



CONTRIBUTION OF HEALTH LITERACY TO INCREASING ANTENATAL CARE COVERAGE IN AN EFFORT TO REDUCE STUNTING

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ABSTRACT

The 2021 Indonesian Nutritional Status Study revealed that the highest prevalence of stunted toddlers, 37.9%, was found in Jeneponto under the Chronic-Acute category. Health literacy greatly influences the health behavior of mothers and babies during pregnancy, particularly regarding nutrition and child health, such as the issue of stunting in Indonesia. A study was conducted to assess the impact of pregnant women's health literacy on the expansion of antenatal care in order to reduce stunting. Using analytical observation with a Cross Sectional Study approach, the research surveyed 96 respondents in the Turatea Community Health Center Working Area in Jeneponto from July to August 2023. The chi-square test indicated a correlation between education and the level of health literacy among pregnant women (P-value 0.039). Additionally, there was a relationship between ANC and the Health Literacy Level of Pregnant Women (P-value 0.014), demonstrating that the level of education does not solely determine health literacy. Other factors such as functional literacy and personal experience also play a role. Routine ANC offers pregnant women an opportunity to learn about proper nutrition during pregnancy, helping prevent stunting in the fetus for those with a higher level of health literacy.

Keywords: Health Literacy, Antenatal Care, Stunting

ABSTRAK

Hasil Studi Status Gizi Indonesia 2021 bahwa prevalensi balita stunting terbanyak di Kabupaten Jeneponto yaitu 37,9 %, sehingga termasuk kategori Kronis-Akut. Literasi kesehatan berperan penting selama kehamilan, mempengaruhi perilaku kesehatan ibu dan bayinya terutama gizi dan kesehatan anak seperti masalah stunting di Indonesia. Tujuan penelitian adalah mengetahui kontribusi health literacy ibu hamil untuk peningkatan cakupan antenatal care dalam upaya penurunan stunting. Observasi analitik yang dipadukan dengan metodologi studi cross-sectional digunakan dalam penelitian ini. Ada 96 responden. Penelitian ini dilaksanakan di Wilayah Kerja Puskesmas Turatea Kabupaten Jeneponto, Juli hingga Agustus 2023. Temuan uji chi-square menunjukkan nilai P-value sebesar 0,039 dengan tingkat signifikansi 0,05 yang menunjukkan adanya hubungan yang signifikan antara pendidikan dengan literasi kesehatan ibu hamil. Terdapat hubungan antara Kunjungan ANC dengan Tingkat Health Literacy Ibu Hamil yaitu nilai $p = 0,014$ dengan $\alpha = 0,05$. Tingkat pendidikan tidak selalu mencerminkan tingkat health literacy, karena variabel lain seperti literasi fungsional dan pengalaman pribadi juga berperan. Kunjungan ANC rutin memberikan kesempatan ibu hamil untuk mendapatkan pengetahuan tentang gizi yang baik selama kehamilan, termasuk asupan nutrisi yang memadai. Ibu hamil yang memiliki tingkat literasi kesehatan yang baik akan lebih cenderung untuk memahami dan menerapkan rekomendasi gizi yang tepat dalam membantu mencegah stunting pada janin.

Kata kunci: Health Literacy, Antenatal Care, Stunting.

INTRODUCTION

Low birth weight and irregular growth during the first two years of life are the results of stunting, which is characterised as a low height-for-age Z-score (HAZ) that starts in the prenatal environment and is typically irreversible after that. Even though the prevalence of stunting declined internationally between 1990 and 2018, 21.3% of children under five are still affected by it. In addition, in Southeast Asia, stunting cases increased from 24.7% in 2019 to 38, 5% at the start of the 2020 pandemic. Therefore, in the same year, Indonesia saw a rise in the prevalence of stunting (UNICEF/WHO/WORLD BANK, 2021). Because stunting is linked to a child's high infection rate, poverty, and malnutrition, the burden of stunting primarily rests on nations with inadequate nutrition. (Roediger et al., 2020). Despite the extraordinary economic and development progress that Indonesia has experienced in recent decades, over thirty percent of Indonesian children under five have stunting or are underweight for their age.

The highest rate of stunting, 37.9%, was found in Jenepono Regency, which was included in the Chronic-Acute category (Stunted $\geq 20\%$ and Wasted $\geq 5\%$) based on the results of the 2021 Indonesian Nutrition Status Study (SSGI). The prevalence of stunting under five was reported to be 27.4% in the province of South Sulawesi (SSGI, 2017). The fact that stunting is more common among low-income household groups adds to this worry, where poverty and poor health can occur from generation to generation (Rizal & van Doorslaer, 2019). According to research findings, starting an intervention a year early can considerably improve the First 1000 Days of Life programme and lower the percentage of neonatal stunting (Gani et al., 2021). From the moment of birth until the kid turns two years old, the first thousand or first days of life are a child's period of growth and development (UNICEF, 2017). The first 1000 days program includes pregnancy and lactation checks. The first 1000 days program includes antenatal care checks, breastfeeding, immunization, exclusive breastfeedprovising, and ion of additional food for children aged 6 months and over.

Many pregnant women in poor and middle-class countries do not have access to or do not use Antenatal care regularly (more than four visits) so increasing coverage and uptake of Antenatal Care services could be an important step towards improving infant mortality as well as children's nutritional outcomes (Kuhnt & Vollmer, 2017). The reduction of stunting will be accelerated by expanding access to timely and high-quality prenatal care services, bolstering community-based nutrition initiatives to support exclusive breastfeeding for up to 6 months, and continued breastfeeding for up to 24 months with the addition of high-quality MPASI (Nshimyiryo et al., 2019). The study's findings indicated a connection between prenatal care visits and the prevalence of stunting in kids between the ages of 24 and 36 months (Hutasoit et al., 2020)(Zurhayati & Hidayah, 2022). Pregnant women are advised to carry out quality antenatal care visits, meaning that they must comply with the standards for examination visits for pregnant women, namely a minimum of 4 times changing to 6 prenatal care visits and the visit time is in accordance with the standards determined by the Ministry of Health accompanied by a complete examination and must meet the 10T service standards (Heryanto , 2021). The 10T examination is an early detection for pregnant women who may be at risk of complications or other disease risks during the pregnancy process.

Pregnancy has a significant impact on health literacy, which affects both the mother's and her unborn child's health behaviours (Nawabi et al., 2022). Especially in relation to children's nutrition and health, such as the increasing problem of stunting in Indonesia (Fitroh & Oktavianingsih, 2020). According to the study's findings, 75% of expectant mothers had little knowledge about health issues, particularly those who were undereducated and underpaid (Essam et al., 2022). Since behaviour plays a part in health literacy, it is important to encourage pregnant women to lead healthy lifestyles, as this can have a positive impact on both their health and the nutritional quality of their unborn child. Improving health literacy plays a significant role in enabling expectant mothers to alter their usage of

accessible prenatal care. Pregnant women who have high health literacy have better pregnancy outcomes, and those who have low health literacy have lower chances of having a successful pregnancy (Kohan, 2015).

The purpose of this study is to ascertain how pregnant women's health literacy affects the availability of prenatal care, with the ultimate goal of lowering stunting.

METHOD

Participant characteristics and research design

In this work, a cross-sectional study methodology was combined with an analytical observation method. Pregnant patients who visited the Turatea Health Centre in Jeneponto for prenatal care made up the study's sample.

Sampling procedures

Purposive sampling was the sample technique employed. There were 96 respondents in the study's samples. Data were collected from the Turatea Health Center, Jeneponto Regency, through a home visit by giving a questionnaire to pregnant women.

Measures and covariates

The data collection tool used was the HLS-EU-SQ10-IDN questionnaire which is the HLS-EU-47Q questionnaire but contains: 10 questions selected from 47 questions. These questions use data mining techniques in the form of feature selection and the results are 10 questions that can measure the level of health literacy with more questions a little and has been adapted to the situation in Indonesia.

The general calculation for the Health Literacy index is as follows:

$$\text{indeks} = (\text{mean} - 1) * (50 / 3)$$

Thus the calculation method is:

$$\text{Gen-HL} = (((Q1 + Q2 + Q3 + Q4 + Q5 + Q6 + Q7 + Q8 + Q9 + Q10)/10) - 1) * 50/3.$$

The index values are categorized as follows:

0-25 = 'inadequate' = insufficient

>25 - 33 = 'problematic' = problematic

>33 to 42 = 'sufficient' = enough

>42 to 50 = 'excellent' = perfect

Data analysis

Bivariate analysis was carried out on each independent and dependent variable, using tests Chi-Square statistics with an alpha significance level of 0.05 with SPSS 22 computer assistance. To see the significance of statistical calculations between independent variables and variables dependently, a 95% confidence level is employed. Should the obtained p-value be less than 0.05.

RESULTS AND DISCUSSION

The purpose of this study is to find out how pregnant women's health literacy levels affect attempts to keep unborn children from becoming stunted. Stunting affects children's long-term physical and cognitive development and is a major social issue, particularly in developing nations. In the realm of public health, stunting is a significant issue in low- and middle-income nations like Indonesia. Studies on stunting have demonstrated a comprehension of the variables influencing stunting (Mulyaningsih et al., 2021). Pregnancy is a delicate time that can impact both the developing baby within the womb and the pregnant mother's long-term wellbeing. Maintaining optimal health through healthy behaviour is made possible in large part by health literacy (Nawabi, Alayli, et al., 2021)(Nawabi, Alayli, et al., 2021). Health literacy of pregnant women is considered an important factor in efforts to prevent stunting because it can influence diet, health care and healthy living behavior during pregnancy.

Univariate analysis

Table 1

Frequency Distribution of Respondents Based on the Age of Pregnant Women in the Working Area of the Turatea Public Health Center, Jeneponto Regency

Age (Years)	Frequency	Percentage
< 20	2	2,1
20- 35	72	75,0
> 35	22	22,9
Total	96	100,0

Table 1's analysis results indicate that 75% of the respondents are between the ages of 20 and 35.

Table 2.

Frequency Distribution of Respondents Based on the Education of Pregnant Women in the Working Area of the Turatea Health Center, Jeneponto Regency

Education	Frequency	Percentage
Higher education	48	50,0
Low education	48	50,0
Total	96	100,0

Table 2's analytical results demonstrate that respondents' characteristics at the same educational level, ranging from high to low, namely 50% each.

Table 3.

Frequency Distribution of Respondents Based on Antenatal Visits in the Work Area of the Turatea Public Health Center, Jeneponto Regency

Antenatal care	Frequency	Percentage
fulfilled	49	51,04
Not fulfilled	47	48,96
Total	96	100,0

Table 3 indicates that 51.04% of completed antenatal visits were the greatest percentage.

Table 4.

Frequency Distribution of Respondents Based on Health Literacy Level in the Working Area of the Turatea Community Health Center, Jeneponto Regency

Health Literacy Level	Frequency	Percentage
Inadequate	5	5,2
Problematic	21	21,9
Sufficient	44	45,8
Excellent	26	27,1
Total	96	100,0

Table 4 indicates that 45.8% of respondents have a sufficient degree of health literacy.

Bivariate analysis

Table 5.

Relationship between Age and the Health Literacy Level of Pregnant Women in the Working Area of the Turatea Community Health Center, Jeneponto Regency

Age (Years)	Health Literacy Level								Total		P Value
	Inadequate		Problematic		Sufficient		Excellent		N	%	
	N	%	N	%	N	%	N	%			
< 20	0	0	0	0	2	100	0	0	2	100	0,439
20- 35	3	4,2	19	26,4	31	43,1	19	26,4	72	100	
> 35	2	9,1	2	9,1	11	50	7	31,8	22	100	
Total	5	5,2	21	21,9	44	45,8	26	27,1	96	100	

Table 5 presents the findings of the Chi-Square Test analysis, which indicated that there was no significant correlation between the mother's age and the health literacy level of expectant mothers in the Turatea Health Centre, Jeneponto Regency, working area. The p-value was 0.439 with a significance threshold of 0.05.

Table 6.

The relationship between education and the level of health literacy of pregnant women in the working area of the Turatea Public Health Center, Jeneponto Regency

Education	Health Literacy Level								Total		P Value
	Inadequate		Problematic		Sufficient		Excellent		N	%	
	N	%	N	%	N	%	N	%			
High	0	0	13	27,1	25	52,1	10	20,8	48	100	0,039
Low	5	10,4	8	16,7	19	39,6	16	33,3	48	100	
Total	5	5,2	21	21,9	44	45,8	26	27,1	96	100	

Table 6 indicates that there is a correlation between education and pregnant women's health literacy in the working area of the Turatea Health Centre, Jeneponto Regency, with a P-value of 0.039 and an α of 0.05.

Table 7.

Relationship between ANC visits and the level of health literacy of pregnant women in the work area of the Turatea Community Health Center, Jeneponto Regency

Antenatal care	Health Literacy Level								Total		P Value
	Inadequate		Problematic		Sufficient		Excellent		N	%	
	N	%	N	%	N	%	N	%			
Fulfilled	1	2	9	18,4	19	38,8	20	40,8	49	100	0,014
Not fulfilled	4	8,5	12	25,5	25	53,2	6	12,7	47	100	
Total	5	5,2	21	21,9	44	45,8	26	27,1	96	100	

The findings of the Chi-Square Test analysis are displayed in Table 7. In the operating area of the Turatea Health Centre, Jeneponto Regency, there is a correlation between ANC visits and pregnant women's health literacy ($p = 0.014$ with $\alpha = 0.05$).

Relationship between Age and Level of Health Literacy in Pregnant Women

Understanding and using health information during pregnancy is crucial for maternal health literacy, since it can impact prenatal care and the health of both the mother and the unborn child. According to recent studies, a pregnant woman's age may have an impact on her degree of health literacy. Previous studies' findings shed more light on the ways in which age can affect how well-informed pregnant women are about health issues, as well as its impact on care and health during pregnancy

(Nawabi, Krebs, et al., 2021). Based on these presumptions, the researchers discovered that in the neighbourhood, in the Turatea Community Health Center's operational area, Jeneponto Regency, there were more mothers in the 20-35 year old category, which is included in the younger age group. The age of the pregnant woman is often related to a broader level of life experience. Older pregnant women may have experienced more health situations and have experience caring for children previously. Pregnant women's experiences can help them understand health information and cope with changes associated with pregnancy. Generally, pregnant women who are younger typically have greater familiarity with digital technologies and knowledge. However, this does not necessarily mean that they have higher health literacy. On the other hand, older expectant mothers might have easier access to medical professionals and more conventional sources of health information, like books and in-person doctor appointments.

The Relationship between Education and the Health Literacy Level of Pregnant Women

According to the findings of the Health Literacy Research for Pregnant Women, the number of children is negatively connected with the results, whereas education, household income, language, social support, and self-efficacy in parenting are positively correlated (al., 2018). This study discovered a correlation between pregnant women's education levels and their health literacy, meaning that greater maternal education levels correspond to better health literacy levels. Pregnant women's health literacy is highly correlated with their educational attainment. This relationship is significant because education can affect a person's capacity to comprehend, assess, and decide what is best for their own health as well as the health of the unborn child. High school graduates who are expecting typically have easier access to health information online, in books, and in scientific journals. They might be able to look up more comprehensive and wide-ranging health information. General literacy skills are frequently correlated with educational attainment. Higher educated pregnant women might be more adept at reading, writing, and comprehending information—all critical components of health literacy.

Relationship between ANC Visits and Health Literacy Levels of Pregnant Women

The study results indicated a correlation between ANC visits and the health literacy level of pregnant women. Antenatal care appointments often involve providing information on the health of the mother and foetus, as well as the necessary pregnancy care. Pregnant women who regularly attend ANC visits have more opportunities to gain knowledge about health care during pregnancy. Their health literacy level can increase because they are exposed to relevant health information. Pregnant women receiving prenatal care require sufficient health literacy (Meldgaard et al., 2022). Pregnant women can learn about the significance of proper nutrition during pregnancy, especially the requirement of sufficient nutrient intake, during routine ANC visits. Pregnant women who have a good level of health literacy will be more inclined to understand and apply appropriate nutritional recommendations, which can help prevent stunting in the fetus.

Antenatal care also include monitoring of fetal growth and development. Pregnant women who understand the importance of this monitoring will be more likely to attend these visits regularly and participate in fetal growth monitoring. This allows early detection of growth problems which can be treated to prevent stunting. At ANC visits, health providers usually provide information about nutrition needed during pregnancy and prescribe necessary supplements. Pregnant women with high health literacy are more likely to comprehend the significance of these nutrients and adhere to the recommendations correctly. The mother's level of health literacy influences her knowledge of the significance of exclusive breastfeeding in the initial six months of a child's life. Pregnant women who have good health literacy will be more likely to plan and understand the importance of giving exclusive breast milk to their babies, which can prevent stunting in babies. Maternal health literacy correlates with the nutritional condition of children in rural and urban locations (Johri et al., 2016).

LIMITATION OF THE STUDY

It is difficult to gather pregnant women at the same time

CONCLUSIONS AND SUGGESTIONS

Educational attainment does not consistently correlate with health literacy as factors like functional literacy and personal experiences also influence it. Besides that, psychosocial aspects such as stress, social support, and economic conditions can also influence pregnant women's ability to manage their health. Therefore, increasing health literacy does not only depend on formal education, but also requires an approach that involves broader social, cultural and economic contexts. Pregnant women can acquire information on proper nutrition, including sufficient dietary intake, through regular ANC appointments. Pregnant women who have a good level of health literacy will be more likely to understand and implement appropriate nutritional recommendations to help prevent stunting in the fetus. In improving health literacy, it is best to involve partners and family members. Social support and shared understanding of health information can provide additional support during pregnancy. Suggestions for further research could be to develop this research by involving active participation from couples, families and local communities in the development and implementation of health programs, which could be in the form of preparing material that is culturally appropriate and building trust in health information.

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ETHICAL CONSIDERATIONS

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Conflict of Interest Statement

The authors did not have any conflicts of interest during the research.

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