

Qualitative Analysis of Husbands' Role in Nutritional Support for Pregnant Women Experiencing Chronic Energy Deficiency

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KEYWORDS ABSTRACT

Chronic Energy Deficiency, Nutrition for Pregnant Women, Husband's role, Pregnancy

This study aimed to explore husbands' perceptions and experiences in supporting the nutritional needs of pregnant women diagnosed with chronic energy deficiency (CED). Data were collected using a qualitative approach from 19 respondents from Bantul District, Indonesia, through in-depth interviews and focus group discussions. Thematic analysis was used to identify key themes. The results of the study showed that husbands often lack knowledge about nutritional balance which affects their wives' diets. In addition, economic constraints and cultural norms also limit husbands' active involvement in dietary decisions. Although husbands provide emotional support, their involvement in food selection and management of their wives' diets is still limited. These findings highlight the importance of husbands' roles in supporting the nutrition of pregnant women with chronic energy deficiency (CED). However, their involvement is hampered by a lack of knowledge and economic constraints. Educational interventions targeted at husbands are essential to improve maternal nutrition for optimal pregnancy.

1. Introduction

Maternal nutrition is a crucial factor in determining maternal and fetal health. Chronic Energy Deficiency (CED) in pregnant women, especially in low- and middle-income countries, has been identified as a significant public health problem that increases the risk of low birth weight, preterm birth, and maternal morbidity (Gurung et al., 2022). Previous studies have highlighted the direct influence of maternal nutritional status, especially low body mass index, on poor fetal growth, which can have negative impacts on the child's long-term health (Apostolopoulou et al., 2023; Maykondo et al., 2022; Wei et al., 2023).

One factor that is rarely discussed in research on maternal nutrition is the role of the husband in meeting the nutritional needs of the wife. Although several studies have shown that the active involvement of the husband can influence the eating habits and emotional well-being of the wife (Nguyen et al., 2018), but there is not much literature that explores in depth how these roles function in cultural, economic, and social contexts. For example, although husbands' involvement in maternal nutrition interventions has been reported to have a positive effect on increasing micronutrient intake, there is little literature that highlights the specific actions of husbands in meeting the nutritional needs of their wives who experience chronic energy deficiency (CED) (Compaoré et al., 2020).

Social support, especially from husbands, has been identified as an important determinant of maternal health. Social support theory suggests that support from a partner, both emotional and practical, can improve health status through reduced stress and increased positive health behaviors (Edmonds et al.,

2011). Husband involvement in household nutrition decision-making has also been associated with increased maternal dietary diversity, which may reduce the risk of anemia and low birth weight (Kheirouri & Alizadeh, 2021). Thus, the existing literature supports the importance of husbands' involvement in their wives' pregnancy health interventions. However, husbands still have limited knowledge about the actions they can take to support their wives' nutrition.

Previous research has shown that economic barriers, such as low family income, are one of the main inhibiting factors in meeting nutritional needs (Workicho et al., 2019). In addition, socio-cultural factors, such as the intensity of gender issues in developing countries, often limit wives' access to more nutritious food due to the husband's dominance in food purchasing decisions (Abdullah et al., 2019). These norms and issues are often reinforced by the husband's lack of knowledge about the importance of balanced nutrition during pregnancy, thus influencing the wife's eating patterns and increasing the risk of chronic energy deficiency (CED) (Nguyen et al., 2018).

Studies conducted in Bangladesh and Pakistan have shown that husband involvement in maternal nutrition programs can increase dietary diversity and compliance with micronutrient supplementation (Abdullah et al., 2019; Nguyen et al., 2018). These results suggest the potential for educational interventions targeting husbands, but similar research in Indonesia is limited. This study aimed to fill this gap by exploring increasing husband engagement across a range of social and economic contexts, particularly in rural Indonesia.

Several studies have suggested that educational interventions specifically designed to improve husbands' knowledge of nutrition can have a significant impact on the nutritional status of pregnant women (Weaver et al., 2014). Programs that involve husbands in diet planning and shopping have also been shown to improve family nutritional needs (McClean, 2020). This study will contribute by adding new insights into interventions that focus more on family and local cultural approaches to increase husbands' involvement in fulfilling the nutritional needs of pregnant women with chronic energy deficiency (CED).

2. Methods

Design

This is a qualitative phenomenological study that explored husbands' involvement in supporting the nutritional needs of pregnant wives with Chronic Energy Deficiency (CED). The phenomenological approach allows for an in-depth understanding of husbands' perceptions and involvement in their daily contexts, particularly in supporting the nutrition of pregnant women. This methodology was used to explore the meaning of husbands' experiences and how these influence their roles in meeting their wives' nutritional needs.

Participant

The participants of this study were 19 residents of Bantul, Indonesia, consisting of 12 pregnant women with chronic energy deficiency (CED) and 7 husbands of these mothers. The participants were selected using purposive sampling to ensure that they had relevant experience with the phenomenon being studied. The concept of saturation was used in determining the sample size, where data collection was stopped after there was no new information during the interview process and focus group discussions (FGDs) (Cleary et al., 2014; Sandelowski, 1995).

Data Collection Technique

Data were collected through in-depth interviews and FGDs from February 17 to March 30, 2023. Interviews were conducted individually for each husband and pregnant mother, while FGDs were conducted in pairs (husband and wife) to explore more deeply the dynamics and interactions related to the role of husbands in supporting their wives' nutritional needs. All interviews and FGDs were recorded and transcribed verbatim for further analysis.

Data Analysis

Data were analyzed using thematic analysis developed by Braun and Clarke (2006) which allowed the researcher to identify and organize key themes emerging from participants' experiences. The analysis process was conducted systematically, starting with familiarization with the data through thorough re-reading of transcripts and then followed by manual coding to identify significant data segments. The resulting codes were then grouped into broader themes relevant to the research focus. Each theme was then reviewed to ensure accuracy in data representation and inter-support (Cypress, 2018).

Research Ethics

Ethical approval for this study was obtained from the Research Ethics Committee of Sebelas Maret University number 26/UN27.06.11/KEP/EC/2023. Prior to data collection, each participant provided written consent after receiving a full explanation of the purpose of the study, their rights as participants, and assurance of data confidentiality. Participants were also free to withdraw from the study at any time without any consequences. This study complies with qualitative research ethics guidelines, including respecting the autonomy and dignity of participants throughout the research process.

Data Validity

To ensure the validity of the data, this study used method triangulation by comparing the results of interviews and FGDs. In addition, member checking was conducted with several participants to verify that the researcher's interpretation of the data was in accordance with the participants' experiences and perceptions. It aimed to increase the credibility and validity of the research findings.

3. Results

Table 1. Sociodemographic characteristics of participants

No.	Participant	Age	Gender	Level of education	Occupation
1	Pregnant mother 1	22	Female	High School	Housewife
2	Pregnant mother 2	28	Female	Diploma	Housewife
3	Pregnant mother 3	25	Female	High School	Merchant
4	Pregnant mother 4	23	Female	High School	Housewife
5	Pregnant mother 5	18	Female	Secondary School	Employee
6	Pregnant mother 6	32	Female	Academik	Employee
7	Pregnant mother 7	37	Female	High School	Housewife
8	Pregnant mother 8	26	Female	Secondary School	Housewife
9	Pregnant mother 9	24	Female	High School	Housewife
10	Pregnant mother 10	28	Female	Diploma	Housewife
11	Pregnant mother 11	30	Female	High School	Employee
12	Pregnant mother 12	36	Female	High School	Housewife
13	Husband 1	33	Male	Academic	Employee
14	Husband 2	38	Male	Secondary School	Farmer
15	Husband 3	26	Male	High School	Merchant
16	Husband 4	25	Male	High School	Employee
17	Husband 5	30	Male	Academic	Merchant
18	Husband 6	32	Male	High School	Employee
19	Husband 7	37	Male	High School	Merchant

Table 1 presents the sociodemographic characteristics of 19 participants, consisting of 12 pregnant mothers with Chronic Energy Deficiency (CED) and 7 husbands. Demographically, the participants

ranged in age from 18 to 38 years, with the majority of participants being their productive age, which is usually considered the ideal age for pregnancy. However, this age range shows that chronic energy deficiency (CED) can be experienced by pregnant women of all ages, even those who have had previous pregnancies.

Education is an important factor in this analysis. The educational background of the majority of female participants is high school or lower, while their husbands have a junior high school or college education. This shows that the lack of knowledge about nutritional balance during pregnancy can be influenced by low access to higher formal education. The results of in-depth interviews showed that some husbands and wives felt they did not understand nutritional needs due to the lack of formal education about nutrition.

Occupation is also a significant determinant. Most pregnant mothers are housewives or informal workers, while their husbands are laborers or workers in the informal sector. This informal work indicates income instability, which is one of the main reasons for the family's limited access to nutritious food. This economic limitation is reinforced by statements from several mothers who stated that they often had to choose food based on price, not nutritional value.

Table 2. Summary of Themes and Subthemes from Thematic Analysis

Themes	Subthemes
Husband's Role in Fulfilling Nutritional Needs	Lack of knowledge about nutritional balance
	Involvement in daily food selection
	The habit of buying fast food
	Husband's influence on wife's diets
Husband Emotional Support	Support in coping with chronic energy deficiency (CED)
	Emotional support
	Physical involvement in preparing diets
	Frequency of involvement in shopping
Economic Limitations in Fulfilling Nutrition	Limited income
	Food selection based on price
	Management of food expenditure

Table 2 above shows a summary of themes and subthemes resulting from the thematic analysis. These themes include the role of husbands in supporting their wives' nutrition, forms of emotional support, and economic barriers that affect husbands' involvement.

Theme 1: The Role of Husband in Fulfilling Nutritional Needs

This study identified that the role of husbands in fulfilling pregnant mothers' nutritional needs is still limited, especially in terms of knowledge about balanced nutrition and involvement in daily food selection. Analysis of interviews and focus group discussions (FGDs) resulted in several related subthemes.

Subtheme 1: Lack of Knowledge about Balanced Nutrition

Most male participants (husbands) expressed that they did not understand the importance of nutrition for pregnant mothers. One participant stated, *“I know the importance of nutrition for pregnancy, but I don't know the details. I only know that vegetables, fruits, and meat are important”* (Participant 17). It showed that limited knowledge can have an impact on the lack of contribution of husbands in maintaining a good diet for their wives during pregnancy. The wives also emphasized, *“He rarely gives advice on the types of food I should eat because of his limited nutrition knowledge”* (Participant 8).

Subtheme 2: Involvement in Daily Food Selection

Some wives expressed that their husbands were not actively involved in daily food selection. For example, one mother stated, *“Usually, I am the one who prepares the food and he helps more with the shopping. Sometimes he accompanies me to the market or supermarket”* (Participant 11). In addition, some husbands prefer to buy ready-to-eat food, as expressed by Participant 13, *“I usually help by buying food that is easy to prepare, such as canned or ready-to-eat food”* (Participant 13).

Subtheme 3: Fast Food Buying Habits

The habit of buying fast food is a practical choice for many families, although it does not always meet the nutritional needs of pregnant mothers. One wife stated, *“We often buy ready-made food or fast food because it is more practical and economical”* (Participant 6). One husband stated the same thing, *“My wife and I often buy fast food, no need to bother cooking”* (Participant 15). This statement illustrates that time and economic constraints also influence decisions in choosing food which ultimately impacts the quality of nutrition received.

Theme 2: Husband's Emotional Support

Emotional support from husbands is an important aspect that plays a role in maternal mental health during pregnancy, even though their involvement in food selection is still low.

Subtheme 1: Support in Facing Chronic Energy Deficiency (CED)

Many wives felt that even though their husbands were not actively involved in fulfilling their nutritional needs, the emotional support they received was very helpful in helping them get through the difficult period of pregnancy. One husband stated, *“I help with some housework to lighten her load”* (Participant 18). This is in accordance with the statement, *“My husband is always there to support me when I feel tired or stressed during pregnancy”* (Participant 10). The husband's support is crucial in maintaining mental health and reducing wife's stress.

Subtheme 2: Physical Involvement in Food Preparation

However, the husbands' involvement in preparing food is very low. Participants said, *“I can't cook and I don't have time to do that, so my wife does it”* (Participant 14). *“My husband rarely participates in preparing food at home”* (Participant 3). This low involvement indicates that there is room for increasing the role of husbands in household activities to support the fulfillment of their wives' nutritional needs.

Theme 3: Economic Limitations in Fulfilling Nutritional Needs

Economic limitation is a dominant determinant in fulfilling family nutritional needs, especially in choosing nutritious foods.

Subtheme 1: Income Limitations and Food Selection Based on Price

Limited income is a major challenge for families to meet the nutritional needs of pregnant mothers. Participants stated, *“... our income is not large, so we have to be frugal in buying food”* (Participant 19). *“Our income is limited, so we have to choose food as economically as possible”* (Participant 1). This reflects that low-income families have limited access to healthy and nutritious food.

A husband also added, *“Healthy food is usually more expensive, and we have to choose cheaper food to meet our daily needs”* (Participant 14). This condition shows the importance of economic support in the form of food subsidy programs or nutritional assistance for low-income families.

Subtheme 2: Managing food expenses

Low-income families must manage their expenses in such a way that they can meet their food and other basic needs. One pregnant participant said, *“Sometimes I have to put nutrition aside and prefer to buy food that can be consumed by all family members, according to our financial condition”*

(Participant 7). This financial management strategy shows how a wife prioritizes meeting daily needs rather than nutritional food for her pregnancy.

Subtheme 3: Managing food expenses

Low-income families tend to choose cheaper foods. A husband said, “*My wife often chooses cheaper foods, such as instant noodles or fast food because they are more affordable than fresh vegetables or meat*” (Participant 16). A pregnant mother also said, “*I always look at the price first, then choose the cheap one so that all my needs are met*” (Participant 9). This shows that family food choices are more determined by price than nutrition.

4. Discussion

The findings of this study highlight the limited involvement of husbands in supporting the nutritional needs of wives with Chronic Energy Deficiency (CED). One important finding is the lack of knowledge of husbands about balanced nutrition which has a negative impact on wives' eating patterns during pregnancy. These results are in line with previous studies that showed that husbands' involvement in pregnant mothers' nutrition is hampered by a lack of awareness and education about the importance of nutrition (Ayensu et al., 2020; Nguyen et al., 2018). Husbands who do not have an understanding of nutrition, especially related to the needs of pregnant mothers, tend to provide less than optimal support in terms of food selection and diet management for their wives.

Socio-cultural factors also influence the role of husbands in fulfilling their wives' nutrition. This study found that gender norms and women's roles in traditional families limit the active involvement of husbands in food-related decision-making. These results are consistent with previous studies that showed that food-related decisions in households in low-income countries are generally taken by husbands, even if the husbands have less knowledge about healthy food (Abdullah et al., 2019). In this context, husbands often choose more practical foods such as fast food, which do not meet the nutritional needs of pregnant mothers.

Economic constraints also emerged as a significant barrier to meeting the nutritional needs of pregnant women. This study found that low-income husbands tended to prioritize price over food quality, which directly affected the quality of the family's diet. This economic problem was also reported in previous studies that showed that low-income families have limited purchasing power for nutritious food, increasing the risk of chronic energy deficiency (CED) in pregnant mothers (Monterrosa et al., 2020; Purwanto et al., 2020). This is further exacerbated by minimal access to quality health services and nutritional information.

However, emotional support from husbands has been identified as an important factor supporting the mental well-being of pregnant mothers. Husbands who provide emotional support, such as accompanying their wives when they feel stressed or tired, have been shown to have a positive impact on the mental health of pregnant mothers, which also affects their eating patterns. This finding is in line with literature showing that social support from partners can reduce the risk of postpartum depression and improve the quality of maternal and infant health (Faleschini et al., 2019).

5. Implication

The results of this study have important implications for the development of pregnant mother health interventions, particularly in resource-limited settings. One key implication is the need for targeted education programs for husbands to improve their knowledge of pregnant mother nutrition. Addressing this knowledge gap could significantly increase husbands' involvement in supporting their wives' nutrition, which in turn could reduce the risk of chronic energy deficiency (CED) and improve maternal and infant health. Such education programs should include information on the importance of a balanced diet during pregnancy and how husbands can contribute to healthy diet planning.

In addition, interventions should consider socio-cultural and economic factors that affect family diet

patterns. Programs that involve husbands in food decision-making should be tailored to the local cultural context, considering gender norms or issues and the role of women in traditional families. These culturally sensitive strategies are essential to ensure the effectiveness of interventions across populations.

Another implication of these findings is the need for interventions that focus on nutritional knowledge and family financial management. Low-income families need guidance on choosing affordable nutritious diets. Financial literacy programs combined with nutrition education can help low-income families make better decisions regarding meeting the nutritional needs of pregnant mothers.

This finding also supports a more comprehensive approach to maternal health program planning that involves husband and wife couples in the decision-making process. A family-based approach involving couples can improve the quality of maternal and child health in accordance with the objectives of the Sustainable Development Goals. The Sustainable Development Goals emphasize the importance of inclusive and family-based strategies to improve community well-being (United Nations, 2015).

6. Conclusion

This study highlights the important role of husbands in supporting the fulfillment of the nutritional needs of pregnant mothers with Chronic Energy Deficiency (CED) in Bantul Regency, Indonesia. Although the husbands have provided emotional support, their involvement in nutritional decision-making is still limited due to the lack of knowledge about nutritional balance, socio-cultural barriers, and economic issues. This study showed that more active involvement of husbands in diet selection and management is needed to improve the nutritional status of pregnant mothers and reduce the risk of chronic energy deficiency (CED).

The results of this study have several important implications. First, nutrition education targeted at husbands should be a key component of pregnant mothers' health intervention programs, especially in areas with limited resources. Second, interventions should be designed sensitively to socio-cultural norms and take into account the role of women in traditional households so that husbands are more easily involved in decision-making regarding family diet. Third, financial literacy and nutrition education programs can help low-income families choose affordable nutritious diets.

Overcoming knowledge, economic, and cultural barriers can increase husband involvement in pregnant mother nutrition which can improve the quality of maternal and infant health. This study provides new insights for the development of more effective family-based health programs that are expected to be applied in various regions with similar social and economic conditions. The implementation of this program also supports global efforts to achieve the Sustainable Development Goals (SDGs) in improving maternal and child health worldwide.

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