
*Full Length Research Article***Impact of Gender Inequality on Nutritional Status of the Women: A Local to Global Perspective**Jyotirmoyee Banerjee¹, Smita Sahu², Arnab Chatterjee^{3*}¹Management Approved Teacher, Department of Food & Nutrition, Trevenidevi Bhalotia College, Raniganj, West Bengal, India²Assistant Professor, Department of Food & Nutrition, Budge Budge College, Budge Budge, West Bengal, India³Assistant Professor, Department of Food & Nutrition, Asansol Girls' College, Asansol, West Bengal, India.

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Abstract

Malnutrition is one of the major public health concerns, irrespective of the country's economic status. Developed and developing countries have launched several nutrition-specific and sensitive policies to address this concern. However, the outcomes of the global nutrition reports are not satisfactory. The reasons for malnutrition are multifaceted. The policies and preventive strategies consist of both biological and social intervention mechanisms. In developed countries, nutrition-specific intervention strategies are effective. On the contrary, in developing countries, the success of nutrition-specific intervention largely depends upon the nutrition-sensitive programs. Hence, social intervention, considering a nutrition-sensitive program, is crucial. Nutrition-sensitive program often focuses on the women of the population of the country. Thus, the concept of 'gender' and its relevance in achieving the country's nutrition targets needs to be re-examined for the nutritional sufficiency of the vulnerable.

Keywords: *Malnutrition, nutrition intervention, social intervention, gender, inequality.*

1. Introduction

Malnutrition is one of the major global crises, irrespective of the economic status of the nations. The cause of malnutrition is considered to be multifactorial; it includes social, economic, cultural and environmental factors. However, the basic underlying cause is insecurity of food and nutrition. Interestingly, insecurity follows a common trend, where it has been evident that the significant vulnerable population is women and children. Nutritional adequacy is essential for a healthy life. The compromised food availability and nutritional insufficiency among women largely jeopardize the economy of the nation. Thus, understanding the gender norm is crucial, especially in low-middle-income countries like India.

'Sex' is considered as biological determinant, whereas 'gender' is considered as socially imposed roles and responsibilities of feminine, masculine or non-binary identity. Gender binary largely drives the policies and practices of any social determinant. Thus, the analyses of any social issue need serious discussion about the gender gap. The feminine gender, or the women, have minimal access to land,

education, information, credit, technology, and decision-making forums. Even wages and recognition are often much less for women than for their opposite gender. The overburdening of being productive, reproductive, and socially active makes women less attentive to their needs and leisure. However, the role of women as caregivers for children is undeniable. However, lack of opportunities and injustice make women more vulnerable. Thus, the role of gender inequality has to be analysed to understand the perpetuity of malnutrition, especially in LMICs.

Gender inequality remains a persistent and pervasive issue across the globe. Despite significant progress towards gender equality in many domains, disparities between men and women continue to exist in education, healthcare, employment, and political representation. Gender inequalities in access to food and nutrition have long been recognized as a significant concern. Women are more likely than men to experience food insecurity, which is defined as "the lack of access to sufficient, safe, and nutritious food to meet dietary needs for an active and healthy life" (McGuire, 2015). According to a report by the Food and Agriculture Organization of the United Nations (FAO), around 60% of the world's chronically hungry people are women and girls (FAO, 2009). This disparity is largely due to a range of social, economic, and cultural factors that disproportionately affect women, including limited access to education and employment opportunities, lower wages, and unequal distribution of household responsibilities.

In addition to experiencing food insecurity, women also face a range of nutritional challenges. These challenges are often related to their reproductive and caregiving roles, as well as to gender norms and expectations that shape food choices and consumption patterns. For example, women may be expected to prioritize the nutritional needs of their children and partners over their own, or to conform to ideals of femininity that prioritize thinness and restrict certain foods. As a result, women may consume less diverse and nutrient-dense diets than men, which can have negative health consequences. (CARE-USA, 2020)

The health consequences of gender inequalities in food and nutrition are significant. In addition to being more likely to experience hunger, women are at higher risk of micronutrient deficiencies such as iron, iodine, and vitamin A (FAO, 2009). These deficiencies can have serious health consequences, particularly for women of reproductive age and children. Like, iron deficiency can lead to anaemia, which increases the risk of maternal mortality, low birth weight, and impaired cognitive development in children (Vir & Malik, 2015).

Undernutrition of women in India is a significant concern that requires urgent attention. Addressing the social, economic, and cultural factors that contribute to gender inequality and limit women's access to nutritious food and healthcare is critical for improving the nutritional status and overall health and well-being of women in India. This paper examines the health consequences of these inequalities and

considers potential solutions to address them. By shedding light on the complex and multifaceted nature of gender inequalities in food and nutrition, this paper aims to contribute to a better understanding of this critical issue and to inform policy and practice aimed at promoting gender equality and improving food and nutrition outcomes for all.

2. Nutritional Status of Women: Global to Local Perspective

According to recent data, the nutritional status of women globally remains a significant concern. The major forms of malnutrition, *i.e.*, under and overnutrition, affect women across the world. The undernourished women remain at a higher risk of anaemia, maternal and child mortality, stunting, and other health problems. Several factors, including poverty, food insecurity, limited access to healthcare and cultural norms that prioritize men's and children's nutrition over women's contribute to the nutritional status of women globally (Kunto & Bras, 2018).

A study conducted by Tuhin Biswas *et al.* predicted that Asian countries will not achieve the 2030 sustainable development goals target (Biswas *et al.*, 2020). The double burden of malnutrition (DBM) has been identified as one of the bottle necks and most crucial global health issues. In the low-middle-income countries (LMICs), pregnancy-related mortality is an enormous topic that needs to be addressed (Rush, 2000). Even a relatively higher abundance of carbohydrates in the diet of the women of LMICs induces a higher prevalence of obesity. Interestingly, the higher prevalence of obesity surpasses the prevalence of undernutrition in developing countries. On the contrary, several studies have indicated that the prevalence of overnutrition and obesity is greater than that of undernutrition and underweight among women in developing countries (Mendez *et al.*, 2005). This may be because their diet contains an abundance of carbohydrates, as a cheap source of satiety. The studies summarized in Table 1 reflect the global phenomenon of the gender disparity in women's nutritional status.

Table 1: Globally available studies associated with gender disparity and its impact on the nutritional status of women

Author (Year)	Sample size (n)	Outcome (women's nutritional status)
Kabir <i>et al.</i> , 2020	27,357 women; 9,234 mother-child pairs	Higher Women's Empowerment Index (WEI) associated with lower odds of maternal undernutrition (BMI < 18.5) and lower odds of low birthweight; dose-response across WEI quartiles.

Malapit & Quisumbing, 2015 (Ghana, Food Policy / IFPRI DP)	3,640 women; 3,344 children (Feed the Future baseline, northern Ghana)	Specific WEAI dimensions (group membership, control over income, reduced workload) positively associated with better maternal nutrition / dietary diversity (though associations vary by empowerment domain).
Malapit, Kadiyala, Quisumbing, Cunningham & Tyagi, 2015	4080 household	Women's empowerment in agriculture mitigates the negative effects of low production diversity on maternal dietary diversity and maternal anthropometry (improved BMI / dietary scores where empowerment is higher).
Sraboni, Malapit & Quisumbing <i>et al.</i> , 2018	Sample size not mentioned	Women's empowerment in agriculture associated with better individual dietary quality across the life course; adult women with higher empowerment had higher dietary diversity and better nutrient intakes (pathway to better BMI).
Quisumbing, Sproule, Martinez & Malapit, 2021	Sample size not mentioned	Aggregate empowerment scores had limited direct associations with women's BMI (and mixed results overall), but specific empowerment domains (income control, group membership, workload) show varied associations — evidence of tradeoffs among empowerment dimensions)
Sraboni <i>et al.</i> , 2014	5503 household	Analysis using WEAI / A-WEAI finds positive associations between women's empowerment (decision-making, asset control) and women's diet quality and BMI (context and domain dependent).
Chattopadhyay <i>et al.</i> , 2022	179 infants	Intra-household food distribution and gender norms are associated with higher prevalence of undernutrition among ever-married women compared with men; inequitable food allocation and norms worsen women's nutritional status.
Ahmed, Hossain & Sanin, 2012	Sample size not mentioned	Review / empirical analyses show persistent high prevalence of undernutrition among women ($\approx 30\%$ BMI <18.5) and discuss gendered determinants (access to food, workload, decision-making).

2.1. Indian Scenario

Women's nutritional status and gender discrimination are deeply intertwined issues in India. Despite progress in recent years, the country still struggles with high rates of malnutrition among women and girls, especially in rural areas. According to the National Family Health Survey report in 2019-2020, 21.2% of women in India were underweight, 53.1% suffered from anemia, and 22.7% were overweight or obese (International Institute for Population Sciences, 2020). Malnutrition is predominantly

prevalent among pregnant and lactating women, with 49.9% of pregnant women and 53.5% of lactating women being anemic. These figures are even higher for women living in rural areas.

Gender discrimination also affects women's ability to access healthcare, including prenatal and postnatal care. Women in India often face barriers such as limited mobility, lack of education, and cultural taboos when seeking medical care. This can lead to untreated illnesses and conditions that exacerbate malnutrition (Dewan, 2008). India is a country with an extensive preference for sons and one of the highest levels of child mortality for girls (Arnold *et al.*, 2010)(Bose, 2011)(Pande, 2003). Many researchers tried to investigate the socioeconomic distribution concerning nutritional status in India and found that overnutrition and obesity were more prevalent among women with flourishing economic condition, on the other hand, low nutritional status was associated with economic constraints (Neuman *et al.*, 2011). Underweight and anemia among women and children are prevalent in India because women in India have lower access to resources (Varghese & Stein, 2019).

It was observed that maternal experience of psychological and sexual abuse increased the risk of malnutrition and trauma in both the mother and the child (Sethuraman *et al.*, 2006). Therefore, India remains a challenging country for children to be born as girls. Due to its immense diversity in culture and communities, the economic condition also varies depending on several factors, which further affect the

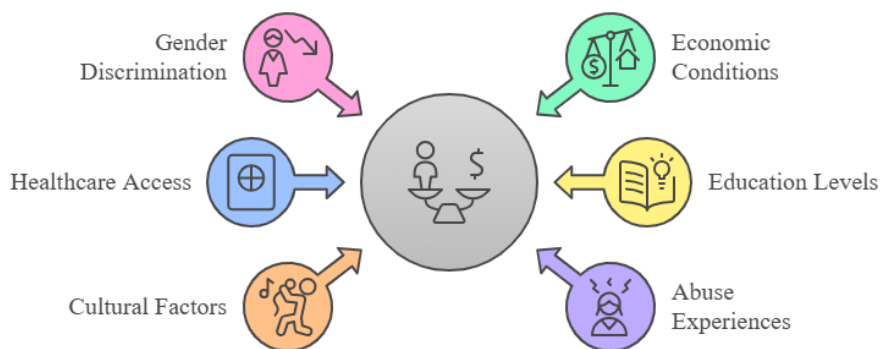


Figure 1: Factors contributing to women's malnutrition in India.

nutritional status of mothers as well as children. To reduce the incidences of child mortality and Intrauterine Growth Retardation (IGR) of the fetus, it is crucial to understand the causative factors of child and maternal undernutrition. Therefore, it requires a thorough study and investigation of the problem of the dual burden of malnutrition (Kumar *et al.*, 2021). There were also associations between the mothers' educational qualifications and the nutritional status of the children and the mothers (H. Singh *et al.*, 2016).

2.1 Scenario of West Bengal

West Bengal, located in eastern India, has a high prevalence of malnutrition among women. The nutritional status of women in West Bengal is poor, with a significant proportion of women suffering from low body mass index (BMI), anaemia, and other micronutrient deficiencies. NFHS-5 data sets revealed that 14.8% of women in West Bengal are underweight (BMI<18.5kg/m²), 71.4% are anaemic, 19.8% have Vitamin A deficiency (ICF, 2017). There are several factors contributing to malnutrition among women in West Bengal. One of the major factors is poverty, as women from poor households are more likely to suffer from malnutrition due to a lack of access to nutritious food.

Moreover, cultural norms in West Bengal, such as the belief that women should eat last or eat less than men, can also contribute to poor nutritional outcomes for women. This can further exacerbate the impact of poverty on women's health (Yasmin *et al.*, 2022). Another factor contributing to malnutrition among women in West Bengal is low education levels of women who are yet to receive formal education are less likely to have knowledge about proper nutrition and are less likely to have access to healthcare services. Furthermore, gender discrimination and unequal distribution of resources also play a significant role in malnutrition among women in West Bengal. Women are often discriminated against and have limited access to resources such as education, healthcare, and nutritious food (Maiti *et al.*, 2011).

3. The Hidden Labour: Unpaid Domestic Work and Gender Inequality

Domestic work, predominantly performed by women, is a crucial yet often overlooked part of the economy. It includes a range of unpaid household activities such as cooking, cleaning, childcare, and elderly care. Despite its importance, unpaid domestic work is often undervalued and invisible in official economic statistics. Domestic work is largely gendered, with women shouldering the majority of unpaid household tasks. This is due to gender roles and expectations shaped by social, cultural, and historical factors. Women are often socialized to be caretakers and are expected to prioritize the needs of their families over their own. As a result, they spend a disproportionate amount of time on domestic work, which limits their ability to participate in paid work and other activities outside the home (Luxton, 1997).

Despite the importance of domestic work, it is often not recognized in economic terms. It is seen as a private responsibility rather than a social and economic contribution. This undervaluing of domestic work has significant implications for women's economic empowerment. Women's unpaid work reduces their ability to participate in paid work, to earn an income, and to accumulate wealth. It also perpetuates gender inequalities in the labor market and broader society (Ervin *et al.*, 2022).

The burden of unpaid domestic work has significant consequences for women's well-being and ability to achieve their full potential. Women who perform a disproportionate amount of domestic work experience higher stress, fatigue, and burnout levels. They also have less time for leisure, education, and other activities that could contribute to their personal and professional growth. Furthermore, women who perform unpaid domestic work are more likely to experience poverty, social exclusion, and economic vulnerability. (Ferrant *et al.*, 2014).

Three theoretical perspectives of domestic work allocation were predominant: a) the time accountability perspective, b) the availability of resources perspective, c) the gender perspective (Bianchi *et al.*, 2000). Studies have indicated that women's work outside the home contributes to multiple positive outcomes (Lundberg, 1996). Currently, women are being encouraged to participate in their family businesses, but in many settings, they receive no profit even after their major contribution (Rowe & Hong, 1998).

In most societies, unpaid domestic work is not a matter of choice for women rather a burden by the patriarchal society (P. Singh & Pattanaik, 2020). Despite their significant contribution to the economy, women are often overlooked and undervalued in their labour market representation. This implies that they are not able to fully realize their potential (Ferrant *et al.*, 2014).

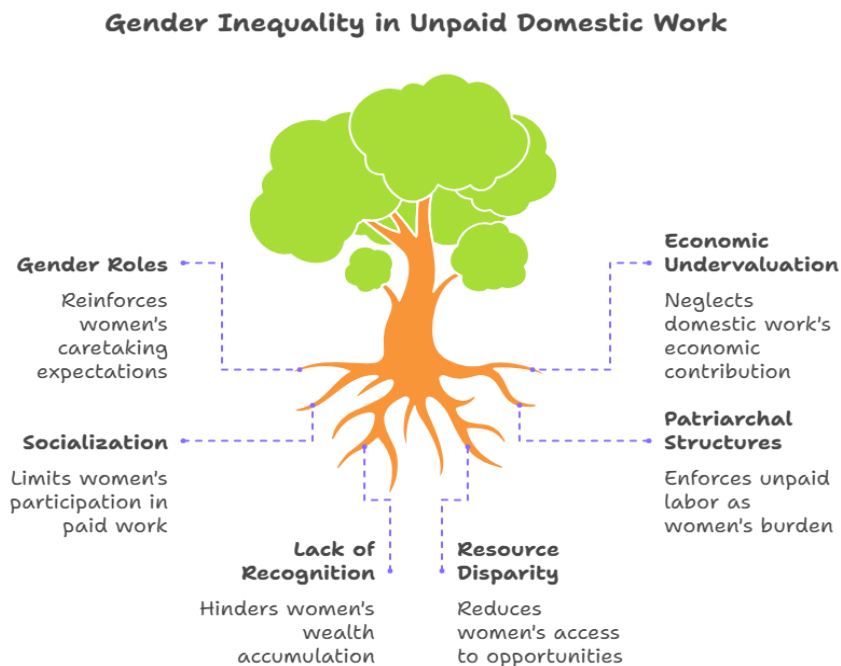


Figure 2: Underlying factors associated with gender and unpaid domestic work.

4. Gender Disparity in Nutrition Interventions: A Life Cycle Approach

Gender disparity persists as a significant barrier to achieving optimal nutrition and food security for women. Addressing inequalities in access to education and nutrition interventions is essential to minimize the burden of undernutrition.

According to the WHO, “Weaning is the process of gradually introducing an infant to food other than breastmilk or infant formula, while continuing to provide breastmilk formula”. Gender discrimination in weaning practices is a significant issue that affects many communities worldwide. Research has shown that in some cultures, boys are weaned earlier than girls, leading to potential health risks and nutritional deficiencies (Marphatia *et al.*, 2016).

A case study conducted in rural India found that male infants were more likely to be introduced to solid foods earlier than female infants. The male infants were also likely to receive a more diverse range of foods during the weaning process. This may have long term implications on the health of the female child, making them more vulnerable to stunting (Srihari *et al.*, 2007). Female infants were more likely to be breastfed for longer than male infants, with 61% of female infants breastfed for at least 18 months compared to 54% male infants (International Institute for Population Sciences, 2007)(Padmadas *et al.*, 2002).

Even during adolescence, girls and boys face distinct challenges and opportunities, which are often shaped by societal norms, values, and beliefs about gender roles. For instance, adolescent girls are more likely to face discrimination, violence, and limited access to education and healthcare. On the other hand, boys may face pressure to conform to masculine norms, which can lead to risk-taking behaviours and poor mental health outcomes. To ensure that all young people have the opportunity to thrive and reach their full potential, it is important to understand and address gender disparities in adolescence (Maiti *et al.*, 2011). A higher percentage of female adolescents were malnourished as compared to males. Hence gender gaps in adolescents are very prominent worldwide and with greater percentage in LMICs (Dey & Chaudhuri, 2008)(Patel *et al.*, 2013)(Gardašević *et al.*, 2021).

Gender Inequality in terms of nutrition intervention among young adults can manifest in various ways, such as differences in access to education and social norms (Jayachandran, 2015). In many parts of the world, young women face barriers in accessing healthcare services, including nutrition interventions. This could be due to factors such as lack of transportation, financial constraints, or cultural beliefs that prioritize men’s health over women’s. As a result, young women may miss out on critical nutrition interventions such as prenatal care, micronutrient supplementation or nutritional counselling (Sethuraman *et al.*, 2006). The nutritional status of young women is greatly associated with nutritional status of their children, hence malnutrition in mothers can contribute to stunting and underdevelopment in children (Neogy, 2010).

As people age, their nutritional needs change, and dietary habits and preferences may shift. For elderly adults, maintaining adequate nutrition is particularly important for preventing chronic diseases and maintaining optimal health. However, gender disparities in elderly nutrition are prevalent and can have significant health consequences (Carmel, 2019). In many cultures, elderly women are expected to take the role of caregivers and prioritize the health and wellbeing of others over their own needs (Asaduzzaman *et al.*, 2015). Elderly women were also less likely to have hospital stays and physician visits due to societal norms. Hence, they were at a greater risk of deficiency and disease related malnutrition (Castel *et al.*, 2006), (Cameron *et al.*, 2010). There is a positive correlation between financial independence and nutritional status (Vlachantoni, 2012).

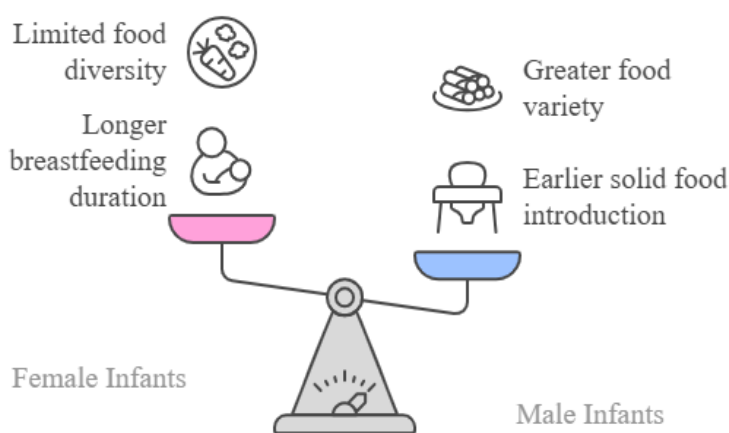


Figure 3: Factors associated with gender disparities in infant nutrition.

5. Conclusion

Nutritional intervention is crucial to mitigate various forms of public health nutrition concerns. The interventional policies are unbiased and neutral about the sexual orientation of the subjects. Some of the studies reported that nutrition intervention differs based on the age group and sexual orientation. However, in India and other LMICs, societal norms often hinder nutritional intervention. Gender is one such norm in developing countries that restricts the choice and accessibility of food. Thus, the strategies to improve the nutritional status of the vulnerable population slow down. Delayed initiation of weaning girl child to restriction of protein rich diets for widows prevails in the society. Even in remote areas in India, the women are often forced to eat the left-over foods of their partners. Hence the chronic deprivation of nutrition has become the custom of the society. The impact of this compensated nutritional intake is often deep and multifaceted. Interestingly, the studies reported that metabolic activities and, body's adaptivity towards endurance exercises are similar for men and women. Even females have been found to have a biological

advantage over males in a range of situations and health outcomes, for instance, male children under five are more likely to be stunted compared to female children. However, this biological advantage depends on equitable treatment and may be lessened or even reversed in situations where boys are valued over girls and have greater access to resources (Evers *et al.*, 2022). Even since childhood, gradual deprivation of nutritious meals for the girl child makes it inevitable that critical thinking capacity of the women is under to less developed. Thus, in similar forms of work often female workers are often paid lesser wages compared to their male colleagues. Surprisingly, it has even been observed that whenever the curtailment of the workforce is required, women are the natural choice.

The economic disparity and insecurity among the genders jeopardized the nutritional status of the mother and children. The lower income potentiality aggravates stunted undernutrition related may explain many complications such as fetal growth restriction, stunting, wasting which are not only due to macronutrient deficiencies, but a wide range of micro nutrient deficiencies such as vitamin A, folic acid, zinc etc (Black *et al.*, 2013). Apart from macro and micro nutrient deficiencies, irrespective of the economic strata son preference is significantly higher in India. Thus multiple pregnancies often lead to higher maternal mortality rate in this country. Even when a girl child is born, the girl will not only face nutritional deprivation but also experience child marriage and intimate partner violation. Even lower academic participation is observed among these girls. Several studies reported that suicide rate is higher among adolescent girls compared to boys.

India is the fifth largest economy in the world, where industrial and agricultural sectors are the major key players. Women's participation in both the sectors are undeniable (Gillespie, 2012). However, the reproductive and domestic works are nearly the sole responsibilities of women, especially in developing countries like India. This majorly contributes to the unpaid labour of women. FAO estimated that women work as much as 13 hours more per week than men in Africa and Asia (Johnston *et al.*, 2015)(FAO, 2009). India's time use survey reports 2019 reveals that 15-59-year-old women spend 305 minutes every day on nonremunerative work, whereas men spend only 67 minutes.

Gender inequalities in terms of food and nutritional status and security persist despite progress made in other areas of development. Addressing these disparities requires a multi-faceted approach that acknowledges the complex social, economic, and cultural factors that perpetuate them. By prioritizing gender-sensitive interventions, policymakers can ensure that all individuals, regardless of their gender, have access to nutritious and sufficient food. The above discussion emphasizes the necessity of thorough interventions to raise women's nutritional status.

Overall, in conclusion, gender inequality continues to have a significant impact on nutritional outcomes worldwide. Women are key actors in the food system,

yet they face numerous barriers that limit their access to food, impair their nutritional status, and perpetuate gender disparities. Addressing these challenges requires a comprehensive approach that considers the social, economic, and cultural factors that underlie them. Gender-sensitive interventions, such as those that target women's access to resources, nutritional education, and empowerment, are critical to reducing gender disparities in nutrition. Moreover, gender-responsive policies that promote women's rights and gender equality can provide a supportive framework for these interventions to succeed. As we strive to achieve the United Nations' Sustainable Development Goal 2 of zero hunger and improve the nutrition and health of all individuals, we must recognize and address the gender inequalities that persist in the food and nutrition system. Thus, by prioritizing gender equality in nutrition interventions and policies, a more sustainable ecosystem can be created that benefits everyone, regardless of gender.

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