CLEARINGHOUSE
FOR MILITARY FAMILY READINESS

SIDS Prevention and Safe Sleep: Rapid Literature Review

Clearinghouse Technical Assistance Team

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Table of Contents

Executive Summary

We conducted a brief literature review on strategies to prevent sudden infant death syndrome (SIDS). Mass media campaigns to promote healthy behaviors and discourage unhealthy behaviors have become a major tool for public health practitioners looking to improve public health (Randolph & Viswanath, 2004). SIDS is the third leading cause of infant mortality in the United States (Miller, Johnson, Duggan, & Behm, 2011), which is why it is so important that SIDS prevention and safe sleep are addressed at a community level.

Risk factors for SIDS includes: prone or side sleeping, soft sleep surfaces, loose bedding, overheating, smoking, bed sharing, and preterm and low birthweight infants (Miller et al., 2011). The back to sleep (BTS) campaign has been successful in addressing the risk of prone or side sleeping, however programs addressing other practices such as bed sharing have been less effective (Ball & Volpe, 2013). These programs may be less successful because they address topics directly related to the parents' culture and behavior (Ball & Volpe, 2013). Bed sharing is particularly hard to target due to how imbedded it is in the culture, the potential positive outcomes associated with it, and the convenience for the mother (Ateah & Hamelin, 2008; Ball & Volpe, 2013).

Introduction

Mass media campaigns to promote healthy behaviors and discourage unhealthy behaviors have become a major tool for public health practitioners in their efforts to improve the health of the public. The success of these interventions have varied greatly (Randolph & Viswanath, 2004). The Back to Sleep (BTS) campaign, for example has been very effective, while bed-sharing programs have not been as successful at changing parental behaviors (Ball & Volpe, 2013). Public awareness campaigns typically utilize two methods: (1) increase the amount of available information on the topic of interest and (2) redefine or frame the issue as a public health problem by making it salient, attracting the attention of the target audience, and suggesting a solution to resolve the problem (Randolph & Viswanath, 2004). This rapid literature review aims to summarize some of the research on SIDS prevention, safe sleep programs, and safe sleep campaigns, as well as provide recommendations about methods to disseminate safe sleep and SIDS prevention recommendations.

It should be noted that while for the purpose of this literature review the term sudden infant death syndrome (SIDS) is used; new research is now starting to use the term sudden unexpected infant deaths (SUIDs) which includes SIDS, death from unknown causes, accidental suffocation, and strangulation in bed (Shapiro-Mendoza, Camperlengo, Kim, & Covington, 2012).

SIDS Prevention

SIDS is the third leading cause of infant mortality in the United States (Miller et al., 2011). Risk factors for SIDS include: prone or side sleeping, soft sleep surfaces, loose bedding, overheating, smoking, bed sharing, and preterm and low birthweight infants (Miller et al., 2011). Sensitizing mothers to SIDS and improving how SIDS information spreads may lead to greater decreases in SIDS rates (D'Halluin, Roussey, Branger, Venisse, & Pladys, 2011).

Babies discharged from the neonatal intensive care unit (NICU) are at an elevated risk for SIDS. In an attempt to combat this trend, an interdisciplinary team consisting of nurses, a physician, an occupational therapist, and a respiratory therapist developed a safe sleep program. The program involved standardizing discharge education for caregivers, safe sleep classes for expectant mothers and community caregivers, and educating NICU staff on guidelines. Prior to program implementation, safe sleep practices were only being utilized in the NICU 20% of the time. Following the intervention, NICU nurses were compliant with safe sleep recommendations 90% of the time. The program addressed many risk factors including the baby's temperature, prone or side sleeping, sleep surfaces, and bed sharing. After following up with some of the mothers that participated, the researchers found that program had the most influence on the use of safe flat sleep surfaces and the avoidance of bed sharing (Zachritz, Fulmer, & Chaney, 2016).

D'Halluin et al. (2011) hypothesized that using an educative questionnaire would increase maternal awareness of SIDS risk factors and compliance to SIDS prevention recommendations. The researchers used a double-blind randomized controlled trial to test this hypothesis. New mothers were randomly assigned to the test or control group in the hospital after giving birth. The mothers in the control group received a demographic survey and the mothers in the test group received the demographic survey and a questionnaire about risks and prevention for SIDS. In general, mothers from both groups seemed to be informed about SIDS prevention, but the group that received the questionnaire received better knowledge scores and were more compliant with health care recommendations than the control group when interviewed three months later.

New Zealand had high rates of SIDS and they were able to lower the infant death rates through a health education program. Their SIDS rate went from 4.2/1000 in 1987 to 2.5/1000 in 1991 (Davidson-Rada, Caldis, & Tonkin, 1995). The health education program utilized in the New Zealand Cot Death Study posited that providers and caregivers need to receive consistent messages and that the information should be distributed to the health care professional first and then to the public. Davidson- Rada, Caldis, and Tonkin (1995) explained that the program was enacted through three strategies:

1. Community Action: consultations were held with community health agencies and voluntary organizations that allowed communities to design and own their own program.
2. Education of Professionals: scientific papers were used to educate health care professionals on the topic.
3. Informing the Public: the public was made aware of SIDS and SIDS prevention through media coverage of scientific findings, television and radio commercials, distribution of programs, and nurse home visits.

Back To Sleep (BTS) Campaign

The BTS campaign began in 1992 to promote a supine sleep position (Miller et al., 2011). The SIDS rate dropped from 1.2/1000 to .53/1000 following the BTS campaign (Ball & Volpe, 2013).

Research suggests that the recommendation to place children supine to sleep needs to be spread beyond parents and health care providers. A study by Moon, Weese-Mayer, and Silvestri (2003) found that 20% of SIDS cases occurred in child care settings. In 1996, 43% of licensed childcare centers were unaware of the association between sleep position and SIDS. Even after the childcare centers had been educated on the topic, a few years later 25% of care centers continued to put infants to sleep in the prone position. In 2003, 60% of childcare centers in the study had not heard of the BTS campaign. Despite not hearing of the campaign, more childcare centers were aware of the recommendation compared to 1999. Fifty nine percent of centers had a written policy regarding sleep position and six states required that children be place supine to sleep in childcare centers. Moon et al. (2003) suggest that in order to lower

Co-Sleeping and Bed Sharing

To understand the research regarding co-sleeping and bed sharing, it is important to understand how these two things differ. Co-sleeping can be defined as the infant sleeping in the parents room as well as in the bed, whereas bed sharing specifically refers to parents sleeping in the same place as their infant which can include a bed, couch, or chair (Ateah & Hamelin, 2008). Having an infant sleep in the parent's bedroom for the first 6 months of life is the general recommendation from the American Academy of Pediatrics (AAP); however, the AAP does not endorse bed sharing and educates about the risks (AAP Task Force on Sudden Infant Death Syndrome, 2016). In fact, parents that did not believe that there were risks associated with bed sharing were six times more likely to bed share (Ateah & Hamelin, 2008).

While the BTS campaign was effective based solely on the dissemination of knowledge, the findings are not the same for bed sharing. In a study by Ateah and Hamelin (2008), the majority of parents expressed understanding of the risks associated with bed sharing, but ¾ of participants still reported bed sharing at least

occasionally. The researchers found that even when participants were aware of the risks, they seemed to be outweighed by the perceived benefits and convenience.

Ball and Volpe (2013) investigated why campaigns addressing sleep environment have been less successful compared to the BTS campaign. The researchers suggest that the interventions often ignore the cultural value of the practice. The authors point out that the BTS campaign was effective because it was simply targeting an infant-care practice, but sleep environment is often rooted in cultural beliefs, which makes them the hardest to change because interventions targeting bed sharing challenge the parent's beliefs and cultural identity. For example, New Zealand created an intervention to prevent SIDS, but they found that the practices and results of the intervention greatly differed between the European and the Maori people (Davidson-Rada et al., 1995). The Maori people were more likely to bed share as a part of their culture. Davidson-Rada, Caldis, and Tonkin (1995) found that only 8% of European participants report bed sharing, but 43.8% of Maori parents reported bed sharing. In an effort to make a safer sleep environment for the child, an intervention was designed that embraced Maori culture (Ball & Volpe, 2013). The intervention involved mothers using traditional Maori basket weaving techniques to weave baskets for the children to sleep in the mothers' beds or bedrooms. While this did not necessarily end bed sharing, it made the practice safer for this population. These findings suggest that interventions are more effective when they are tailored to the population being targeted (Ball & Volpe, 2013).

Another potential reason sleep environment campaigns have not taken off is the conflicting infant health agenda. There are two approaches toward infant health: (1) safeguarding and (2) infant well-being. Both approaches have overlapping goals and agendas, but the recommendations for the two can contradict each other. For example, bed sharing is a risk factor for SIDS, but in terms of infant well-being, it has been associated with positive psychological outcomes and is often utilized by breastfeeding women. These findings reiterate the importance of addressing the potential benefits and risks when speaking with parents about why they should not bed share. While there are some benefits, the research is not strong enough to reverse the recommendation that parents share a bedroom, but maintain separate sleep surfaces (Ateah & Hamelin, 2008).

Recommendations

Reviewing research on SIDS prevention, the success and lessons learned from other public safety awareness campaigns, and safe sleep programs can inform methods to improve the dissemination of knowledge regarding safe sleep and SIDS prevention within a given community. Below is a list of potential methods to increase safe sleep practices and SIDS prevention awareness.

1. Use the knowledge, action, and behavior (KAP) change model to target risky

behaviors (Ball & Volpe, 2013).

2. Utilize culturally sensitive methods to educate and change parental behavior regarding safe sleep practices (Ball & Volpe, 2013).
3. Ensure the target audience receives sufficient exposure to the campaigns messages and themes (Randolph & Viswanath, 2004).
    a. Utilize social marketing tools to spread creative marketing messages.
    b. Take advantage of free press to help get the message out.
4. Provide a supportive environment to allow the audience to make the recommended behavioral changes (Randolph & Viswanath, 2004).
5. Design campaigns to be theory-based that are developed with an understanding of what elements of health behavior could potentially lead to the desired outcomes (Randolph & Viswanath, 2004).
6. Plan a campaign/program that will be sustainable for continued use (Randolph & Viswanath, 2004).

Suggested Citation

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