Nutritional Status and Health Disorders Among Urban Working Women in India: A Decade of Evidence (2014–2024)

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***Abstract*—The rapid pace of urbanization and evolving work environments have considerably impacted the nutritional well-being of women in India. Women in the workforce, especially those aged 30 to 60 years, encounter various health issues due to factors like job-related stress, a sedentary lifestyle, and poor dietary habits. This review compiles findings from the years 2014 to 2024, concentrating on the nutritional health and related disorders among urban working women in India. A thorough search was performed using databases such as PubMed, Scopus, Google Scholar, and INFLIBNET with pertinent keywords. Studies that fulfilled the inclusion criteria (urban environment, women aged 30-60 years, employed for at least 6 months) were analyzed in detail. The results reveal a dual challenge of malnutrition: under nutrition characterized by anemia and micronutrient deficiencies, alongside over nutrition leading to obesity and associated non-communicable diseases. The prevalence of anemia varied between 30% and 55% in different studies, while the rates of obesity and overweight were found to be between 25% and 40% among respondents. Elevated incidence of diabetes, hypertension, and musculoskeletal issues was also noted. This review highlights the critical need for specific interventions, workplace wellness initiatives, and policy-driven efforts to enhance the nutritional well-being of working women. Upcoming research should concentrate on longitudinal studies and interventions that combine aspects of diet, physical activity, and mental health.**

***Index Terms*—Urban working women, nutritional status, India, health disorders, Anemia, Obesity, Non-communicable diseases**

I. INTRODUCTION

Urbanization, economic development, and changing socio-cultural patterns in India have significantly influenced the nutritional status and health profile of women, particularly those engaged in paid employment. The shift toward urban living has altered dietary behaviours, physical activity patterns, and occupational structures. Urban working women aged 30–60 years represent a growing demographic contributing to economic productivity and household well-being. However, they face health challenges due to time constraints, irregular meals, and dependence on convenience foods (Rani., 2020).

Nutritional status reflects the balance between nutrient intake and physiological needs. Among working women, this balance is often disrupted, leading to both deficiencies and excess intake. As a result, conditions such as anaemia, obesity, diabetes, hypertension, osteoporosis, and PCOS are increasingly reported. Despite multiple individual studies, a consolidated review focusing on this group is limited. Therefore, this review synthesizes evidence from 2014–2024.

II. REVIEW OF LITERATURE

1. Nutritional status of urban working women

Nutritional status is a key indicator of overall health, particularly among working women who manage both professional and household responsibilities. Various studies have assessed nutritional status using anthropometric measures such as Body Mass Index (BMI), along with dietary and biochemical assessments (Iqbal., 2023). Evidence from urban regions indicates an increasing trend toward overweight and obesity among working women. For instance, studies conducted in cities like Varanasi have reported BMI levels approaching or exceeding the overweight category. This trend reflects changing lifestyle patterns and reduced energy expenditure.

At the same time, the coexistence of undernutrition and over nutrition has been widely documented. Research among urban Anganwadi workers in Haryana showed a high proportion of overweight and obese individuals despite having basic nutritional awareness, highlighting a gap between knowledge and practice. These findings suggest that occupational and environmental factors play a crucial role in shaping nutritional outcomes.

2. Dietary Patterns and Food Habits

Dietary behaviour is a major determinant of nutritional status. Urban working women often face time limitations that influence their food choices and meal patterns. Studies consistently report irregular eating habits, with breakfast skipping being particularly common. Research from urban Varanasi revealed a high dependence on convenient and energy-dense foods, along with insufficient consumption of fruits and vegetables. Although awareness of balanced diets exists, practical constraints such as time availability and accessibility significantly affect actual food intake (Trivedi et al., 2025). Low dietary diversity is another concern, with diets predominantly based on cereals and fats, while intake of micronutrient-rich foods like fruits, green leafy vegetables, and pulses remains inadequate. Such patterns contribute to both nutrient deficiencies and increased risk of chronic diseases.

3. Lifestyle Factors Affecting Nutritional Status

Lifestyle-related factors significantly influence the nutritional health of urban working women. Many women are engaged in occupations that involve prolonged sitting and limited physical movement, contributing to reduced energy expenditure.

High levels of occupational stress have also been reported, which can adversely affect eating behaviour and metabolic health. Irregular meal timings, emotional eating, and inadequate rest are common issues observed in this population. Sleep disturbances and extended working hours further compound these effects. Studies examining cardio metabolic risk have demonstrated a clear association between these factors and increased prevalence of obesity, hypertension, and related disorders. These findings emphasize the need for lifestyle modifications alongside dietary improvements (Yagnik et al., 2016).

4. Common Health Problems among Urban Working Women

Urban working women face a wide range of nutrition-related health problems. Anaemia remains one of the most prevalent conditions, largely due to insufficient intake of iron-rich foods and poor dietary absorption.

In addition, overweight and obesity are emerging as major public health concerns. The simultaneous presence of undernutrition and overnutrition reflects the “dual burden of malnutrition.” Furthermore, there is a growing incidence of non-communicable diseases such as diabetes, cardiovascular disorders, and thyroid dysfunction. These conditions are closely linked to dietary imbalances, physical inactivity, and stress-related factors (Gupta et al., 2011).

5. Impact of Work and Socio-economic Factors

Employment conditions and socio-economic status play a significant role in shaping nutritional outcomes. Working women often experience time constraints that limit their ability to maintain regular and balanced meals. Higher income levels may improve access to a variety of foods but can also increase consumption of processed and calorie-dense items. Conversely, women from lower socio-economic backgrounds may face inadequate nutrient intake due to financial limitations. Additionally, the dual responsibility of work and household management often reduces the time available for self-care, including proper nutrition and physical activity. This imbalance contributes to compromised health and nutritional status.

A. Objectives

1. To assess the nutritional status of urban working women in India over the past decade (2014–2024).
2. To analyse the prevalence of associated health disorders such as anaemia, obesity, diabetes, and hypertension in urban working women.
3. To identify research gaps and propose recommendations for policy and practice.

B. Methodology

The present study is a narrative review which is aimed to synthesize existing literature on the nutritional status and health disorders among urban working women in India over a period of ten years (2014-2024) involved in various occupations. The review focuses on identifying patterns, trends and determinants related to nutrition and associated health outcomes in this population group.

C. Data Sources

Secondary data for the review were collected from various electronic databases and reliable sources including; Google Scholar, PubMed, ResearchGate, Science Direct etc.

These Databases were selected to ensure comprehensive coverage of both national and international research studies relevant to the topic.

D. Search Strategy

A systematic search of literature was conducted using a combination of keyword. The main search terms included: "urban women," "working women," "nutritional status," "India," "anaemia," "obesity," "lifestyle disorders," "obesity and lifestyle diseases in urban women." Boolean operators (AND/OR) were applied to combine search terms.

E. Inclusion Criteria

The following criteria were used to select studies for the review:

- Studies published between 2014–2024
- Studies focusing on urban women, particularly working or employed women
- Research articles addressing nutritional status, dietary habits or health disorders.
- Female participants aged 30–60 years
- Participants engaged in employment for at least 6 months.

F. Exclusion Criteria

- Studies on adolescents, rural women, pregnant or lactating mothers
- Non-Indian studies
- Articles not directly related to nutrition or health outcomes
- Non-peer-reviewed sources, editorials and opinion papers.

III. RESULTS AND REVIEW FINDINGS

1. Nutritional Status of Urban Working Women

The findings indicate a dual burden of malnutrition. Overweight and obesity prevalence ranges from 25%–40%, mainly due to sedentary work and low physical activity.

Micronutrient deficiencies are widespread. Anemia affects 30%–55% of women. Vitamin D deficiency (up to 70%), along with calcium and B12 deficiencies, is also common.

Dietary patterns show that over 45% of women skip meals, particularly breakfast, and rely on processed foods with low fruit and vegetable intake.

2. Prevalence of Health Disorders

Non-communicable diseases are increasingly common. Diabetes affects 8–12%, while hypertension affects 15–20% of women.

Reproductive issues such as PCOS are linked to obesity and poor diet. Musculoskeletal disorders (10–15%) are associated with calcium and vitamin deficiencies.

Mental health issues such as stress and anxiety further contribute to poor dietary habits and health outcomes.

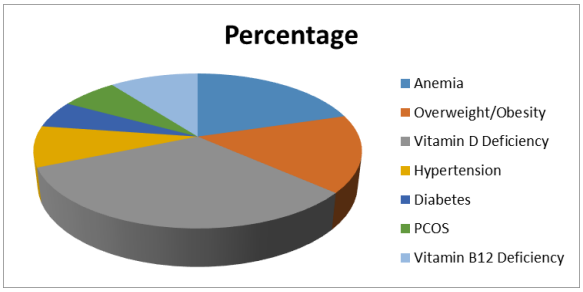

Table 1- Prevalence of Nutritional and Health Disorders among Urban Working Women (2014–2024)

3. Research Gaps and Recommendations

There is a lack of longitudinal studies and integrated research combining dietary, biochemical, and lifestyle factors. Workplace interventions are insufficiently studied. Mental health and nutrition relationships are also underexplored.

Table 1: Summary of Selected Studies on Nutritional Status of Urban Working Women in India (2014–2024)

Author & Year	Sample Size & Location	Age Group	Key Findings
Sharma et al., 2015	420, Delhi	30–55 yrs	38% overweight/obese, 42% anemic
Nair & Thomas, 2017	300, Bengaluru	25–60 yrs	Vitamin D deficiency in 68% of women
Gupta et al., 2018	500, Lucknow	30–50 yrs	High prevalence of anemia (51%), poor dietary diversity
Rani et al., 2020	275, Mumbai	30–45 yrs	29% obesity, 17% hypertension, irregular meals common
Singh & Verma, 2021	310, Chandigarh	35–60 yrs	Sedentary lifestyle linked with 34% obesity and 12% diabetes
Iqbal et al., 2023	260, Hyderabad	30–55 yrs	PCOS in 14% of women, obesity and stress strong predictors
Patel et al., 2024	480, Ahmedabad	30–60 yrs	Anemia (36%), hypertension (18%), Vitamin B12 deficiency (22%)

IV. DISCUSSION

The review highlights that urban working women in India face a dual burden of malnutrition. On one side, micronutrient deficiencies such as anaemia, Vitamin D, and Vitamin B12 remain widespread due to irregular diets and poor food diversity. On the other side, over nutrition-related disorders such as overweight, obesity, diabetes, and hypertension are rapidly rising due to sedentary lifestyles, stress, and poor dietary practices.

These findings are consistent with national surveys such as NFHS-5, which documented anemia in over 53% of women in India, including those in urban areas. However, unlike rural women who mainly face under nutrition, urban working women are more prone to obesity and lifestyle disorders due to reduced physical activity and high-calorie diets.

A. Work and Lifestyle Impact:

The occupational structure of urban women long working hours, irregular shifts, and work-life imbalance emerges as a major determinant of poor nutritional practices. Women often skip meals or rely on fast food, leading to nutrient deficiencies. Stress-induced eating further contributes to obesity and metabolic syndrome.

B. Regional Variation:

Although the studies reviewed cover different parts of India, consistent patterns emerge. Northern states (Delhi, Lucknow and Chandigarh) show high rates of anaemia, while southern cities (Bengaluru, Hyderabad) report more obesity and PCOS cases. These variations reflect regional dietary habits, urbanization levels, and work culture.

Comparison with Global Trends: Globally, studies have shown similar challenges among working women in urban environments. However, in developed countries, obesity and cardiovascular diseases dominate, while in India, the coexistence of anaemia and obesity is more pronounced reflecting India's unique "nutritional transition."

C. Research Gaps Identified:

1. Lack of longitudinal studies to track changes in nutritional status over time.
2. Few studies integrate biochemical indicators with dietary and lifestyle assessments.
3. Limited focus on mental health-nutrition interactions among working women.
4. Insufficient evaluation of workplace nutrition and wellness programs in India.

D. Policy and Practice Implications:

1. Workplace interventions such as healthy canteens, flexible meal breaks, and yoga/fitness programs can improve health outcomes.
2. Public health policies should target urban women with tailored programs addressing anemia, obesity, and NCDs.
3. Awareness campaigns are needed to encourage healthy eating, stress management, and regular physical activity among working women.

V. CONCLUSION

This review of literature from 2014–2024 indicates that the nutritional status of urban working women in India is a growing public health concern. High rates of anaemia, micronutrient deficiencies, overweight, obesity, diabetes, hypertension, and reproductive health issues such as PCOS were consistently

reported. The evidence underscores that urban working women face a dual nutritional challenge: persisting under nutrition alongside emerging over nutrition and NCDs.

Addressing this requires multi-dimensional strategies, including nutrition education, workplace wellness initiatives, and policy-level interventions tailored to the needs of employed women. Future research should emphasize longitudinal and intervention-based studies that integrate diet, physical activity, and mental health. Improving the nutritional health of working women is not only essential for their well-being but also for sustaining the productivity and health of future generations.

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