

## **Influence of socioeconomic factors on the occurrence of micronutrient deficiencies in women: implications for public health: a literature review**

*Influência de fatores socioeconômicos na ocorrência de deficiência de micronutrientes em mulheres: implicações para a saúde coletiva: uma revisão de literatura*

*Influencia de los factores socioeconómicos en la ocurrencia de deficiencias de micronutrientes en mujeres: implicaciones para la salud pública: una revisión de la literatura*

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### **Abstract:**

**Introduction:** Micronutrient deficiencies constitute a significant public health problem, especially among women of reproductive age, pregnant women, and postpartum women. The nutritional transition observed in recent decades has favored the coexistence of different forms of malnutrition, including nutritional deficiencies, overweight, and obesity. In this context, food insecurity and socioeconomic inequalities contribute to inadequate dietary patterns, reduced dietary diversity, and greater female nutritional vulnerability, with repercussions on maternal health, breast milk composition, and child development. **Objective:** To understand, based on available scientific evidence, how food insecurity and social inequalities influence the development of micronutrient deficiencies in women, especially during the reproductive and postpartum periods. **Methodology:** This is an integrative literature review, of a descriptive-exploratory nature, conducted based on the following guiding question: "How do socioeconomic factors influence the occurrence of micronutrient deficiencies in women and what are the implications for public health?". The search was conducted in the SciELO, PubMed, and BVS databases, using descriptors in Portuguese and English combined with Boolean operators. Primary articles published between 2022 and 2026, in Portuguese and English, related to the influence of socioeconomic factors on micronutrient deficiencies in postpartum women were included. The selection of studies followed the recommendations of the PRISMA protocol, with subsequent full-text reading and critical analysis of eligible articles. **Results and Discussion:** The analyzed studies demonstrated that food insecurity, low income, unemployment, social vulnerability, and limited access to health services are directly associated with an increased risk of deficiencies in iron, zinc, folate, vitamins A and B12, and iodine. These conditions hinder access to nutritious foods and compromise the quality of nutrition during pregnancy and the postpartum period. The findings reinforce the importance of supplementation strategies, food fortification, food and nutrition education, and strengthening public policies aimed at promoting food security. Furthermore, they highlight the relevance of nutritional monitoring and multidisciplinary action in the prevention and control of these deficiencies. However, a scarcity of studies specifically addressing the role of nutritionists in this context was observed. **Conclusion:** Micronutrient deficiencies in women are strongly related to unfavorable socioeconomic conditions and food insecurity, compromising maternal health and child development. The results reinforce the importance of nutritional monitoring, food and nutrition education actions, and the expansion of public policies aimed at promoting women's health. The need for further research on the role of nutritionists and on effective strategies for preventing these deficiencies in vulnerable populations is also highlighted.

### **Keywords:**

Primary health care; micronutrient deficiency; socioeconomic factors; postpartum women; nutritionist.

**Resumo:**

**Introdução:** As deficiências de micronutrientes constituem um importante problema de saúde pública, especialmente entre mulheres em idade reprodutiva, gestantes e puérperas. A transição nutricional observada nas últimas décadas favoreceu a coexistência de diferentes formas de má nutrição, incluindo carências nutricionais, sobrepeso e obesidade. Nesse contexto, a insegurança alimentar e as desigualdades socioeconômicas contribuem para padrões alimentares inadequados, reduzida diversidade alimentar e maior vulnerabilidade nutricional feminina, com repercussões na saúde materna, na composição do leite materno e no desenvolvimento infantil. **Objetivo:** Compreender, com base nas evidências científicas disponíveis, como a insegurança alimentar e as desigualdades sociais influenciam o desenvolvimento de deficiências de micronutrientes em mulheres, especialmente durante o período reprodutivo e pós-parto. **Metodologia:** Trata-se de uma revisão integrativa da literatura, de caráter descritivo-exploratório, conduzida a partir da seguinte questão norteadora: “Como os fatores socioeconômicos influenciam a ocorrência de deficiência de micronutrientes em mulheres e quais são as implicações para a saúde coletiva?”. A busca foi realizada nas bases de dados SciELO, PubMed e BVS, utilizando descritores em português e inglês combinados por operadores booleanos. Foram incluídos artigos primários publicados entre 2022 e 2026, nos idiomas português e inglês, relacionados à influência dos fatores socioeconômicos nas deficiências de micronutrientes em mulheres no pós-parto. A seleção dos estudos seguiu as recomendações do protocolo PRISMA, com posterior leitura integral e análise crítica dos artigos elegíveis. **Resultados e Discussão:** Os estudos analisados demonstraram que a insegurança alimentar, a baixa renda, o desemprego, a vulnerabilidade social e o acesso limitado aos serviços de saúde estão diretamente associados ao aumento do risco de deficiências de ferro, zinco, folato, vitaminas A e B12 e iodo. Tais condições dificultam o acesso a alimentos nutritivos e comprometem a qualidade da alimentação durante a gestação e o pós-parto. Os achados reforçam a importância de estratégias de suplementação, fortificação alimentar, educação alimentar e nutricional e fortalecimento das políticas públicas voltadas à promoção da segurança alimentar. Além disso, evidenciam a relevância do acompanhamento nutricional e da atuação multiprofissional na prevenção e no controle dessas carências. Observou-se, entretanto, escassez de estudos abordando especificamente a atuação do nutricionista nesse contexto. **Conclusão:** As deficiências de micronutrientes em mulheres estão fortemente relacionadas às condições socioeconômicas desfavoráveis e à insegurança alimentar, comprometendo a saúde materna e o desenvolvimento infantil. Os resultados reforçam a importância do acompanhamento nutricional, das ações de educação alimentar e nutricional e da ampliação das políticas públicas voltadas à promoção da saúde da mulher. Destaca-se ainda a necessidade de novas pesquisas sobre o papel do nutricionista e sobre estratégias efetivas para prevenção dessas deficiências em populações vulneráveis.

**Palavras-chave:** Atenção Primária à Saúde; Deficiência de Micronutrientes; Fatores Socioeconômicos; Mulheres Pós-parto; Nutricionista.

**Resumen:**

Las deficiencias de micronutrientes constituyen un importante problema de salud pública, especialmente entre mujeres en edad reproductiva, gestantes y puérperas. La transición nutricional observada en las últimas décadas ha favorecido la coexistencia de diferentes formas de malnutrición, incluidas las carencias nutricionales, el sobrepeso y la obesidad. En este contexto, la inseguridad alimentaria y las desigualdades socioeconómicas contribuyen a patrones alimentarios inadecuados, una reducida diversidad dietética y una mayor vulnerabilidad nutricional femenina, con repercusiones en la salud materna, la composición de la leche materna y el desarrollo infantil. **Objetivo:** Comprender, con base en las evidencias

científicas disponibles, cómo la inseguridad alimentaria y las desigualdades sociales influyen en el desarrollo de deficiencias de micronutrientes en las mujeres, especialmente durante el período reproductivo y posparto. Metodología: Se trata de una revisión integradora de la literatura, de carácter descriptivo-exploratorio, realizada a partir de la siguiente pregunta orientadora: “¿Cómo influyen los factores socioeconómicos en la ocurrencia de deficiencias de micronutrientes en las mujeres y cuáles son las implicaciones para la salud pública?”. La búsqueda se realizó en las bases de datos SciELO, PubMed y BVS, utilizando descriptores en portugués e inglés combinados mediante operadores booleanos. Se incluyeron artículos primarios publicados entre 2022 y 2026, en portugués e inglés, relacionados con la influencia de los factores socioeconómicos en las deficiencias de micronutrientes en mujeres durante el posparto. La selección de los estudios siguió las recomendaciones del protocolo PRISMA, con posterior lectura completa y análisis crítico de los artículos elegibles. Resultados y Discusión: Los estudios analizados demostraron que la inseguridad alimentaria, los bajos ingresos, el desempleo, la vulnerabilidad social y el acceso limitado a los servicios de salud están directamente asociados con un mayor riesgo de deficiencias de hierro, zinc, folato, vitaminas A y B12, y yodo. Estas condiciones dificultan el acceso a alimentos nutritivos y comprometen la calidad de la alimentación durante el embarazo y el posparto. Los hallazgos refuerzan la importancia de las estrategias de suplementación, fortificación alimentaria, educación alimentaria y nutricional y fortalecimiento de las políticas públicas orientadas a promover la seguridad alimentaria. Además, evidencian la relevancia del seguimiento nutricional y de la actuación multidisciplinaria en la prevención y control de estas carencias. Sin embargo, se observó una escasez de estudios que abordaran específicamente el papel del nutricionista en este contexto. Conclusión: Las deficiencias de micronutrientes en las mujeres están fuertemente relacionadas con condiciones socioeconómicas desfavorables y con la inseguridad alimentaria, comprometiendo la salud materna y el desarrollo infantil. Los resultados refuerzan la importancia del seguimiento nutricional, de las acciones de educación alimentaria y nutricional y de la ampliación de las políticas públicas dirigidas a la promoción de la salud de la mujer. También se destaca la necesidad de nuevas investigaciones sobre el papel del nutricionista y sobre estrategias eficaces para prevenir estas deficiencias en poblaciones vulnerables.

**Palabras clave:**

Atención Primaria de Salud; Deficiencia de Micronutrientes; Factores Socioeconómicos; Mujeres en Posparto; Nutricionista.

**INTRODUCTION**

Nutritional deficiencies have been investigated and discussed from two different perspectives: focusing on malnutrition, food insecurity, and micronutrient deficiencies, or when dealing with overweight, obesity, and overeating. However, due to the rapid global nutritional transition, a growing proportion of individuals are exposed to different forms of undernutrition throughout their lives and to the development of what is known as "double burden." of Malnutrition, in Portuguese "Carga Dupla De Desnutrição" (Wells *et al.*, 2020). According to Popkin, Corvalan, and Grummer-Strawn (2020), the double burden of malnutrition represents a growing public health challenge, characterized by the simultaneous occurrence of undernutrition and overweight; this condition affects most low- and middle-income countries.

Globally, nearly two billion people suffer from micronutrient deficiencies, which has a significant impact and burden on public health . placing women as a population at risk ( Melby *et al.* , 2020). Inadequate intake of these nutrients can harm not only the mother's health, but also negatively influence the composition of breast milk and the child's development (Marangoni *et al.* , 2016).

Within the context of important factors contributing to inadequate food consumption, food insecurity is found as a complex manifestation that relates to the scenario of poverty and social inequality (Bezerra; Olinda; Pedraza , 2017). Women are more susceptible to feeling the effects of food insecurity, as they are aware of the needs faced within their homes, and are more vulnerable to food insecurity due to the high intake of foods that are more caloric, accessible, and of low nutritional value (Franco JG *et al.* 2019).

Iron deficiency anemia is characterized by a reduction in hemoglobin caused by iron deficiency, which can be caused by low dietary intake, impaired absorption, blood loss, and increased physiological needs (Belarmino *et al.* , 2025). The incidence of anemia in women remains high and unwavering in many countries; social inequalities are evident in many forms of malnutrition in women and children, indicating a significant role for poverty and low education, reinforcing the need for multi-sectoral actions to accelerate development ( Victora C G. *et al.* 2022 ).

*postpartum* period is a delicate and transitional time in a woman's life. The difficulties of the puerperium, due to the interconnectedness of biological, psychological, behavioral, sociocultural, economic, and gender aspects, exacerbate the demands of motherhood, encompassing significant changes in a woman's lifestyle (Cabral & Oliveira, 2010), who often prioritize the child over her own needs, altering her physical and emotional well-being (Mazzo *et al.* , 2018).

The study conducted by Lebrun *et al.* (2019), carried out in Canada, investigated food consumption and diet quality, where The study reveals a severe reduction in the intake of iron, vitamin C, and B complex vitamins in women throughout the postpartum period. It was identified that micronutrient intake decreased over time, associated with changes in the use of supplements .

The research developed by Aparício *et al.* (2020), conducted in the city of Reus in Tarragona (Spain), investigated food consumption in women during pregnancy and postpartum, where evidence showed that although nutritional demands increase during pregnancy, many women do not adequately increase their energy and nutrient intake during this period and postpartum, which exposes them to a greater risk of vitamin D, iron and folate deficiencies.

According to the National Demographic and Health Survey of Children and Women (PNDS 2006), national data show that approximately 29.4% of women of childbearing age have anemia, with the highest rates found in the Northeast (39.1%) and Southeast (28.5%) regions (BRASIL (2009)). As specified by Osório (2002), iron deficiency anemia results from various factors that aggravate a group of individuals: sociocultural, socioeconomic, environmental, dietary, physiological, pathological, and biological. In their research, Santos *et al.* (2014) The study presents similar results for zinc and vitamin A intake in pregnant and lactating women, and it is reported that this poor intake tends to intensify during pregnancy, since many women do not modify their eating habits.

At this stage of a woman's life, healthy eating aims to ensure an adequate supply of nutrients in order to meet nutritional recommendations (Gila-Diaz *et al.* , 2021). Furthermore, it contributes to postpartum recovery ( Jouanne) . *et al.*, 2021) and, in a complementary way, ensures adequate levels of nutrients and compounds essential for the survival and development of the newborn through breastfeeding (Melo; Oliveira; Pereira, 2020).

Chapter 1 of the book "Treatise on Nutrition and Diet Therapy" presents situations that explain micronutrient deficiencies, marked by the nutritional transition and the increased consumption of ultra-processed foods. According to Rossi and Poltronieri (2020), the Food and Nutritional Security Policy, It reveals that one of the main challenges was combating the main causes of food insecurity and social vulnerability.

Addressing malnutrition in all its forms demands new strategies for planning, directing, and implementing programs and policies to accelerate progress in improving nutrition globally ( Popkin , Corvalan , and Grummer-Strawn , 2020).

Therefore, the present study aims to understand, based on evidence available in the literature, how food insecurity and social inequalities influence the development of micronutrient deficiencies in women, in the context of women's health, especially during the reproductive and postpartum periods.

## **Methodology**

This study consists of an integrative literature review of a descriptive-exploratory nature. The review was conducted based on the following guiding question: "How do socioeconomic factors influence the occurrence of micronutrient deficiencies in women, and what are the implications for public health?"



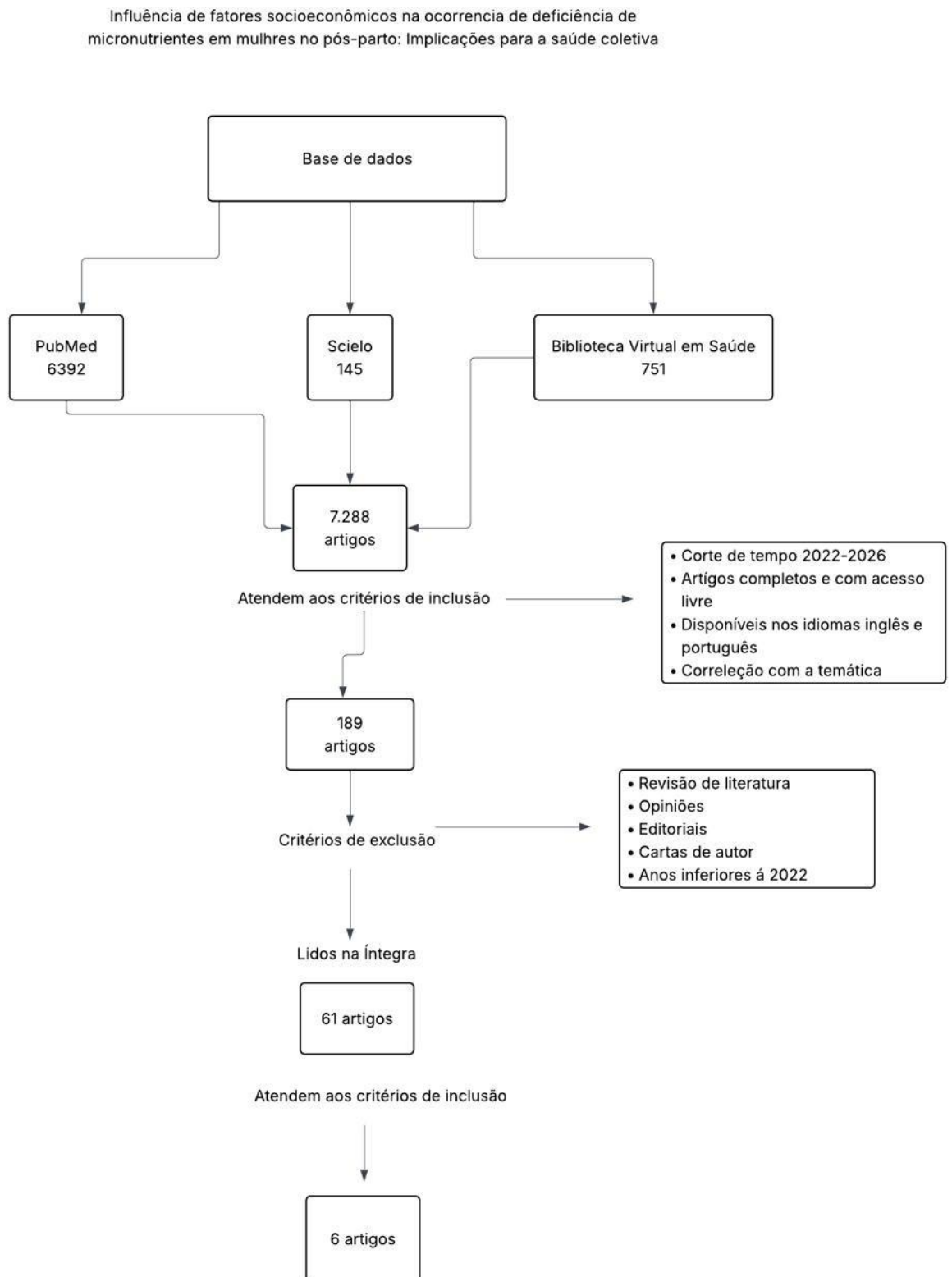
The bibliographic search was conducted in the SciELO ( Scientific) database. Electropical Library Online) , PubMed (US National Library of Medicine) The Virtual Health Library (VHL) was used to gather nationally and internationally prominent scientific publications in the area of health and nutrition. Descriptors were used, combined with Boolean operators AND and OR, to improve the results and gather the main concepts on the topic. The terms used were: "nutritionist", "micronutrient deficiency", "socioeconomic factors", "postpartum women", and "primary health care" . The terms were used in English to broaden the search for studies in the databases.

The inclusion criteria were: primary articles published between 2022 and 2026, written in Portuguese and English, addressing how socioeconomic factors influence the occurrence of micronutrient deficiencies in postpartum women, especially in the context of public health. Duplicate studies in the databases were removed , as well as monographs , works without peer review , editorials , opinion pieces , dissertations , conference abstracts, and those that did not directly address the central theme. The analyzed period (2022-2026) was chosen to ensure academic updates considering micronutrient deficiencies in postpartum women.

Data collection was carried out in the following stages. Initially, studies were searched in the chosen databases using the defined descriptors. Subsequently, titles and abstracts were read to select articles that met the inclusion criteria. After this initial evaluation, the full texts were read, allowing the identification of socioeconomic factors that influence the occurrence of micronutrient deficiencies in postpartum women, especially in the context of public health.

The six selected studies were critically and descriptively evaluated, taking into account their objectives, methodologies, sample characteristics, and main findings, and subsequently organized into a summary table. This selection process was conducted according to the PRISMA ( Preferred Standards for Innovation, Communication and Analysis) model. Reporting Items for Systematic Reviews and Meta- Analyses ), as illustrated in the flowchart below, which summarizes the steps and criteria applied during the screening of articles.

**Figure 1 - Flowchart representing the steps of identification, screening, eligibility, and inclusion of studies selected for the current research.**



Source: developed by the authors, 2026.

Table 1 below summarizes the results obtained from the six articles included in this integrative review, according to the criteria defined in the methodological approach. The synthesis brings together the main information from each study, including authors, year of publication, title, design, objectives, and the most relevant results, allowing a comparative analysis of the scientific evidence on socioeconomic factors in the occurrence of micronutrient deficiencies in postpartum women within the context of public health.

**Table 1.** Summary of articles analyzed for review.

Articles	Author, year of publication, location of the study	Outline into, type of study and N	Study objectives	Methodology	Key findings
1	Freire, JKS 2022 Maceió	Study observational longitudinal N= 240 women accompanied of no (period of 3, 6 and 12 months).	The study aims to objective assess consumption of micronutrient es, a Prevalence of inadequacy and associated factors in women in the postpartum period.	This is a study. with accompany ento of women in the postpartum period over the course of a year, in which consumption micronutrient es was evaluated through a recall. 24- hour dietary intake, with statistical analysis to identify associated factors.	The study revealed a high proportion of inadequate micronutrient intake among postpartum women, with a tendency to worsen over time. This inadequacy is related to socioeconomic factors, food insecurity, and increased consumption of ultra-processed foods.

2	Deshpan de <i>et al.</i>  2024  India	Cross -sec- tional and observa- tional study  N= 454 pregnant women	Describe the intake of macro and micronutri- ents , describe dietary diver- sity and in- take of un- healthy foods.	The data was collected using socio-demo- graphic infor- mation . Life- style and eat- ing habits through inter- views and	High prevalence of food insecurity among pregnant women living in slum areas, associated with factors socioeconomic unfavorable factors are related to poorer diet quality and increased risk to maternal health , reinforcing the need for public policies.
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			investigate de- terminant s partner demographic and lifestyle factors.	food recall.	
3	Rosenth al J <i>et al.</i>  2025  Belize	Study observation al e transversal  N= 937 women no pregnant	Estimate the fraction at- tributable to the national and regional popu- lation and the potential num- ber of cases of anemia avoidable for three fac- tors of Nutritional risk and defi- ciency among women.	National sur- vey based on household probabilities and micronu- trients , captur- ing socio-de- mographic and health infor- mation .	The study showed that anemia in women of reproductive age in Belize is strongly associated with deficiencies in iron, folate, and vitamin B12; significant findings could be avoided by correcting these deficiencies, highlighting food fortification as an effective public health strategy.
4	Carbon <i>et</i> <i>al .</i>  2026  Africa South	Observation nal and transversal .  N= 681 pregnant women	Evaluate the dietary diver- sity of preg- nant women in the Prov- ince of State Free and identify fac- tors associated with it.	Data collection was carried out using struc- tured question- naires, includ- ing socio-evi- dence. demographics	Studies show that most pregnant women had low dietary diversity, with only a small proportion reaching the minimum recommended intake. Furthermore, socioeconomic factors and food insecurity were associated with poorer diet quality.

5	Lopes <i>et al.</i> 2022 Portugal	C Transversal .  N= 203 women pregnant	The study sought to investigate the effects of supplementation. Iodine intake during pregnancy, especially and regarding maternal iodine nutritional status.	Lizardo was a randomized clinical trial, conducted at a single research center. During the follow-up , parameters were evaluated. related to the state nutritional iodine and function	They demonstrated that iodine supplementation during pregnancy contributed to improving the iodine nutritional status of pregnant women, by increasing the urinary iodine concentration in supplemented women.
				maternal thyroid.	
6	Sauer <i>et al.</i> 2026 Cambodia	C, Randomize of, experimental and controlled.  N= 36 women pregnant	Developing previous research by testing sequential, then and three interventions distinct, family support, a tracking calendar educational videos and comparing its acceptability , feasibility, and usefulness .	acceptability was investigated . and the feasibility of using multiple micronutrient supplements es por pregnant women, evaluating the participants' experience with different related interventions to the consumption of the supplement.	The study showed that adherence to multimicronutrient supplementation depends on behavioral factors, with perceived benefits favoring use and barriers hindering it, highlighting the importance of strategies for better adherence and health outcomes.

Source: developed by the authors, 2026

## RESULTS AND DISCUSSION

The studies analyzed demonstrate different methodological approaches regarding how food insecurity and social inequalities influence the development of micronutrient deficiencies in women, within the context of women's health, especially during the postpartum period. This

allowed for a broad understanding of the need for a nutritional approach, highlighting challenges to nutritional practice in the field of public health, particularly in relation to health promotion.

In general, the results show that the authors share the perception that socioeconomic factors, access to adequate food, and healthcare play a fundamental role in controlling nutritional deficiencies. This is influenced not only by dietary habits but also by social inequalities, food insecurity, and limitations in access to health services. However, the studies highlight important weaknesses related to social vulnerability, access to quality nutritional food, and health education aimed at pregnant women.

Deshpande's study *et al.* (2024), conducted in urban slums in Pune, India, analyzed the association between micronutrient deficiency and low dietary diversity among pregnant women living in vulnerable areas. The research showed that the lack of adequate intake of important nutrients, such as iron, zinc, folate, riboflavin, and thiamine, increases the prevalence of food insecurity associated with socioeconomic conditions, poor diet quality, and increased risks to maternal health, demonstrating the importance of strengthening public policies aimed at nutritional monitoring and social support.

Rosenthal J *et al.* (2024) noted in their study conducted in Belize, developed through national and regional research, that approximately one-third of anemia cases in the population can be attributed to iron, vitamin B12, and folate deficiencies. In this context, food fortification appears as a promising approach to reduce the impact of anemia, especially in vulnerable populations. However, the authors emphasize that the benefits of this intervention depend on the availability and continuous access to fortified foods, highlighting regional and social inequalities that can interfere with the results of nutritional policies.

The study of Carboo *et al.* (2026), conducted in South Africa, found that during pregnancy the mother's nutritional needs increase due to the demands of carrying the fetus. This research revealed that dietary diversity among pregnant women is associated with factors such as food insecurity, unemployment, and low family income, all linked to socioeconomic causes. The study highlighted the continuous consumption of carbohydrate-rich foods and low intake of foods rich in essential micronutrients, such as legumes, leafy greens, and nuts; these limitations can compromise maternal health, favoring significant nutritional deficiencies during pregnancy.

The findings of the study by Lopes *et al.* (2022), conducted in Portugal, which analyzed iodine supplementation in pregnant women from a region with a deficiency of this micronutrient, highlight the importance of this micronutrient for the production of thyroid

hormones, where it becomes essential for neurological development and adequate fetal growth. Such deficiency may be associated with cognitive impairments and alterations in the child's development. In this context, the findings reinforce the relevance of nutritional care during prenatal care, regarding monitoring, supplementation when necessary, and adequate food intake. The study shows the importance of multidisciplinary follow-up and the promotion of a balanced diet during the gestational process.

Similarly, the research A study by de Freire *et al.* (2022), conducted in the municipality of Rio Largo, in the state of Alagoas, Brazil, identified prevalences of micronutrient intake imbalances among postpartum women, particularly for vitamin B9, vitamin A, and zinc, linked to socioeconomic vulnerability and food insecurity. The authors point out that factors such as low income, difficulty accessing healthy foods, and reduced consumption of *fresh, unprocessed foods* contribute to nutritional deficits. This demand indicates that the postpartum period is a phase requiring meticulous nutritional monitoring, especially during lactation, a period in which women become more susceptible to vitamin and mineral deficiencies.

The qualitative research conducted by Sauer C. *et al.* (2026) in Cambodia, involving 39 pregnant women, aimed to explore and evaluate behavioral interventions capable of increasing pregnant women's adherence to multiple micronutrient supplementation. The authors highlighted that continuous guidance from healthcare professionals and health education planning can promote greater acceptance of supplementation and contribute to greater prevention of maternal nutritional deficiencies. The results show the positive impact of family support, specifically from partners, which exerts a constructive influence on adherence to multiple micronutrient supplements during pregnancy.

Furthermore, the study conducted by Deshpande *et al.* (2024) show **that** low dietary diversity was directly linked to inadequate micronutrient intake among pregnant women living in vulnerable areas. Similarly, Rosenthal J. *et al.* (2024) indicate that deficiencies in iron, folate, and vitamin B12 contribute significantly to the progression of anemia in the population, highlighting the potential of food fortification as a preventive measure. Both studies agree on the relevance of interventions aimed at promoting healthy eating and strengthening nutritional policies, considering their potential in preventing and reducing nutritional deficiencies and negative health impacts during pregnancy.

The studies included in this review, in general, do not address in depth the role of the nutritionist, an aspect of great relevance in the context of prevention, identification, and management of micronutrient deficiencies. This gap highlights the need for greater appreciation

of nutritional care and the inclusion of nutritionists in strategies for promoting and providing comprehensive care for women's health .

Understanding the importance of the nutritionist's role in preventing micronutrient deficiencies, the study by Santos (2022), conducted in Brazil, highlighted the importance of implementing permanent strategies, demonstrating that the nutritionist's role in Primary Health Care (PHC) favors actions for prevention, nutritional monitoring, and food education. Furthermore, the researchers emphasize that the work of this professional promotes the structuring and implementation of collective activities, as well as multidisciplinary collaboration within the PHC context. Although the study was conducted on the general adult population, and not specifically on women, its results were essential to this discussion because... This reinforces the importance of the nutritionist's role in Primary Health Care, proposing strategies for health promotion and nutritional monitoring. Therefore, although it is not part of the analytical framework because it does not directly address the issue of micronutrient deficiencies in women, the article provides an understanding of the nutritionist's role within Primary Health Care.

All the studies analyzed demonstrated that the occurrence of micronutrient deficiencies in women is associated with several socioeconomic factors, such as income, education, access to health services and adequate nutrition, highlighting greater vulnerability in socially disadvantaged groups. These studies highlight relevant aspects for the prevention and management of nutritional deficiencies, emphasizing the importance of training professionals and the role of nutritionists. Furthermore, some studies point to the importance of public policies as a strategy to support professional practice and address this deficiency.

It was observed that five of the six studies present discussions related to public policies; however, this approach was succinct, without delving into specific governmental strategies aimed at preventing and managing micronutrient deficiencies. The findings highlight the importance of strengthening these actions and public policies in nutrition and health, particularly in the context of promoting women's health and reducing social inequalities related to nutrition and food insecurity.

Furthermore, it is important to highlight the need for studies specifically focused on the perception and experiences of nutritionists regarding micronutrient deficiencies in women, since understanding their perspectives and challenges can contribute important information for improving professional practices, developing more humanized strategies, and strengthening the role of nutritionists in primary health care teams.



## CONCLUSION

This integrative review revealed that micronutrient deficiencies in women, particularly during pregnancy and postpartum, are directly associated with socioeconomic factors, low dietary diversity, food insecurity, and limitations in health services. The studies analyzed demonstrated that inadequate consumption of essential micronutrients, such as iron, folate, vitamin B12, vitamin A, zinc, and iodine, can compromise maternal health and fetal development, reinforcing the importance of continuous monitoring during this period.

The findings showed that social inequalities significantly influence the quality of food and access to prevention, such as supplementation and food fortification, especially in disadvantaged populations. This context highlights the importance of the nutritionist's role in primary health care, through actions in food and nutrition education, and strategies for preventing and controlling nutritional deficiencies.

The review sought to identify gaps in the literature related to the scarcity of studies focused on the nutritional monitoring of women in the postpartum period. It also noted the need for research that more thoroughly assesses the impact of public food and nutrition policies on the prevention of micronutrient deficiencies, contributing to the improvement of practices in public health and the widespread promotion of women's health.

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