

Socioeconomic Context and Health Outcomes of Rural Women in India: A Literature Review

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Abstract

This systematic literature review delves into the determinants of health outcomes among rural women in India, encompassing individual, socio-cultural, economic, and environmental and health service-related factors. It further investigates strategies for enhancing health status through the provision of adequate nutrition. Nutrition is the fundamental pillar of health and development, directly influencing the health and well-being of individuals across all the stages of life (Block et al., 2011). It impacts infant, child, adolescent and maternal health, strengthens immune systems, ensures safer pregnancies, reduces non-communicable disease risks and promotes longevity. Malnutrition, in all its forms, poses significant threats globally, with low- and middle-income countries facing a dual burden of undernutrition and overweight. The COVID-19 pandemic has made problems with food systems and health services even worse (Ebata, Nisbett & Gillespie, 2021). Out of 45 articles reviewed, 24 were chosen to find the socioeconomic determinants of female health outcomes. Additionally, out of 12 articles 6 were rigorously reviewed to investigate strategies for improving health outcomes. A detailed and systematic review of these articles was conducted to provide useful insights and recommendations to improve nutrition and health for rural women, tackling the major challenges they encounter.

Introduction

Amidst the vibrant tapestry of India's rural landscapes, a profound and often overlooked narrative unfolds—one where the socioeconomic conditions and health outcomes of rural women are intricately interwoven, revealing a story of resilience, disparity and the urgent need for transformative change. Nutrition constitutes an essential cornerstone of health and development (Who& Consultation, 2003). As it acutely impacts the health of all, bolsters immune defence, ensures safer pregnancies and childbirth, diminishes the risk of non-communicable diseases such as diabetes and cardiovascular conditions and enhances overall healthier lifetime (Tollefson, Eriksen & Pathak, 2021), the children and adolescents who receive a balanced nutrition exhibit improved

learning capability and demonstrate increased productivity, thereby generating opportunities to disrupt the cycle of poverty and hunger (Yousafzai, Rasheed & Bhutta, 2013)

Malnutrition, in any form is a considerable global risk (Shrimpton & Rokx, 2012). In today's rapidly evolving world, people's food habits and lifestyles have undergone significant transformation because of which the world today is encountered with the dual challenge of both undernutrition and overweight, especially prevalent in low and middle-income nations (Ford, Patel & Narayan, 2017). The World Health Organization (WHO) offers scientific guidance and strategic tools to aid countries in addressing all facets of malnutrition, thereby promoting health and well-being across all age groups (World Health Organization, 2000).

Gender discrimination is a key issue that has made the health of women in India mainly neglected (Shukla, 2020). The paper therefore, aims at identifying the varied determinants that influence health outcomes of Rural Women in India and the methods for improving health by optimal nutrition. The objective of this study will be to investigate how far these variables influence the health status of Rural Women and which are the feasible and effective methods for making health better via proper intake food nutrients, so that recommendations and actionable insights can be provided for improving nutritional and health outcomes among them who are disproportionately affected by such issues.

This research is important as it examines the major factors that affect the nutrition and wellness levels of females. Addressing malnutrition in women is crucial not only for their health but also for ensuring nutritional adequacy for future generations, including infants, children, and adolescents. Adequate nutrition for women is essential throughout their lives, particularly before, during, and after pregnancy, to achieve intergenerational nutritional adequacy (Rampal & Swain, 2019). By considering individual behaviour change factors and psychological influences, socio-cultural enabling environment, economic setting, ecological surroundings, health and nutrition services accessibility and availability, this research goes beyond one-dimensionality understanding of malnutrition dynamics. It also helps us to understand that till date what interventions have been successfully made to achieve good health via nutrition. As a methodological approach, it includes scrupulous analysis of existing literature, case studies examination and data synthesis from various sources with an aim to provide an all-inclusive view on challenges faced as well as highlight some potential ways forward.

The paper starts by clearly stating the objective of the research, then gives an in-depth look at factors that determine women's nutritional and health status. Additionally, it assesses socio-cultural elements affecting nutrition for women and explores economic issues that influence nutritional status. It also examines as to how gender-based disparities affect health outcomes. Last but not the least the objective of the paper is to review health and nutrition services as a means of addressing these concerns. The conclusion sums up the findings with some policy suggestions for consideration and application.

Research Objective

The main objective of the study is to analyse the relationship of socioeconomic context and health outcomes for rural women in India. Further, the paper comprehensively examines the multifaceted determinants influencing women's nutritional and health status in India, with a particular focus on the interplay between gender inequality and health outcomes. Further the strategies for achieving optimal health are also critically examine

Research Methodology

The research methodology was to explore past 20 years research articles on health condition of females in Rural areas in India. Some articles beyond the criteria have also been reviewed because of their significance for the study. We reviewed about 45 articles out of which 24articles were selected based on the 4 themes of socioeconomic context viz. Education, Income, Gender Inequality and Access to health care services influencing 3 health outcomes viz. Maternal health, Nutritional status and Mental health. Additionally, out of 12 articles 6 were screened for review of counselling as a strategy for enhancing health status. A rigorous review of these 30articles has been conducted to find out the impact of each of the socioeconomic factor on each of the health outcomes.

Literature review

Impact of Education on Health Outcomes of Females in Rural Areas of India

Education plays a pivotal role in shaping various health outcomes among females in rural areas of India, influencing maternal health, nutritional status and mental well-being. This comprehensive critical review examines the interplay between education and these health dimensions based on existing literature.

Education and Maternal Health

Maternal health outcomes in India is a function of education status of females in rural India. Higher levels of education among women are associated with improved utilization of maternal healthcare services, including timely antenatal care visits and skilled birth attendance (Govindasamy& Ramesh, 1997). Maternal morbidity and mortality rates shall take a downfall if the females are well educated. (Paul et al., 2022).Conversely, lower educational status correlates with delayed healthcare access which puts the females to higher risks during pregnancy and childbirth, contributing to adverse maternal health outcomes (World Health Organization, 2017).

Education and Nutritional Status

Education also plays a critical role in determining the nutritional status of women in rural India. Educated women tend to have better dietary practices and nutritional knowledge, leading to improved dietary diversity and reduced risks of malnutrition (Rao et al., 2010). In contrast, limited education is linked to inadequate dietary intake and higher prevalence of nutritional deficiencies, exacerbating health disparities among rural women (Nair et al., 2017).

Education and Mental Health

Mental health outcomes are significantly influenced by educational attainment among females in rural areas. Higher education levels are associated with better mental health indicators, including lower rates of anxiety and depression, and higher levels of resilience and self-esteem (Malhotra & Shah, 2015). Education empowers women with skills for coping with stress and accessing support systems, thereby enhancing their overall psychological well-being (Reddy, 2019). Conversely, lower levels of education contribute to increased vulnerability to mental health disorders due to limited access to resources and social support (World Health Organization, 2017). Summary of the above is given in Table-

Table-1

S. No.	Year	Research topic
1	1997	“Maternal education and the utilization of maternal and child health services in India” (Govindasamy& Ramesh, 1997).
2	2010	“Diet and nutritional status of women in India” (Rao et al., 2010)
3	2015	“Women and mental health in India: An overview” (Malhotra & Shah, 2015).
4	2017	“Study of nutritional status of adolescent girls in a rural area of a district of Maharashtra” (Nair et al., 2017)
5	2019	“Mental health issues and challenges in India: A review” (Reddy, 2019)
6	2022	“Maternal education, health care system and child health: Evidence from India” (Paul et al., 2022)

The Impact of Income Status on Women Health in India

Income level is a pivotal factor influencing various aspects of women’s health in India, including maternal health, nutritional status, and mental well-being. This comprehensive critical review synthesizes findings from literature on how income disparities shape health outcomes among females, emphasizing key implications for policy and intervention.

Income and Maternal Health

Income inequality significantly impacts maternal health outcomes in India by affecting access to healthcare services. Higher household income correlates with increased utilization of essential maternal healthcare services such as antenatal care visits, skilled birth attendance, and postnatal care (Shariff & Singh, 2002). This access is crucial for reducing maternal morbidity and mortality rates. Conversely, women from lower-income households face barriers such as out-of-pocket expenses and limited healthcare infrastructure, leading to delayed or

inadequate healthcare access (Vora et al., 2009). Addressing economic disparities is essential for improving maternal health outcomes through enhanced healthcare access and support services.

Income and Nutritional Status

Income levels profoundly influence the nutritional status of women in India, shaping dietary intake and food security. Higher income enables women to afford diverse and nutritious diets, reducing the prevalence of nutritional deficiencies such as anaemia and undernutrition (Sinha et.al, 2023). Adequate nutrition during pregnancy is critical for maternal health and foetal development, underscoring the role of economic resources in promoting positive health outcomes (Agarwal, Pant & Singh, 2016). Policies aimed at improving income levels and access to nutritional education can mitigate these disparities and enhance nutritional status among women.

Income and Mental Health

Income disparities impact women’s mental health outcomes, influencing psychological well-being and access to mental health services. Higher income provides women with greater resources for coping with stressors associated with pregnancy, childbirth, and daily life challenges (Sharma & Pathak, 2015). It facilitates access to mental health services, including counselling and psychiatric care, thereby promoting resilience and mental well-being. In contrast, economic hardships increase the risk of mental health disorders such as depression and anxiety among women from lower-income backgrounds (Venkata Shiva et al., 2021). Strengthening social support networks and expanding access to affordable mental health services are crucial steps in addressing these disparities. The summary of the above is given in Table-2.

Table -2

S. No.	Year	Research topic
1	2002	“Determinants of maternal health care utilisation in India: evidence from a recent household survey (No. 85). New Delhi” (Shariff & Singh, 2002)
2	2009	“Maternal health situation in India: a case study” (Vora et al., 2009)
3	2015	“Women mental health in India” (Sharma & Pathak, 2015)
4	2016	“A comparative study of nutritional status of economically independent and economically dependent urban women in Lucknow city” (Agarwal, Pant& Singh, 2016).
5	2021	“Mental health issues and challenges in India: A review” (Venkatashiva et al., 2021)
6	2023	“Association of Socioeconomic Factors with Nutritional Status among Women of Reproductive Age in India: A Systematic Review” (SINHA et al., 2023)

The Impact of Gender Inequality on Women Health in India

Gender inequality exerts profound influences on various dimensions of women's health in India, including maternal health, nutritional status, and mental well-being. This comprehensive critical review integrates insights from literature on how gender disparities shape health outcomes among females, emphasizing critical implications for policy and intervention.

Gender Inequality and Maternal Health

Gender disparities significantly hinder women's access to essential maternal healthcare services in India. Sociocultural norms and unequal gender roles limit women's autonomy in healthcare decision-making, leading to delays in seeking care and inadequate utilization of maternal health services (Banda et al., 2017). This results in higher maternal mortality rates and preventable complications during pregnancy and childbirth, particularly affecting marginalized groups (Sanneving et al., 2013). Addressing gender-based barriers is crucial for improving maternal health outcomes through enhanced access to skilled birth attendants, emergency obstetric care, and comprehensive reproductive health services.

Gender Inequality and Nutritional Status

Gender inequalities adversely affect the nutritional status of women in India, influencing dietary intake and food security. Discriminatory practices within households often prioritize male dietary needs, leaving women and girls with inadequate nutrition (Kaur, Kaur &Walia, 2020). This contributes to higher rates of malnutrition, micronutrient deficiencies, and stunting among females, especially in rural and disadvantaged communities (Tiwari, 2013). Policies aimed at promoting gender equity and empowering women to access nutritious foods and dietary education are essential for mitigating these nutritional disparities and improving overall health outcomes.

Gender Inequality and Mental Health

Gender disparities significantly impact the mental health of women in India, affecting psychological well-being, access to mental health services, and social support networks. Societal norms and gender roles restrict women's autonomy and decision-making power, contributing to stress, anxiety, and depression (Chandra & Satyanarayana, 2010). Limited access to mental health services and stigma surrounding mental illness further exacerbate mental health challenges among women, particularly those facing economic and social marginalization (Ram, Strohschein& Gaur, 2014). Strengthening mental health resources, community support systems, and advocacy for gender-sensitive mental health policies are essential for addressing these disparities and promoting women mental well-being. The summary of the above is given in Table-3.

Table-3

S. No.	Year	Research topic
1	2010	“Gender disadvantage and common mental disorders in women” (Chandra & Satyanarayana, 2010)
2	2013	“Inequity in India: the case of maternal and reproductive health” (Sanneving et al., 2013)
3	2013	“Gender inequality in terms of health and nutrition in India: Evidence from national family health survey-3” (Tiwari, 2013))
4	2014	“Gender socialization: Differences between male and female youth in India and associations with mental health” (Ram, Strohschein& Gaur)
5	2017	“Women at risk: Gender inequality and maternal health” (Banda et al., 2017)
6	2020	“Exploring gender disparity in nutritional status and dietary intake of adolescents in Uttarkashi” (Kaur, Kaur &Walia, 2020)

Impact of Access to Healthcare Services and Nutritional Status of Females in India

Access to healthcare services is a critical determinant of nutritional status among females in India, influencing dietary intake, nutritional counselling, and overall health outcomes. This comprehensive review synthesizes the literature on how access to healthcare services impacts nutritional status, highlighting key findings and implications.

Healthcare Services and Nutritional Counselling

Access to healthcare services facilitates nutritional counselling and education, essential for improving dietary practices and nutritional status among females in India. Healthcare providers play a pivotal role in promoting healthy eating habits, addressing dietary deficiencies, and providing crucial micronutrient supplementation, particularly during pregnancy and lactation (Gogoi, Unisa &Prusty, 2014). Effective nutritional interventions through healthcare settings can significantly improve dietary diversity and micronutrient intake, contributing to better overall health outcomes among women.

Maternal and Child Health Services

Maternal and child health services are crucial for improving nutritional outcomes among females in India. Comprehensive prenatal care, supplementation with essential nutrients like iron and folic acid, and postnatal support play vital roles in combating maternal malnutrition and reducing the risk of adverse birth outcomes (Yadav & Jena 2022). However, disparities in access to these services due to geographic barriers, economic constraints, and cultural factors perpetuate nutritional deficiencies among vulnerable populations (Gupta & Dasgupta, 2019). Strengthening maternal healthcare services and integrating nutritional interventions can mitigate these disparities and improve maternal and child health outcomes.

Socioeconomic Factors and Access Barriers

Socioeconomic disparities significantly impact access to healthcare services and nutritional status among females in India. Women from lower socioeconomic backgrounds face multifaceted barriers to healthcare access, including limited financial resources, lack of health insurance, and inadequate healthcare infrastructure (Raval, 2023). These barriers exacerbate nutritional deficiencies and contribute to disparities in health outcomes, highlighting the urgent need for targeted interventions to address social determinants of health.

Policy Implications and Interventions

Addressing barriers to healthcare access through policy interventions and healthcare reforms is essential for improving nutritional status among females in India. Policy efforts should focus on enhancing the availability, affordability, and quality of healthcare services, particularly in rural and marginalized communities (Kamalapur & Reddy, 2013). Integrating nutrition education into primary healthcare services, expanding community-based healthcare initiatives, and advocating for women's health rights are crucial steps towards achieving equitable access to nutritional services and improving overall health outcomes. The summary of the above is given in Table 4.

Table-4

S. No.	Year	Research topic
1	2004	"India mental health country profile" (Khandelwal et al., 2004) S. K., Jhingan, H. P., Ramesh, S., Gupta, R. K., & Srivastava, V. K.)
2	2012	"Mental health concerns for Indian women" (Basu, 2012)
3	2013	"Women health in India: An analysis" (Kamalapur & Reddy, 2013)
4	2014	"Utilization of maternal health care services and reproductive health complications in Assam, India" (Gogoi, Unisa & Prusty, 2014)
5	2022	"Explaining changing patterns and inequalities in maternal healthcare services utilization in India" (Yadav & Jena, 2022)
6	2023	"Gender Inequality and Impact on the Right to Access to Health Care Services and Nutrition of Women". (Raval, 2023)

Counselling as a strategy for improved health status

Recent reports from the National Health & Family Survey, the United Nations International Children's Emergency Fund (UNICEF), and the World Health Organization (WHO) have highlighted the alarmingly high rates of malnutrition among adolescent girls, pregnant and lactating women, and children in India. Factors

contributing to this widespread malnutrition include maternal nutritional status, lactation behavior, women's education and sanitation (Narayan, John, & Ramadas, 2019).

Proper nutrition enhances individual productivity and reduces medical treatment costs that might otherwise be incurred. Nevertheless, India's unsatisfactory record in female, infant and child nutrition indicates an urgent need for action, especially if the Sustainable Development Goals (SDGs) are to be met (Rampal & Swain, 2019). Malnutrition primarily results from the poor distribution of food resources at both global and household levels. Micronutrient deficiencies are most common in areas plagued by poverty, environmental deprivation and social disparity (Lorch, 2001).

Studies have shown that nutrition education and counselling are significantly associated with increased weight velocity among girls and improved feeding behaviours among both boys and girls (Kilaru, Griffiths, Ganapathy, & Shanti, 2005). The Adolescent Girls' Anaemia Control Programme in India is an exemplary knowledge-based approach that successfully scales up evidence-based public health nutrition interventions. This program highlights how controlling anemia in adolescent girls can create a platform for intersectoral convergence among government departments and partners, providing services and support to empower adolescent girls, reduce gender and social inequities, and break the intergenerational cycle of undernutrition and deprivation (Aguayo, Paintal, & Singh, 2013).

Effective interventions to combat malnutrition include awareness generation and behavior change at individual, family and community levels, focusing on critical life cycle periods such as infancy, adolescence, pregnancy and lactation (Chaudhuri, 2002). Programmatic platforms must recognize the diversity of malnutrition epidemiology in India and choose appropriate implementation designs. Given the prevalence of chronic malnutrition, interventions must address food security, healthcare, agriculture, water and sanitation, livelihoods and women's empowerment. Community-based malnutrition treatment and prevention programs should complement treatment with socioeconomic and preventive interventions, with limited expansion of nutrition rehabilitation centers to high-wasting areas. Improving the Continuum of Care is vital to making both hospital and community-based models effective (Dasgupta, Sinha, & Yumnam, 2014).

Considerable progress has been made with various large-scale interventions and the evidence supporting the effectiveness of nutrition interventions and delivery strategies has grown. A comprehensive update of interventions addressing undernutrition and micronutrient deficiencies in women and children, using standard methods to assess new evidence for delivery platforms, underscores the importance of continued investment in nutrition-specific interventions. Engaging communities and reaching the most at-risk poor segments of the population can significantly reduce maternal and child undernutrition and micronutrient deficiencies (Bhutta et al., 2013). The summary of the above is given in Table-5

Table 5

S.No	Year	Research Topic
1	2002	“CINI’s approaches to intervention: An innovative strategy to combat malnutrition in India” (Chaudhuri, 2002).
2	2005	“Community-based nutrition education for improving infant growth in rural Karnataka” (Kilaru et al., 2005)
3	2013	“The Adolescent Girls’ Anaemia Control Programme: a decade of programming experience to break the inter-generational cycle of malnutrition in India” (Aguayo, Paintal& Singh, 2013).
4	2013	“Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?” (Bhutta, et al., 2013).
5	2014	“Programmatic response to malnutrition in India: room for more than one elephant?” (Dasgupta, Sinha &Yumnam, 2014).
6	2019	“Agriculture and Female Malnutrition in India. In Hunger and Malnutrition as Major Challenges of the 21st Century” (Rampal& Swain, 2019).

Findings

The socioeconomic context significantly influences the health outcomes of rural women in India, with access to healthcare services, education, gender inequality and income, playing pivotal roles. Access to healthcare services is fundamental, affecting dietary intake, providing nutritional counselling and impacting maternal and child health outcomes. Rural women often face barriers such as inadequate healthcare infrastructure, long distances to healthcare facilities, and lack of healthcare professionals. Comprehensive strategies, including policy reforms and community-based interventions, are essential to overcome these barriers and ensure equitable healthcare delivery. Enhancing access to quality healthcare services and integrating nutritional interventions can mitigate disparities, resulting in improved health and well-being for women. Implementing mobile health clinics, telemedicine and community health worker programs are practical approaches to overcoming these challenges. Education emerges as a critical determinant of health outcomes, impacting maternal health, nutritional status and mental well-being by empowering women with knowledge and skills. Educated women are more likely to make informed decisions about their health, seek healthcare services and adopt healthier lifestyles. Policies and interventions aimed at improving educational opportunities for rural women are essential for reducing health disparities and promoting overall well-being. Enhancing educational infrastructure, providing scholarships and implementing vocational training programs are crucial steps in this direction. Education serves as a powerful tool for achieving sustainable development goals by enabling women to break the cycle of poverty and improve their health outcomes.

Gender inequality remains a critical determinant, influencing maternal health, nutritional status and mental well-being by limiting women autonomy, decision-making power and access to resources. Comprehensive strategies are needed to address gender disparities through policy reforms, community empowerment initiatives and educational campaigns. Promoting gender equity involves challenging discriminatory practices, enhancing women access to healthcare services and ensuring their participation in decision-making processes. Empowering women and fostering gender-sensitive policies are essential for mitigating the adverse effects of gender inequality on women health and achieving sustainable development goals. Programs that focus on raising awareness about gender equality, providing legal support for women rights and encouraging male involvement in promoting gender equity are vital.

Income also plays a multifaceted role, influencing maternal health, nutritional status and mental well-being by determining access to healthcare services, nutritious foods and other essential resources. Addressing income disparities through targeted policies and interventions is essential for improving overall health outcomes and achieving sustainable development goals. Enhancing economic opportunities, expanding social safety nets and integrating health equity into policy frameworks are critical strategies to promote women health and well-being across socioeconomic strata. Initiatives such as microfinance programs, income-generating activities, and social protection schemes can provide financial stability and improve health outcomes for rural women.

Addressing barriers to healthcare access, improving educational opportunities, promoting gender equity and reducing income disparities are crucial for enhancing the health and well-being of rural women. Comprehensive strategies that integrate policy reforms, community-based interventions and educational campaigns are essential for achieving sustainable development goals and ensuring equitable health outcomes. By adopting a multifaceted approach, India can mitigate health disparities and promote a healthier future for its rural female population.

Among the methods of fighting malnutrition such as improving food security (Pingali, (2012), micronutrient supplementation (Bhutta et al., 2008), Routine health check and treatment of malnutrition (Ashworth et al., 2004) etc., counselling (Bhutta et al., 2013) has emerges as one of the significant strategies to fight malnutrition. This was realized because in many cases it was found that though females were eating well and had appropriate BMI yet they were anemic which showed that they lacked the correct knowledge of nutrition for which counselling would prove to be the most appropriate. Moreover, it was found that there are limited review articles pertaining to this method indicating that not many studies have been done in this direction. Also, most of the studies concentrate on child malnutrition and maternal health. Not much has been studied about the health status of females at all stages of life.

Conclusion

The study underscores the critical influence of socioeconomic context on the health outcomes of rural women in India. Factors such as access to healthcare services, education, gender inequality and income disparities significantly shape women's health and well-being (Moss,2002). Addressing these determinants necessitates comprehensive strategies. Improving healthcare access through policy reforms and community-based interventions can dismantle barriers and ensure fair healthcare delivery. Integrating nutritional interventions via mobile health clinics, telemedicine, and community health worker programs holds promise for enhancing maternal and child health outcomes. Education emerges as pivotal, empowering women with knowledge and skills that foster better health decisions and lifestyles, thereby aiding in breaking the cycle of poverty. Combatting gender inequality is crucial, demanding robust policies, community empowerment initiatives and educational campaigns to promote gender equity (Östlin et al, 2006). Programs that raise awareness and provide legal support for women's rights are essential for mitigating the detrimental effects of gender disparities on women's health. Addressing income disparities through targeted interventions like microfinance, income-generating activities, and social protection schemes is also vital for improving overall health outcomes and advancing sustainable development goals. By adopting this multifaceted approach encompassing policy reforms, community interventions and educational initiatives, India can effectively reduce health disparities and foster a healthier future for rural women, thereby ensuring equitable health outcomes and sustainable development(Jana, 2023)

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