



Breastfeeding Pattern based on Nutritional Status in 6-12 Months Old Infants

Carissa Cerdasari*

*Malang State Health Polytechnic, Ministry of Health, Indonesia

OBJECTIVE

Malnutrition, especially under nutrition is still a concern for public health problems in Indonesia. Recorded in 2013, an increase in the prevalence of malnutrition in Indonesia, which reached 5.7% (severely underweight), 13.9% (underweight), and 19.2% (stunting) (1).

Malnutrition, especially underweight, will interfere the learning process due to impaired intelligence development, more susceptible to infection and increase disease severity, to increase mortality (2).

One of the direct causes of underweight incidence is the consumption of foods that do not fit the needs, including patterns of breastfeeding that are not appropriate. Breastfeeding patterns include low frequency of breastfeeding and exclusive breastfeeding duration, proven to be associated with underweight incidence in infants (3).

This study was conducted to asses the difference breastfeeding patterns include the exclusive breastfeeding duration and daily breastfeeding frequencies based on nutritional status in 6-12 months old infants.

METHODS

In this cross-sectional study, mothers (n=60) of infants aged 6-12 months old were recruited. The infant's nutritional status was determined anthropometrically by 3 indexes ie body weight for age, length for age, and weight for length.

Breastfeeding patterns include the breastmilk only duration and daily breastfeeding frequencies is obtained by interview and by 2x24 hour daily breastfeeding form.

This study was conducted after obtaining the Ethical Approval Recommendation from the Ethics Commission of Malang State Health Polytechnic No.:250/KEPK-POLKESMA/2016, as well as the informed consent that respondents are willing to participate in this research.

Kruskal-wallis test were used to evaluate the difference breastfeeding patterns including the exclusive breastfeeding duration and daily breastfeeding frequencies based on nutritional status.

RESULTS

Characteristics of respondents showed that most of mothers were housewives, with lower/middle education. While the family income showed most of the respondents have a good family income (above regional minimum wage).

Table 1. General Characteristics of The Subjects

Variables	N=60	%
Mother Working Status		
Not working/housewife	40	66,67
Working	20	33,33
Mother's Education		
Low/Middle	47	78,33
Graduated from academy/university	13	21,67
Father's Occupation		
Labour/ tradesman/service/self employed	29	48,33
Private sector/BUMN/PNS/TNI/POLRI	31	51,67
Father's Education		
Low/Middle	41	68,33
Graduated from academy/university	19	31,67
Parity		
> 2 children	8	13,33
≤ 2 children	52	86,67
Family Income		
≥ UMK (Rp. 2.099.000,-)	31	51,67
< UMK (Rp. 2.099.000,-)	29	48,33
Infant's Sex		
Boys	26	43,33
Girls	34	56,67
Infant's Birth Weight		
<2500 gr	2	3,33
≥2500 gram	58	96,67
Infant's Birth Order		
First Child	24	40,00
Second Child onwards	36	60,00

Table 2. Breastfeeding Pattern in 6-12 Months Old Infants

Variables	Mean ± SD	Min	Max
Breastmilk Only Duration (Months)	3,21 ± 2,41	0	7
Daily Breasfeeding Frequencies (Times)	12,46 ± 3,8	3	20

Distribution of infant's nutritional status in graphic 1, showed that most of infants had normal nutritional status.

Graphic 1. Distribution of Infant's Nutritional Status

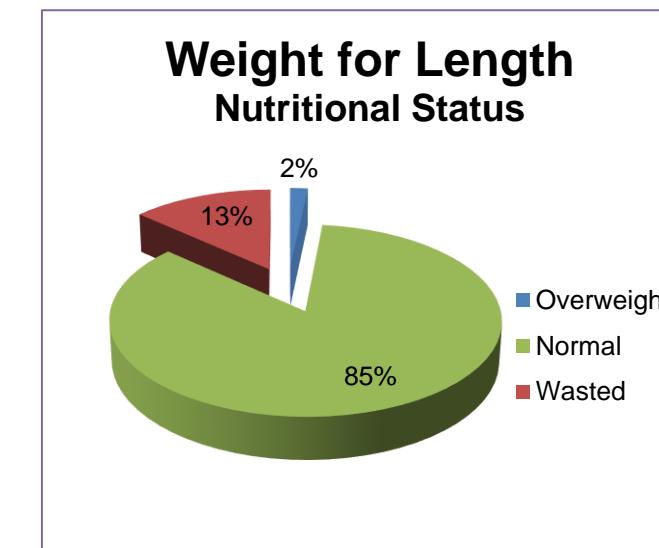
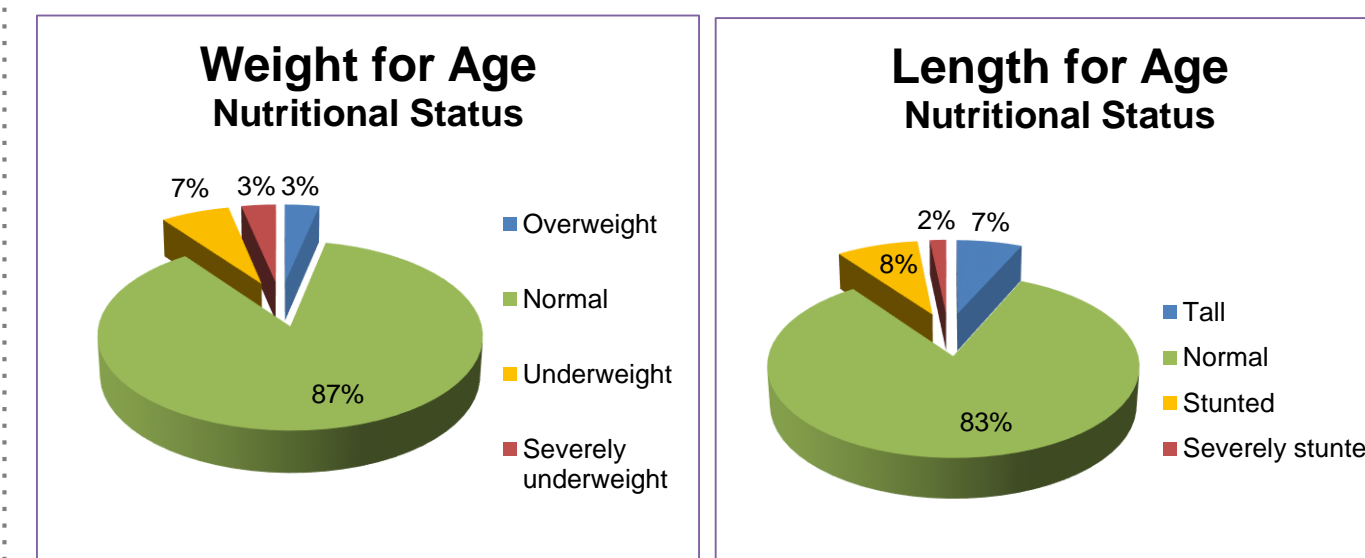


Table 3. Breastfeeding Pattern based on Weight for Age Nutritional Status

Variables	Nutritional Status (W/A)				P
	Overweight	Normal	Underweight	Severely Underweight	
Breastmilk Only Duration (Months)	(n = 2) 3,5 (1 ; 6)	(n=52) 4 (0 ; 5)	(n=4) 5 (2,5 ; 5)	(n = 2) 2,5 (2 ; 3)	0,89
Daily Breasfeeding Frequencies (Times)	11 (7 ; 15)	11 (1,5 ; 14)	12 (4 ; 17)	6,5 (0 ; 13)	0,88

Kruskal-Wallis test; in median (Q1 ; Q3)

Table 4. Breastfeeding Pattern based on Length for Age Nutritional Status

Variables	Nutritional Status (L/A)				P
	Tall	Normal	Stunted	Severely Stunted	
Breastmilk Only Duration (Months)	(n = 4) 3,5 (0,5 ; 6)	(n=50) 4 (0 ; 5)	(n=5) 0 (0 ; 5)	(n = 1) 5 (5 ; 5)	0,76
Daily Breasfeeding Frequencies (Times)	10,5 (3,5 ; 14,5)	11 (0 ; 15)	12 (8 ; 12)	8 (8 ; 8)	0,96

Kruskal-Wallis test; in median (Q1 ; Q3)

Table 5. Breastfeeding Pattern based on Weight for Length Nutritional Status

Variables	Nutritional Status (W/L)				P
	Long	Normal	Stunted	Severely Stunted	
Breastmilk Only Duration (Months)	(n = 4) 10,5 (3,5 ; 14,5)	(n=50) 11 (0 ; 15)	(n=5) 12 (8 ; 12)	(n = 1) 8 (8 ; 8)	0,96
Daily Breasfeeding Frequencies (Times)	3,5 (0,5 ; 6)	4 (0 ; 5)	0 (0 ; 5)	5 (5 ; 5)	0,76

Kruskal-Wallis test; in median (Q1 ; Q3)

CONCLUSIONS

There were no difference in breastfeeding patterns either on breastmilk only durations or on daily breastfeeding frequencies based on nutritional status in 6-12 months old infants (p>0,05). Although it is not significantly different, there were tendencies of less daily breastfeeding frequencies based on weight for age and weight for length index.

Infant's nutritional status is determined more by the daily energy consumption of all infant foods, not only from breast milk but also from complementary food.

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