



AWARENESS AMONG PARENTS AND CAREGIVERS REGARDING THE USE OF PACIFIERS: A DESCRIPTIVE CROSS -SECTIONAL STUDY

Dental Science

Sharon Vincent*

PG Resident, Dept of Paediatric and Preventive Dentistry, Christian Dental College, Ludhiana *Corresponding Author

Abi M. Thomas

Professor and HOD, Dept of Paediatric and Preventive Dentistry, Christian Dental College, Ludhiana.

ABSTRACT

The aim of this study was to measure the level of awareness among parents and caregivers regarding the use of pacifiers. The study was conducted in Ludhiana city in July 2017 among 300 parents and caregivers. A self-administered questionnaire containing knowledge, attitude and practice questions were distributed. Data was recorded and statistical analysis was done by descriptive statistics. 45% of the participants used pacifiers for their children. Parents (75 %) were well aware that pacifiers should not be coated with honey or other substances to reduce the risk of dental caries. 75% of parents were unaware that pacifier use reduces SIDS risk. The level of knowledge regarding pacifier use was satisfactory though there was a discrepancy in putting knowledge to practice. The attitude of parents towards acquiring knowledge was positive.

KEYWORDS

pacifier, soothing, SIDS, dental problems

INTRODUCTION

Neonates are born with several vital adaptive reflexes that facilitate their development through their first weeks and months of life. These involuntary reflexes occur either spontaneously or as responses to different stimuli. The development of sucking reflex is an important milestone to ensure survival as it requires coordination with breathing and swallowing, aiding in nourishment of the neonate. This skill develops in utero as early as the eighth week of gestation and continues well after birth¹. Non-nutritive sucking (NNS), is a precursor to nutritive sucking^{2,3}, and holds various physiological benefits including improved digestion, behavioral organization⁴, pain management, and prevention of aspiration in the term and preterm infants. A pacifier or dummy is a fairly common method of non-nutritive sucking, usually introduced by parents to calm the child. Consequently, every time the child is irritated, the pacifier is offered as a form of amusement and a panacea, and the child develops a strong attachment to the sucking object. Pacifiers have been implicated in nipple confusion, increased frequency of otitis media and dental problems. Other commonly held beliefs criticize pacifiers for interfering with normal dental and speech development and sleep habits. However, there is a growing body of research on pacifiers and their possible protective effect against Sudden Infant Death Syndrome (SIDS).

The use of pacifiers is an ancient practice, but often becomes a point of debate when parents and professionals aim to protect and promote breastfeeding as the most appropriate method of infant nutrition. Existing literature inadequately documents the rationale behind pacifier use, which now has more of become a cultural norm. The use of pacifiers is firmly entrenched in some cultures and the reasons for pacifier use need to be investigated and better understood in order to design effective interventions to reduce their inadvertent use. Hence, the aim of this study was to investigate the level of awareness among parents and caregivers regarding the use of pacifier.

SUBJECTS AND METHODS:

This descriptive cross-sectional study was conducted in the city of Ludhiana, State of Punjab in July 2017. The study proposal was approved by the Institutional Research Committee. A validated, pre-tested questionnaire comprising of demographic information and specific research questions on

knowledge, attitude and practice was distributed among a representative sample of 300 parents and caregivers in different centres across the city such as kindergartens, schools, hospitals, stores selling infant supplies. The questionnaire was also distributed among caregivers across different states of the country via emails. These self-administered questions were in English as well as national and local languages. Cronbach's coefficient was found to be 0.80 and the face validity 92%. Descriptive statistics was used to analyse the data.

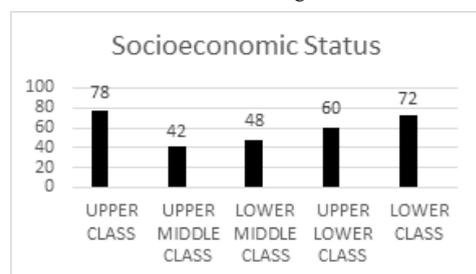
RESULTS

In this study 45% of the participants used pacifiers for their children. Demographic data of the study participants is summarized in Graph 1

according to Modified Kuppaswamy scale, 2017⁵. The parents acquired their knowledge about pacifiers primarily from family and friends. However, there was a discrepancy in knowledge and practice as depicted in Table 1.

S.No	Question	Knowledge	Practice
1.	Pacifiers can be introduced at the age of six months	43%	23.4 %
2.	Pacifiers should be weaned off by 2 years of age	50 %	10 %
3.	Pacifier use should be limited to sleep	40 %	15 %

Reasons for pacifier use included comfort/satisfaction, safety, and preference over digit-sucking. The harmful effects of pacifier use were related to potential risk of infections (70%), dental problems (44%) and reduced duration of breast feeding (40%). Also, parents (75%) were well aware that pacifiers should not be coated with honey or other substances to reduce the risk of dental caries. 75% parents were unaware that pacifier use reduces SIDS risk; however, most parents did not think that this knowledge about association between pacifier and SIDS risk reduction would have changed their decision.



Graph 1: Socioeconomic data of the population according to Modified Kuppaswamy Scale, 2017

Parents' attitude regarding their existing knowledge is shown in Fig 1. Parents were positive about enhancing their knowledge especially from paediatricians and paediatric dentists.

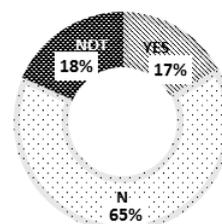


Figure 1: Attitude about existing knowledge

DISCUSSION

Pacifiers were originally designed to soothe cranky infants, promote and continue restful sleep, and reduce the pain of teething⁶. Health care professionals are often asked for guidance about pacifier use in children, especially regarding the benefits and risks, and when to appropriately wean a child. The benefits of pacifier use include analgesic effects in common minor procedures like vaccination, shorter hospital stays for preterm infants, and a reduction in the risk of sudden infant death syndrome. Potential complications of pacifier use, particularly with prolonged use, include a negative effect on breastfeeding, dental malocclusion, and otitis media. American Academy of Paediatrics (AAP) guideline on breastfeeding does not contradict pacifier use for oral training in preterm infants. AAP also recommends avoiding pacifier use until breastfeeding is well established (usually by one month of age) and educating mothers about effect of pacifier use on breastfeeding in the immediate postpartum period⁷. American Academy of Family Physicians (AAFP) also discourages parents or caregivers from putting sweet substances on pacifiers to entice the infant⁸. Pacifiers should be sterilized in boiling water and replaced regularly every 6-8 weeks to maintain good hygiene⁹. American Dental Association (ADA) and American Academy of Paediatric Dentistry (AAPD) recommend actively discouraging pacifier use after four years of age¹⁰. There is limited published research regarding pacifier use by Indian parents and caregivers. In the present study 45 % of the participants used pacifiers for their children at some point of time, that is, from birth to even more than two years. Pacifier use was more commonly observed in extremes of the socioeconomic scale though this difference was not statistically significant. Multiple factors, including concerns about infant comfort, infant safety, attachment to the pacifier, dental problems, nipple confusion, and infection, might have impacted parental decision to use or not use a pacifier. Frequently cited reasons for pacifier use were infant comfort, gratification of sucking urge and preference over digit sucking. Many parents perceived that it would be less difficult to wean the infant off of the pacifier than to stop the finger sucking. The participants had adequate knowledge about sterilization and replacement protocols. Most of the parents knew that pacifiers should not be coated with honey or sugar substitutes to avoid dental caries.

The AAPD, in its policy statement about non-nutritive sucking, recognizes that sucking is a common and developmentally normal behavior and states that there is little danger of permanent harm to the teeth if the pacifier is discontinued by 3 years of age¹⁰.

Few of the respondents felt that pacifier reduces the duration of breast feeding due to possible risk of nipple confusion. According to previous studies, when the pacifier is introduced after breastfeeding has been established, there is little risk for nipple confusion⁸ and pacifier use does not impact on the duration of breastfeeding¹¹⁻¹³.

There is increasing literature about the protective association of pacifier use and Sudden Infant Death Syndrome (SIDS)¹⁴⁻¹⁶. But, many parents are unaware of the recommendations to use a pacifier for SIDS risk reduction. The disadvantages of pacifier use outweighed the advantage of using a pacifier to reduce the risk of SIDS for most of the participants. Researchers have hypothesized that this protective effect of pacifiers may be due to decreased arousability, changes in autonomic control, or maintenance of the airway during sleep¹⁵.

According to the results of the present study, recommendations for pacifier use have proved to be controversial in the Indian context. The Indian Academy of Pediatrics in its Child survival and Safe Motherhood Programme (CSSM) discourages the use of pacifiers in breastfeeding infants¹⁷. The incidence of cot death in India is lower than many other countries including developed countries where it is a common practice for babies to sleep in the same room with their parents.¹⁸ Hence, recommending pacifier merely to calm a fussy baby would eventually invite a plethora of problems for children and the parents.

Research suggests that limiting pacifier use does not significantly affect crying or fussing.¹⁹ Pacifiers transform from a means of non-nutritive sucking to objects of affection that give the child a sense of security. Hence, parents should be counseled about alternate methods of soothing and pacifier weaning. Key alternatives to pacifier use in younger infants include swaddling, rocking, soft music, singing, and infant massage. Older infants or toddlers may be distracted from pacifiers with activities, toys, or other objects of affection. Some weaning methods that have been studied include physician or parent encouragement, putting unpalatable substances on the pacifier, and stopping the habit abruptly.

The level of knowledge among participants in this study was satisfactory though there was discrepancy in putting the knowledge into practice. This might be due infant attachment with the pacifier especially during sleep which puts young parents and caregivers in a difficult situation to wean off this habit. The attitude of the parents towards acquiring knowledge was positive and expected more information from pediatrician and pediatric dentists.

The population for the study was limited to parents and caregivers in Ludhiana city and only a few responses could be generated via emails from other states across India. Thus, these findings may not be generalizable. In addition, because this is a qualitative study, these findings cannot determine prevalence of specific opinions or beliefs.

Conclusion

The level of knowledge among parents and caregivers regarding the use of pacifiers was satisfactory though there was a discrepancy in putting knowledge to practice. Pediatricians and pediatric dentists should be aware that parents may have strong preferences about knowing about benefits and risks of pacifier use. Hence it essential to develop an educational tool to generate more awareness about pacifiers, especially in the Indian context.

REFERENCES

- Lau C. Oral feeding in the preterm infant. *Neo Reviews*. 2006;7:e19–e27. doi: 10.1542/neo.7-1-e19.
- Popescu EA, Popescu M, Wang J, Barlow SM, Gustafson KM. Non-nutritive sucking recorded in utero via fetal magnetography? *Physiol Meas*. 2008;29:127–139. doi: 10.1088/0967-3334/29/1/009.
- Bertoncelli N, Cuomo G, Cattani S, Mazzi C, Pugliese M, Coccolini E et al. Oral Feeding Competences of Healthy Preterm Infants: A Review. *Int J Pediatrics*. 2012. doi.org/10.1155/2012/896257.
- Harding CM, Law J, Pring T. The use of non-nutritive sucking to promote functional sucking skills in premature infants: an exploratory trial. *Infant*. 2006;2:238–243.
- Singh T, Sharma S, Nagesh S. Socio-economic status scales updated for 2017. *Int J Res Med Sci* 2017;5:3264-7.
- Schwartz RH, Guthrie KL. Infant pacifiers: an overview. *Clin Pediatr (Phila)*. 2008; 47(4):327–31.
- Eidelman AI, Schanler RJ. AAP Section on Breastfeeding, Policy statement: Breastfeeding and the use of human milk. *Pediatrics*. 2012; 129(3):e827–e841.
- American Academy of Family Physicians. Breastfeeding, family physicians supporting (position paper). Available at : <http://www.aafp.org/online/en/home/policy/policies/b/breastfeedingpositionpaper.html>. Accessed September 8, 2018
- Pacifier cleaning practices and risk of allergy development. James C. Thompson, William K. Dolen *Pediatrics* Nov 2014, 134 (Supplement3) S136-S137, DOI:10.1542/peds.2014-1817G.
- American Academy of Pediatric Dentistry. Council on Clinical Affairs, Policy Statement on Oral Habits. 2000. [cited 2014 November 14]; Available from: www.aapd.org/media/Policies_Guidelines/P_OralHabits.pdf
- Howard CR, Howard FM, Lanphear B, et al. The effects of early pacifier use on breastfeeding duration. *Pediatrics*. 1999;103:E133.
- Karabulut E, Yalcin SS, Ozdemir-Geyik P, et al. Effect of pacifier use on exclusive and any breastfeeding: a meta-analysis. *Turk J Pediatr*. 2009;51:35–43.
- Jenik AG, et al. Does the recommendation to use a pacifier influence the prevalence of breastfeeding? *J Pediatr*. 2009; 155(3):350–4 e1.
- Kattwinkel J, et al. Task Force on Sudden Infant Death Syndrome, American Academy of Pediatrics. The changing concept of sudden infant death syndrome: diagnostic coding shifts, controversies regarding the sleeping environment, and new variables to consider in reducing risk. *Pediatrics*. 2005; 116(5):1245–1255
- Moon RY. American Academy of Pediatrics, Task Force on Sudden Infant Death Syndrome. Policy statement-SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. *Pediatrics*. 2011; 128(5):1030–1039
- Horne RS, et al. Sudden infant death syndrome: implications of altered physiological control during sleep. *Curr Pediatr Rev*. 2010; 6(1):30–38.
- HPS. IAP policy on infant feeding. -PubMed-NCBI [Internet]. Ncbi.nlm.nih.gov. 2018 [cited 11 September 2018]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/8635776>
- Kroll M, Quigley M, Kurinczuk J, Dattani N, Li Y, Hollowell J. Ethnic variation in unexplained deaths in infancy, including sudden infant death syndrome (SIDS), England and Wales 2006–2012: national birth a