

# The Breast-Feeding Pattern and Caries Severity Index in the Children 4 to 6 years old (A study at subdistrict of Kasihan, Bantul, Yogyakarta Indonesia)

**Pipiet Okti Kusumastiwi<sup>1</sup> Alfini Octavia<sup>2</sup>**  
**<sup>1, 2</sup> School of Dentistry , Muhammadiyah University Yogyakarta, Indonesia**

Octavia\_alfini@gmail.com

**Background.** The previous research revealed that the risk of caries increased 2,27 times in children consuming bottle-milk twice or more a day. Several studies also stated the breast-feeding role in prevention of caries incidence.

**Aim.** The aim of this study is to determine the relationship between breast-feeding pattern and caries severity in children at of age 4 – 6 years old.

**Design.** This study was conducted with analytic cross-sectional design and cluster sampling technique in three kindergartens at the subdistrict of Kasihan, Bantul, Yogyakarta, Indonesia. One hundred and seven pairs of mother and child were examined as the subject. Some questionnaires were administered to the mothers for inquiring the breast-feeding patterns while intra oral examination had been conducted for collecting the data of caries severity index (CSI).

$$\text{CSI index} = \frac{\text{caries score of the teeth}}{\text{amount of caries teeth}}$$

**Pict 1. Caries Severity Index (Shimono)**

	Sounds
C 1	Obvious explorer catch, no soft walls or floor observed. Stained pits or fissures in enamel
C2	Obvious explorer catch with soft walls, softend floor or undermined enamel
C3	Caries exceeds C2 and involvement of the pulp exist. Fistula, abcess or hyperplastic pulpitis must be clinically pr
C4	Crown is destroyed by the caries process, retained roots present clinically

**Pict 2 & 3. Collecting data from the children**



**Results.** The score of caries severity index in the children who had exclusive breast-feeding was 2,33 and the score in those who had non exclusive breast-feeding is 2,08. Mann Whitney test showed that there was no significant difference in both of children having exclusive breast-feeding and non exclusive breast-feeding.

**Table 1. Breast feeding patterns in gender**

Breast Feeding Pattern	Male		Female		Total	
	n	%	n	%	n	%
Exclusive	26	36,2	15	20,7	41	56,9
Non exclusive	20	27,8	11	15,3	31	43,1
<b>Total</b>	<b>46</b>	<b>64</b>	<b>27</b>	<b>36</b>	<b>72</b>	<b>100</b>

**Table 2. Breast feeding pattern in aged group**

No.	Breast Feeding pattern	4,0-4,12 years old		5,0-6,0 years old		Total	
		n	%	n	%	n	%
1.	exclusive	9	12,5	30	41,67	39	54,17
2.	Non exclusive	4	5,5	29	40,33	33	45,83
<b>Total</b>		<b>13</b>	<b>18</b>	<b>59</b>	<b>82</b>	<b>72</b>	<b>100</b>

**Table 3. Saphiro wilk normality test result**

Brest feeding pattern	df	Signifikan (p)
<b>Exclusive</b>	41	.040
<b>Non exclusive</b>	31	.510

**Table 4. Statistic test result**

	skor CSI
<b>Mann-Whitney U</b>	626,000
<b>Wilcoxon W</b>	1122,000
<b>Z</b>	-,108
<b>Asymp. Sig. (2-tailed)</b>	,914

**Conclusion.** There is no significant difference of caries severity between the children having exclusive breast-feeding and non exclusive breast-feeding

**Refferences**

- Yulita, I., Elly, D dan Victrix Astarte, A. (2013). Air susu ibu dan karies gigi sulung. Jurnal Health Quality 4 (1), pg. 69 – 76
- Kidd, E.A.M. dan Bechal, S.J. (1991). Dasar-dasar karies penyakit dan penanggulangannya (2<sup>nd</sup> ed.) (N. Sumawinata, penerjemah). Jakarta: EGC Jakarta.
- Kawashita, Y., Kitamura, M., Saito, T. (2011) Early childhood caries. International Journal of Dentistry, (7) 1.
- Suradi, R dan Kristina, H. (2004). Manajemen laktasi, Cetakan ke-2, Perkumpulan Perinatologi Indonesia, Jakarta.
- Firdaus, A., Iswati, R. S. (2013). Hubungan pemberian ASI eksklusif dengan kejadian karies gigi pada anak usia 2-4 tahun di kelompok bermain desa Gading Watu Gresik. Embrio Jurnal Kebidanan (3)
- Saleh, M. (2004). Deteksi faktor utama penyebab karies berdasarkan cariogram pada anak sekolah dasar di kota dan desa (kajian di SD Pujokusuman III dan SD Lagaran Sanden Yogyakarta). Tesis. Program Pasca Sarjana UGM. Yogyakarta.
- Loveren, C.V., Buijs, J. F., Cate, J. M. T. (2000). The effect of triclosan toothpaste on enamel demineralization in a bacterial demineralization model. Journal of Antimicrobial Chemotherapy (45). 153-158

**Acknowledgment**

- Arya Adiningrat, DDS.,PhD , for his advice and support
- All of the students, parents, and teachers of Adisiwi Kindergarten, Pertiwi Kindergarten, and Wijaya Atmaja Kindergarten, Kasihan, Bantul, Yogyakarta ,Indonesia for their help and support to this study