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Analysis of Parity and Socio-Cultural Factors Influencing Nutritional Status of Pregnant Women in the Working Area of Itlay Hisage Community Health Center, Jayawijaya Regency

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Abstract: Nutritional problems are an indirect cause of maternal and child deaths that can actually be prevented. Low nutritional intake and nutritional status of pregnant women during pregnancy can result in various negative impacts on the mother and baby. The problem of malnutrition in pregnant women not only directly affects the mother's health, but also has an impact on the growth and development of the fetus. Factors that affect the nutritional status of pregnant women include food intake influenced by the culture of abstinence from food and infectious diseases, the age of the pregnant woman, income, knowledge, parity, and education and socio-culture. The purpose of this study was to determine the relationship between parity and socio-cultural factors that affect the nutritional status of pregnant women in the Itlay Hisage Health Center Work Area, Jayawijaya Regency. The research design used by researchers in this study was a correlation study using a cross-sectional approach. This study was conducted in the Itlay Hisage Health Center Work Area with a sample size of 32 respondents. The sampling technique used was Total sampling. The instruments used were questionnaire sheets and observation sheets. The statistical test used was the chi-square test. The results of statistical analysis using the chi-square test show that the p-value = 0.005 which means p <0.05 (Ho is rejected), so it can be concluded that there is a relationship between parity and the nutritional status of pregnant women at the Itlay Hisage Health Center, Jayawijaya Regency. The results of statistical analysis using the chi-square test show that the p-value = 0.005 which means p <0.05 (Ho is rejected), so it can be concluded that there is a relationship between Socio-Cultural and the Nutritional Status of Pregnant Women at the Itlay Hisage Health Center

Keywords: Nutritional status of pregnant women; Parity; Socio-culture

Introduction

Nutritional problems remain a major public health concern in developing countries, including Indonesia. Malnutrition during pregnancy can lead to serious maternal and fetal complications, such as anemia, preeclampsia, premature birth, and low birth weight (World Health Organization, 2022). The Sustainable Development Goals (SDGs) aim to reduce the Maternal Mortality Rate (MMR) to 70 per 100,000 live births. However, Indonesia's MMR remains high at 305 per 100,000 live births (Kemenkes, 2020), indicating a need for further intervention.

Several factors influence the nutritional status of pregnant women, including socioeconomic conditions, food intake, parity, and cultural practices (Simbolon et al., 2020). Parity plays a crucial role, as frequent pregnancies (>4 times) can deplete maternal nutrient

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reserves, increasing the risk of malnutrition (Sintia et al., 2021). Additionally, cultural beliefs regarding food restrictions during pregnancy can lead to inadequate nutrient intake (Chakona et al., 2019).

Papua Pegunungan has one of the highest malnutrition rates among pregnant women, reaching 18% (BPS, 2021). Limited access to healthcare and economic disparities contribute significantly to this issue. Understanding the relationship between parity, socio-cultural factors, and nutritional status is essential for developing effective intervention strategies. This study aims to analyze how parity and socio-cultural aspects influence the nutritional status of pregnant women in the Itlay Hisage Health Center Work Area, Jayawijaya Regency.

Method

The research design used by researchers in this study is a correlation study using a cross-sectional approach. This study was conducted in the Itlay Hisage Health Center Working Area with a sample size of 32 respondents. The sampling technique used was Total sampling. The instruments used were questionnaire sheets and observation sheets. The statistical test used was the chi-square test.

Data Analysis

Data analysis was performed using the SPSS. The statistical test used was the chi-square test.

Result and Discussion

Distribution of Respondent Characteristics at Itlay Hisage Health Center

Table 1. Characteristics of Respondents at Itlay Hisage Health Center

Characteristic	Frequency	Percentage
Age :		
Late Adolescence (17-25 years)	6	18.8
Early Adulthood (26-35 years)	22	68.8
Late Adulthood (36-45 years)	4	12.5
Total	32	100
Education :		
Primary School	1	3.1
Junior High School	6	18.8
Senior High School	25	78.1
Total	32	100
Occupation :		
Housewife	29	90.6
Employee	2	6.3
Self-employed	1	3.1
Total	32	100

Table 1 is the result of univariate analysis, showing that of the 34 respondents, the majority of respondents were in the early adulthood age category, namely 22 respondents (68.8%), the highest education was high school/senior high school, namely 25 respondents (78.1%), and work as a housewife, namely 29 respondents (90.6%).

Distribution of Respondent Parity Frequency

The table 2 shows that of the 34 respondents, the majority of respondents were in the non-risk parity category, namely 18 respondents (56.2%) and 14 respondents (43.8%) with risky parity.

Table 1. Distribution of Respondent Parity Frequency Test Results

Parity	Frequency	%
Risk	14	43.8
Not Risk	18	56.2
Total	32	100

Distribution of Respondents' Socio-Cultural Frequency

The table 3 shows that respondents in the good and bad socio-cultural categories have the same number of respondents, namely 16 respondents (50.0%).

Table 3. Distribution of Respondents Socio-Cultural Frequency

Socio-Cultural	Frequency	%
Not Good	16	50.0
Good	16	50.0
Total	32	100

Distribution of Nutritional Status of Pregnant Women Frequency

The table 4 shows that of the 34 respondents, there were more respondents with a non-risk nutritional status, namely 17 respondents (53.1%) and 15 respondents (46.9%) with a risky nutritional status.

Table 4. Distribution of Nutritional Status of Pregnant Women Frequency

Nutritional Status of Women	Frequency	%
Risk	15	46.9
Not Risk	17	53.1
Total	32	100

Relationship between Parity and Nutritional Status of Pregnant Women at Itlay Hisage Health Center

The results of the study in the table below show that out of 32 respondents, most respondents with parity are not at risk and nutritional status is not at risk, namely 14 respondents (43.8%). The results of statistical analysis using the chi-square test show that the p-value = 0.005 which means p <0.05 (Ho is rejected), so it can

be concluded that there is a relationship between parity and the nutritional status of pregnant women at the Itlay Hisage Health Center, Jayawijaya Regency. The odds ratio value (12.833) means that respondents with parity at risk are 12.8 times more likely to have nutritional status at risk.

Table 5. Relationship Between Parity and Nutritional Status of Pregnant Women at Itlay Hisage Health Center

Parity	Nutritional Status of Pregnant Women				Total		P-value	OR
	Risk		Not Risk					
	N	%	N	%	N	%		
Risk	11	34.4	3	9.4	14	43.8	0.005	12.833
Not Risk	4	12.5	14	43.8	18	56.2		
Total	15	46.9	17	53.1	32	100		

Table 6. Relationship between Socio-Culture and the Nutritional Status of Pregnant Women at the Itlay Hisage Health Center

Parity	Nutritional Status of Pregnant Women				Total		P-value	OR
	Risk		Not Risk					
	N	%	N	%	N	%		
Not Good	12	37.5	4	12.5	16	50.0	0.005	13.000
Good	3	9.4	13	40.6	16	50.0		
Total	15	46.9	17	53.1	32	100		

The results of the study in the table show that out of 32 respondents, the most with good socio-cultural and non-risk nutritional status were 13 respondents (40.6%). The results of statistical analysis using the chi-square test showed that the p-value = 0.005 which means $p < 0.05$ (Ho is rejected), so it can be concluded that there is a relationship between socio-culture and the nutritional status of pregnant women at the Itlay Hisage Health Center.

Discussion

The findings indicate that parity significantly affects the nutritional status of pregnant women. Mothers with high parity (>4 times) were 12.8 times more likely to experience malnutrition (OR = 12.833, p = 0.005). This is consistent with the study by Mariani et al. (2024), which found that frequent pregnancies deplete maternal nutrient stores, increasing the risk of anemia, chronic energy deficiency (CED), and other maternal complications. Frequent pregnancies without sufficient recovery time can also lead to micronutrient deficiencies, particularly iron, calcium, folic acid, and vitamin D, which negatively impact both maternal and fetal health (A. B. Smith et al., 2023). Inadequate spacing between pregnancies has also been associated with higher risks of preterm birth, low birth weight (LBW), and increased maternal mortality (Hidalgo-Lopezosa et al., 2019; Liu et al., 2021; Pusdekar et al., 2020).

Additionally, socio-cultural factors significantly influence maternal nutrition. The study found that 50% of respondents followed food taboos, which restricted their intake of essential nutrients. Similar results were reported by Parmar et al. (2018), where cultural beliefs often prohibit the consumption of protein-rich foods such as eggs, fish, and certain vegetables during pregnancy. These restrictions, while culturally ingrained, can lead to inadequate protein and iron intake, increasing the risk of maternal anemia and fetal growth restrictions. A study by de Diego-Cordero et al. (2021) also revealed that cultural norms and traditional beliefs strongly influence maternal dietary habits, making community-based nutritional education programs essential for improving maternal health.

The role of economic status and education level cannot be overlooked when assessing nutritional health. In this study, 90.6% of respondents were housewives, which indicates financial dependence on their spouses. Limited financial resources can restrict access to diverse and nutritious food sources, resulting in higher malnutrition rates among pregnant women (Robson, 2011). Studies by Kleinman (2006) and Neuman (2014) highlight that lower education levels correlate with poorer dietary choices and reduced awareness of maternal health risks. Pregnant women with higher education levels tend to have better nutritional knowledge, allowing them to make healthier food choices and actively seek prenatal care (Marshall et al., 2022).

Furthermore, access to healthcare services also plays a crucial role in determining the nutritional status of pregnant women. The World Health Organization (2023) emphasizes that regular antenatal care (ANC) visits are essential for monitoring maternal nutrition and identifying risks early. However, in rural and economically disadvantaged areas like Jayawijaya Regency, limited healthcare infrastructure and cultural barriers often prevent pregnant women from receiving adequate prenatal care (SDKI, 2020). Previous studies

have shown that low ANC attendance is strongly associated with poor maternal nutrition, anemia, and adverse birth outcomes (National Institutes of Health, 2022).

To address these challenges, a multidimensional approach is needed. Governments and healthcare providers should implement integrated nutrition programs that focus on education, access to diverse food sources, and prenatal healthcare services. Community-based initiatives, such as nutrition workshops and culturally adapted dietary counseling, can help bridge the gap between traditional beliefs and scientific nutritional recommendations. Interventions targeting women's empowerment, income generation, and maternal education have also been shown to significantly improve maternal and fetal health outcomes (E. R. Smith et al., 2023).

This study underscores the importance of addressing parity and socio-cultural influences on maternal nutrition. Future research should focus on developing targeted intervention strategies, such as customized dietary plans and culturally appropriate health campaigns, to enhance maternal and fetal well-being in underprivileged regions. Longitudinal studies with larger sample sizes are also recommended to better understand the long-term effects of parity and socio-cultural factors on maternal health.

Conclusion

Most respondents in the early adulthood category were 22 respondents (68.8%), the most education was high school/senior high school as many as 25 respondents (78.1%) and work as housewives as many as 29 respondents (90.6%). Most respondents in the parity category were not at risk, namely 18 respondents (56.2%). Respondents in the good and bad socio-cultural categories had the same number of respondents, namely 16 respondents (50.0%). More respondents with nutritional status were not at risk, namely 17 respondents (53.1%) and 15 respondents (46.9%) with nutritional status at risk. The results of statistical analysis using the chi-square test showed that the p-value = 0.005 which means p <0.05 (Ho is rejected), so it can be concluded that there is a relationship between parity and the nutritional status of pregnant women at the Itlay Hisage Health Center, Jayawijaya Regency. The results of statistical analysis using the chi-square test show that the p-value = 0.005, which means p <0.05 (Ho is rejected), so it can be concluded that there is a relationship between socio-culture and the nutritional status of pregnant women at the Itlay Hisage Health Center.

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Author Contributions
R.F., contributed in conceptualizing the research idea, developing the product. A.H & E.H., contributed in analyzing data and writing the article. D.P & M.A., contributed in writing, reviewing, and editing the article. M.K.S., contributed in collecting data.

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Conflicts of Interest
The authors declare that there is no conflict of interest regarding the publication of this article.

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