier. While using it, women were able to carry their young while working. Furthermore, college tuition and marriage costs are usually covered by parents, and many parents continue to provide some sort of economic support until their offspring are in their late 20s. Within this atmosphere, co-sleeping is considered natural, and possibly even an obligation. Parent-child co-sleeping is a method of caring for the child, even while the child is sleeping, and solitary sleeping is considered to be a form of neglect. While the number of bed-sharing parents has decreased with the spread of Western culture and increased public awareness of SIDS, most parents are still present when the child falls asleep.
a child is considered an important aspect. Priorities are given to autonomy, infant separation and emotional independence. This gave rise to ‘babywise parenting’, in which establishing a routine and teaching discipline are given importance for successful parenting. Anthropologists argue that this may be one of the reasons why co-sleeping is comparatively rare in the postindustrial West. Conforming to social values and following ‘expert’ advice, parents were taught that teaching a child to sleep alone and soothe him or herself when needed was an important part of childcare.

Proponents of infant separation and independence consider autonomy-granting as a key variable in their theory, situating it on a spectrum with encouragement of independence and over-protection on each end. These results are under much controversy, as are the conclusions of other studies on parenting, as there is little consensus on how these dimensions should be constructed. Some researchers place psychological control on the opposite end as independence, yet overprotection and psychological control are very different values. Furthermore, when dimensions are constructed as spectrums (e.g., autonomy-granting on one extreme and psychological control on the other), the increase of one construct usually indicates a decrease or absence of the other. However, parents may not necessarily belong in either group. This field is further complicated by cultural differences, thus empirical validation of the constructs will be needed before any dimensions can be applied to other cultures.

Is Sleep Really That Important?—Acceptance of Co-Sleeping

The culturally perceived importance of sleep may also play a role in co-sleeping. Eastern societies are well known for their ‘sleep less, work more’ ethic, and studies have shown that Easterners may sleep up to an hour less than the people in some Western societies. This difference is even greater in high school students. The college entrance exams of Japan and Korea are notorious for their competitiveness, causing great pressure to reduce sleep for increasing study time. This leads to radical reduction of the sleep time, with an average sleep duration of just 5 hours and 27 minutes. Consequently, sleep is naturally given comparatively less weight compared to in Western countries. This is also reflected in indoor lighting. Whereas Western homes use dimmer lighting with indirect illumination, perhaps to allow better relaxation, Korean homes use direct illumination, and are much brighter. Hence, it may be argued that people of Eastern countries, and Koreans in particular, are more tolerant towards sleep disturbances. This may enable them to accept the anticipated decrease in sleep quality more easily. Therefore, although sleeping with their children during the night may disturb parents’ sleep, Korean parents easily accept the sacrifice of sleep to look after their children, even during the night.

Attitudes toward Co-Sleeping

Attitudes towards co-sleeping are another important factor in determining whether or not parents actually practice bed-sharing and/or room-sharing. From this perspective, the two main considerations are the quality of parental sleep and marital intimacy. Some studies have reported that parental satisfaction concerning sleeping arrangements and marital intimacy did not differ between solitary sleepers and early bed-sharers (e.g., infants who started to sleep with their parents before one year of age), with most parents answering ‘satisfied’ or higher upon evaluation. Another study based on children with sleeping problems reported that co-sleeping was associated with higher levels of marital distress. The parents in the first study were probably able to choose whether or not to sleep together, which may have helped them accept the situation and adapt to it comparatively easily. On the other hand, the parents of the latter study may have been forced into doing so due to the sleeping problems of their child. Thus, the adaptation process would have been more difficult. These findings indicate that parental attitudes can be influenced by the reasons for co-sleeping, which in turn affect parental satisfaction.

As mentioned above, Koreans are traditionally collectivistic, traces of which can even be seen in the spoken language. For instance, instead of using ‘me’ or ‘my’, the term “Wuri” (which means “we” or “our”) is used in phrases such as “our husband” or “our wife”, which may seem inappropriate to Westerners. In Korea, rather than considering oneself as an individual, people consider themselves as part of a ‘whole’, which in many cases is an individual’s family. Thus, the needs and wants of the family as a whole are given more priority over those of an individual compared to the situation in Western families. As sleep quality and marital intimacy, including sex life, are individual values, they are given low priority in comparison to caring for the baby, making parents more likely to sacrifice themselves in order to care for the baby at night. In addition, as grown adults are also expected to care for their elders, extended families are not uncommon. In this situation, room shortages may also increase the likelihood of co-sleeping.

What parents actually think of bed- or room-sharing is also important. It is interesting to note that there is no word for bed-sharing, room-sharing, or co-sleeping in Korean. This may be because Koreans consider mother-infant co-sleeping as a natural thing, and possibly an obligation. Many mothers reported that they felt more comfortable when their children slept with them. Koreans also believe that such a habit is ‘good for the child’s emotional stability’ and promotes ‘love among the family’. When asked about the optimal duration of co-sleeping, Korean mothers usually gave the answer of between 3 to 6 years after birth, which is similar to the answers given by Chinese mothers.

Low Rates of SIDS in Asian Culture

The findings discussed above show that attitudes towards bed-
sharing are generally more favorable in Eastern cultures, where it is also more popular. Then, since bed-sharing is a risk factor for SIDS, it could be expected that the rates of SIDS should also be high in Eastern cultures. However, several studies have reported that this is not so. In fact, contrary to expectations, the rate of SIDS in Asian cultures was found to be lower than in most other cultures, causing much speculation. Of course, the possibility that infant deaths were not fully reported in Asian countries should also be considered. Meanwhile, the sleeping arrangements and practices of Asian parents have also received attention. A study comparing Eastern and Western parents concluded that Eastern practices were safer in terms of the major risk factors for SIDS, despite the higher frequency of bed-sharing. Based on recent studies, bed-sharing in itself may be viewed in a new light. A study comparing SIDS infants with controls reported that a large number of the deaths were discovered approximately 90 minutes after usual waking time. This indicates that frequent checking may reduce the risk for SIDS. Since bed-sharing increases arousals and nighttime waking in the mother, the extra vigilance and additional observations that can be afforded due to the increased ‘sleep disturbances’ may be protective for the child.

CONCLUSION

Korean parents have recently been flooded with studies and recommendations mostly based on Western child care practices, which usually contain messages concerning the dangers of co-sleeping. But, is co-sleeping, in fact, dangerous? Is the message applicable everywhere, regardless of context or culture? This message needs to be interpreted with caution. Several factors may influence the risks and benefits of co-sleeping, and these factors need to be viewed from several vantage points. The influence of any factor on the risk of SIDS is, of course, extremely important. However, how co-sleeping helps or hinders the child’s or parent’s sleep also needs consideration. Its long-term effects on the parent-child relationship and on the child’s mental and physical growth should also be examined.

One such factor needing consideration is bedroom arrangement, which may change the nature of the parent-child sleep interactions. In Korea, sleeping together on the floor is common, and does not seem to carry the same level of risk of SIDS as bed-sharing. In addition, as protection and risk-elimination are important aspects of parenting, co-sleeping may help protect the child from SIDS while improving the parent-child relationship. This is reflected by the lower rate of SIDS observed in Eastern cultures. As Koreans are also more tolerant to sleep loss, the effect of increased disturbance may not be significant, and in some cases, may help alleviate maternal anxiety. In contrast, if parents are forced into co-sleeping by factors such as living with an “extended family”, these beneficial effects may not necessarily be seen.

In the past, the term ‘co-sleeping’ was limited to describe bed-sharing, for which the message concerning it may have been correct. However, the recommendations have changed. Co-sleeping without bed-sharing is now recommended. In Korea, co-sleeping itself already indicates co-sleeping without bed-sharing, as parents typically sleep with their children on the floor, not on beds. Therefore, the sleeping arrangement that has been commonly used by Korean parents may be optimal, and parents may be encouraged to conform to such an arrangement in the future.

Conflicts of Interest

The authors have no financial conflicts of interest.

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