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Narrative Review: Social and Cultural Determinants of Chronic Energy Deficiency among Women in Developing Countries

Fitri Handayani
Department of Public Health, Faculty of Public Health, Universitas Sumatera Utara, Medan, Indonesia

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ABSTRACT

Chronic Energy Deficiency (CED) among women remains a major nutritional problem in developing countries and has significant impacts on maternal health, pregnancy outcomes, and future generations. The high prevalence of CED indicates that this issue is not solely related to inadequate nutrient intake, but is also influenced by structural social and cultural determinants that interact with one another. This article aims to examine the role of social and cultural determinants in the occurrence of CED among women in developing countries. This article was developed using a narrative review approach based on open-access journal articles, official reports from the World Health Organization (WHO) and UNICEF, as well as population-based and qualitative studies published between 2016 and 2025. The keywords used included *chronic energy deficiency*, *women*, *social determinants*, and *cultural factors*. Relevant articles were selected based on topic relevance, developing country context, and a focus on women, and were then thematically analyzed to identify recurring patterns of social and cultural determinants. The findings indicate that poverty, low levels of education, limited access to nutritious food, gender inequality, and women's workload significantly contribute to the occurrence of CED. In addition, cultural norms and practices related to intra-household food distribution and specific food taboos further exacerbate women's vulnerability to CED, particularly during the reproductive age. Chronic Energy Deficiency among women is a structural problem that requires nutrition interventions sensitive to social and cultural contexts as well as gender equity in order to achieve sustainable improvements in nutritional status.

Email :
fitrihandayani@usu.ac.id

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INTRODUCTION

Chronic Energy Deficiency (CED) is a form of malnutrition that remains prevalent among women of reproductive age in developing countries. This condition is characterized by long-term inadequate energy intake, leading to a decline in health status, an increased risk of pregnancy complications, and the birth of infants with low birth weight (World Health Organization [WHO], 2016). Global reports indicate that women in South Asia and Sub-Saharan Africa continue to experience a substantial burden of undernutrition, despite the implementation of various nutrition intervention programs (Victora et al., 2021).

Most studies on CED have primarily focused on biomedical and individual behavioral factors, such as dietary patterns and maternal health status. However, these approaches do not fully explain why CED persists across diverse social contexts, even in regions with relatively adequate supplementation programs and healthcare services (Ruel et al., 2018). This suggests that CED among women cannot be understood in isolation, but must be examined within broader social and cultural contexts.

Social determinants such as poverty, education, and access to healthcare services play a crucial role in shaping women's nutritional status (Smith & Haddad, 2017). In addition, cultural factors—including gender norms, intra-household food distribution, and food taboos during pregnancy and breastfeeding—significantly influence women's energy adequacy (Kavle et al., 2019; Nguyen et al., 2021). Deeply rooted gender inequalities within social structures further limit women's access to economic resources and nutritious food (Heise et al., 2019).

Based on this background, this article aims to present a narrative review of the social and cultural determinants of Chronic Energy Deficiency among women in developing countries, with the objective

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of enriching public nutrition perspectives and supporting the development of more contextualized and sustainable nutrition policies.

METHODS

This article is a narrative review examining scientific literature related to the social and cultural determinants of Chronic Energy Deficiency (CED) among women in developing countries. Literature searches were conducted using the PubMed, ScienceDirect, and Google Scholar databases. The inclusion criteria comprised open-access articles published between 2016 and 2025, written in English, and relevant to the topic of CED among women of reproductive age.

The included articles encompassed observational studies, qualitative studies, review articles, and reports from international organizations. Article selection was performed through screening of titles, abstracts, and full texts. The data were synthesized descriptively to identify key themes related to the social and cultural determinants of Chronic Energy Deficiency.

RESULTS AND DISCUSSION

1. Patterns of Chronic Energy Deficiency among Women in Developing Countries

Findings from various published studies indicate that Chronic Energy Deficiency (CED) among women remains prevalent in developing countries and shows considerable regional variation. Women living in rural areas, from low-income households, and with lower levels of education face a higher risk of CED (Development Initiatives, 2022). CED is often chronic in nature and persists from adolescence into adulthood, reflecting the cumulative exposure to nutritional risks over the life course (Victora et al., 2021).

The pattern of CED is influenced not only by geographic factors but also by life-cycle dynamics. Adolescent girls who experience chronic energy deficiency tend to remain undernourished into pregnancy if there are no improvements in their social and economic conditions. This indicates that CED represents a cumulative risk trajectory that cannot be effectively addressed through short-term interventions alone.

2. Social Determinants of Chronic Energy Deficiency

a. Poverty and Household Food Security

Poverty is a primary determinant of CED among women. Household food insecurity limits access to foods with adequate energy density and nutrient content, thereby increasing the risk of long-term energy deficits (FAO et al., 2019; Harris-Fry et al., 2017). Beyond affecting the quantity of food intake, food insecurity also compromises dietary stability. Income fluctuations and reliance on informal employment often compel women to reduce their own food portions as a household coping strategy, ultimately exacerbating CED (Herforth et al., 2020).

b. Women's Education and Nutrition Literacy

Women's educational attainment is closely associated with nutritional status. Women with lower levels of education tend to have limited nutrition literacy and reduced bargaining power in household decision-making (Smith & Haddad, 2017). Improvements in education contribute to better dietary practices and greater utilization of health services (Raghunathan et al., 2018).

Education also plays a critical role in strengthening women's autonomy. Women with higher education levels possess greater negotiating capacity in household resource allocation, making education an important indirect determinant in the prevention of CED.

3. Cultural Determinants of Chronic Energy Deficiency

Unequal gender norms significantly influence food distribution and women's workload. In many patriarchal societies, women prioritize the needs of other household members over their own, increasing their vulnerability to chronic energy deficits (Heise et al., 2019; Rao et al., 2021). In addition,

food taboos during pregnancy and breastfeeding restrict the consumption of energy-dense foods and essential nutrients.

These cultural practices are often not grounded in scientific evidence, yet they persist due to deeply entrenched social norms (Kavle et al., 2019; Nguyen et al., 2021). Furthermore, the normalization of thin body types as acceptable or typical conditions leads to CED frequently being unrecognized as a health problem.

4. Impacts of Chronic Energy Deficiency and the Intergenerational Cycle

CED among women increases the risk of anemia, pregnancy complications, and low birth weight infants (WHO, 2016). These outcomes contribute to stunting and impaired child development, thereby reinforcing the intergenerational cycle of malnutrition (Victora et al., 2021).

Beyond its health consequences, CED also has economic implications. Reduced work capacity and productivity among women perpetuate cycles of poverty, which in turn heighten the risk of CED in subsequent generations (Ruel et al., 2018).

5. Program and Policy Implications

The review findings suggest that nutrition-specific interventions should be combined with nutrition-sensitive approaches that include women's empowerment, education, social protection, and the transformation of gender norms (Menon et al., 2021). Community-based programs involving community leaders and families have been shown to be more effective in modifying cultural practices that negatively affect women's nutritional status (Pelto et al., 2016).

A multisectoral approach is therefore essential to achieving sustainable and context-specific reductions in CED in developing countries.

6. Study Limitations

As a narrative review, this article has limitations, including potential selection bias in the literature and the absence of a systematic quality appraisal of the included studies. In addition, most of the reviewed literature originates from South Asia and Africa, necessitating cautious generalization of the findings.

CONCLUSION

Chronic Energy Deficiency among women is a multidimensional nutritional problem shaped by interrelated social and cultural factors. Addressing CED requires a multisectoral approach that integrates nutrition-specific and nutrition-sensitive interventions to break the intergenerational cycle of malnutrition.

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