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## RESEARCH ARTICLE

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## The Behavior of Pregnant Women with Chronic Energy Deficiency in Preventing Stunting with the Perspective of Women's Empowerment

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### ABSTRACT

Chronic energy deficiency (CED) in pregnant women has been proven to have various impacts on the mother during pregnancy, childbirth, and even the postpartum period. The impact on the fetus is proven to be four times the risk of being born with low birth weight. Data on chronic energy deficiency in pregnant women, which is still high at the Tarus Health Center, is the background in writing this article, how their behavior prevents stunting from the aspect of empowering women. The purpose of this study was to analyze the behavior of chronic energy-deficient pregnant women with chronic energy deficiency in preventing stunting in their later children based on women's empowerment, which was associated with educational background, age, and parity status. This type of research was cross-sectional study, involved 44 pregnant women who experienced chronic energy deficiency, had an MCH handbook, and were willing to participate, selected using total sampling. Data were collected using questionnaire, then analyzed using Chi-square test. Most of the pregnant women were in the gravida status with the multiparous category, with unfavorable behavior, there was a significant relationship ( $p$ -value  $< 0.05$ ) between education and the mother's age, while parity status has no significant relationship to the behavior of pregnant women in preventing stunting. As conclusion, stunting prevention behavior in pregnant women with chronic energy deficiency was related to the mother's age and educational background.

**Keywords :** pregnant women; chronic energy deficiency; behavior; education; parity; age

### INTRODUCTION

Stunting is a toddler who experiences chronic or chronic nutritional problems. The measurement results are based on the length or height according to the age of the toddler compared with the standard standards submitted by the WHO. Stunting in children occurs from the time they are still in the womb and appears at the age of two.<sup>(1-3)</sup> Incidence of stunting in Indonesia 10.2% of babies in Indonesia are born with low birth weight, 19.6% of toddlers in Indonesia have a weight that does not match their age, 32.2% have a height that does not match their age 1 out of 3 children in Indonesia experiencing stunting, this condition can be prevented by fulfilling the nutritional needs of pregnant women.<sup>(1)</sup>

Chronic energy deficiency in pregnant women has been proven to have various impacts on the mother during pregnancy, childbirth, and even the postpartum period. The impact on the fetus is proven to have 4 times the risk of being born with low birth weight<sup>(2)</sup>, besides that, there is a significant relationship between pregnant women and CED with the incidence of stunting in their future children.<sup>(2)</sup> and the causes of this incident also presented by.<sup>(3)</sup>

Chronic energy deficiency (CED) is a condition in which a pregnant woman experiences a lack of food intake for a long time, even for years, which can result in health problems, where this condition experiences problems during pregnancy due to increased nutritional needs.<sup>(4)</sup> Various causes of its occurrence have been proven in various research journals, but not enough to reduce this condition. At the Tarus Health Center, Kupang Tengah District, Kupang Regency, NTT, the number of pregnant women from January to November 2022 was 886 and 21% of pregnant women experienced chronic energy deficiency. The 2018 Basic Health Research showed that of all pregnant women, 17.3% experienced chronic energy deficiency, and of this number, more than half did not receive additional food, namely 74.8%. Data related to pregnant women who did not receive iron tablets were also presented, namely 26.7%.<sup>(5)</sup> Health development policy has one of the main objectives to improve the status of maternal and child health, family planning, and reproductive health.<sup>(6)</sup> Women need to be empowered to meet their nutritional needs during pregnancy because the concept of empowering women makes a woman independent with all that is within her trying to be able to find solutions to improve her own health and that of her own fetus.<sup>(7)</sup> The management of pregnant women with chronic energy deficiency has been widely provided at the health center level to more adequate health facilities, but the literature study conveys that there is still very little literature that raises aspects of how women themselves must be empowered to improve their health, especially during pregnancy which has an impact on The fetus is even closely related to the incidence of stunting in children. The various descriptions above make the author want to explore how the behavior of pregnant women with chronic energy deficiency in their efforts to be able to meet nutritional needs and even get adequate antenatal care services based on women's empowerment.

The purpose of this study was to obtain an analysis of the behavior of chronic energy-deficient pregnant women with chronic energy deficiency in preventing stunting in their later children based on women's empowerment, associated with educational background, age, and parity status.

## METHODS

This type of research was observational study with a cross-sectional design. The study was conducted in the working area of the Tarus Public Health Center, Kupang Tengah District, Kupang Regency, East Nusa Tenggara Province. The research was conducted in June 2022. The study population comprised all pregnant women who experienced chronic energy deficiency, had an Maternal and Child Health (MCH) handbook, and were willing to participate. The total population is less than 100; therefore, the research sample is the population. The Tarus Health Center acknowledges this research through the research permit number: 070/05/Kuteng/2022. The data obtained in this study are the primary data.

The dependent variable was behavior of pregnant women with CED, described in the research questionnaire using a Likert scale. Data on demographic variables, maternal age, parity status, and educational background and behavior were collected using questionnaire. The independent variables were the age of the pregnant woman, the parity status of the mother, and the last education obtained using a checklist. The Chi-square test was performed to examine the relationship between the two variables.

In conducting research, he paid attention to the elements of ethics, which was preceded by providing an explanation of the aims and objectives of the research, what information would be studied, and the advantages and disadvantages that would be experienced by the mother as it would take a little time. After that, give a consent form to the research subjects to sign. The researcher also said that he would maintain the privacy or confidentiality of the mother, name and personal identity would not be published.

## RESULTS

Table 1 shows the distribution of CED pregnant women and their characteristics. The age most experiencing CED was healthy reproductive age 21-35 years, the distribution of education was almost even but most of them were those with high school education, and the behavior of pregnant women with the greatest number of children was good compared to bad behavior. The description presented in the distribution of Table 1 suggests that CED in pregnant women can occur in any group with any educational background and requires a good management strategy.

Table 2 shows that the majority of pregnant women with CED behave well in their efforts to carry out pregnancy checks, try to meet nutritional needs by utilizing existing resources, but are lacking in trying to find information about stunting in children.

Table 3 shows that the mother's age and recent educational status have a significant relationship with the behavior of pregnant women, but mothers with parity status do not have a significant relationship with the mother's behavior.

Table 1. Distribution of gravida, age, education, and behavior of pregnant women with CED in preventing stunting

Variable	Category	Frequency	Percentage
Parity	Primigravida	15	34
	Multigravida	22	50
	Grandemultigravida	7	16
Age of mother	<20	11	25
	20-35 years old	27	61
	>35 years old	6	14
Education	Elementary school	10	23
	Junior high school	12	27
	Senior high school	19	43
	Bachelor	3	7
Behaviour	Positive	23	55
	Negative	21	45

Table 2. Distribution of behavior of pregnant women with CED in preventing stunting

Mother Behaviour	Not good		Good	
	Frequency	Percentage	Frequency	Percentage
<u>Antenatal Care</u>				
Trying to be able to check for pregnancies according to the schedule given even if not accompanied by a husband or family member	8	18	36	82
Visit the Puskesmas or hospital if you experience a condition of danger signs	7	16	37	83
Set aside money to be able to pay for gas/public transportation used for pregnancy checks	7	16	37	83
<u>Fulfillment of nutritional needs by utilizing existing resources at home</u>				
Utilize the home page or polybags to grow vegetables or other simple sources of nutrition at home	16	36	28	64
Trying to set aside spending money to buy milk for pregnant women	2	4	42	96
Try to eat a varied diet consisting of rice, sweet potatoes, corn, fish protein, tempeh, and tofu.	4	9	40	91
Consumption of Iron Tablets Add Blood,	3	7	41	93
Additional food given by the midwife has eaten alone until it runs out according to the rules	4	9	40	91
<u>Efforts to find information about stunting</u>				
Make an effort to ask midwives or other health workers for information about stunting	41	93	3	7

Table 3. The results of hypothesis testing

Variable	Not good	Good	p
Age of mother			
<20 years old	4	7	0.003
20-35 years old	15	12	
>35 years old	2	4	
Education			
Elementary school	9	1	0.001
Junior high school	8	4	
Senior high school	3	26	
Bachelor	1	2	
Parity			
Primigravida	10	4	0.4
Multigravida	10	13	
Grandemultigravida	1	6	

## DISCUSSION

Stated that there are still many pregnant women who do not practice the habit of eating with their families, their eating patterns are less diverse, and their main food portions are still inadequate. There are restrictions on food sources of energy and high protein such as fish and eggs as well as inappropriate family food distribution.<sup>(8)</sup>

The behavior of pregnant women in preventing stunting is described as preventing stunting from the perspective of women's empowerment. This is related to efforts to obtain services in pregnancy checks or antenatal care. Most pregnant women already have awareness and make various efforts that they provide to be able to check their pregnancies. This is a good opportunity for midwives with good maternal behavior. Antenatal care is very important because it relates to the outcome of the baby to be born where the risk of neonatal death is reduced for mothers who do antenatal care.<sup>(9)</sup> Good antenatal care connects women and families with the formal health system such as health centers and even hospitals, so there is a great possibility for obtaining the appropriate and correct information on the health of themselves and their fetuses.

The number of times the mother has been pregnant or parity status is proven by the results of the cross table, which has no significant relationship with the behavior of pregnant women with CED in preventing stunting. The results of the analysis conveyed in the study that there was no relationship between parity and the behavior of pregnant women with CED in preventing stunting, this is in line with research by Sumerti et al.<sup>(10)</sup> concerning educational status that does not affect the behavior of pregnant women in the context of how to brush their teeth and it is conveyed that the knowledge of a person who shapes behavior is not only obtained from the aspect of education level but exposure to various information through counseling at health centers, or existing online media mass media around mother email. Most pregnant women have a low level of education, namely elementary school, and only 2 percent of pregnant women have an undergraduate education background.

This research also shows that there is a strong relationship between a mother's education and her child's health. Children born to educated women suffer less from malnutrition, which manifests as underweight, thin, and short in stunted children.<sup>(11)</sup> Mothers with an adequate educational background are aligned with their ability to recognize and analyze their needs to improve the health of themselves and their fetuses during pregnancy. Midwives as health workers who are always the mother's partner during pregnancy must have a specific strategy for addressing the problems experienced by pregnant women with various educational backgrounds.<sup>(12)</sup> When midwives communicate with pregnant women with higher educational backgrounds, they must be more creative because these pregnant women will be more selective in making decisions.<sup>(13)</sup>

Even though it has a relationship based on the results of statistical analysis, most pregnant women who have a high school education background with sufficient educational background also have good behavior, as well as those at the undergraduate level, although at these levels there are still those who behave to prevent stunting by less category. This illustrates that educational background is not the only one that can influence pregnant women's behavior in preventing stunting, other variables influence it such as knowledge, family support factors, and so on<sup>(14)</sup>, for this it is important to continue to provide information knowledge to pregnant women with chronic energy deficiency during pregnancy how she should meet all her own nutritional needs with what she has to improve her health and prevent nutritional deficiencies in her fetus at birth, even preventing stunting from an early age.<sup>(15)</sup> Before communicating, the midwife must make the correct diagnosis according to the midwifery diagnostic nomenclature.<sup>(13,16)</sup>

The mother's age has a significant relationship with her behavior in preventing stunting in her child Age categories are used based on healthy reproductive age, below and even above. The majority of respondents were in the reproductive age range of 20-35 years, with the results of this analysis giving midwives an idea of the importance of paying attention to these factors in providing midwifery care. The period when a healthy mother in reproduction should have strong instincts as a potential mother for her fetus to try to fulfill all things related to fulfilling her pregnancy needs, in this.<sup>(17,18)</sup> It is also necessary to involve various resources, including cadres in the community, to improve the health of pregnant women from an empowerment aspect to detect early and provide information to pregnant women.<sup>(19-22)</sup>

## CONCLUSION

Stunting prevention behavior in pregnant women with chronic energy deficiency is related to the mother's age and educational background, but does not have a significant relationship to the parity status of the mother.

## REFERENCES

1. Kemenkes RI. Cegah stunting, itu penting. Jakarta: Pusdatin Kemenkes RI; 2018.
2. Ningsih DA, Apriani W. Relationship history of chronic energy deficiency (KEK) in mothers with the incidence of stunting in children under five at the Karang Jaya Community Health Center, Musi Rawas Utara Regency in 2019. CHMK Midwifery Sci J. 2021;4(3).

3. Mugianti S, Mulyadi A, Anam AK, Najah ZL. Faktor penyebab anak stunting usia 25060 bulan di Kecamatan Sukorejo Kota Blitar. *J Ners dan Kebidanan*. 2018;5(3):268–78.
4. Aisyah S, Angraini H. Science midwifery factors associated with the incidence of chronic energy deficiency (CED) in pregnant women in the working area of the UPT Health Center Inpatient Bandung Agung in 2021. *Sci Midwifery*. 2022;10(2):2721–9453.
5. Kemenkes RI. Laporan Riskesdas 2018. Jakarta: Kemenkes RI; 2018.
6. Kemenkes RI. Arah dan kebijakan pembangunan kesehatan tahun 2020-2024. Jakarta: Kemenkes RI; 2020.
7. Astuti BW. Peran pemberdayaan wanita sebagai upaya peningkatan kesehatan ibu di Indonesia. *J Ilm Kesehat*. 2021;20(1):16–24.
8. Hasanah DN, Febrianti M. The eating habit is one of the cause chronic energy deficiency (CED) on pregnant mothers in Obstetrics Policlinic at Lestari & Hospital Cirendeu South Tangerang. *J Kesehat Reproduksi*. 2012;3(3):91–104.
9. Shiferaw K, Mengiste B, Gobena T, Dheresa M. The effect of antenatal care on perinatal outcomes in Ethiopia: A systematic review and meta-analysis. *PLoS One*. 2021;16(1 January):1–11.
10. Sumerti NN, Gede Agung AA, Raiyanthi I, Wirata I, Diantari A. Hubungan tingkat pendidikan dan usia kehamilan terhadap perilaku ibu hamil tentang cara menyikat gigi di Kabupaten Gianyar tahun 2021. *Dent Heal J*. 2022;9(1).
11. Abuya B, Ciera J, Murage EK. Effect of mother's education on child's nutritional status in the slums of Nairobi. *BMC Pediatr*. 2012;12(80).
12. Taubman-Ben-Ari O, Chasson M, Abu Sharkia S, Weiss E. Distress and anxiety associated with COVID-19 among Jewish and Arab pregnant women in Israel. *J Reprod Infant Psychol*. 2020;38(3):340–8.
13. Wariyaka MR. Model nomenklatur diagnosa kebidanan dalam kehamilan Melinda Rosita Wariyaka. 2021;12(April):140–3.
14. Kiftia M, Rizkia M, Ardhia D, Darmawati. The correlation among pregnant woman's education level with knowledge and behaviour on readiness toward COVID-19 pandemic. *Enferm Clin*. 2022 Aug;32:S35–8.
15. Nih Farisni T, Suriati. The relationship between nutritional health services for pregnant women and the incidence of stunting in Lhok Bot, Aceh Jaya. *Clin Med Insights*. 2022;03(01):250–6.
16. Wariyaka MR. Pengembangan model nomenklatur diagnosa kebidanan dalam kehamilan. Bandung: Media Sains Indonesia; 2021.
17. Wariyaka MR, Kristin DM, Vivianri T, Tabelak I, Wariyaka MR, Kristin DM, et al. CED from women's empowerment perspective. 2019;58–66.
18. Tabelak TVI, Boimau S, Wariyaka M. Pemberdayaan perempuan dalam masa kehamilan melalui pregnancy empowerment program di Desa Noelbaki Kecamatan Kupang Tengah Kabupaten Kupang. *J Kreat Pengabd Kpd Masy*. 2021;4(3):698–704.
19. Wariyaka MR, Anggraeningsih NLMDP, Manalor LL. Memberdayakan kader dengan sosialisasi dan pendampingan kader posyandu untuk identifikasi faktor risiko pada ibu hamil. *J Kreat Pengabd Masy*. 2023;6(2):424–34.
20. Nasution SS, Erniyati E. The intervention of community role for improving health status of pregnant women suffering HIV-AIDS in Medan. *Open Access Maced J Med Sci*. 2018 Sep 24;6(9):1768-1772.
21. de Masi S, Bucagu M, Tunçalp Ö, Peña-Rosas JP, Lawrie T, Oladapo OT, Gülmezoglu M. Integrated person-centered health care for all women during pregnancy: implementing World Health Organization recommendations on antenatal care for a positive pregnancy experience. *Glob Health Sci Pract*. 2017 Jun 27;5(2):197-201. doi: 10.9745/GHSP-D-17-00141.
22. Friska D, Kekalih A, Runtu F, Rahmawati A, Ibrahim NAA, Anugrapaksi E, Utami NPBS, Wijaya AD, Ayuningtyas R. Health cadres empowerment program through smartphone application-based educational videos to promote child growth and development. *Front Public Health*. 2022 Oct 13;10:887288.