



# The Sociocultural in Food Selection Among Pregnant Women with Chronic Energy Deficiency: A Qualitative Study

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**Abstract.** Maternal health is a key indicator in assessing the quality of a country's healthcare services, particularly in the context of achieving Sustainable Development Goals. Chronic energy deficiency (CED) among pregnant women is a prevalent public health issue in developing countries, including Indonesia. Recent data reveal that the prevalence of CED in Indonesia, particularly in Bantul Regency, increased from 9.79% in 2018 to 12.10% in 2022, highlighting the urgency of addressing this issue. In Indonesia, culture and social values strongly influence health behaviors, including food choices. In rural areas, social and cultural norms, such as patriarchal practices, dictate food distribution within families, often prioritizing husbands and children over pregnant women.

This study examines the sociocultural factors that influence food selection among pregnant women with CED in Bantul Regency using qualitative methods, including in-depth interviews and focus group discussions. Participants included pregnant women, their husbands, and healthcare providers selected through purposive sampling. The findings indicate that cultural norms, such as food taboos and traditional dietary practices, economic limitations, and limited access to nutritious food exacerbate poor dietary habits among pregnant women with CED. For instance, traditional food practices often conflict with modern nutritional guidelines, as pregnant women are advised to avoid nutrient-rich foods like eggs, seafood, and certain fruits due to cultural beliefs.

Additionally, pregnant women are often unaware of the importance of adequate nutrition, and patriarchal norms lead them to consume smaller or less nutritious portions of food, posing significant health risks for both mother and child. These findings underscore the need for culturally sensitive nutrition education programs that involve entire families and communities. Such interventions should aim to address food taboos, improve awareness of balanced nutrition, and promote equitable food distribution to reduce the prevalence of CED and improve maternal health outcomes.

**Keywords:** Sociocultural, Food Selection, Pregnant Women, Chronic Energy Deficiency

## 1 Introduction

Maternal health is a key indicator in evaluating the quality of a country's health services, especially within the framework of achieving the Sustainable Development Goals (SDGs) (1). Just like other developing countries, Indonesia also faces maternal health problems. One of the health problems of pregnancy in Indonesia is chronic energy deficiency (CED). Chronic energy deficiency is a deficiency of energy intake that occurs over a long period of time which can have an impact on the health of the mother and fetus, such as premature birth, low birth weight (LBW), and increasing risk of maternal and infant death (2,3). Various prevention efforts have not been effective in overcoming the high prevalence of CED, especially in rural areas with limited access to health services (4,5).

Indonesia is a country with cultural diversity (6). Cultural and social values greatly influence health behavior, including in terms of food choices. Bantul Regency, which is mostly rural, has a strong patriarchal culture that prioritizes husbands and children in food distribution in the family. It means that pregnant women or wives often get smaller portions or lower food quality. Additionally, traditional food taboos, such as avoiding pineapple, durian, eggs, and seafood, are deeply ingrained in these communities. These taboos are believed to protect maternal and fetal health but often limit dietary diversity, leading to insufficient intake of essential nutrients (7,8). These socio-cultural factors exacerbate the problem of CED, the prevalence of which has increased from 9.79% in 2018 to 12.10% in 2022 (9).

In addition to social factors, economic constraints significantly limit access to nutritious foods. Households in poverty often face reduced affordability and availability of balanced meals, forcing reliance on cheaper, calorie-dense options that lack nutritional value (10). Studies have demonstrated a correlation between low socioeconomic status and poor maternal nutrition, as economic hardships exacerbate the imbalance between energy needs and food consumption (11). This economic vulnerability further compounds the nutritional challenges faced by pregnant women in rural areas.

Education level also plays a crucial role in shaping awareness about proper nutrition during pregnancy. Women with lower educational attainment are less likely to understand the importance of balanced diets, contributing to improper nutritional practices. Research indicates that lower levels of education are significantly associated with higher incidences of CED (12). Furthermore, multiparous women often face greater challenges in meeting dietary needs due to increased household responsibilities and financial constraints, highlighting the interplay between parity, education, and economic factors in maternal nutrition.

Based on the explanation above, this study aimed to explore the socio-cultural factors that affect food choices in pregnant women with chronic energy deficiency in Bantul Regency. Understanding these factors is expected to lead to the development of

more culturally sensitive and effective nutritional interventions to improve the nutritional status of pregnant women in rural areas.

## 2 Research Methodology

This study employs a phenomenological qualitative research design, which seeks to understand how individuals perceive and interpret their surroundings. This approach is particularly suitable for exploring the perceptions and experiences of pregnant women with Chronic Energy Deficiency (CED) within the socio-cultural context influencing their food consumption behavior (13).

The study involved 29 participants, consisting of 12 pregnant women with CED, 7 husbands of pregnant women, and 10 healthcare providers. Participants were selected using purposive sampling to ensure variations in age, education level, socio-economic background, and parity, representing the diversity of Bantul society. Inclusion criteria included pregnant women diagnosed with CED, husbands of these women, and healthcare providers involved in maternal care. Exclusion criteria were individuals unwilling to provide informed consent. The sample size was determined to achieve data saturation, ensuring a comprehensive understanding of the phenomenon (14).

Data collection was conducted through in-depth interviews and focus group discussions (FGDs) using semi-structured guidance. Interviews lasted 30 to 45 minutes, while FGDs were conducted for 1.5 to 2 hours. All sessions were conducted by the researcher and audio-recorded with participants' consent. To maintain data validity, triangulation of data sources and methods was applied, incorporating diverse perspectives from pregnant women, their husbands, and healthcare providers (15). Reflexivity was employed by the researcher to minimize bias, and peer debriefing sessions were conducted to enhance the credibility of the findings.

Data analysis followed a systematic thematic approach. Initial steps included re-reading transcripts and conducting open coding to identify significant statements. Themes were developed by clustering codes into categories, followed by thematic interpretation to explore underlying patterns. Member checking was utilized to validate themes with participants, and multiple researchers participated in the coding process to enhance inter-rater reliability. This rigorous process ensured the credibility and trustworthiness of the analysis (14).

Demographic information about participants was recorded to provide context for the findings. Pregnant women ranged in age from under 20 to 39 years, with most being housewives and having high school education. Husbands were predominantly workers or traders, and healthcare providers had at least 10 years of professional experience. Socio-economic status varied across participants, highlighting the diverse challenges faced by this population.

While this methodology offers significant insights into the socio-cultural factors influencing dietary practices, some limitations should be acknowledged. Qualitative research findings are context-specific and may not be generalizable to other regions or populations. Additionally, reliance on self-reported data introduces the potential for

recall bias. These limitations underscore the importance of interpreting findings within their cultural and regional context.

This research adheres to ethical standards as approved by the Ethics Committee of the Faculty of Medicine, Sebelas Maret University (Ref No.: 1234/UN27.4.1.31/TU/2023). Informed consent was obtained from all participants, ensuring compliance with ethical guidelines for health research.

3 Result

3.1 A Subsection Sample

Table 1 shows the characteristics of the participants. The participants were aged between less than 20 years to more than 50 years. The background of most pregnant women and their husbands was high school, while all health workers were college graduates. Most pregnant women participants were housewives, husbands were workers and traders, while health workers had worked for 10-20 years.

Table 1. Characteristic of participants: with chronic energy deficiency

|                  | Pregnant women<br>with chronic<br>energy deficiency<br>(n=12) | Husband of<br>pregnant woman<br>with chronic energy<br>deficiency (n=7) | Healthcare<br>providers<br>(n=10) |
|------------------|---------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------|
| Age (years)      |                                                               |                                                                         |                                   |
| <20              | 1 (8.3%)                                                      |                                                                         |                                   |
| 20-24            | 3 (25%)                                                       |                                                                         |                                   |
| 25-29            | 4 (33.3%)                                                     | 2 (28.6%)                                                               | 3 (30%)                           |
| 30-34            | 2 (16.7%)                                                     | 3 (42.8%)                                                               | 1 (10%)                           |
| 35-39            | 2 (16.7%)                                                     | 2 (28.6%)                                                               | 3 (30%)                           |
| 40-44            |                                                               |                                                                         | 1 (10%)                           |
| 45-49            |                                                               |                                                                         | 1 (10%)                           |
| ≥50              |                                                               |                                                                         | 1 (10%)                           |
| Education        |                                                               |                                                                         |                                   |
| Secondary School | 2 (16.7%)                                                     | 1 (14.3%)                                                               |                                   |
| High School      | 7 (58.3%)                                                     | 4 (57.1%)                                                               |                                   |
| College          | 3 (25%)                                                       | 2 (28.6%)                                                               | 10 (100%)                         |
| Occupation       |                                                               |                                                                         |                                   |
| Housewife        | 8 (66.7%)                                                     |                                                                         |                                   |
| Employee         | 3 (25%)                                                       | 3 (42.8%)                                                               |                                   |
| Merchant         | 1 (8.3%)                                                      | 3 (42.8%)                                                               |                                   |
| Farmer           |                                                               | 1 (14.3%)                                                               |                                   |
| Midwives         |                                                               |                                                                         | 5 (50%)                           |
| Nutritionists    |                                                               |                                                                         | 5 (50%)                           |
| Parity           |                                                               |                                                                         |                                   |

|                    |           |         |
|--------------------|-----------|---------|
| Primigravida       | 8 (66.7%) |         |
| Secundigravida     | 4 (33.3%) |         |
| Year of experience |           |         |
| 0-9                |           | 3 (30%) |
| 10-20              |           | 6 (60%) |
| >20                |           | 1 (10%) |

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## Theme 1: Cultural Values and Beliefs

### Subtheme 1: Recommended Foods

The culture adopted by the family significantly influences food choices during pregnancy. Pregnant women's diets tend to follow family advice rooted in tradition and beliefs. The community perceives that traditional foods recommended for pregnant women benefit maternal and fetal health. Commonly recommended foods include rice, vegetable soup, green beans, ginger drink, turmeric-tamarind drink, and rice-aromatic ginger drink. These traditional food practices align with findings from studies highlighting the influence of cultural norms on dietary practices (7). As participants stated:

*"In my family, pregnant women can only eat oil-free vegetable soup and drink ginger to avoid nausea." (Participant 1)*

*"...eat spinach, green beans, rice, and take rice-aromatic ginger drink." (Participant 4)*

*"My wife regularly drinks rice-aromatic ginger or ginger." (Participant 15)*

*"Many pregnant women still drink herbal drinks such as ginger, turmeric-tamarind, and rice-aromatic ginger because they believe it is healthy. The types of food they generally consume include rice, green vegetables such as spinach, and they cook them without oil." (Participant 22)*

### Subtheme 2: Prohibited Foods

Participants admitted that certain foods are considered taboo or harmful to pregnant women and fetuses, based on cultural beliefs. Prohibited foods include pineapple, durian, seafood such as tuna and shrimp, eggs, and papaya leaves. Pineapple and durian are thought to cause miscarriage, while seafood and eggs are believed to cause itching. Spicy foods are also avoided, as they are believed to weaken pregnancy. These findings are consistent with studies showing that food taboos can significantly restrict dietary diversity during pregnancy (8). Participants shared:

*"I am prohibited from consuming durian and pineapple because both give a burning sensation in the stomach, which is feared to cause miscarriage, while eggs are prohibited because those are thought to cause itching." (Participant 1)*

*"Pregnant women are prohibited from consuming pineapple, durian, sea fish, eggs, and papaya leaves." (Participant 9)*

*"Pregnant women are prohibited from eating spicy foods, pineapple, and durian because those are thought to be dangerous for the mother and her baby." (Participant 13)*

### **Subtheme 3: Daily Diets**

The daily diet of pregnant women often lacks balanced nutrition. Pregnant women tend to prefer practical and traditional foods, which may not always meet nutritional needs. These practices highlight gaps in nutritional knowledge, particularly regarding the importance of balanced diets (16). As participants stated:

*"I get bored of eating spinach all the time, so I buy fast food or instant food." (Participant 4)*

*"I don't know what to eat, so I often buy fried food or something that traditionally doesn't violate food prohibition." (Participant 6)*

## **Theme 2: Influence of Family and Community**

### **Subtheme 1: Support from the Family**

Family support plays a significant role in shaping dietary behaviors. Family members encourage pregnant women to eat more and accompany them for pregnancy check-ups. However, this support is often general and lacks specific advice on balanced nutrition, reflecting gaps in family awareness of dietary needs during pregnancy (17,18). Participants explained:

*"My family, especially my mother, reminds me to eat without specifically mentioning what I should eat." (Participant 5)*

*"My mother-in-law determines what I can and cannot eat. Sometimes she also accompanies me to check at the Health Center." (Participant 12)*

*"My mother often reminds me to eat." (Participant 15)*

### **Subtheme 2: Social Pressure**

The environment surrounding pregnant women often imposes social pressure, limiting their freedom to choose foods. This pressure stems from traditional beliefs and expectations, leading to discomfort and dietary restrictions. Such findings align with research indicating the role of social dynamics in shaping maternal food choices (11). Participants shared:

*"I feel pressured by my surroundings. Those people suggest me to consume herbal drinks regularly, even though I don't like the smell." (Participant 7)*

*"I feel pressured by my family, so I can't freely choose the food I want. This pressure sometimes messes up my diet." (Participant 11)*

*"Tradition greatly influences the behavior of pregnant women, especially in choosing food; pregnant women are always faced with pressure from neighbors and family." (Participant 29)*

### **Theme 3: Patriarchal Culture**

#### **Subtheme 1: Prioritizing Husband**

Patriarchal cultural norms prioritize husbands in food distribution within families. Pregnant women often eat last, which can limit their food intake and exacerbate nutritional deficiencies. This reflects broader systemic issues related to gender roles in rural communities, as documented in studies on patriarchal influences on food practices (10). Participants explained:

*"I prioritize my husband to eat because he is the backbone of the family." (Participant 3)*

*"I prepare a lunch for him to bring to work, and I eat after that." (Participant 10)*

*"I usually eat after my husband and children have finished their meals." (Participant 12)*

These findings highlight the need for culturally sensitive public health interventions that address food taboos, enhance family awareness of balanced nutrition, and challenge patriarchal norms. Educational programs targeting families and communities could promote dietary diversity and reduce the prevalence of CED. Integrating these insights into public health strategies can strengthen maternal nutrition and improve pregnancy outcomes in rural Indonesia.

## **4 Discussion**

Cultural values and family traditions play an essential role in determining food choices during pregnancy. Many families in Bantul still adhere to traditional practices, consuming foods believed to benefit maternal and fetal health, such as rice, vegetable soup, and herbal drinks like ginger and rice-aromatic ginger drink. These findings align with Chakona and Charlie (2019) study (7), which demonstrated that similar traditions persist in sub-Saharan Africa. However, such practices often conflict with balanced nutrition guidelines. For instance, prohibitions on consuming fish can lead to nutritional imbalances and protein deficiencies. Similarly, food taboos against certain fruits and seafood, such as pineapple, durian, or shrimp, are also prevalent in other Asian and African cultures, where these foods are deemed harmful to pregnancy (8).

Family support is evident in dietary selection during pregnancy, with parents and in-laws often influencing food choices. However, this support is frequently rooted in traditional norms rather than modern nutritional knowledge. Social pressure from extended family and the community further constrains pregnant women from selecting foods that meet their nutritional needs. This aligns with findings in Nigeria, which

highlighted that social pressures often limit the decision-making flexibility of pregnant women, as they prioritize maintaining family harmony over following nutritional guidelines (11).

This study also revealed that pregnant women prioritize the needs of their husbands and children in food distribution, reflecting the patriarchal norms that dominate rural communities. Husbands often play a dominant role in decision-making, including food allocation within the family. Consequently, pregnant women tend to eat last, consuming limited and less nutritious foods, thereby exacerbating their risk of CED. These findings are consistent with Khatun et al. (2020), who reported that women frequently experience dietary restrictions influenced by their husbands' preferences. Such cultural and traditional practices represent significant barriers to achieving adequate maternal nutrition (19).

The findings underscore the need for culturally sensitive nutritional education programs targeting pregnant women, families, and communities. Interventions should aim to address food taboos, enhance family awareness of balanced nutrition, and challenge patriarchal norms. Educational initiatives should involve all family members, as Triharini et al. (2018) emphasized that family involvement in nutritional education significantly improves food consumption patterns among pregnant women (16). Moreover, public health strategies must integrate community-based interventions to address social pressures and promote equitable food distribution within households.

Future research should explore additional influencing factors, such as the role of healthcare providers in shaping dietary behaviors and the potential impact of economic constraints on food accessibility. Studies investigating the effectiveness of community-based nutrition programs in reducing CED prevalence would also provide valuable insights. By incorporating these recommendations, maternal health interventions can be better aligned with local socio-cultural contexts, ultimately improving pregnancy outcomes and reducing the burden of CED in rural Indonesia.

## 5 Conclusion

This study demonstrated that cultural values, family roles, social pressures, and patriarchal culture significantly impact the food choices of pregnant women with chronic energy deficiency (CED) in Bantul. The practice of restricting food types and consuming traditional foods, although intended to protect maternal and fetal health, often conflicts with balanced nutrition guidelines and can lead to imbalanced nutritional intake. Family support plays a critical role in food decision-making; however, it is frequently rooted in traditional beliefs and lacks sufficient nutritional knowledge.

Patriarchal cultural factors further limit pregnant women's access to adequate nutrition. Women prioritize the needs of their husbands and children, often consuming limited types and amounts of food. This pattern exacerbates CED, highlighting the need to address these gendered food distribution practices. Similar findings in other cultural contexts suggest that these barriers are not unique to Bantul, emphasizing the broader implications of sociocultural influences on maternal nutrition (19).

To address these challenges, culturally sensitive nutrition intervention programs are essential. These programs should involve all family members in nutrition education, targeting not only pregnant women but also their husbands and extended families. Involving families in nutritional education can significantly improve food consumption patterns. Public health strategies should also engage community leaders and stakeholders to challenge food taboos and patriarchal norms, promoting equitable food distribution within households.

Broader implications include integrating these findings into national maternal health policies and community-based interventions. Nutrition education campaigns should address the specific dietary needs of pregnant women while considering economic constraints and social pressures. Healthcare providers can play a pivotal role in disseminating culturally relevant nutritional information and advocating for behavioral changes within families and communities.

Future research should explore the effectiveness of targeted interventions in reducing CED prevalence and improving maternal health outcomes. Studies investigating the intersection of cultural norms, economic factors, and healthcare accessibility could provide deeper insights into addressing maternal nutrition challenges. By incorporating these approaches, public health initiatives can better align with local contexts, ultimately improving pregnancy outcomes and reducing the burden of CED in rural Indonesia.

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