

EVALUATION OF SPECIFIC INTERVENTION PROGRAMS ON PREGNANT WOMEN WITH CHRONIC ENERGY DEFICIENCY TO REDUCE THE INCIDENCE OF STUNTED CHILDREN

Sarwan Payanadi^{1*}, Sastrawan², Sismulyanto³

^{1,2,3} Program Studi Magister Administrasi Kesehatan, Universitas Qamarul Huda
Badaruddin, Indonesia

Email: sharwankhan56@gmail.com, sastrawanzakariya@gmail.com,
sis_mulyanto@yahoo.com

ABSTRACT

The West Lombok Regency implementation interventions and sensitive interventions to reduce stunting 3.73 percent from 2021 to 2022. The research aims to determine if there is a significant relationship between specific intervention programs for chronically energy-deficient pregnant women and the reduction of stunting incidents. The objective is to evaluate the impact of specific intervention programs on pregnant women with chronic energy deficiency. The quantitative cross-sectional method involved 294 respondents, with the research conducted from September to November 2023. Conclusions: (1) There is a significant relationship with the provision of supplementary food, with an odds ratio of 0.264 times. (2) There is a significant relationship with the provision of blood supplement tablets, with an odds ratio of 0.379 times. (3) There is no relationship with pregnancy examinations. (4) There is a significant relationship with the administration of TT/TD immunizations, with an odds ratio of 0.440 times. (5) There is no relationship with HIV/TB/Malaria/Hepatitis services. (6) There is no relationship with the mother's class program. (7) Independent variables explain the dependent variable by 17.5 percent, and 82.5 percent is explained by variables not studied. Recommendations for the West Lombok Regency government: (1) The provision of supplementary food requires intensive monitoring of the target population. (2) Increasing the coverage of pregnancy examination programs and blood tablet consumption requires an application system. (3) Increasing the coverage of TT/TD immunization integrated with a health application. (4) HIV/TB/Malaria/Hepatitis services require human resource planning, equipment and disposable material, and reporting systems. (5) Mother's class activities require innovation and modification.

KEYWORDS Chronic energy deficiency, Specific intervention, Stunting, Pregnant women



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

How to cite:

E-ISSN:

Published by:

Payanadi, S et al. (2024). Evaluation Of Specific Intervention Programs On Pregnant Women With Chronic Energy Deficiency To Reduce The Incidence Of Stunted Children. *Journal Eduvest*. 4 (3): 1258-1267

2775-3727

<https://greenpublisher.id/>

INTRODUCTION

The implementation of specific interventions in West Lombok District refers to West Lombok Regent Regulation number 19. A of 2020 concerning stunting prevention and handling as one of the references in the implementation of specific interventions and sensitive interventions. Interventions are carried out in the first 1000 days of life, specific intervention activities targeting pregnant women include giving blood tablets, supplementary feeding to pregnant women to overcome chronic energy and protein deficiency, giving tetanus toxoid immunization, overcoming iodine deficiency, handling pregnant women from HIV, AIDS, TUBERCULOSIS, Malaria and Hepatitis, and providing standard ANC services (Pemerintah Kabupaten Lombok Barat, 2020).

The handling of stunting in West Lombok Regency is still ongoing where stunting cases have decreased, namely in 2021 stunting cases by 22.71 percent, then in 2022 stunting cases decreased to 18.98 percent (Dinas Kesehatan Kabupaten Lombok Barat, 2023).

The purpose of the study was to determine how much impact specific intervention programs have on pregnant women with chronic lack of energy in reducing the incidence of stunting toddlers in West Lombok Regency. Chronically energy-deficient pregnant women who have received supplementary feeding, giving blood-added tablets, pregnancy checks, immunizing tetanus toxoid/tetanus diphtheria, HIV/TB/Malaria/Hepatitis services, and mother's class activities to then see the nutritional status of children who have been born whether stunted or not stunted.

RESEARCH METHOD

The study used a type of quantitative research method with a cross sectional design, the population in this study was homogeneous, namely all pregnant women with chronic lack of energy in the West Lombok Regency area. How to calculate respondents using the Table of Isaac and Michael (1981), with an alpha of 5% so that with a population of 1,866 people so that the number of respondents was 294 respondents (Henny syafitri, 2021).

Data analysis with SPSS statistics, binary logistic regression analysis -2 Log Likelihood test, Omnibus test, Pseoude R Square, and Hosmer and Lemeshow test, as well as Odds Ratio result test from logistic regression and partial hypothesis testing with Wald Test technical approach with chi square.

RESULT AND DISCUSSION

This study was conducted on a number of patients of Narmada Youth Hospital who had received inpatient services or outpatient services with a large sample of 150 people with the characteristics of respondents described in table 1 below.

Table 1. Characteristics of respondents

Characteristics of Respondents	Sum (n=294)	Percentage (%)
Age		
15 – 19 years old	30	10,20
20 – 24 years	126	42,85
25 – 29 years old	74	25,17
30 – 34 years old	41	13,94
35 – 39 years old	17	5,78
40 – 44 years old	5	1,70
> 44 years old	1	0,34
Education		
Does not end SD	3	1,02
SD	38	12,93
SMP	66	22,45
SMA	171	58,16
Diploma	3	1,02
S1/S2/S3	13	4,42

Source: Primary data

In this study, the number of respondents was 294 people, of which the respondents were SEZ pregnant women in 2022 who have currently given birth with toddlers aged between 0 – 24 months. In table 1. Characteristics of respondents by age group: the age of respondents under 20 years old as many as 30 people (10.20 %) and respondents over 35 years old as many as 23 people (7.82 %).

The results of this study are in line with the conclusion of Irbah Nabila Aprilia's research (2020) that there is an influence of adolescent pregnancy aged 15-19 years on the incidence of anemia and SEZ in pregnant women (Irbah Nabila Aprilia, 2020). In this research, the highest level of education among respondents is high school or its equivalent, with a total of 171 people (58.16%).

Tabel 2. Iteration history block 0

Step	Nila -2 Loglikelihood	Constant
1	309,249	-1.129
2	308.093	-1.273
3	308.091	-1.279
4	308.091	-1.279

Source: Primary data

From table 2 above, the results of the logistic regression test have obtained a value of -2 likelihood of 308,091. Then next determine the table chi square value with the result is $DF = N - 1$ ($294 - 1 = 293$) so that the table chi square value is 333.921. So based on the test criteria above, it is concluded that the value of -2 log

likelihood < chi square table or $308,091 < 333,921$, then the model before entering the independent variable has met the test requirements.

Table 3. Table hosmer and lemeshow

Step	Chi-square	Df	Say.
1	1.927	5	0.859

Source: Primary data

In table 3 is the result of the SPSS output that in this study the calculated chi square value of 1.927 is smaller than the table chi square value of 11.07 or a significance value of 0.859 or greater than 0.05, it can be concluded that H_0 is accepted meaning that the model is able to predict the value of observation (goodness of fit).

Tabel 4. Omnibus Test of Model Coefficients

	Chi-square	Df	Say.	Say.
Step	35.362	6	0,000	0.859
Block	35.362	6	0,000	
Model	35.362	6	0,000	

Source: Primary data

From table 4. SPSS output results that in this study has a calculated chi square value of 35.362, then chi square table is obtained worth 12.59 then the value of $35.362 > 12.59$. and a significance value of 0.000 means that the significance value is less than 0.05 so that it can be concluded that H_0 is rejected and H_a is accepted. So there is an influence of at least one independent variable on the dependent variable, or specific interventions in SEZ pregnant women together affect the reduction in the incidence of stunting toddlers.

Table 5. Variables in the equation

Were	B	Df	Say	Exp (B)
TTD supplements	-1,331	1	0,001	0,264
Pregnancy check-up	-0,970	1	0,016	0,379
Imunisasi T/T	-20,803	1	0,999	0,000
Pel HIV/TBC/	-0,821	0,337	0,015	0,440
Malaria/Hepatitis	0,314	1	0,493	1,369
Mother's class	-0,487	1	0,185	0,615
Constant	22,122	1	0,999	4,05

Source: Primary data

From table 5. The above can be explained as follows:

- 1) The supplemental feeding variable has a significance value of 0.001 or less than 0.05 and the B value is -1.331 (negative value) hence it has a negative

relationship. If supplementary feeding is increased, it further reduces the incidence of stunting toddlers by 0.264 times. The supplementary feeding program for SEZ pregnant women has a partial relationship with reducing the incidence of stunting toddlers, the odds ratio value is less than 1 meaning that the program has a small impact on reducing the incidence of stunting toddlers. This research is in line with the results of research by Fitri Juliasari and Elsa Fitria Ana (2020) that there is a relationship between PMT and Weight Gain in SEZ pregnant women at the White Doh Health Center in 2020. (Fitri juliasari dan Elsa fitria ana, 2021). Based on the results of data analysis from 31 countries showed food supplementation showed weight gain in underprivileged families. Furthermore, when supplementary meals are given with nutrition education and local food interventions, weight gain increases even more (Kementerian Kesehatan Republik Indonesia, 2019). The obstacles found in supplementary feeding (1) Dropping additional food from the center cannot be ascertained the time of arrival, and the target amount of additional food has been determined by the central government (2) Officers cannot ensure that the additional food given is actually consumed by SEZ pregnant women regularly or not. (3) The biscuits given are not consumed entirely because there are SEZ pregnant women who do not like the taste of biscuits. (4) Supplementary feeding in the fourth quarter will cause the puskesmas to lack preparation in the implementation of the supplementary feeding.

- 2) The variable of giving blood-added tablets has a significance value of 0.016 or less than 0.05 and the B value is -0.970 (negative value) then has a negative relationship. If the consumption of tablets is increased, it further reduces the incidence of stunting toddlers by 0.379 times. An odds ratio of less than 1 means that the program has a small impact on reducing the incidence of stunting toddlers. In the results of research Kartika Putri, et al (2022) explained that 62.5% of stunted mothers under five are not used to taking blood-added tablets before pregnancy (Suci Kartika putri, 2022) In pregnant women who suffer from anemia will increase the risk of giving birth to babies with less weight or low birth weight, having a miscarriage, and will give birth prematurely, the risk of bleeding before and or during labor which results in the death of the mother and baby. In the womb babies can experience impaired growth and development, can not reach optimal height and children become less intelligent (Kementerian Kesehatan Republik Indonesia, 2014). In line with research that there is an effect of adherence to the consumption of blood-added tablets and diet on the incidence of anemia in pregnant women in the second trimester.(Septi Kurniawati, Novi Pasiriani, 2023)
- 3) The TT/TD immunization variable has a significance value of 0.015 or less than 0.05 and a B value of -0.821 (negative value). If more TT / TD immunization is given, it will reduce the incidence of stunting toddlers by

0.440 times. In line with Agustin's research research, (2021) that ANC and Tetanus Toxoid Immunization in pregnant women with the incidence of stunting show a significant relationship (Agustin, 2021). The results of this study are in accordance with the research of Roger Baxter, et al (2017) in Northern California in 2010-2015 with the conclusion of the results of the study showed that Tetanus diphtheria vaccination in pregnant women was very effective, with vaccine effectiveness of 91.4% during the first 2 months of life and 69.0% during the first ten years of life (Baxter *et al.*, 2017). In the study of Eduardo Juscamayta Lopez et al (2023) in Peru, it was concluded that the administration of maternal TDAP (tetanus, diphtheria, and acellular pertussis) vaccination during pregnancy was found to be a very effective intervention to protect babies from pertussis, especially for Peruvian populations at higher risk (Juscamayta-López *et al.*, 2023). Immunization is one way to provide immunity to humans where during pregnancy must weigh the risks and advantages of immunization, tetanus toxoid (TT) vaccine is effective to prevent tetanus which is a dangerous disease, especially tetanus neonatorum is an acute disease with characteristics of not having the ability to suck followed by stiffness and muscle spasms. This immunization is given in the second trimester of pregnancy. Tetanus diphtheria immunization to prevent infections that occur in the nose, pharynx, larynx or mucous membrane infections (Toto, Aristasari and Afifah, 2018).

- 4) The variable of pregnancy examination has a significance value of 0.999 or more than 0.05 so it is concluded that pregnancy examination does not have a significant effect on reducing the incidence of stunting toddlers. In Nurul Ramadhini's research, et al (2021) also concluded that antenatal care was not significantly related to the incidence of stunting in children aged 0-24 months in the work area of the Seberang Padang Health Center in 2019 (Ramadhini, Sulastri and Irfandi, 2020). The results of this study contradict the research of Diani Magasida and Erawati (2021) which concluded that there is a relationship between antenatal care and the incidence of stunting in the working area of the Kalibawang Kulonprogo Health Center (Magasida Diani dan erawati, 2021). In the implementation of the pregnancy examination program (ANC), several obstacles are still found, including: (1) factors that affect the compliance of pregnant women in making ANC visits are the distance of residence, the farther the distance of health facilities from the residences of pregnant women, and the more difficult access to health facilities will reduce the motivation of pregnant women to make ANC visits, the distance will make mothers think twice about making visits because it will take a lot energy and time every time you make a visit. (2) The uneven distribution of health workers in remote areas can also reduce the access of pregnant women to health services. (3) Information media that includes information about the importance of

antenatal services for pregnant women can increase knowledge and motivation of mothers in making visits.

- 5) The variable of HIV/TB/Malaria/Hepatitis services has a significance value of 0.493 or greater than 0.05 so that it is concluded that HIV/TB/Malaria/Hepatitis services do not have a significant effect on reducing the incidence of stunting toddlers. The program still found several obstacles including (1) human resources who will conduct examinations in the context of finding cases, where data from the health office the ratio of Medical Laboratory Technology Experts is 12.5 per 100,000 population, this number is still below the target ratio set based on Kepmenko Bid.Kesra No.54 of 2013 which is 18 people per 100,000 (2). There are still limited medical devices that will be used to support the program (3). The program is also still constrained in meeting the needs of consumables. This service program is in the form of finding and handling cases in pregnant women in HIV / TB / Malaria / Hepatitis when ANC services aim to improve infection detection in pregnant women so as to prevent mother-to-child transmission (MTCT). Then it will not have a direct impact on reducing the incidence of stunting toddlers. In a study by Nadia Hachicha-Maalej, et al (2023) conducted in Egypt and Ukraine explain the conclusion: This is one of the first models to explore HCV screening and treatment strategies in pregnancy, which will be critical in informing future treatments and policies as more safety/efficacy data emerge. Universal screening and treatment of pregnancy has the potential to improve maternal and infant outcomes (Hachicha-Maalej *et al.*, 2023).
- 6) The variable class of pregnant women has a significance value of 0.185 or greater than 0.05 so that it is concluded that the class of mothers does not have a significant effect on reducing the incidence of stunting toddlers. The problems in the implementation of this pregnant women class are (1) Lack of participation of husbands or families, (2) There are still negative attitudes from pregnant women towards the pregnant women class because there is still a lack of information and understanding of the importance of attending pregnant women classes. (3). There were respondents who did not attend the pregnant women's class for reasons during the implementation of the mother's class while working. In the research of Nasir et al., (2021) it was concluded that this class activity for pregnant women is an effort to reduce stunting cases. Mothers who attend classes for pregnant women mostly have good knowledge and a positive attitude. In addition, there is a significant relationship between the provision of classes for pregnant women to increase knowledge and attitudes about stunting prevention, meaning that mother's class activities are activities that indirectly affect the incidence of stunting because there are moderation variables, namely knowledge and attitudes of pregnant women after attending mother's classes (Nasir, Amalia and Zahra, 2021). In another study stated that there is an influence of the

class of pregnant women on maternal knowledge in early detection of pregnancy risk tinggi (Ida and Afriani, 2021)

Tabel 6. Model Summary

Step	-2 Log likelihood	Cox & snell R Square	Nagelkerke Square
1	272,729	0,113	0,175

Source: Primary data

In table 6 above presents the Pseudo R Square and the Nagelkerke R Square value of 0.175 or equivalent to 17.5 percent, it can be concluded that the independent variable in this study has the ability to explain the dependent variable of 17.5 percent and 82.5 percent explained by other factors that are not studied. According to the Lancet (2013) specific interventions are activities that directly address the causes of stunting and are generally provided by the health sector such as food intake, infection prevention, maternal nutritional status, infectious diseases and environmental health. Meanwhile, sensitive interventions are activities related to indirect causes of stunting which are generally outside the authority of the Ministry of Health. In tackling nutritional problems, sensitive interventions contributed 70% while specific interventions accounted for about 30%. (Djauhari, 2017).

CONCLUSION

From the results of this study, several conclusions can be drawn as follows: (1) There is a significant relationship in the supplementary feeding program for SEZ pregnant women to reduce the incidence of stunting toddlers in West Lombok Regency but has an odds ratio of less than 1, which is only 0.264 times so that it is categorized as having a small impact in reducing the incidence of stunting toddlers (2) There is a significant relationship in the program of giving blood-added tablets to mothers SEZ pregnancy has a decrease in the incidence of stunting toddlers in West Lombok Regency, but has an odds ratio of less than 1, which is 0.379 times so that it is categorized as having a small impact on reducing the incidence of stunting toddlers (3) There is no significant relationship in the pregnancy examination program for SEZ pregnant women to the decrease in the incidence of stunting toddlers in West Lombok Regency (4) There is a significant relationship in the TT / TD immunization program in SEZ pregnant women to reduce the incidence of stunting toddlers in West Lombok Regency with the odds ratio value still below 1, which is only 0.440 times so that it is classified as having a small impact on reducing the incidence of stunting toddlers (5) There is no significant relationship in HIV/TB/Malaria/Hepatitis service programs in pregnant women SEZs to the decrease in the incidence of stunting toddlers in West Lombok Regency (6) There is no significant relationship between the Mother Class program in mothers SEZ pregnancy on the decrease in the incidence of stunting toddlers in West Lombok Regency, (7) The independent variable in this study has the ability to explain the dependent variable by 17.5 percent and 82.5 percent explained by other factors that were not studied.

Suggestions for the Regional Government of West Lombok Regency (1) In the program of supplementary feeding for SEZ pregnant women, it is necessary to monitor and evaluate the target recipients of additional food, including monitoring the amount and type of additional food received and consumed by the target, monitoring storage methods, serving methods, supplementary food supplies and target complaints against these additional foods. Monitoring can be carried out by accompanying cadres or from the family, the target, and the results of monitoring activities are reported regularly (2) To increase the coverage of the pregnancy examination program and increase the coverage of blood tablet consumption in pregnant women, SEZs need an information system in the form of an application that can provide chat services that can be connected to health facilities and health workers who will serve pregnancy examination and monitoring automatically and routinely, so that all important information about pregnancy checks and blood-added tablets can be conveyed through the information system (3) In increasing the coverage of TT / TD immunization for pregnant women, SEZs are recommended to be integrated with the Satu Sehat application so that they will have a history of immunization in pregnant women, besides that it is necessary to further disseminate information to cross-sectors about the importance of TT / TD immunization (4) On HIV/TB/Malaria/Hepatitis services need to be planned for the availability of human resources, equipment and consumables, and reporting systems in the implementation of the program (5) Mother Class activities need to be carried out with innovation and modification of activities according to the conditions in each place, providing supporting facilities, time for the implementation of activities so that they can be carried out in the afternoon.

Suggestions for future research Conduct further research on factors that affect the incidence of stunting in West Lombok district, because the results of this study can only explain 17.5 percent and 82.5 percent explained by other factors that are not studied

REFERENCES

- Agustin, L.E. (2021) 'Hubungan ANC dan Imunisasi TT Pada Ibu Hamil Terhadap Kejadian Stunting Di Kecamatan Siulak Kabupaten Kerinci Provinsi Jambi Tahun 2021'. Universitas Jambi.
- Baxter, R. *et al.* (2017) 'Effectiveness of vaccination during pregnancy to prevent infant pertussis', *Pediatrics*, 139(5).
- Dinas Kesehatan Kabupaten Lombok Barat (2023) *Profil Kesehatan Lombok Barat 2022*. Available at: www.dikes.lombokbaratkab.co.id.
- Djauhari, T. (2017) 'Gizi dan 1000 HPK', *Saintika medika*, 13(2), pp. 125–133.
- Fitri juliasari dan Elsa fitria ana (2021) 'PEMBERIAN MAKANAN TAMBAHAN (PMT) DENGAN KENAIKAN BERAT BADAN IBU HAMIL KEK', <http://journal.aisyahuniversity.ac.id/index.php/Jaman>, pp. 1–5.
- Hachicha-Maalej, N. *et al.* (2023) 'Modelling the potential effectiveness of hepatitis C screening and treatment strategies during pregnancy in Egypt and Ukraine', *Journal of Hepatology*, 78(5), pp. 937–946. Available at: <https://doi.org/10.1016/j.jhep.2022.12.032>.
- Henny syafitri, *et al* (2021) 'Buku Ajar Metodologi Penelitian Kesehatan', *Ahli Evaluation Of Specific Intervention Programs On Pregnant Women With Chronic Energy Deficiency To Reduce The Incidence Of Stunted Children*

- media press*, pp. 1–220.
- Ida, A.S. and Afriani, A. (2021) ‘Pengaruh edukasi kelas ibu hamil terhadap kemampuan dalam deteksi dini komplikasi kehamilan’, *Jurnal Inovasi Penelitian*, 2(2), pp. 345–350.
- Irbah Nabila Aprilia (2020) ‘Effects of Adolescent Pregnancy on the Occurrence of Anemia and KEK in Pregnant Women’, *Juni*, 11(1), pp. 554–559. Available at: <https://doi.org/10.35816/jiskh.v10i2.347>.
- Juscamayta-López, E. *et al.* (2023) ‘Case-control study to estimate the association between Tdap vaccination during pregnancy and reduced risk of pertussis in newborn infants in Peru, 2019–2021’, in *Open Forum Infectious Diseases*. Oxford University Press US, p. ofad325.
- Kementerian Kesehatan Republik Indonesia (2014) ‘Peraturan Menteri Kesehatan Republik Indonesia Nomor 88 Tahun 2014 tentang standar tablet tambah darah bagi wanita usia subur dan ibu hamil’, (1840).
- Kementerian Kesehatan Republik Indonesia (2019) *Petunjuk Teknis Makanan Tambahan Balita dan Ibu Hamil*.
- Magasida Diani dan erawati (2021) *HUBUNGAN ANTENATAL CARE TERHADAP KEJADIAN STUNTING PADA BALITA USIA 24-59 BULAN*.
- Nasir, M., Amalia, R. and Zahra, F. (2021) ‘Kelas Ibu Hamil Dalam Rangka Pencegahan Stunting’, *Jurnal Pengabdian dan Pemberdayaan Nusantara (JPPNu)*, 3(2), pp. 40–45.
- Pemerintah Kabupaten Lombok Barat (2020) ‘PERBUP LOMBOK BARAT NOMOR 19.A TAHUN 2020 TENTANG PENCEGAHAN DAN PENANGGULANGAN STUNTING’, *Pemerintah Kabupaten Lombok Barat*, pp. 1–22.
- Ramadhini, N., Sulastrri, D. and Irfandi, D. (2020) ‘Hubungan Antenatal Care terhadap Kejadian Stunting pada Balita Usia 0-24 Bulan di Wilayah Kerja Puskesmas Seberang Padang Tahun 2019’, *Jurnal Ilmu Kesehatan Indonesia*, 1(3), pp. 246–253.
- Septi Kurniawati, Novi Pasiriani, A. (2023) ‘Pengaruh Kepatuhan Konsumsi Tablet Tambah Darah Dan Pola Makan Terhadap Kejadian Anemia Pada Ibu Hamil Trimester Ii Di Wilayah Kerja Puskesmas Long Ikis’, *Journal of comprehensive science*, 2(1), pp. 368–376.
- Suci Kartika putri, *et al* (2022) ‘Gambaran Pengetahuan Ibu Pola Asuh dan Kebiasaan Minum TTD dan Hubungannya dengan kejadian stunting pada balita (Kelurahan Telaga Biru)’, *Jurnal Riset Pangan dan Gizi*, 4(1), pp. 41–50.
- Toto, S., Aristasari, T. and Afifah, A. (2018) ‘1.000 Hari Pertama Kehidupan Yogyakarta’. Gadjah Mada University Press.