Journal of Sexual and Reproductive Health Sciences
Vol. 1, No. 2, July 2022, Page 70-76

Factors Affecting Balanced Nutrition in Babies and Toddlers

Eka Novyriana[1], Prihartinni Tina Irtanti [2], Vivi Virgianty Sumaji [3], Nichen Sindyana Susilo[4], Wulan Rahmadhani[5]*, Adinda Putri Sari dewi[6]
[1,2,3,4,5,6] Departemen of Midwifery, Universitas Muhammadiyah Gombong

* corresponding author : wulanrahmadhani@unimugo.ac.id

ARTICLE INFO

Article history
Received **14/01/2022**
Revised **19/05/2022**
Accepted **21/07/2022**

Keywords
Nutrition
growth and development
toddlers
infants
balanced nutrition

ABSTRACT

The problems that exist in a nutrition will cause a limited level of ability possessed by children where these abilities can encourage each child to develop the potential that exists within him. There are several factors that are the main causes of malnutrition in children under five and infants which need to be investigated further in order to obtain interventions that are appropriate to solve all problems in dealing with the problem of unbalanced nutrition suffered by infants and toddlers. This research is specifically aimed at understanding all the factors related to the problem of malnutrition in infants and toddlers. The approach used in this study focuses on the literature review method where this method leads to the search for several journals which of course have a relationship with the problems studied in this study. There are several references that have been set by the author, which include search engines in the form of Google Scholar and also Pubmed where to facilitate data search, journal searches are carried out by entering keywords including "nutrition, growt and development, toddler, baby, infant, balanced nutrition". This study produces data where it is shown that there are several factors that are quite influential in the level of nutritional balance in infants or toddlers where these factors include the role of a mother in understanding all knowledge about nutrition in infants or toddlers, education provided, economic conditions and social status, work of the father or mother, to the history of breastfeeding given. There are important points in multidimensionality that can affect the level of nutritional balance in infants and toddlers, thus an intervention is needed from several parties to carry out the management of the

1. Introduction

In the wider world, the problem of malnutrition is increasingly becoming an increasingly worrying problem. Problems in the level of malnutrition are mostly experienced by developing countries, and Indonesia is no exception [1]. It is found that there are at least 70-80% of the number of children experiencing malnutrition problems where they live in countries where people have lower middle incomes. In parts of Asia and also Sub-Saharan malnutrition itself has the greatest influence on mortality rates for infants and children under five. In general, there are up to half of the total deaths experienced by each child which is up to 3 [2].

One of the nutritional problems that Indonesia must face today is malnutrition. Toddlers belong to a nutritionally vulnerable group who easily suffer from nutritional disorders due to lack of the food they need[3]. Malnutrition is an indicator of an emergency and requires immediate action. The target of the Sustainable Development Goals (SDGs) when entering 2030 will be the end of the malnutrition system in achieving all the previously set targets globally, including problems related to unbalanced levels of malnutrition.[4].

Nutritional problems in children can be detected as early as possible by measuring the child's body weight[5]. BW/U describes the amount of protein, fat, water, and minerals in the body[6]. Body weight is a composite measurement of body size [7]. Changes in body weight can be detected in a short time and describe the current nutritional status. If nutritional problems in children are detected early and treated immediately, chronic nutritional problems such as malnutrition and stunting will not occur (Par'i et al., 2017, p. 47). According to UNICEF in 2016, the prevalence of under-five under five in the world in 2016 was 14% (94.5 million), and in 2017 there were 13.5% (92 million) under five in the world. According to the 2018 Basic Health Study, the prevalence of malnutrition and malnutrition under the age of 5 in Indonesia was 17.8% in 2017 and 17.7% in 2018 (Basic Health Research, 2018). The number of malnourished children under five in Central Java was 14% in 2017 and 15% in 2018. Although the number of cases of malnutrition and malnutrition in the country has decreased from year to year, this figure is not in line with the 2019 Medium Term Development Plan (RPJM) target, namely the prevalence of underweight in children under the age of 5 years. Age 17.0% (Basic Study of Health Care 2018). Research also shows that malnutrition in infants is influenced by several factors . The incidence of malnutrition has an objective nature because it depends on the intake and condition of each toddler so that different results can be interpreted by one toddler to another.[8]. Research related to the factors that cause malnutrition in toddlers has been carried out comprehensively so that researchers are interested in choosing the literature review method in describing factors related to undernourishment in toddlers.

2. Materials and Method

The approach used in this study focuses on the literature review method where the method leads to the search for several journals which of course have a relationship with the problems studied in this study. There are several references that have been set by the author, which include search engines in the form of Google Scholar and also Pubmed. The keywords used to search articles are sexual activity, social media, youth.Then this literature review is analyzed in terms of objectives, topic suitability, research methods used, research ethics, results from each article, and limitations that occur. The method that the author uses can be seen in the table below.the search was carried out according to keyword and found articles that were close 47 selection of subsequent articles was.

The journals that have been found are then specified according to the inclusion criteria and exclusion criteria, namely IC1: journal published, IC2: journal published in 2016-2021, IC3: type of quantitative research, IC4: non-duplicate journal published on Google scholar. After conforming to IC1-IC4, only 37 articles were left. Then IC5 was selected based on the compatibility of article titles and abstracts with the aim of this literature review, which is to have the main content investigating the events of the role of media social on sexual activity in adolescents and only 10 journals were selected that will be analyzed. The journals that have been found are then specified according to the inclusion criteria and exclusion criteria, namely IC1: journal published, IC2: journal published in 2016-2021, IC3: type of quantitative research, IC4: non-duplicate journal published on Google scholar.

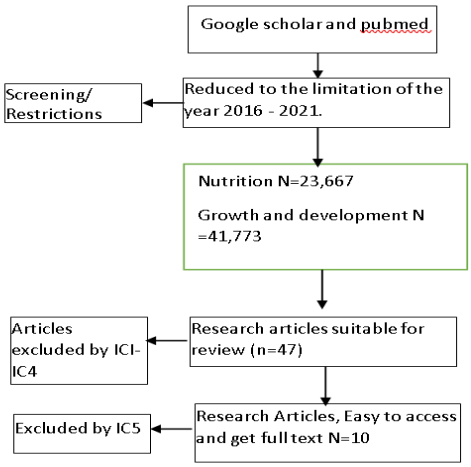

Figure 1. Literature plots review

3. Results and Discussion

The author explores journals through journal databases based on the suitability of defined criteria and predetermined keywords, namely "Influencing Factors" and Nutrition in infants and toddlers "

3.1. Results

Table of literature review results

Writer's name	Title	Method	Technique Sampling	Sample	Data analysis	Results study
Amira A Roess,	Food Consumption Patternsof Infants and Toddlers: Findings from the Feeding Infants and Toddlers Study	cross-sectional	Purpose Sampling	N=3235	Chi square statistical test	This observation highlights the need for improved parental health education. Economic status also affects the nutrition of infants and toddlers
Joanne F. Guthrie	The Special Supplemental Nutrition Program for Women, Infants, and Childrenis Associated with Several Changes in Nutrient Intakes and Food Consumption Patterns of Participating Infants and Young Children	cross-sectional	Purpose Sampling	N= 2635	Chi square statistical test	In 2008 there was no difference between the two groups, but indicated by a significant WIC-by-timeinteraction, the behavior of the two groups deviated between 2008 and 2016, with the addition of sugar intake in non-WIC toddlers decreased while in non-WIC toddlers decreased toddler WIC no
Johanna T Dwye	The Feeding Infants and Toddlers Study	cross-sectional	Purpose Sampling	N=2892	Chi square statistical test	Therefore, promotion of breastfeeding remains an important area for further nutrition education. However, the average nutritional intake was higherfor WIC infants. Compared with low- and high- income non-WIC infants, WIC infants had higher intakes of iron and vitamin D, which were more often

						lacking in non-WIC infants.
Daniel J Hoffman	Nutrients in Complementary Feeding Protect Against Wasting, but Not Stunting	cross-sectional	Purpose Sampling	N=4000	Chi square statistical test	These results are in contrast to the study by Maciel et al., who found that no specific dietary factor promoted linear growth and that stunted children consumed more fiber than others, suggesting that

3.2. Discussion

Based on the results literature review which has been described, it is known that the factors that influence balanced nutrition in infants and toddlers include the mother's level of education and knowledge, socio-economic and occupational influences; and a history of exclusive breastfeeding.

The influence of mother's education on the nutritional status of children may be due to educated mothers not only investing in their children's food ingredients, but also in the health and education of their children. In addition, they may be more aware when their children are sick and seek health care earlier[9]. Research conducted by Roess et al. (2018) states that maternal education affects the nutritional status of children under five in America. The family system that surrounds the child's domestic life will play an active role in building and promoting behaviors that will last throughout his life. Children's early life experiences at home with their parents have a role in promoting healthy eating in future life. In the current analysis, parental food habits and feeding strategies were the most dominant determinants of children's eating behavior and food choices. Parents should expose their children to a variety of good food choices while acting as positive role models. Prevention programs should be aimed at them, taking into account socio-economic and educational aspects[11].

By reviewing what Notoatmojo said in 2013 where he emphasized that there are important factors related to the good or bad nutrition experienced by a person, namely leading to the level of knowledge controlled by a mother.Radwan (2013)also uses the mother's education factor as an indicator of research on the nutritional status of children under five. As a result, it can be said that the level of knowledge of a mother will affect the good or bad nutrition received by her child. In line with research conducted byDwyer (2018) there is an influence in the family diet that affects the nutritional status of children and toddlers.

Research by Hadju et al. (2017) shows that nutritional status is influenced by mother's education. This is indicated by the low education of mothers in line with low nutritional status. Mothers who are not highly educated stay at home and provide more protein and fat to their children. Finally, it can be concluded that the problem of malnutrition in this study is acute malnutrition and is related to maternal education.

The level of high or low knowledge that exists in a person will affect the ease or difficulty of that person in understanding the various information he receives which if the higher a person's education it will also be easier for him to apply the knowledge they get, including knowledge of unbalanced nutrition problems. for babies and toddlers..

Study Makamto Sobgui et al., (2018)concluded that the socioeconomic and profession of the parents themselves will also affect the value of the food and nutritional needs of all the foods their children eat. This is reinforced by the evidence that children who have a good economy will cause the level of nutrition obtained by these children tends to be good too. On the other hand, if children live in a poor economy, they tend to have poor nutrition as well. This is one of the causes of malnutrition as a direct cause of inadequate food intake, which underlies it at the household level with inadequate economic status so that it can affect other levels.

In line with research Huey et al., (2019)There is a correlation between malnutrition in young children living in Mumbai's urban slums. That socioeconomic status affects the nutritional status of children in Mumbai's Urban Slums.

The nutritional status of children from lower socioeconomic classes is worse than children from upper socioeconomic classes. Poverty, low literacy rates, food availability, and women's education appear to be important factors influencing the poor health status of children from low socioeconomic classes.

According to UNICEF's conceptual framework on the causes of malnutrition in children, inadequate intake of nutrients (both quality and quantity) and disease are the two most important causes of malnutrition, which is further compromised by poor access to food, water, sanitation and health services. . These causes are usually referred to as food, care and health, which at the household level are influenced by basic factors such as income, maternal education, and other socioeconomic and demographic factors.

It should be noted that underweight children are the result of acute malnutrition, whereas stunted children are the result of chronic malnutrition and underweight is the result of acute and chronic malnutrition. The first 1000 days of life are a time of high risk of stunting, which continues into childhood[17].

Exclusive breastfeeding with the nutritional status of toddlers. Research conducted by Amira A Roess (2016) found that 83% of children aged 0 to 23.9 months (n = 2635) had been breastfed, 34% of children aged 0 to 3.9 months (n = 305) and 15% of children aged 0 to 23.9 months. 4 to 5.9 months (n = 295) were exclusively breastfed, and 24% of children 12 to 14.9 months (n = 412) were breastfed on the day of withdrawal. Complementary foods were more likely to be introduced before 4 months in formula-fed infants (27%) than in non-formula-fed infants (5%). Half of children aged 4 to 5.9 months ate iron-fortified infant cereal, but only a few ate iron-rich meat. Among toddlers (12–23.9 months; n = 1133), >20% did not eat fruit or vegetables on the day of withdrawal,

StudyKhan & Islam (2017) showed that children who are not exclusively breastfed until 6 months after their birth can suffer from various infectious diseases and malnutrition. Health promotion and other public health interventions should be stepped up to encourage exclusive breastfeeding for at least six months of birth.

Compared with infants who were not breastfed at all, infants who were exclusively breastfed until the age of 4 months followed by mixed breastfeeding had better communication and social interaction at 6 months of age, and better cognition, communication, and social interaction at 12 months of age. month. Exclusive breastfeeding until 6 months of age had no significant impact on outcomes at 6 and 12 months of age.

Exclusive breastfeeding up to 4 months of age followed by mixed breastfeeding can maximize the developmental effects of babies in the first year after birth. Breastfeeding programs must effectively communicate that exclusive breastfeeding for at least 4 months is beneficial for the baby's development[19].

Breastfeeding exclusivity has a positive effect on a lower risk of obesity. StudyUwaezuoke et al. (2017) showed that exclusive breastfeeding reduced the risk of being overweight/obese in later life.

4. Conclusion

After analyzing the data that has been obtained, a conclusion can be drawn that there are several factors that are quite influential in the level of nutritional balance in infants or toddlers where these factors include the role of a mother in understanding all knowledge about nutrition in infants or toddlers. , education provided, economic and social conditions, occupation of the father or mother, to the history of breastfeeding given.On the other hand, it can be said that the level of knowledge that exists in a person will affect the ease or difficulty of that person in understanding the various

information he receives which if the higher a person's education, the easier it will be for him to apply the knowledge they get, including knowledge of unbalanced nutrition problems in infants and toddlers.

Declaration

Acknowledgments: The authors would like to express the greatest gratitude to all who help this research.
Conflicts of Interest: The authors declared there is no conflicts of interest in this research.

References

1. W. Rahmadhani, N. Annisa, and S. Amin, “PENERAPAN PEMBERIAN MINYAK JINTAN HITAM (NIGELLA SATIVA OIL) UNTUK PENGOBATAN BIANG KERINGAT (MILIARIA) PADA BAYI DI WILAYAH PMB BRIDA KITY DINARUM S.ST,” Al-Insyirah Midwifery J. Ilmu Kebidanan (Journal Midwifery Sci., vol. 10, no. 2, 2021, doi: 10.35328/kebidanan.v10i2.2071.
2. K. I. Sanin et al., “Micronutrient adequacy is poor , but not associated with stunting between 12-24 months of age : A cohort study findings from a slum area of Bangladesh,” pp. 1–17, 2018.
3. hine-W.-W. Phu, J. Wittayasooporn, and C. Kongsaktrakul, “Influence of child feeding practices and selected basic conditioning factors on stunting in children between 6 and 24 months of age in Myanmar,” Makara J. Heal. Res., vol. 23, no. 2, 2019, doi: 10.7454/msk.v23i2.10397.
4. A. Aziz, A. Hidayat, G. Marini, A. Pangestu, and M. Tyas, “Factors Affecting Nutritional Status in Children Aged 6 – 24 months in Lamongan Regency , Indonesia,” vol. 8, pp. 291–295, 2020.
5. D. J. Hoffman, “Nutrients in complementary feeding protect against wasting, but not stunting: Results from a multi-country longitudinal cohort study,” J. Nutr., vol. 151, no. 1, pp. 5–6, 2021, doi: 10.1093/jn/nxaa334.
6. K. Cowbrough, “Learning files Infant feeding practices in the UK Feeding the toddler : 12 months to 3 years – challenges and opportunities,” no. January 2010, 2014.
7. . F. Guthrie et al., “The special supplemental nutrition program for women, infants, and children is associated with several changes in nutrient intakes and food consumption patterns of participating infants and young children, 2008 compared with 2016,” J. Nutr., vol. 150, no. 11, pp. 2985–2993, 2020, doi: 10.1093/jn/nxaa265.
8. M. B. Frost, R. Forste, and D. W. Haas, “Maternal education and child nutritional status in Bolivia: finding the links,” Soc. Sci. Med., vol. 60, no. 2, pp. 395–407, Jan. 2005, doi: 10.1016/j.socscimed.2004.05.010.
9. A. A. Roess et al., “Food consumption patterns of infants and toddlers: Findings from the feeding infants and toddlers study (FITS) 2016,” J. Nutr., vol. 148, no. 9, pp. 1525S-1535S, 2018, doi: 10.1093/jn/nxy171.
10. S. Scaglioni, V. De Cosmi, V. Ciappolino, F. Parazzini, P. Brambilla, and C. Agostoni, “Factors influencing children’s eating behaviours,” Nutrients, vol. 10, no. 6, pp. 1–17, 2018, doi: 10.3390/nu10060706.
11. H. Radwan, “Patterns and determinants of breastfeeding and complementary feeding practices of Emirati Mothers in the United Arab Emirates,” BMC Public Health, 2013.
12. J. T. Dwyer, “The feeding infants and toddlers study (FITS) 2016: Moving forward,”
13. J. Nutr., vol. 148, no. 9, pp. 1575S-1580S, 2018, doi: 10.1093/jn/nxy159.
14. V. Hadju, R. Yunus, A. I. Arundhana, A. U. Salmah, and A. Wahyu, “Nutritional Status of Infants 0-23 Months of Age and its Relationship with Socioeconomic Factors in Pangkep,” Asian J. Clin. Nutr., vol. 9, no. 2, pp. 71–76, Mar. 2017, doi: 10.3923/ajcn.2017.71.76.
15. C. M. Sobgui, L. K. Fezeu, F. Diawara, H. Diarra, and V. Afari-sefa, “Predictors of poor nutritional status among children aged 6 – 24 months in agricultural regions of Mali : a cross-sectional study,” pp. 1–13, 2018.
16. S. L. Huey et al., “Prevalence and covariates of undernutrition in young children living in urban slums of Mumbai, India: A cross sectional study,” Front. Public Heal., vol. 7, no. JUN, pp. 1–13, 2019, doi: 10.3389/fpubh.2019.00191.
17. J. L. Leroy, M. Ruel, J.-P. Habicht, and E. A. Frongillo, “Linear Growth Deficit Continues to Accumulate beyond the First 1000 Days in Low- and Middle-Income Countries: Global Evidence

from 51 National Surveys," J. Nutr., vol. 144, no. 9, pp. 1460–1466, Sep. 2014, doi: 10.3945/jn.114.191981.
18. M. N. Khan and M. M. Islam, "Effect of exclusive breastfeeding on selected adverse health and nutritional outcomes: a nationally representative study," BMC Public Health, vol. 17, no. 1, p. 889, Dec. 2017, doi: 10.1186/s12889-017-4913-4.
19. H. J. Choi, S. K. Kang, and M. R. Chung, "The relationship between exclusive breastfeeding and infant development: A 6- and 12-month follow-up study," Early Hum. Dev., vol. 127, pp. 42–47, Dec. 2018, doi: 10.1016/j.earlhumdev.2018.08.011.
20. S. N. Uwaezuoke, C. I. Eneh, and I. K. Ndu, "Relationship Between Exclusive Breastfeeding and Lower Risk of Childhood Obesity: A Narrative Review of Published Evidence," Clin. Med. Insights Pediatr., vol. 11, p. 117955651769019, Jan. 2017, doi: 10.1177/1179556517690196.