



Volume 16 Nomor 1 (2026) 1-13

JURNAL KEBIDANAN

p-ISSN: 2089-7669 ; e-ISSN: 2621-2870

<https://doi.org/10.31983/jkb.v16i1.12213>



Health Status of Pregnant Mothers and Newborn Babies After Local Food Giving

Isti Qomah^{*1}, Muftlilah², Andari Wuri Astuti²

¹Midwifery, Faculty of Health Sciences, Aisyiyah University Yogyakarta Indonesia

²Master of Midwifery, Faculty of Health Sciences, Aisyiyah University Yogyakarta Indonesia

Jl. Siliwangi No.63, Rice field area, Nogotirto, Kec. Gamping, Sleman Regency,
Special Region of Yogyakarta 55292, Indonesia

Corresponding author: Isti Qomah

Email: qomahisti077@gmail.com

Received: October 6, 2024; Revised: December 10, 2024; Accepted: October 4, 2025

ABSTRACT

Problems of pregnant women Less Chronic Energy due to the consumption of nutritional substances that are still lacking. Another cause of Chronic Energy Less is an infection disease, pregnant women who eat enough but suffer from a disease or illness then experience problems characterized by decreased appetite that causes reduced eating intake and pregnant women whose eating intake is less able to lower endurance so that it is easy to develop disease. This literature study to find out the health status of pregnant women and newborns after local food. A study literature scoping review, using 4 databases to search for relevant articles: PubMed, Scopus, Embase and CINAHL. The stages and flow of research article selection using PRISMA Flowchart (Preferred Reporting Items For Systematic review and Meta-Analyses), and to assess the quality of the article, researchers used a checklist from Joanna Briggs Institute. The results of the relevant article search and according to the specified keywords obtained 741 articles, 194 duplicates of articles issued and 547 selected according to the purpose of the literature study. There are 46 articles that are eligibility and 7 articles that meet criteria for review. There are two main themes: (1) Cause of Chronic energy deficiency (CED): (Difficulty in fulfilling nutrition, supplemental feeding), (2) Impact of CED in pregnancy: (Anemia, Baby Birth Weight Low, Stunted), (3) Factors related to the incidence of CED in pregnant women: (Education, Family Income, Mother Knowledge, Age, Infection disease. One of the efforts made in the nutritional improvement of pregnant women CED is by feeding supplements (PMT). Lack of Chronic Energy deficiency (CED) is a nutritional problem in pregnant women who are still a nutritional problem in the world. Efforts to feed the pregnant women CED is the realization of health efforts in curative and preventive form to improve the nutrition status of pregnant women, in order to give birth to children who do not have nutritional problems.

Keywords: Pregnant women with chronic energy deficiency (CED); local supplementary food (LSF); nutritional needs of pregnant women; malnutrition in pregnant women

Introduction

The Maternal and Child Health (MCH) Program is one of the main priorities of health development in Indonesia. This program is responsible for health services for pregnant women, mothers in labor and neonatal babies [1]. Maternal and child health is one of the indicators that is a benchmark for health development in a country. Mothers and children are family members who need to be prioritized in the implementation of health efforts, because mothers and children are vulnerable groups to family circumstances so that assessment of the health status and performance of maternal and child

health efforts is important to do [2]. The development of quality human resources is a priority mandate of national development. Good nutritional status is one of the determining factors for the success of human resource development. Pregnant women are one of the groups vulnerable to nutrition that need special attention, because of the long-term impacts caused by malnutrition. In addition, if pregnant women experience malnutrition, it will affect the growth and development of the fetus which is at risk of giving birth to babies with low birth weight (LBW) and/or stunting [3].

The problem of toddler nutrition in Indonesia is still quite high. Based on the 2022 Indonesian Nutritional Status Survey (SSGI), the prevalence of wasting toddlers was 7.7% and stunting toddlers was 21.6%. Meanwhile, Basic Health Research (2018) shows the prevalence of KEK risk in Women of Childbearing Age is 14.1%, while in pregnant women it is 17.3%. In addition, the prevalence of anemia in pregnant women is 48.9% 202 [21].

Nutritional problems are caused by various factors. Lack of nutritious food intake and/or frequent infection with disease are direct causes of nutritional problems. Inappropriate parenting patterns, lack of knowledge, difficulty in accessing health services, and socio-economic conditions also indirectly affect access to nutritious food and health services [5]. The nutritional status of the mother before and during pregnancy affects the nutritional status of the mother and baby, because the growth and development of the fetus is very dependent on the mother's nutritional intake. One indicator of the fulfillment of the nutritional needs of pregnant women can be seen from the increase in the mother's weight every month [6].

A pregnant woman will give birth to a healthy baby if her health and nutrition levels are in good condition. However, until now there are still many pregnant women who experience nutritional problems, especially malnutrition such as Chronic Energy Deficiency (CED) which is characterized by an Upper Arm Circumference (LILA) below 23.5 cm [7]. One of the nutritional deficiencies in pregnant women is Chronic Energy Deficiency (CED). Pregnant women with nutritional problems have an impact on the health and safety of the mother and baby as well as the quality of the baby born. The condition of pregnant women with CED, is at risk of reducing muscle strength that helps the labor process so that it can result in prolonged labor and postpartum hemorrhage, even maternal death [8].

The impact of Chronic Energy Deficiency on the labor process includes the risk of prolonged labor, premature labor, and increased operative labor. The impact of Chronic Energy Deficiency (CED) on the fetus includes the risk of stunted fetal growth, miscarriage or abortion, stillbirth, neonatal death, birth defects, anemia in infants, intrapartum asphyxia (death in the womb), and low birth weight (LBW) [9].

Kubu Raya Regency in 2022 had 114 pregnant women with special economic zones, Sungai Ambawang Health Center in 2022 had 72 pregnant women with special economic zones. The Indonesian Ministry of Health provides local PMT assistance for pregnant women with special economic zones. The Indonesian Ministry of Health provides funding for the implementation of PMT activities using local food ingredients through the Non-Physical Special Allocation Fund (DAK). However, funding for the implementation of similar activities can come from various sources. As a reference for the implementation of these activities, Technical Instructions for Providing Additional Food (PMT) Using Local Food Ingredients for Pregnant Women have been prepared.

Providing Supplementary Food (PMT) made from local food is one of the strategies for handling nutritional problems of pregnant women. The PMT activity needs to be accompanied by nutrition and health education for behavioral changes, for example with educational support and counseling on feeding, cleanliness and sanitation for families. PMT activities based on local food are expected to encourage food independence and family nutrition in a sustainable manner. Indonesia is the third largest country in the world in terms of biodiversity. There are at least 77 types of carbohydrate sources, 30 types of fish, 6 types of meat, 4 types of poultry; 4 types of eggs, 26 types of nuts, 389 types of fruits, 228 types of vegetables, and 110 types of spices and herbs (Profil Kesehatan Ibu dan Anak, 2022).

This shows that the potential for utilizing local food is very wide open, including for providing family food, including for improving the nutrition of pregnant women. However, the availability of various food ingredients has not been utilized optimally as basic ingredients for Additional Food (MT). Therefore, the researcher is interested in the title "Implementation of local PMT provision to improve the health status of pregnant women with chronic energy deficiency (KEK) at the Sungai Ambawang Health Center, Kubu Raya Regency

Methods

This review uses the grouping method as suggested by Arksey and O'Malley. The stages carried out in the scoping review consist of: (1) identifying scoping review questions, (2) identifying relevant articles, (3) selecting articles, (4) charting data, (5) compiling, summarizing and reporting the results [10].

1. Scoping Review Questions

To identify the scoping review question, an effective search strategy that can be used to formulate questions in the literature search. In this process is called Population Exposure Outcome (PEOs). To form questions and facilitate the literature search and can help to identify more specific keywords that match the interest in the focus of the review, develop appropriate search terms to develop the problem and determine inclusion and exclusion criteria.

Tabel 1.

Framework PEOs Scoping Review

Population/Problem		Exposure	Outcome		Study Design
Pregnant women	KEK, Newborn baby	Local supplementary feeding (LSF)	Health Status of Pregnant Women with KEK		Quantitative, Qualitative

Based on the PEOs framework above, the scoping review question is: what is the health status of pregnant women with special economic conditions and newborns after being given local food?

2. Identify relevant articles

In identifying relevant articles, researchers determine the inclusion and exclusion criteria. The inclusion and exclusion criteria used in compiling the scoping review are as follows:

a. Inclusion criteria

- 1) Articles from the last 10 years
- 2) Original articles
- 3) Systematic reviews
- 4) Articles discussing the implementation of the health status of pregnant women with special economic conditions and newborns after local food provision

b. Exclusion criteria

- 1) Book review letters
- 2) Incomplete articles

3. Article Selection

a. Literature Searching using databases, manual searching and grey literature (Identifying relevant literature)

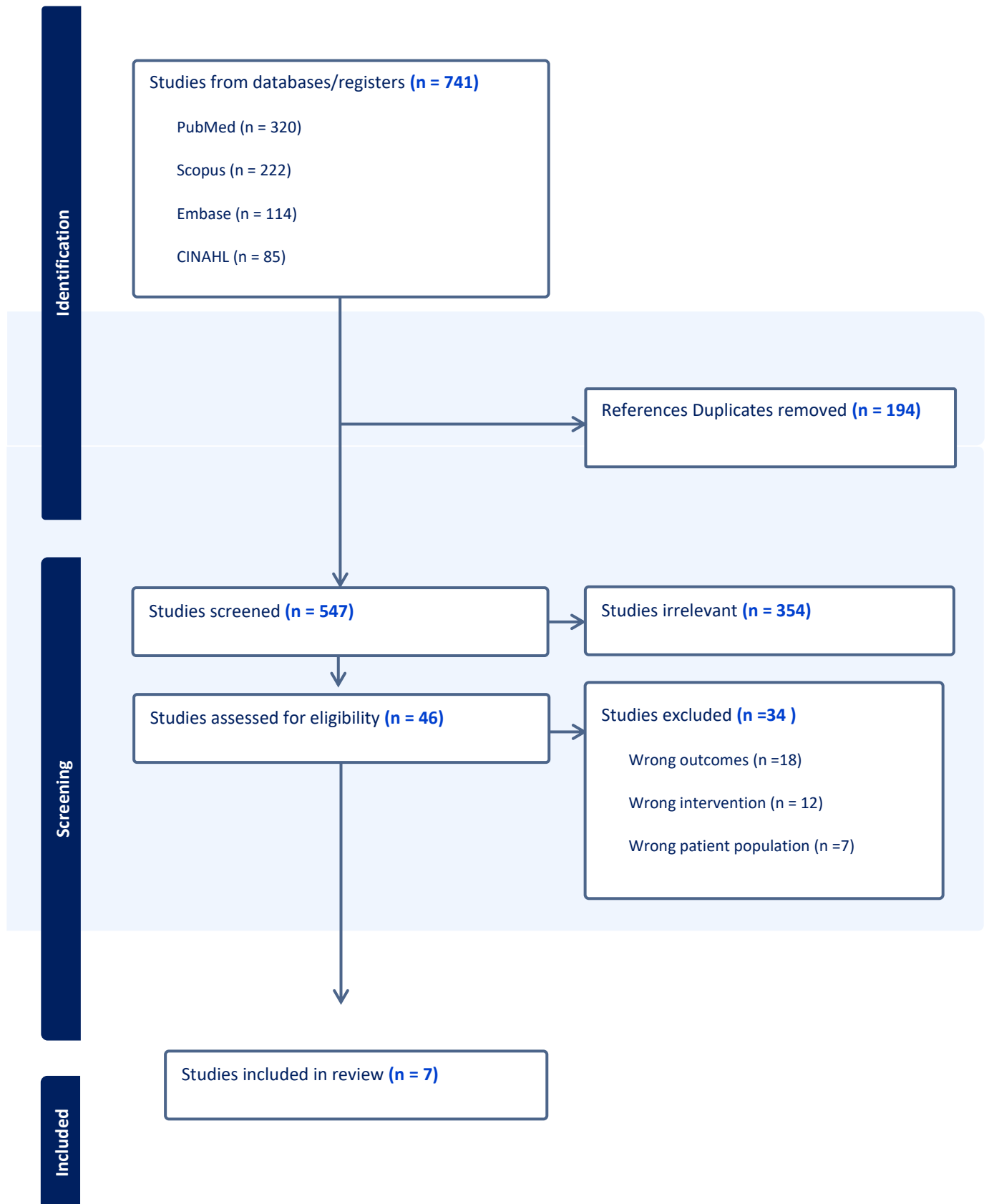
The information source item explains the literature search sources used. The databases used to search for relevant articles in compiling this scoping review are 4 databases, namely PubMed, Scopus, Embase, CINAHL.

4. Literature search strategy

This search item explains the literature search strategy. The specified keywords, by adding "OR", "AND" that are in accordance with the topic, namely (((Pregnant women with chronic energy deficiency (KEK)) OR (Newborn babies)) OR (local supplementary food (PMT))) AND (nutritional needs of pregnant women)) AND (malnutrition in pregnant women)) OR (health status of pregnant women with chronic energy deficiency (CED)).

5. PRISMA flowchart

In this step, the researcher uses Zotero as a reference management software tool to conduct article selection such as checking for duplication, selecting titles, abstracts and conducting full text-reading. The findings of the number of articles and the filtering process are described in the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) Flowchart [11].



Gambar 1. Prisma Flowcart

6. Data Charting

Tabel 2.

Data Charting

No	Title/Author/Year	Country	Objective	Types research	Participants/Sample Size	Result
A1	Acceptability And Nutrient Content Of Instant Drink Made From Yellow Sweet Potato And Red Kidney Bean As An Alternative Supplementary Drink For Pregnant Women With Chronic Energy Deficiency [12]	Indonesia	This study aims to develop and analyze instant powdered drinks made from yellow sweet potatoes and red beans as an alternative additional drink for pregnant women with chronic energy deficiency (CED).	Experimental study with randomized sampling design	Pregnant women who experience chronic energy deficiency (CED)	Based on the results of the acceptance test, instant drinks were accepted by pregnant women with an acceptance percentage of 89.5%. The nutritional content shows that instant drinks contain 423 kcal of energy, 3.75% water, 1.52% ash, 14.28% protein, 9.92% fat, 70.53% carbohydrates, 7.27% dietary fiber, 14.4 mg β -carotene. , and protein digestibility of 74.22%. This product can be recommended as an alternative additional drink for pregnant women with KEK because it is sensorially acceptable and its nutritional content has met the nutritional content requirements for additional food for pregnant women with CED.
2	Assessment of Dietary Intake and Nutrient Gaps, and Development of Food-Based Recommendations, among Pregnant and Lactating Women in Zinder, Niger: An Optifood Linear Programming Analysis [13]	California	To determine Food Intake and Nutritional Gaps, and Development of Food-Based Recommendations, among Pregnant and Lactating Women in Zinde	Cross-Sectional Study Embedded. Conducting a survey to assess food intake was carried out in May – October 2015.	Pregnant women	Mothers have difficulty meeting local nutrient recommendations due to food availability and dietary patterns. Providing IFA supplementation to pregnant women as the current standard of care in this population is inadequate to address multi-micronutrient deficiencies. Furthermore, FBR modeling suggests that this may not be sufficient to address micronutrient deficiencies

No	Title/Author/Year	Country	Objective	Types research	Participants/Sample Size	Result
						and may be costly in the local context. Thus, multiple micronutrient supplementation, and provision of nutrient-dense food-based interventions should be considered.
3	Diet quality and nutrient density in pregnant women according to adherence to Mediterranean diet [14]	Pakistan	The aim of this study was to describe dietary nutrient intake and diet quality during pregnancy and to evaluate whether high adherence to a Mediterranean diet is associated with more adequate micronutrient intake.	Cross-sectional study, Energy and nutrient intakes were calculated using a validated 151-item semi-quantitative food frequency questionnaire and nutrient density was estimated by dividing absolute nutrient intake by total energy intake.	sample of 1,356 pregnant women	High adherence to the Mediterranean diet was associated with increased intakes of protein, monounsaturated fatty acids, fiber, vitamins (B1, B9, C, D), calcium, magnesium, iron, zinc, phosphorus, potassium, essential fatty acids, and α -linolenic acid, and with lower intakes of α -linoleic acid and trans fatty acids compared to low adherence to the Mediterranean diet.
4	Relationship of Chronic Energy Deficiency in Pregnant Women with Low Birth Weight Newborn in Central Sulawesi Province [15]	Indonesia	This study aims to determine the relationship between KEK in Pregnancy and LBW. This study is observational with a Retrospective cohort.	The type of research used is observational research with a retrospective cohort study.	the number of samples was 290 mothers	The results showed that the percentage of pregnant women who experienced KEK was 69 mothers (23.8%) and low birth weight was 58 babies (20%). There was a significant relationship between KEK in pregnant women and LBW with a p value = 0.000. CED is a Risk Factor for LBW with a RR value = 4.215 (RR > 1).
5	Intake of supplementary food during pregnancy and lactation and its	Timor Leste	The aim of this study was to measure the prevalence and	Cross-sectional study of the	A total of 5,993 mothers (15–49 years) and children.	The prevalence of consuming additional food during pregnancy and lactation was 29.1% (95% CI [27.2–

No	Title/Author/Year	Country	Objective	Types research	Participants/Sample Size	Result
	association with child nutrition in Timor Leste [16]		determinants of supplementary food intake during pregnancy and lactation, and its relationship to the nutritional status of toddlers in Timor Leste.	Demographic Survey		31.0]), 31.0% (95% CI [29.1–33.0]), respectively, and the prevalence of consuming iron supplements during pregnancy was almost the same at three-fifths (63.1%, 95% CI [60.9–65.3]). The odds of consuming additional food during pregnancy and lactation were lower in the younger age group and higher in the urban population.
6	Maternal dietary diversity and pattern during pregnancy is associated with low infant birth weight in the Cape Coast metropolitan hospital, Ghana: A hospital based cross-sectional study [17]	Ghana	This study aimed to determine the association between maternal dietary diversity scores and dietary patterns during pregnancy and the likelihood of low birth weight at the Cape Coast Metropolitan Hospital in Ghana.	hospital-based cross-sectional study.	The population of this study was mothers who attended the postnatal clinic at the Cape Coast Metropolitan Hospital during the study period (January to August 2016). Of the total women who attended ANC and delivered at the facility, 483 mothers agreed to participate in the study.	Low dietary diversity scores during pregnancy were associated with higher odds of low birth weight, while diets considered “healthy” and “traditional” during pregnancy were associated with lower odds of low birth weight. The findings of this study suggest that higher dietary diversity and “healthy” and “traditional” diets during pregnancy may be protective against LBW in the study area.

No	Title/Author/Year	Country	Objective	Types research	Participants/Sample Size	Result
7	The Effect of Deppamil Dangke to Pregnant Women with Chronic Energy Deficiency on the Outcome of Newborn Babies in Enrekang Regency [18]	Indonesia	This study aims to determine the effect of administering Deppamil Dangke to pregnant women with CED on the outcome of newborns.	This research method uses a quasi-experimental design which was conducted for 18 weeks in Enrekang Regency.	a population of 28 pregnant women >20 weeks who then used the exhaustive sampling technique where the sample was divided into two consisting of 14 intervention samples and 14 controls.	Consuming Deppamil Dangke does not provide a direct effect on the final results of newborns, although the difference is not significant, but the average final results of newborns in mothers who consume Deppamil Dangke + additional food provided by the government are in the normal category.

1. Critical Appraisal

Critical Appraisal Results of 7 selected articles and assessed the quality of the articles using critical appraisal from The Joanna Briggs Institute (JBI).

Table 3.

Critical Appraisal Score Results

No	Author, Year	Critical Appraisal Score Result
A1	[12]	24/24
A2	[13]	26/27
A3	[14]	29/30
A4	[15]	27/27
A5	[16]	26/27
A6	[17]	30/30
A7	[18]	24/24

2. Data Analysis

The review results show 7 articles that have been selected and are of good quality, then classified based on the characteristics of the article, namely the first characteristics based on the characteristics of the country and research methods.

a. Characteristics of Articles

1) Country

Of the 7 articles, research was conducted in developed countries, namely California and Ghana, while there were also some from developing countries, namely Indonesia, Timor Leste and Pakistan..

2) Method

Based on the selected articles and in accordance with the quality of the articles, it was found that the 7 articles used different research methods, such as experimental studies with randomized sampling designs, embedded cross-sectional studies, and retrospective cohort studies.

a. Mapping Thematic

In this mapping step, the author groups the interesting study findings reviewed in the article, namely:

Table 4.

Mapping Thematic

Theme	Sub Theme	Article
Causes of chronic energy deficiency (CED) in pregnant women	Difficulty in fulfilling nutritional needs, Providing additional food	[12], [13], [14], [18]
The impact of KEK in pregnancy	Anemia, LBW, Stunted	[15], [14],
Factors related to the occurrence of CED in pregnant women	Education, Family income, Maternal knowledge, Age, Infectious diseases	[16], [17]

Results and Discussion

a. Causes of chronic energy deficiency (CED) in pregnant women

1) Difficulty in fulfilling nutrition

Maternal nutrition from conception to two years after delivery, known as the first 1000 days of life, is very important for maternal and child health (Majiding, Damayanthi and Dewi, 2021). Poor

nutrition during pregnancy is a risk factor for maternal death and fetal growth retardation, which increases the risk of neonatal death and contributes to impaired growth and linear development postnatally [12]. A study in England said that pregnant women experience difficulties in fulfilling nutritional needs during pregnancy due to locally available foods and diets [18]. Evidence-based approaches to improving nutritional status in pregnant women include supplementation (eg iron and folic acid, various micronutrients, and balanced protein and energy supplementation), food fortification (eg mass fortification of cereals, oils, and spices), and dietary counseling to increase consumption of nutrient-dense foods[13].

Evidence-based approaches to improving nutritional status in pregnant women include supplementation (e.g. iron and folic acid, multiple micronutrients, and balanced protein and energy supplementation), food fortification (e.g. mass fortification of cereals, oils, and spices), and dietary counseling to increase consumption of nutrient-dense foods [19].

2) Supplemental Feeding

Extra Food Providing (PMT) to pregnant women, especially those with KEK in the form of biscuits plated with special prescriptions containing vitamins and minerals to meet their nutritional needs [13]. Long Supplementary Food or PMT is given at least 90 days [20]. According to the health ministry regulations no 51 of 2016 concerning the standard nutritional supplementation products is a biscuit containing linoleic acid, protein, carbohydrates and equipped with 11 vitamins, 7 minerals (Permenkes Nomor 51 Tahun 2016). Extra Food Providing or PMT aims to improve the nutritional status of pregnant women, especially poor or poor pregnant women, PMT is also a strategy of being made by Kemenkes RI in addressing macro nutrition problems in pregnant women [20].

3) Impact of CED in pregnancy

a. Anemia

Pregnant women with CED are more likely to suffer from anemia than pregnant women without CED. This is due to the consumption habits and food intake capacity of pregnant women who are not balanced during pregnancy so as to cause other diseases such as anemia in pregnant women [15].

b. Baby Birth Weight Low

Mothers who experience chronic energy deficiency (CED) tend to experience fatigue and weakness that will impact the fetus that weaken, growth of infants also need enough intake from the mother to help the formation and development of the fetus if the fetus is weakened and the intake of the baby born will experience low birth weight (BBLR) [12].

c. Stunted

The incidence of stunting in children will affect the next life, the main factor of stunting comes from the condition of the mother during pregnancy with the size of LILA which is < 23.5 namely chronic energy deficiency (KEK), the nutritional status of the mother during pregnancy determines the birth of the baby [14]. A good mother's nutritional status before and during pregnancy will result in a healthy and normal baby born month [18]. Similarly, mothers suffering from chronic energy deficiency (KEK) who gave birth to a low birth weight baby (BBLR), thus impacting stunting (Castro-Barquero et al., 2023). In other words, the nutritional status of a mother before and during pregnancy has a great influence on the birth and growth of the baby she contains [13].

4) Factors related to the incidence of KEK in pregnant women

a. Dining pattern

Malnutrition can occur during pregnancy in women of childbearing age. One cause is an unbalanced diet so that it does not meet nutritional needs so that it results in insufficient food intake into the body [16]. If a woman of childbearing age consumes food in the category of poor, then her nutritional needs do not meet the adequacy of nutrition (AKG) so that it can result in the occurrence of malnutrition [17]. If it lasts long, it will increase the risk of chronic energy shortage (CES) higher than individuals who have a good diet [12].

b. Education

Education can affect a person's behavior in relation to lifestyle, especially in relation to attitude motivation. The higher education the easier it is to understand information [22]. Educational background is strongly related to nutritional status, due to ignorance or lack of

information about the importance of balanced diet for health can affect awareness and willingness to apply balanced nutritional behavior in life [16].

c. Family income

Family income levels determine nutritional behavior in the family [16]. Low income causes the unmet needs of the mother during pregnancy to pose the risk of insufficient family nutrition, including pregnant women, and the reduced fetal needs of the mother who affects the growth of the fetus with chronic energy deficiency disorder [17].

d. Mother's knowledge

Studies in Australia explain that a person obtains a lot of information sources for the information that has a broader knowledge of applying their lives [23]. Knowledge can be influenced by formal education so that knowledge is closely related to education to be expected with the increase of one's education, the knowledge that belongs to him becomes increasing as well. The achievement of acceptance in health education is also strongly influenced by one's education [15]. Pregnant women on research in partially low-educated, and some are highly educated so that highly educated mothers are easier to understand and improve knowledge. Knowledge and understanding is very decisive [24].

e. Age

Age affects the capture and mindset of a person. The more age will develop the capture and mindset so that the knowledge gained is improved and can determine the proper nutrition pattern during pregnancy (Egeland *et al.*, 2018). The age of pregnant women can have an effect on every decision and action so that knowledge of all explanations related to the nutritional pattern of fulfillment during pregnancy will be better [26].

f. Infection disease

Infection disease can interfere with the function of absorption in the digestive tract and decrease appetite so that infection can play a role as the beginning of malnutrition, and vice versa someone suffering from malnutrition will be more easily infected [14].

Conclusion

Nutritional problems in pregnant women caused by chronic energy lack (KEK) are still a problem that has not been fully addressed. One of the efforts made in the nutritional improvement of pregnant women KEK is by feeding supplements (PMT). Lack of Chronic Energy (KEK) is a nutritional problem in pregnant women who are still a nutritional problem in the world. Efforts to feed the pregnant women KEK is the realization of health efforts in curative and preventive form to improve the nutrition status of pregnant women, in order to give birth to children who do not have nutritional problems.

References

- [1] <https://databoks.katadata.co.id/perdagangan/statistik/e88c25f97166ecf/cakupan-pemberian-asi-eksklusif-di-20-provinsi-ini-masih-di-bawah-nasional>
- [2] H. Zulfiqar Et Al., 'Dietary Association Of Iron Deficiency Anemia And Related Pregnancy Outcomes', *Food Sci Nutr*, Vol. 9, No. 8, Pp. 4127–4133, Jun. 2021, Doi: 10.1002/Fsn3.2373.
- [3] A. S. Utama And E. S. Rahayu, 'Faktor-Faktor Yang Mempengaruhi Kejadian Kekurangan Energi Kronis Pada Ibu Hamil'.
- [4] 'Profil Kesehatan Ibu Dan Anak 2022.Pdf'.
- [5] Z. S. Lassi, O. Irfan, R. Hadi, J. K. Das, And Z. A. Bhutta, 'Protocol: Effects Of Interventions For Infant And Young Child Feeding (Iycf) Promotion On Optimal Iycf Practices, Nutrition, Growth And Health In Low- And Middle-Income Countries: A Systematic Review', *Campbell Systematic Reviews*, Vol. 14, No. 1, Pp. 1–26, Jan. 2018, Doi: 10.1002/Ci2.189.
- [6] S. Farhanidiah, Y. S. Arief, And I. D. Kurnia, 'Feeding Behavior Among Stunting Toddler's Mothers', *Pedimaternurs. J.*, Vol. 7, No. 1, P. 26, Jul. 2021, Doi: 10.20473/Pmnj.V7i1.21501.
- [7] B. Nasution, Z. Zainudin, And A. Jaya, 'Prevention Of Early Stunting Through Family Posyandu In Sape District, Bima Regency', *Empiric. Journal*, Vol. 3, No. 2, Pp. 214–220, Dec. 2022, Doi: 10.36312/Ej.V3i2.1008.

- [8] Q. Wu, Y. Huang, M. Helena Van Velthoven, W. Wang, S. Chang, And Y. Zhang, 'Feasibility Of Using Wechat To Improve Infant And Young Child Feeding In Rural Areas In China: A Mixed Quantitative And Qualitative Study', *Plos One*, Vol. 16, No. 2, P. E0246942, Feb. 2021, Doi: 10.1371/Journal.Pone.0246942.
- [9] S. M. Rahmawati, S. Madanijah, F. Anwar, And R. Kolopaking, 'Konseling Oleh Kader Posyandu Meningkatkan Praktik Ibu Dalam Pemberian Makan Bayi Dan Anak Usia 6-24 Bulan Di Desa Pagelaran, Kecamatan Ciomas, Bogor, Indonesia', *Gizindo*, Vol. 42, No. 1, P. 11, Jul. 2019, Doi: 10.36457/Gizindo.V42i1.379.
- [10] A. C. Tricco *Et Al.*, 'Prisma Extension For Scoping Reviews (Prisma-Scr): Checklist And Explanation', *Annals Of Internal Medicine*, Vol. 169, No. 7, Pp. 467–473, 2018, Doi: 10.7326/M18-0850.
- [11] M. J. Page *Et Al.*, 'Prisma 2020 Explanation And Elaboration: Updated Guidance And Exemplars For Reporting Systematic Reviews', *The Bmj*, Vol. 372, 2021, Doi: 10.1136/Bmj.N160.
- [12] C. M. Majiding, E. Damayanthi, And M. Dewi, 'Acceptability And Nutrient Content Of Instant Drink Made From Yellow Sweet Potato And Red Kidney Bean As An Alternative Supplementary Drink For Pregnant Women With Chronic Energy Deficiency', *Mgi*, Vol. 16, No. 1, P. 62, Jan. 2021, Doi: 10.20473/Mgi.V16i1.62-71.
- [13] K. R. Wessells, R. R. Young, E. L. Ferguson, C. T. Ouédraogo, M. T. Faye, And S. Y. Hess, 'Assessment Of Dietary Intake And Nutrient Gaps, And Development Of Food-Based Recommendations, Among Pregnant And Lactating Women In Zinder, Niger: An Optifood Linear Programming Analysis', *Nutrients*, Vol. 11, No. 1, Pp. 1–23, 2019, Doi: 10.3390/Nu11010072.
- [14] S. Castro-Barquero *Et Al.*, 'Diet Quality And Nutrient Density In Pregnant Women According To Adherence To Mediterranean Diet', *Frontiers In Public Health*, Vol. 11, No. August, Pp. 1–12, 2023, Doi: 10.3389/Fpubh.2023.1144942.
- [15] S. Restu, S. Sumiaty, I. Irmawati, And S. Sundari, 'Relationship Of Chronic Energy Deficiency In Pregnant Women With Low Birth Weight Newborn In Central Sulawesi Province', *International Journal Of Sciences*, Vol. 36, No. 2, 2017.
- [16] S. Yaya, R. Wang, S. Tang, And B. Ghose, 'Intake Of Supplementary Food During Pregnancy And Lactation And Its Association With Child Nutrition In Timor Leste', *Peerj*, Vol. 6, P. E5935, Nov. 2018, Doi: 10.7717/Peerj.5935.
- [17] D. Y. Quansah And D. Boateng, 'Maternal Dietary Diversity And Pattern During Pregnancy Is Associated With Low Infant Birth Weight In The Cape Coast Metropolitan Hospital, Ghana: A Hospital Based Cross-Sectional Study', *Heliyon*, Vol. 6, No. 5, P. E03923, May 2020, Doi: 10.1016/J.Heliyon.2020.E03923.
- [18] H. Arifuddin, M. Ahmad, S. As'ad, F. Husin, A. N. Usman, And M. Maddeppungeng, 'The Effect Of Deppamil Dangka To Pregnant Women With Chronic Energy Deficiency On The Outcome Of Newborn Babies In Enrekang Regency', *Jik*, Vol. 17, No. 1, Pp. 81–88, May 2023, Doi: 10.33860/Jik.V17i1.2184.
- [19] K. Begum *Et Al.*, 'Prevalence Of And Factors Associated With Antenatal Care Seeking And Adherence To Recommended Iron-Folic Acid Supplementation Among Pregnant Women In Zinder, Niger', *Matern Child Nutr*, Vol. 14 Suppl 1, No. Suppl 1, P. E12466, Feb. 2018, Doi: 10.1111/Mcn.12466.
- [20] R. Pastuty, R. Km, And T. Herawati, 'Efektifitas Program Pemberian Makanan Tambahan-Pemulihan Pada Ibu Hamil Kurang Energi Kronik Di Kota Palembang', *Jikm*, Vol. 9, No. 3, Art. No. 3, Nov. 2018, Doi: 10.26553/Jikm.2018.9.3.179-188.
- [21] 'Permenkes Nomor 51 Tahun 2016.Pdf'.
- [22] A. Siregar, 'Application Of Quantum Teaching Learning Model As An Effort To Improve Student Learning Outcomes', *Jurnal Pajar (Pendidikan Dan Pengajaran)*, Vol. 4, No. 5, Art. No. 5, Sep. 2020, Doi: 10.33578/Pjr.V4i5.8134.
- [23] H. Roth, G. Lemarquand, A. Henry, And C. Homer, 'Assessing Knowledge Gaps Of Women And Healthcare Providers Concerning Cardiovascular Risk After Hypertensive Disorders Of Pregnancy—A Scoping Review', *Frontiers In Cardiovascular Medicine*, Vol. 6, P. 178, 2019.
- [24] G. J. Cho *Et Al.*, 'Prepregnancy Factors Are Associated With Development Of Hypertension Later In Life In Women With Pre-Eclampsia', *Journal Of Women's Health (15409996)*, Vol. 28, No. 7, Pp. 984–989, Jul. 2019, Doi: 10.1089/Jwh.2018.7165.

- [25] G. M. Egeland *Et Al.*, 'Pregnancy-Related Risk Factors Are Associated With A Significant Burden Of Treated Hypertension Within 10 Years Of Delivery: Findings From A Population-Based Norwegian Cohort', *Journal Of The American Heart Association*, Vol. 7, No. 10, P. E008318, Doi: 10.1161/Jaha.117.008318.
- [26] A. Joshi, T. Beyuo, S. A. Oppong, C. A. Moyer, And E. R. Lawrence, 'Preeclampsia Knowledge Among Postpartum Women Treated For Preeclampsia And Eclampsia At Korle Bu Teaching Hospital In Accra, Ghana', *Bmc Pregnancy Childbirth*, Vol. 20, No. 1, P. 625, Dec. 2020, Doi: 10.1186/S12884-020-03316-W.