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THE EFFECT OF BREAST MILK TOWARD CHILDREN'S GROWTH: A SYSTEMATIC REVIEW

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Abstract

Exclusive breastfeeding is breast milk consumption as early as can after the birth/delivery. The breast milk is given without schedule. The baby also doesn't get any others food, include plain water until the age of 6 months. Many researcher have shown that breastfeeding is really important to the growth of a child. The breastfeeding will be able to decrease the number of stunting problem and obesity on children. The purposes' of the research is to give the right information about breastfeeding exclusively in order to improve the quality growth of the children. The method of the research is systematic review by searching on some database such as: Google Scholar, EBSCO and Pro-Quest. The result of this systematic review shown that in many countries breastfeeding exclusively since 0-6 months is really important for the growth of children. From many characteristics, we found that breastfeeding exclusively in the age of 0 to 6 month has a significant impact to the growth of the children.

Keywords

Breastfeeding, Growth Child, Stunting, and Stunting Food

1. Introduction

Exclusive breastfeeding is giving milk to the baby in the age of 0-6 month. Breast milk is given as early as can to the baby after delivering. Breast milk is given without a schedule. The baby also doesn't get another food except breast milk in that period (Depkes RI, 2014). Only one third of Indonesian people exclusively do breastfeeding to their baby. There are so many obstacles to give breastfeeding in Indonesia. They come from some relatives or even doctor. Some mothers are afraid that breastfeeding will be painful and un-practical, but the biggest obstacle is the problem in understanding the term and meaning of the obstacle.

For example in Aceh, as the region which is the biggest number of stunting babies in Indonesia, they have awareness in consuming breast milk but actually the problem is in the way they mean terminology of "exclusive". They give breast milk to their babies but also they give banana and honey. They believe the baby needs others food to feel full. The promotion in consumption breast milk well through primary health service is really needed. Consuming breast milk in 6 months well is necessary to decrease growth disorders in baby (UNICEF, 2016).

Based on the information from UNICEF, in neonatal service, the breast milk consumption in the world is still low such as in Nigeria, Somalia, Chad and South Africa. In Indonesia and Tunisia the breast milk consumption is decreasing. In china, the demand of formulation milk increases and attracting the attention of press. Because of that, in some countries for examples Australia and England. It is contradictive with Cambodia, Togo and Zambia. In those countries the stock are increasingly moving.

The research uses systematic review because even the government has decided to succeed the program of exclusive breast milk for 6 months. The program hasn't been achieved maximally. The breast milk consumption has a positive impact to the growth of the baby. But there are many mothers give breast milk but un - exclusively. Event worst they replace the breast milk at all. Breast milk is replaced by formulation milk. The Government Promote program of exclusively breastfeeding because breastmilk the most effective way and the cost to save a child's life.

The research has shown that breast milk is really important to the growth of the children in the future. It even can decrease the number of stunting problem and obesity (Pudla, 2015). Some research has shown contrary result. The research showed that the breast

milk doesn't have a significant impact to the growth of the children. The result of the systematic review on this research will give us much knowledge about giving breast milk to baby. So the growth of the children will be better and better.

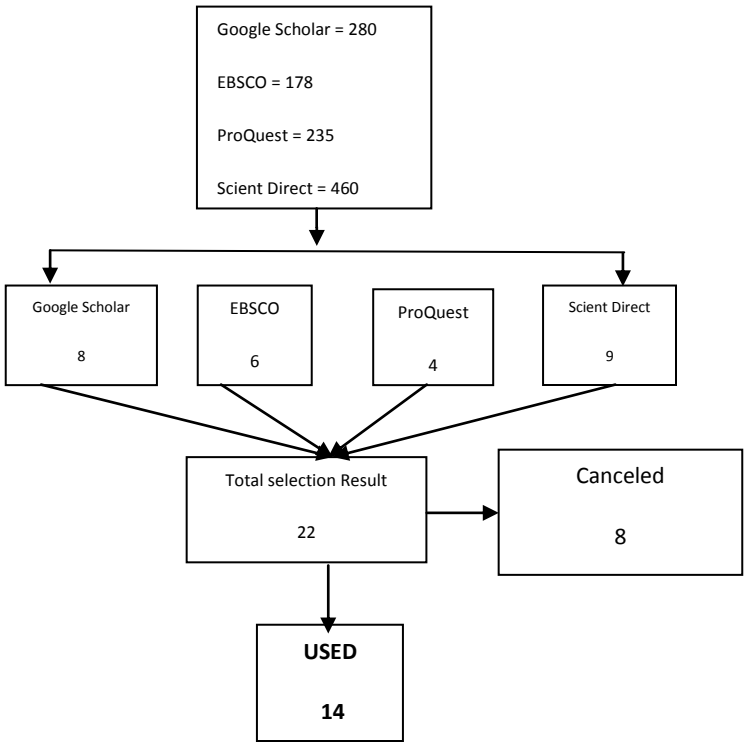
2. Methodology

2.1 Data Collecting Strategy

The sources and references on this systematic review come from some literatures and they be taken by downloading from the Internet. The data are the result of some research about exclusive breast milk and children growth. The data of the research are taken from the period of 2011 to 2016 via Google scholar, EBSSO and ProQuest. The key word of the searching are: breastfeeding, Child Growth, Stunting and also between breastfeeding and stunting. And we got many data related to those key words.

2.2 The Selection of the Studies

In this *systematic review*, they are some requirements should be fullfilled: (1) The research could be qualitative or quantitative research. (2) the research is full text research. (3) the research has been published since 2011 till 2016. (4) the research is about the impact of exclusive breastfeeding , (5) the key word is the *document title.*



2.3 Data Management

The researcher only takes some information which is match to the requirements, such as: (1) General Information: author, year, research location, (2) Design of the studies: method. Number of sample and technique of sampling collection, (3) result of the research.

2.4 Result and Explanation

The character of the systematic review showed that 14 studies have been chosen on table no 1, it uses retrospective cohort, cross sectional and case control as the design of the research. It's got from some relevant international and national journal. All of them should be relevant with the theme of this systematic review.

Table 1: *Characteristics Used In Research*

Researcher	Title	Countries of The Research	Study Design	The Result
Agrasada, 2011	Exclusive breastfeeding of low birth weight infants for the first six months: infant morbidity and maternal and infant anthropometry	Philippines	*Case Control*	At six months, neither overall gain in infant weight, length and head circumferences nor mean maternal weight and body mass index differed significantly between the feeding groups. exclusive breastfeeding for 6 months can be recommended in term low birth weight infants, who were protected from diarrhea, had fewer respiratory infections, required no hospitalization and had catch up growth.
Rahayu, 2011	The impact of low weight on	Indonesia	*Retrospective Cohort*	The research shows stunting prevalence has improved from 15% at the age of 15% (6-12

	delivering and exclusive breastfeeding toward stunting progress changing on baby in the City and Kab. Tangerang. BantenProvience.			month) becomes 34,6% at the age 3-4 years. There is a difference stunting status test of pairedsample t-test the value 1. Value < 0,001. On the research we also can found low weight on delivery, premature, length of body with the stunting case at the age of 6-12 month the score of p value < 0,001, but it doesn't show significant intimate with the case of stunting at 3-4 month. Based on multivariate statistical test founded there is no impact to the breast milk with the stunting.
Anugraheni, 2012	Risk Factor of Stunting on children at the age of 12-36 months in Kecamatan Pati, KabupatenPati	Indonesia	*Case Control*	Risk Factor of Stunting on children at the age of 12-36 months in KecamatanPati,
Marriot, 2012	World Health Organization (WHO) infant and young child feeding indicators: associations with growth measures in 14 low-income	Developing Countries Bangladesh, Cambodia, Ethiopia, Ghana, India, Kenya,	*Cross-Sectional*	These results identify FI associated with growth and reinforce maternal education as a variable to reduce risk of underweight and stunting in poor countries.

	countries	Malawi, Nepal, Nigeria, Rwanda, Tanzania, Uganda, Zambia, Zimbabwe		
Al.Anshori, 2013	Risk Factor of Stunting on children at the age of 12-24 months (a study in Kecamatan Semarang Timur)	Indonesia	*Case-Control*	Risk factor of stunting on the age of 12–24 months is the status of economical status low (OR= 11.769; p= 0.006; CI 1.401 – 98.853), story of ISPA (OR= 4.043; p= 0.023; CI 1.154 – 14.164), little protein consumption (OR = 11.769; p = 0.006; CI 1.401 – 98.853). the history of Breast milk. The history of breast feeding, parents education, history of diarrhea, energy consumption, fat, carbohydrate, zinc, energy consumption, calcium, are not the only one factor of stunting
Ana, 2015	Impact of breastfeeding on the intelligence quotient of eight-year-old children		*Prospective Cohort*	Results At age 8 years, 560 children were assessed with Raven's Colored Progressive Matrices test. The average score was 22.56 points, with a standard deviation of 5.93. The difference in the averages found between the breastfed and non-breastfed groups at six months of age was 1.33 (p = 0.008). Mother's and child's skin color,

				social and economic class, maternal education and smoking, and breastfeeding at six months of age (p = 0.007) were still associated with the outcome.
Siqueira, 2013	Breastfeeding during the first hour of life and neonatal mortality	67 Country	*Ecological Study*	Results Breastfeeding within the first hour of life was negatively correlated with neonatal mortality (Spearman's Rho = −0.245, p = 0.046), and this correlation was stronger among countries with more than 29 neonatal deaths per 1000 newborns (Spearman's Rho = −0.327, p = 0.048). According to the statistical model, countries with the lowest breastfeeding rates had 24% higher neonatal mortality rates (Rate ratio = 1.24, 95% CI = 1.07-1.44, p & lt; 0.05), even when adjusted for potential confounders.
Lopes, 2014	Association between breastfeeding and breathing pattern in children: a sectional study		*Observational*	Results of the total sample, 43.1% of the children were mouth breathers, 48.4% had been breastfed exclusively until six months of age or more, and 27.4% had non-nutritive sucking habits. Statistically significant associations were found for bottle-feeding (p < 0.001) and oral habits of non-nutritive sucking (p = 0.009), with an increased likelihood of children exhibiting a predominantly oral breathing pattern. A statistically significant association was also observed between a longer duration of exclusive

				breastfeeding and a nasal breathing pattern presented by children.
Stadskleiv, 2014	Growth effects of exclusive breastfeeding promotion by peer counsellors in sub-Saharan Africa: the cluster-randomised PROMISE EBF trial	AFRICA, Sub-Saharan BURKINA	*Intervention Trial*	The study included a total of 2,579 children. Adjusting for socio-economic status, the mean WLZ at 24 weeks were in Burkina Faso -0.20 (95%CI -0.39 to -0.01) and in Uganda -0.23 (95%CI -0.43 to -0.03) lower in the intervention than in the control arm. In South Africa the mean WLZ at 24 weeks was 0.23 (95%CI 0.03 to 0.43) greater in the intervention than in the control arm. Differences in LAZ between the study arms were small and not statistically significant. In Uganda, infants in the intervention arm were more likely to be wasted compared to those in the control arm at 24 weeks (PR 2.36; 95%CI 1.11 to 5.00). Differences in wasting in South Africa and Burkina Faso and stunting and underweight in all three countries were small and not significantly different.
Fonseca, 2015	Impact of breastfeeding on the intelligence quotient of eight-year-old children1		*Prospective Cohort*	Results At age 8 years, 560 children were assessed with Raven's Colored Progressive Matrices test. The average score was 22.56 points, with a standard deviation of 5.93. The difference in the averages found between the breastfed and non-breastfed groups at six months of age was 1.33 ($p = 0.008$). Mother's and child's skin color,

				social and economic class, maternal education and smoking, and breastfeeding at six months of age (p = 0.007) were still associated with the outcome.
Ajetunmobi, 2015	Breastfeeding is Associated with Reduced Childhood Hospitalization: Evidence from a Scottish Birth Cohort (1997-2009)	Scotland	*Retrospective Cohort*	Results Within the first 6 months of life, there was a greater hazard ratio (HR) of hospitalization for common childhood illnesses among formula-fed infants (HR 1.40; 95% CI 1.35-1.45) and mixed-fed infants (HR 1.18; 95% CI 1.11-1.25) compared with infants exclusively breastfed after adjustment for parental, maternal, and infant health characteristics. Within the first year of life and beyond, a greater relative risk of hospitalization was observed among formula-fed infants for a range of individual illnesses reported in childhood including gastrointestinal, respiratory, and urinary tract infections, otitis media, fever, asthma, diabetes, and dental caries.
Onubogu, 2015	Changes in breastfeeding and nutritional status of Nigerian children between 1990 and 2008, and variations	Nigeria		In each study year, over 97% of the children were ever breastfed. The proportion of infants breastfed within 1 hour and 1 day of birth increased from 34% to 45.8%, and from 63.8% to 82.3%, respectively. Overall, breastfeeding for ≥ 12 months changed from 88.9% to 95.2%, an increase of 7%; however, an increase of 14% was observed in

	by region, area of residence and maternal education and occupation			the northern region (from 86.1% to 97.8%) while a decline of 7% was observed in the southern region (from 97.1% to 89.9%). Over the study period, the prevalence of all the assessed indicators of malnutrition (stunting, wasting and underweight) increased in the northern region while the southern region experienced a decline in all except severe wasting. In both urban and rural areas, stunting and wasting increased, while underweight declined. Children of non-formally educated and unemployed mothers were more malnourished in all the study years
Pudla, 2015	Effect of breastfeeding on obesity of schoolchildren: influence of maternal education		*Cross-Sectional*	Prevalence of obesity was 8.6% (95% CI: 7.6–9.7%) and 55.7% (95% CI: 53.8–57.6%) received breastmilk for ≥6 months. BF was not associated with obesity, even in the adjusted analysis. Stratified analysis according to maternal schooling showed that, in children aged 7–10 years and children whose mothers had 0–8 years of schooling, the chance of obesity was lower among those breastfeed for >1 month, especially among those who received breastmilk for 1–5 months (OR=0.22; 95% CI 0.08–0.62). Among children of women with higher schooling (>8 years), the chance of obesity was 44% lower in those

				who were breastfed for >12 months (p-value for interaction <0.01). This interaction was not found in older children (11–14 years).
Vieira, 2015	Trends in breastfeeding indicators in a city of northeastern Brazil	Brazil	*Cross-Sectional*	The annual growth of the breastfeeding indicators was 2.1% for breastfeeding in the first hour of life (from 52.2% to 68.9%); 1.1% for breastfeeding among children aged 9 to 12 months (from 45% to 59.6%); and 0.8% for exclusive breastfeeding among infants younger than 6 months (from 36.9% to 47.4%). The median duration of exclusive breastfeeding increased from 52.3 to 84.3 days, and overall breastfeeding from 278 to 376 days. Some changes in the characteristics of the population were observed, which may have positively influenced the evolution of the breastfeeding indicators (better schooling level among the mothers, less use of dummies/pacifiers, and lower proportions of adolescent mothers), or negatively (greater proportions of primiparous mothers and cesarean deliveries, and lower frequency of births in Baby-Friendly Hospitals).

3. Result

All the 14 studies are used to show that breastfeeding exclusively since 0 month till 6 months is very important to the growth and the development of the children. Many researcher has proved that the case of stunting is caused by the miss-procedure of breastfeeding The breastfeeding is not maximal for example. In the age of 6 month or before 6 month, the baby has got other food or formulation milk besides breast milk. The research also recommend us to do breastfeeding to premature baby, the researches state that breastfeeding will be able to gain the babies' weight.

4. Conclusion

From many characteristics above, we Found that breastfeeding exclusively in the age of 0 to 6 month has a significant impact to the growth of the children.

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