

Anaemia and Women's Productivity in Karnataka: Implications for Economic Development

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Abstract

Anaemia is a major public health issue in Karnataka, particularly among women, affecting their productivity and overall economic contributions. This study examines the impact of anaemia on women's productivity and its implications for economic development. Secondary source of data has been used from National Family Health Survey NFHS-3 to NFHS-5, 2005-2021), The study explores prevalence rates, contributing factors, and economic consequences. Findings suggest that anaemia significantly hampers women's work efficiency, educational attainment, and overall economic participation. Policy recommendations include improved nutritional interventions, enhanced healthcare access, and targeted economic policies to mitigate anaemia's impact.

Keywords: Anaemia, Women's Productivity, Karnataka, Economic Development, Health.

Introduction

Anaemia, primarily caused by iron deficiency, remains a pressing health issue in India, particularly among women of reproductive age. Karnataka, a state with significant rural and urban economic disparities, has reported high anaemia prevalence among women, influencing their ability to contribute effectively to the workforce. Reduced physical and cognitive capacities due to anaemia affect employment rates, income levels, and overall economic growth. Addressing anaemia is crucial for Karnataka's socio-economic progress, as women's health directly correlates with labour productivity and economic development.

Objectives of the Study

1. To Examine the Prevalence of Anaemia Among Women in Karnataka.
2. To Analyse the Impact of Anaemia on Women's Productivity and Economic Contributions.
3. To Identify the Socio-Economic Factors Influencing Anaemia Among Women.
4. To Explore Policy Measures to Mitigate Anaemia's Economic Impact.

Literature Review

The National Family Health Survey-3 (NFHS-3) (2005-06) reported that 52% of women in Karnataka suffered from anaemia, with higher prevalence in rural areas due to inadequate dietary intake and lack of

healthcare accessibility.

Balarajan et al. (2008) explored the role of socio-economic disparities in anaemia prevalence, concluding that poverty and lack of education significantly influenced nutritional deficiencies.

Kaur et al. (2012) identified anaemia as a major factor reducing women's productivity in both agricultural and industrial sectors. The study also found that the National Iron Plus Initiative (2013) helped in reducing anaemia prevalence but faced implementation challenges.

Seshadri et al. (2014) studied the effects of iron deficiency on cognitive function and academic performance, suggesting that anaemia in adolescent girls had long-term economic repercussions.

A study by Rao and Swaminathan (2016) examined the dietary patterns of women in Karnataka and their relationship with anaemia. They found that dietary diversity significantly influenced haemoglobin levels. NFHS-4 (2015-16) data supported these findings, indicating a marginal improvement in anaemia prevalence but continued challenges in rural health interventions.

IIPS (2018) published data on anaemia trends, revealing urban-rural disparities and highlighting policy gaps in tackling nutritional deficiencies. A study by Gupta et al. (2018) examined the economic impact of anaemia, estimating that reduced work capacity resulted in annual losses of 1-2% of GDP.

WHO (2019) reported anaemia as a leading cause of maternal mortality in India, emphasizing its economic burden due to increased healthcare costs and lost productivity. Mishra et al. (2019) conducted a meta-analysis on anaemia prevention strategies, recommending large-scale fortification programs. The NFHS-5 (2019-20) survey showed anaemia prevalence in Karnataka at 47.8%, reinforcing the need for improved interventions. Srivastava and Mehta (2020) explored anaemia's impact on women's participation in the workforce, showing a correlation between high anaemia rates and declining female labour force participation. NITI Aayog (2021) suggested integrating anaemia control with employment and livelihood programs. Singh et al. (2021) identified deficiencies in anaemia intervention strategies and suggested localized, community-driven approaches.

UNDP (2022) examined the role of gender inequality in anaemia prevalence, linking poor healthcare access with socio-economic disadvantages. ICMR (2023) assessed the effectiveness of anaemia control programs in Karnataka, finding significant gaps in outreach and monitoring mechanisms. WHO (2024) evaluated food fortification and anemia reduction, recommending targeted nutrition programs for vulnerable populations in Karnataka.

Methodology

This study is based on secondary data collected from the National Family Health Survey (NFHS-3 to NFHS-5, 2005-2021), reports from the Government of India, , academic journals, and policy papers. The methodology involves a comprehensive review of statistical trends, policy effectiveness, and economic correlations to assess the impact of anaemia on women's productivity in Karnataka. The study explores a quantitative approach to analyse the prevalence and socio-economic implications of anaemia. Statistical data from NFHS reports provide insight into historical trends in anaemia rates among women in both rural and urban Karnataka. The NHM reports and government policy documents are examined to evaluate the effectiveness of various health and nutrition programs aimed at reducing anaemia prevalence.

Discussion and Analysis

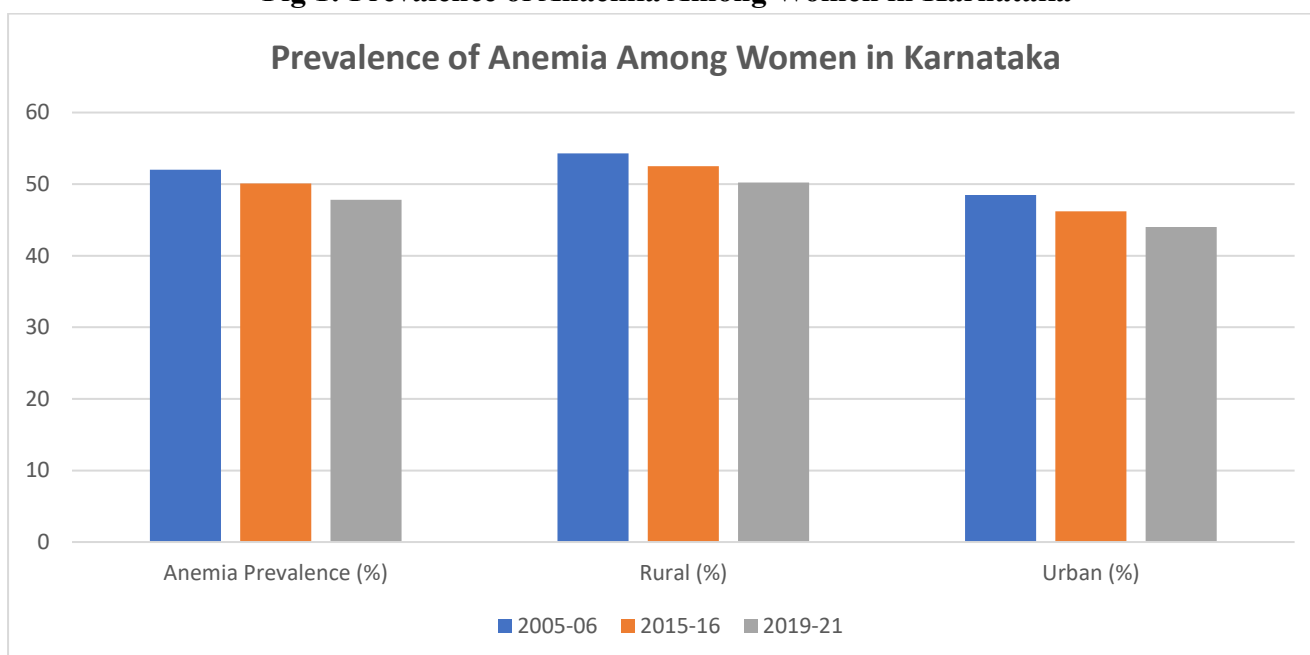
Table 1: Prevalence of Anaemia Among Women in Karnataka (in Percentages)

Year	Anaemia Prevalence (%)	Rural (%)	Urban (%)
2005-06	52	54.3	48.5
2015-16	50.1	52.5	46.2
2019-21	47.8	50.2	44

Source: National Family Health Survey (2005-2021)

Above the data gathered from the National Family Health Surveys (NFHS-3,4,5) shows a slow but steady decline in anaemia prevalence among women in Karnataka over the past 15 years. However, the rural-urban disparity remains pronounced, with rural women consistently exhibiting higher prevalence rates. In 2005-06, more than half of Karnataka’s women were anaemic (52%), with rural areas facing a significantly higher burden (54.3%) compared to urban areas (48.5%), largely due to inadequate healthcare access, lower dietary diversity, and socio-economic disparities. A decade later, in 2015-16, anaemia prevalence slightly declined to 50.1%, but rural women continued to be disproportionately affected (52.5%). By 2019-20, the prevalence further reduced to 47.8%, with urban women experiencing a greater improvement (44.0%) than their rural counterparts (50.2%). The slow reduction in anaemia prevalence highlights the limitations of existing nutritional programs and healthcare interventions. Although government initiatives such as the Anaemia Mukht Bharat campaign and food fortification efforts have contributed to these marginal improvements, the persistent high rates in rural areas indicate gaps in policy implementation and the need for targeted interventions that address socio-economic determinants, dietary habits, and healthcare access.

Fig 1: Prevalence of Anaemia Among Women in Karnataka



Source: Table 1.

Major Findings

- Despite a decline, anaemia remains prevalent among Karnataka's women, especially in rural areas.
- Anaemia significantly impacts women's productivity, leading to economic losses.
- Poor dietary intake, healthcare accessibility, and socio-economic conditions contribute to high anaemia rates.
- Government programs have made progress, but further targeted interventions are required.

Conclusion

Anaemia among women in Karnataka is a persistent public health challenge with significant economic implications. The data shows a gradual decline in prevalence, the rate of progress remains slow, particularly in rural areas. Anaemia directly impacts women's productivity by reducing physical endurance, cognitive function, and workforce participation, ultimately affecting household income and economic growth. To mitigate the economic and health burden of anaemia, a multi-faceted approach is necessary. Strengthening nutritional interventions through food fortification, iron supplementation, and dietary diversification is crucial. Additionally, improving healthcare access, particularly in rural areas, and integrating anaemia control strategies with economic and employment programs can yield significant benefits. Long-term solutions must also include community-driven awareness programs and enhanced monitoring and evaluation mechanisms to ensure effective policy implementation. Addressing anaemia comprehensively will not only improve women's health but also contribute to Karnataka's economic development by increasing labour productivity and workforce participation.

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