

Article

## The Factor of Interesting In Breastfed Mother With Milk Formula In Buleleng , Bali

Ni Made Karlina Sumiari Tangkas<sup>1</sup>, Putu Dian Prima Kusuma Dewi<sup>2</sup>, Indire Lutfian<sup>3</sup>, Desak Ketut Sugiartini<sup>4</sup>, Luh Mariyoni<sup>5</sup>, Luh Putu Sri Artadi<sup>6</sup>

<sup>1,2,3,4,5</sup> Midwife Departement, STIKES Buleleng, Bali, Indonesia

<sup>6</sup> Midwifery in Puskesmas Sawan 1, Buleleng-Bali, Indonesia

### SUBMISSION TRACK

Received: March 01, 2019  
Final Revision: May 28, 2019  
Available Online: June 2019

### KEYWORDS

Formula milk, Factor of interesting, Buleleng

### CORRESPONDENCE

Phone: 087863010609  
E-mail: karlina.sumiari@gmail.com

### A B S T R A C T

Providing formula milk is still the biggest obstacle in the success of exclusive breastfeeding. Bali Province reported as a province in Indonesia with the highest use of formula milk. This study aims to look at the percentage and factors of interest of breastfeeding mothers on formula milk. The method used is a mixed-method with questionnaire sheets and interviews. The results show the proportion of formula milk interest is 25.48%. Factors that increase interest in formula milk are higher education 3.03 times (CI 1.18-7.81; p0.02), duration of work more than 6 hours 12.22 times (CI 5.95-25.09; p 0.01), and not giving Exclusive Breastfeeding 5.85 times (CI 2.94-11.65; p 0.01). While the absence of promotion of formula reduces interest by up to 77% (OR 0.23 CI 0.13-0.42; p 0.01). The reason for the interest in formula milk is that mothers must work so that there is no time for breastfeeding, inadequate breastfeeding, and time off It is enough. Better guidance on how to store breast milk should be prioritized for working mothers not only an understanding of the benefits of breastfeeding. Health workers should review government regulation No. 33 of 2012 regarding exclusive breastfeeding to support breastfeeding and limit the use of formula milk.

## I. INTRODUCTION

Exclusive breastfeeding is breastfeeding without eating another supplement for six months. Achievement of exclusive breastfeeding is still low globally, only 38% while in Indonesia it only reaches 30.4% (Global, Bank, Feeding, Children, & Children, 2007). WHO has a target of achieving exclusive breastfeeding up to 50% by 2025 (WHO, 2012, 2016).

The provinces in Indonesia that have the highest ASI coverage are Bali Province, but the irony is that Bali is also the province with the highest formula milk reaching 93.7% (RI, 2014). Giving formula milk is the biggest factor contributing to the failure of breastfeeding (Fikawati, 2011; Fikawati et al., 2010; Khasawneh & Khasawneh, 2017; WHO, 2012). Buleleng Regency in Bali has a trend of achieving exclusive breastfeeding which declined in 2017, due to several factors

including because most mothers who have working babies earn a living to support family needs so that there is no chance to exclusively breastfeed from birth until the baby is 6 months old and give more formula milk to her baby (Buleleng, 2017). The achievement of high formula milk indicates promotion and high interest in formula milk. Formula milk is considered the best solution for breast milk substitutes, especially for working mothers, even though the content of breast milk cannot be replaced by formula milk.

Several studies show that formula feeding increases the failure of exclusive breastfeeding (Saleh, 2011; Tilahun, Degu, Azale, & Tigabu, 2016; WHO, 2016). Counseling about Exclusive ASI is not enough to overcome the problems that arise. The root of the problem must be traced back to examining the factors that influence the interest of breastfeeding mothers on formula milk.

Promotion through media and internet in the form of advertisements that describe the content and excess found in formula milk is one of the factors for breastfeeding mothers interested in giving formula milk. Sometimes the promotion actually comes from health workers. Even though government regulation No. 33 of 2012 concerning Exclusive Breastfeeding clearly states that the provision of formula milk is carried out on certain indications.

This study aims to see

the factor of attraction of breastfeeding mothers to formula milk which of course will greatly affect the failure of exclusive breastfeeding. This will contribute to the patterns and forms of the focus of breastfeeding counseling that need to be given to increase awareness of nursing mothers that breast milk is the most complete nutrition for their babies.

## II. METHODS

This research is included in the mix method which combines quantitative and qualitative research. Quantitative research was conducted to analyze the most dominant factors affecting the interest of breastfeeding mothers in formula milk. Research with a qualitative method was carried out to deeply explore the interest of nursing mothers on formula milk.

This research was carried out by seven villages in the Sawan district. The subjects of this study were nursing mothers with children aged 0-2 years. The variables analyzed consisted of demographic characteristics (education, occupation, number of children, last childbirth distance, type of delivery, and length of work in a day), knowledge of exclusive breastfeeding, exclusive breastfeeding status, the supply of formula milk from health workers, and promotion of milk formula. The condition traced qualitatively is the reason breastfeeding mothers are interested in formula milk.

The analysis used was univariate, bivariate and multivariate with the help of STATA 12 software. Univariate analysis was used to determine the proportion of interest in formula milk and the percentage factor of interest in formula milk. Bivariate analysis to determine the factors associated with the interest of formula milk and determine the variables that can enter into the regression model. The P-value specified in the regression model is  $<0.25$ . Logistic regression is used to determine the most dominant factors increasing or decreasing the interest of breastfeeding mothers on formula milk. The specified p-value is  $<0.05$ . RESULT

The results of this study showed that from 420 breastfeeding mothers in seven villages in the Sawan sub-district, Buleleng Bali District, it showed that 25.48% (107 people) had an interest in formula milk and 20.48% (86 people) had given formula milk before the age of 6 months.

Table 1 below shows that breastfeeding mothers who are interested in providing formula milk 76.64% have elementary, middle and high school education, 85.05% do not work, 50.47% work longer than six hours per day, 89.72% the number of children 1-3 people, 51.40% distance of children more than two years, 86.92% types of normal / vaginal delivery, 76.64% have good breastfeeding status, 78.50% do not get formula milk offerings from health workers, 50.47% do not get formula milk promotions and 57.01% succeed in providing exclusive breastfeeding.

**Table 1. Characteristics of Breastfeeding Mother's Interest on Formula Milk in Buleleng Regency.**

Characteristics		Interesting with Formula Milk	
		Tidak Tertarik f (%)	Tertarik f (%)
<b>Demografic Characteristics</b>			
<b>Education</b>			
Elementary, Secondary,		300 (95.85)	82 (76.64)
High Shcool			
University Degree		13 (4.15)	25 (23.36)
<b>Employment Status</b>			
No		310 (99.04)	91 (85.05)
Yes		3 (0.96)	16 (14.95)
<b>Time of Work</b>			
≤ 6 hour/day		296 (94.57)	54 (50.47)
>6 hour/day		17 (5.43)	53 (49.53)
<b>Range of child</b>			
>2 years		199 (63.58)	55 (51.40)
≤2 years		114 (36.42)	52 (48.60)
<b>Number of Child</b>			
1-3 person		280 (89.46)	55 (51.40)
4-6 person		33 (10.54)	11 (10.28)
<b>Type of Delivery</b>			
Vaginam		296 (94.57)	93 (86.92)
SectioCaesarea		17 (5.43)	14 (13.08)
<b>Knowledge of Exclusive Breastfeeding</b>			
Good		197 (62.94)	82 (76.64)
Bad		116(37.06)	25 (23.36)
<b>Promotion of Formula Milk</b>			
Yes		54 (17.31)	53 (49.53)
No		258 (82.69)	54 (50.47)
<b>Offering Formula Milk from the health provider</b>			
Yes		24(7.67)	23(21.50)
No		289(92.33)	84(78.50)
<b>Status of Exclusive Breastfeeding</b>			
Yes		290(92.65)	61 (57.01)
No		23(7.35)	46 (42.99)

Ten variables that had been bivariate analyzed showed that the variables related to an increasing interest in breastfeeding mothers in formula milk were mothers with higher education classifications (OR 7.04 CI 3.45-14.35), working status (18.17 CI 5.18-63.73), length of work more than six hours per day (OR 17.09 CI 9.21-31.72), distance of children less than two years (OR 1.65 CI 1.06-2.57), type of delivery SC (OR 2.62 CI 1.24-5.52) and not giving Exclusive Breastfeeding (OR 9.51 CI 5.37-16.84). The variables that are related but reduce interest in formula milk are mothers with insufficient knowledge of exclusive breastfeeding (OR 0.52 CI 0.31-0.86), lack of offers of formula milk from health workers (OR 0.30 CI 0.16-0.56), and the absence of promotion of formula milk to mother (OR 0.21 CI 0.13-0.34).

Based on the results of the bivariate analysis, nine variables meet the entry into the regression model with a value of  $p < 0.25$ . Multivariate results show that there are four variables related to maternal interest in formula feeding, of which three of them increase interest and one variable decreases interest in formula milk. Mothers with a classification of education to tertiary education

were 3.03 times more interested in giving formula milk than those with lower education (CI 1.18-7.81 p 0.02). The duration of work also determines that mothers with long working hours of more than six hours have a tendency to be interested in using formula milk 12.22 times greater than mothers who work less than six hours per day. Exclusive breastfeeding is also a determinant of interest in formula milk, where mothers who have failed to give exclusive breastfeeding are 5.85 times more interested in giving formula milk than mothers who have successfully given exclusive breastfeeding.

In addition, external variables are also proven to increase maternal interest in formula milk, namely the promotion of formula milk. This study found results that not exposure to mothers to the promotion of formula milk can reduce attraction by up to 77%.

**Table 2. Bivariate and Multivariate Analysis of Mnyusui's Interest in Formula Milk in Buleleng Regency**

Karakteristik			Ketertarikan Terhadap Susu Formula	
Karakteristik Demografi			Bivariat	Multivariat
			OR (CI;p)	aOR (CI;p)
<b>Education</b>				
Elementary, Shcool	Secondary,	High	1 (ref)	1 (ref)
University Degree			7.04 (3.45-14.35;0.01)	3.03 (1.18-7.81;0.02)
<b>Employment Status</b>				
No			1(ref)	-
Yes			18.17 (5.18-63.73;0.01)	
<b>Time of Work</b>				
≤ 6 hour/day			1 (ref)	1 (ref)
>6 hour/day			17.09 (5.18-63.73;0.01)	12.22 (5.95-25.09;0.01)
<b>Range of child</b>				
>2 years			1 (ref)	-
≤2 years			1.65 (1.06-2.57;0.02)	
<b>Number of Child</b>				
1-3 person			1(ref)	-
4-6 person			0.97(0.47-1.99;0.94)	
<b>Type of Delivery</b>				
Vaginam			1(ref)	-
SectioCaesarea			2.62(1.24-5.52;0.01)	
<b>Promotion of Formula Milk</b>				
Yes			1(ref)	1(ref)
No			0.21(0.13-0.34;0.01)	0.23(0.13-0.42;0.01)
<b>Offering Formula Milk from a health provider</b>				
Yes			1(ref)	-
No			0.30(0.16-0.56;0.01)	
<b>Status of Exclusive Breastfeeding</b>				
Yes			1(ref)	1(ref)
No			9.51(5.37-16.84;0.01)	5.85(2.94-11.65;0.01)

Offers for formula milk from 93 people who provided formula milk received the most promotion through media such as television, internet, and shops or supermarkets amounting to 52.68% (49/93). Qualitatively it shows that from the results of interviews with 86 mothers who

have given formula milk before the age of 6 months, three things are the reasons for giving formula milk. The saturation results of the respondent's answers are one

1. "I have to go back to work because the work leave has been used up. I am worried that I will not be able to meet the needs of breastmilk for babies so they are given formula milk"
2. "Work makes not having much time for breastfeeding"
3. "The milk comes out a little so it must be helped by giving formula milk so the baby is not fussy"

## II. DISCUSSION

The interest of breastfeeding mothers on formula milk is 25.48%. Interest in formula milk has a correlation and relationship with formula feeding. A more in-depth analysis showed that 64.49% (69 people) who were interested in formula milk had actually given formula milk before the age of six months. This interest in formula milk is shown to be 3 times greater for mothers who are educated up to college than mothers with elementary, middle and high school education. The results of this study are inversely proportional to the predictors of exclusive breastfeeding, where mothers with higher education of 7.16 times (AOR = 7.16, 95% CI 2.73, 18.79) are more likely to give exclusive breastfeeding (Arora et al., 2017). Deeper correlation analysis shows that 63.16% (24 people) of highly educated mothers have a quantity of work that is more than six hours and do not know how to store breast milk correctly at 61.90% (13 people) so that this group has the opportunity and interest in formula milk greater than. This is supported by qualitative results that the reasons for breastfeeding mothers are more interested in giving formula milk because they work and are worried that their babies are fussy and lack nutrition if they are deficient in breast milk. Working mothers are the biggest obstacle in giving breast milk and the only way out is to choose formula milk (Saleh, 2011).

The length of work in a day also increases interest in formula milk where mothers who work longer than six hours a day 12.22 times are more interested in formula milk than mothers who work less than six hours a day. The longer the mother is separated and not breastfeeding directly, the milk production can also decrease along with reduced prolactin and let down reflexes experienced (Fraser, 2011). Inadequate milk production is a problem and the main reason for mothers to give formula milk (WHO, 2012). This can be overcome if the mother routinely empties the breast by pumping and storing properly. The goal is that breast milk production remains stable through a process of breast emptying which will stimulate the production of prolactin hormones (Bobak, 2005). The more in-depth analysis also shows that 80.95% (17 people) among those who work with intensity for more than six hours do not know how to store breast milk correctly when left to work.

Mothers who succeed in giving exclusive breastfeeding have an interest of 5.85 times to give formula milk. Qualitatively, it was found from the results of this study that mothers felt that their ASI production was inadequate and unable to meet the needs of infants so that formula milk was the only alternative to fulfill nutrition for infants.

There are no rules and regulations that regulate the promotion of formula milk. The regulation in PP No. 33 of 2012 that formula is given for certain medical indications and cannot be said as a substitute for ASI (Kepmenkes, 2012; RI, 2014). Mothers who do not get formula milk promotion can reduce interest by up to 77%. The implementation study on the success of Exclusive ASI stated that the failure of Exclusive Breastfeeding was one of them with the promotion of formula milk (Fikawati et al., 2010).

### III. CONCLUSION

Factors that increase maternal interest in formula milk are higher education, longer working hours than six hours a day and failing to provide exclusive breastfeeding, while maternal interest in formula milk will decrease by 77% if you do not get promotion about formula milk.

### REFERENCES

- Arora, A., Manohar, N., Hayen, A., Bhole, S., Eastwood, J., Levy, S., & Scott, J. A. (2017). Determinants of breastfeeding initiation among mothers in Sydney, Australia: findings from a birth cohort study. *International Breastfeeding Journal*, 12(1), 39. <https://doi.org/10.1186/s13006-017-0130-0>
- Bobak, L. J. (2005). *Buku Ajar Keperawatan Maternitas Edisi 4*. (Renata Komalasari, Ed.) (4th ed.). Jakarta: EGC.
- Buleleng, D. K. (2017). Profil Kesehatan Buleleng Tahun 2017. *Profil Kesehatan Kota Bukittinggi*, 38–74. <https://doi.org/10.1016/j.ajog.2006.12.019>
- Fikawati, S. (2011). Study on Policy and Implementation of Exclusive and Early Initiation of Breastfeeding in Indonesia, (May 2017). <https://doi.org/10.7454/msk.v14i1.642>
- Fikawati, S., Syafiq, A., Indonesia, D., Susu, A., Asi, I., & Pembahasan, H. (2010). Kajian Implementasi Dan Kebijakan Air Susu Ibu Eksklusif Dan Inisiasi Menyusu Dini Di Indonesia, 14(1), 17–24.
- Fraser, D. (2011). *Buku Ajar Bidan (I)*. Jakarta: ECG.
- Global, W. H. O., Bank, D., Feeding, Y. C., Children, T., & Children, U. (2007). Date updated: 2009-07-21, 2–6.
- Kepmenkes. (2012). Pokok - Pokok Peraturan Pemerintah No . 33 Tahun 2012 tentang Pemberian Air Susu Ibu Eksklusif, (33), 1–42.
- Khasawneh, W., & Khasawneh, A. A. (2017). Predictors and barriers to breastfeeding in north of Jordan: could we do better? *International Breastfeeding Journal*, 12(1), 49. <https://doi.org/10.1186/s13006-017-0140-y>
- RI, P. K. (2014). *Situasi dan Analisis ASI Eksklusif*.
- Saleh, L. O. A. (2011). Faktor-Faktor Yang Menghambat Praktik ASI Eksklusif Pada Bayi Usia 0-6 Bulan.
- Tilahun, G., Degu, G., Azale, T., & Tigabu, A. (2016). Prevalence and associated factors of timely initiation of breastfeeding among mothers at Debre Berhan town , Ethiopia : a cross- sectional study, 1–9. <https://doi.org/10.1186/s13006-016-0086-5>
- WHO. (2012). *WHA Global Nutrition Targets 2025 : Breastfeeding Policy Brief*.
- WHO. (2016). *Breastfeeding The Goal*.

### BIOGRAPHY

#### First Author

The author is a lecturer at D-III Midwifery STIKES Buleleng. He graduated from the Diploma III Midwife at the Health Ministry Polytechnic Denpasar in 2010, and Diploma IV at the STIKes Husada Jombang in 2012. Willingness and interest to always develop themselves, the author in 2018 then completed his Master of Law studies at Soegijapranata Catholic University.

#### Second Author

The author is a lecturer and chair of the study program at D-III Midwifery STIKES Buleleng. Having dedication and interest in developing oneself that continues to increase and proven by completing the Masters in Health at Udayana University in 2015. The author has obtained Kemenristek Dikti Grant funds for the beginner lecturer research (PDP) scheme in 2017 and the stimulus PKM in 2019.