

## **Evaluation of the use of a pacifier and its problems in children under five years at Kirkuk city**

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### **Abstract**

**Pacifier is a nipple given to infant or child to suck upon. It's still common user in our locality. Infants have an intense need to suck that is separate from their need to eat. Some newborns begin to suck immediately. Infants suck when they are tired, bored, or in need of comfort. Some babies have a stronger need to suck than others and—next to eating and being held—sucking may provide the most comfort to an infant. Babies who do not suck their thumbs or fingers often rely on pacifiers.**

**Most infants cry because they do not yet have methods for soothing themselves. Some newborns do not have the coordination to suck their fingers or thumb. Although breastfeeding is the most effective way to calm infants, and their hands or thumbs can be placed in their mouths, pacifiers can be very helpful for discontented babies who cannot or will not suck their thumbs or fingers. The aims of this study to decrease problem that occurs with using of pacifier by evaluate the association between pacifier use and the increased occurrence of acute otitis media, diarrhea, oral thrush, and teething problems. The current work represented a case control study which was conducted during the period extending from the first of the July 2015 to the end of October of 2015. A simple random sampling technique had been used to collect a (200) kids (100 kids use pacifier and 100 not use pacifier) from different locations in Kirkuk province and their age from birth to 5 years.**

**The 100 children that used a pacifier at baseline. 56% of children using pacifier had otitis media (OM) versus 40% of non-pacifier using. 66% of children using pacifier had oral thrush versus 49% of non-pacifier use. Use of pacifier appears to be a risk factor for recurrent acute OM and oral thrush. Parents should be informed about the possible negative effect of using a pacifier once there has been diagnosed with acute OM or oral thrush to avoid recurrent OM and oral thrush.**

### **Introduction**

A pacifier is an artificial nipple designed for babies to suck on for comfort that was cited for the first time in medical literature in 1473 by

German physician Bartholomaeus M. in his book *Kinderbuchlein*. (1) Infant pacifiers should be cleaned daily by boiling and washing in a dishwasher (2,3). They should never be stored in

plastic bags where dampness can encourage fungal overgrowth(2,4). Pacifiers should never be sweetened because sweetened pacifiers constitute a leading cause of tooth decay and caries in babies under three years (3). Pacifiers never should be used to replace a feeding, and children never be given a pacifier if they are so hungry( 5). A hungry baby may become upset when there is no milk in the nipple and could develop feeding problems(6,7) Thus pacifiers should only be used between or after feedings (8,9,10) . It was commonly believed that pacifiers may interfere with breastfeeding, by reducing milk production .(10,11,12) but, trials have not found any effect on duration of breastfeeding from using a pacifier; It may have clinical benefits for preterm babies, such as helping them to change feeding from tube to bottle feeding(15).

Research suggests that infants who use pacifiers may have more ear infections (otitis media). It is not clear, though, whether avoiding the usage of a pacifier can be prevent ear infections.(12)

It is also commonly believed that using a pacifier may lead to dental problem(13,14,15). However, if the pacifier is used for less than around

three years, it appears to be no strong evidence that using a pacifier delays speech development by preventing babies from practicing their speaking skills .(16)

### **Aim**

To decrease problem that occurs with using of pacifier by evaluate the association between pacifier use and the increased occurrence of acute otitis media, diarrhea , oral thrush, and teething problems.

### **Patients and Methods**

The study had been conducted in Pediatrics Hospital in Kirkuk city In Kirkuk province from different areas in the province ( urban and rural areas) .A simple random sampling technique had been used to collect a (200) kids (100kids use pacifier and 100 not use pacifier ) from different locations in Kirkuk province up to 5years old; during the period extending from the first of July of 2015 to the end of October of 2015.

The study include interviewer administration of questionnaire . Prior to interview , the purpose of data collection was explained and consent was obtained from the parents . Patients with congenital anomalies or medical condition and history of

chronic drug use had been excluded from the study .

The Statistical Package for Social Sciences (SPSS, version 18) was used for data entry and analysis. Chi ( $\chi^2$ ) square test of association was used to compare proportions of different factors among different groups of study sample. Odds ratio (OR) was used to identify the risk. P value of  $\leq 0.05$  was regarded as statistically significant. Bar chart used to present the data.

## Results

About 52(52%) of pacifier use were male, as compared to 48(48%) of them were female also the same picture found among non- user group, this relation was statistically not significant as shown in table 1.

About 56(56%) of the pacifier using children had otitis media versus 40(40%) of the non- pacifier user, this relation was statistically significant, as shown in table 2.

About 86(86%) of the pacifier using children had diarrhea versus 78(78%) of the non- pacifier user, this relation was statistically not significant, as shown in table 3

About 66(66%) of the pacifier using children had oral thrush versus 49(49%) of the non- pacifier user, this

relation was statistically significant, as shown in table 4.

About 21(21%) of the pacifier using children had teething problems versus 18(18%) of the non- pacifier user, this relation was statistically not significant, as shown in table 5.

## Discussion

A pacifier (American English), dummy (United Kingdom, other Commonwealth countries and Ireland), binky, or soother (Canadian English) is a rubber, plastic, or silicone nipple given to an infant or other young child to suck upon. In its standard appearance it has a teat, mouth shield, and handle. The present study was the first study carried out in Tikrit University College of Medicine . Evaluate the use of pacifier and it is among children less than 5 yr. in Kirkuk general hospital of pediatric . Therefore , the methods and results developed would be useful as basic information in further studies among this age group

About 67.2% of male using pacifier from urban area and 71.2 % of male using pacifier till know versus 56.3% of female . this result agree with Niemela study which found 134 male children using pacifier from 200

child.(17) Because in our community very care the male than female .

In current study , children using pacifier risk for recurrent OM more than non-pacifier use (56% vs. 44%),because the pacifier open ET and during flue or tonsillitis the bacterial or viral enter to ear . This finding similar to Neimla “study that found 62% of children using pacifier suffer recurrent OM.(17)

In current study , children using pacifier more risk for oral thrush (esp. fungal infection)66% of children using pacifier had oral thrush versus 49% non-pacifier use, because the pacifier still sources of infection and very difficult to kept it clean . This result agree with Neimla study that found oral thrush twice common in children use pacifier.(17)

In current study , no relation between use of pacifier and dental problem no further studies among this age group for comparism,because the study sample aged birth-5 yrs. .

### **Conclusion &**

### **Recommendation**

1. Pacifier still significant problem in our locality
2. Pacifier more common use in urban area .
3. Pacifier coming use in male more than female .

4. Pacifier is preventable risk factor to acute OM.
5. Pacifier is preventable risk factor to oral thrush.

### **References**

1. Sexton S. Risks and benefits of pacifiers. American Family Physician. 2009; 679-81.
2. Levin S. Dummies. S. Afr Med J. 1971 (4) :237-40.
3. Gale CR, Martyn CN. Dummies and the health of Hertfordshire infants, 1911-1930. Soc Hist Med. 1995:231-255.
4. Kahn A, Sawaguchi T, Sawaguchi A, Groswasser J, Franco P, Scaillet S, Kelmanson I, Dan B. Sudden infant deaths: from epidemiology to physiology. Forensic Sci Int. 2002 Sep 14; 130 Suppl: S8-20.
5. Niemelä M, Pihakari O, Pokka T, Uhari M. Pacifier as a risk factor for acute otitis media: a randomized, controlled trial of parental counseling. Pediatrics. 2000:483-88.
6. Zempsky WT, Cravero JP, for the American Academy of Pediatrics. Relief of pain and

- anxiety in pediatric patients in emergency medical systems. Pediatrics. 2004;1348–1356.
7. Gartner LM, Morton J, Lawrence RA, et al., for the American Academy of Pediatrics Section on Breastfeeding. Breastfeeding and the use of human milk. Pediatrics. 2005;496–506.
  8. Ishijima K, Sando I, Balban C, Suzuki C. Length of the eustachian tube and its postnatal development. Ann Otol Rhinol Laryngol. 2000; 109-500.
  9. Bylander A., Tiemstom D. Diagnosis and management of acute otitis media. Pediatrics. 2004;1451–1465.
  10. ICSI. Diagnosis and treatment of otitis media in children. [http://www.icsi.org/otitis\\_media/diagnosis\\_and\\_treatment\\_of\\_otitis\\_media\\_in\\_children\\_2304.html](http://www.icsi.org/otitis_media/diagnosis_and_treatment_of_otitis_media_in_children_2304.html). Accessed November 6, 2008.
  11. Tonkin SL, Lui D, McIntosh CG, Rowley S, Knight DB, Gunn AJ. Effect of pacifier use on mandibular position in preterm infants. Acta Paediatr. 2007 Aug 20; 18-20.
  12. Thompson JM, Thach BT, Becroft DM, Mitchell EA. Sudden infant death syndrome: Risk factors for infants found face down differ from other SIDS cases. J Pediatric. 2006 (4); 630-33.
  13. Talbert DG. Dysphagia as a risk factor for sudden unexplained death in infancy. Med Hypotheses. 2006; 67(4):786-91.
  14. Joanna B. Institute Early childhood pacifier use in relation to breastfeeding, SIDS, infection and dental malocclusion, Nurs Stand, 2006; 20(38):52-55.
  15. Li DK, Willinger M, Petitti DB, Odouli R, Liu L, Hoffman HJ. Use of a dummy (pacifier) during sleep and risk of sudden infant death syndrome (SIDS): population based case-control study. BMJ. 2006 Jan 7; 332(7532):18-22.
  16. Nelson EA, Yu LM, Williams S; International Child Care Practices Study Group

Members. International Child  
Care Practices study:  
Breastfeeding and pacifier use.  
J Hum Lact. 2005 ; 21(3):289-  
95.

17. Niemela M, Uhari M,  
Mottonen M. A pacifier  
increases the risk of recurrent  
acute otitis media in children in  
day care centers. Pediatrics  
(Nov 1995) 96: 884-88 .

Table 1 Distribution of the study samples according to sex

Sex	Study groups		Total
	Pacifier use	Not used	
Male	52 52.0%	52 52.0%	104 52.0%
Female	48 48.0%	48 48.0%	96 48.0%
Total	100 100.0%	100 100.0%	200 100.0%

$\chi^2=0$ ,  $df=1$ , P value  $>0.05$  not significant

Table 2 Distribution of the study samples according to otitis media infection .

Otitis media	Study groups		Total
	Pacifier use	Not used	
Yes	56 56.0%	40 40.0%	96 48.0%
No	44 44.0%	60 60.0%	104 52.0%
Total	100 100.0%	100 100.0%	200 100.0%

$\chi^2=5.128$ ,  $df=1$ , P value  $<0.05$  significant

Table 3 Distribution of the study samples according to diarrhea.

Diarrhea	Study groups		Total
	Pacifier use	Not used	
Yes	86 86.0%	78 78.0%	164 82.0%
No	14 14.0%	22 22.0%	36 18.0%
Total	100 100.0%	100 100.0%	200 100.0%

$\chi^2=2.168$ ,  $df=1$ , P value  $>0.05$  not significant

Table 4 Distribution of the study samples according to oral thrush

oral thrush	Study groups		Total
	Pacifier use	Not used	
Yes	66 66.0%	49 49.0%	115 57.5%
No	34 34.0%	51 51.0%	85 42.5%
Total	100 100.0%	100 100.0%	200 100.0%

$\chi^2=5.913$ ,  $df=1$ , P value  $<0.05$  significant

Table 5 Distribution of the study samples according to teething problems.

Teething problems	case classification		Total
	Pacifier use	Not used	
Yes	21 21.0%	18 18.0%	39 19.5%
No	79 79.0%	82 82.0%	161 80.5%
Total	100 100.0%	100 100.0%	200 100.0%

$\chi^2=0.287$ ,  $df=1$ , P value  $>0.05$  not significant