



## To Study the Nutritional Status of Working and Non-Working Women

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### Abstract

The primary objective of the study was to assess the socio-economic status, nutritional status, and dietary patterns of working and non-working women in the Chennai district. A total of 100 women, comprising 50 working and 50 non-working women aged between 25 and 40 years, were randomly selected for the study. The findings revealed that the majority of the participants belonged to the lower-middle-class socio-economic group, and most of them were educated. The study also showed that anthropometric measurements improved after supplementation in Group 'A', indicating a positive impact on nutritional status. However, no significant changes were observed in Group 'C', suggesting the lack of nutritional improvement without intervention. Based on these findings, the study concludes that it is essential to educate both working and non-working women about the importance of proper nutrition in order to reduce the risk of nutrition-related diseases and promote better health outcomes.

**Keywords:** Nutrition status, Dietary pattern and Socio- Economic Status

### 1. Introduction

Indian women manage multiple responsibilities, balancing both family and professional roles with remarkable dedication. However, despite their significant contributions, women in India often lag behind in terms of nutritional health. According to the International Labour Organization (2014), only 13.4 percent of working Indian women are employed in regular salaried jobs, compared to 21.2% of men. This disparity not only reflects economic inequality but also highlights broader issues related to women's health and nutrition. Education, health, and nutritional status of women are crucial for improving overall quality of life and are key determinants of family well-being. [5,7] A healthy diet plays an essential role in human life by providing the necessary nutrients required for growth, development, and optimal functioning of the body. However, it has been observed that women—whether employed or not—often eat last in the family, and the food consumed may be insufficient, excessive, or nutritionally imbalanced. Numerous studies have emphasized that a family's economic condition significantly influences women's food intake. Limited financial resources restrict the ability to purchase a variety of nutritious food items [2,9]

Additionally, a woman's health is shaped not only by biological and reproductive factors but also by her workload, occupational stress, household responsibilities, nutritional knowledge, and in some cases, migration [1]. Nutritional deficiencies can lead to a range of adverse outcomes, including decreased work productivity, weakened immune function, reduced physical stamina, and diminished physical appearance, all of which directly affect an individual's quality of life [6,8].

### 2. Purpose of the Study

This study seeks to explore the various roles and responsibilities of women in relation to their nutritional habits and assess the current status of women's nutrition. It aims to identify the socio-economic, cultural, and occupational factors influencing women's dietary patterns and highlight the urgent need for nutritional awareness and intervention. [3,4]

#### 2.1. Objectives

- To examine the socio-economic status of working and non-working women in the Chennai district.
- To assess the nutritional status of working and non-working women in the Chennai district.

- To analyse the dietary patterns of working and non-working women in the Chennai district.

### 3. Methodology

A total of 100 women, comprising 50 working women and 50 non-working women aged between 25 and 40 years were randomly selected

### 4. Data Collection

Data was collected under the following heads.

- Socioeconomic survey
- Anthropometrical measurements
- Dietary Survey and
- Clinical measurements

A structured questionnaire was developed with the objectives of the study. It includes the information on respondents' age, economic status, educational background, family profile, dietary practices and nutrient intake. For anthropometric measurements, the body weight of both working and non-working women was recorded using a portable electronic weighing scale. Participants were asked to stand barefoot on the scale during measurement. Height was measured to the nearest 0.1 cm using a portable anthropometric rod, with respondents standing upright without footwear. Table 1 shows Mean Weight of Working and Nonworking Women

**Table 1 Mean Weight of Working and Nonworking Women**

Group	Weight of Working women before supplementation	Weight of Working women after supplementation	Weight of non-working women before supplementation	Weight of non-working women before supplementation	$\chi^2$
A	60 Kg	61.50 Kg	63 Kg	64.5 Kg	0.0011
B	59 Kg	60.00 Kg	62 Kg	63.01 Kg	

Table 1 represent the mean weight changes observed among working and non-working women in Groups A and C. In Group A, the mean weight of working women increased from 60.0 kg before supplementation to 61.5 kg after supplementation. Similarly, the mean weight of non-working women increased from 63.0 kg to 64.5 kg post-supplementation. In contrast, Group C, which did not receive any supplementation, showed minimal changes. The mean weight of working women in this group increased slightly from 59.0 kg to 60.0 kg after

90 days. For non-working women, the mean weight changed from 62.0 kg to 63.0 kg over the same period. The data indicate that the weight gain observed in Group A can be attributed to nutritional supplementation, whereas the minimal changes in Group C suggest that, in the absence of supplementation, weight remained largely unchanged. Thus, it was concluded that  $\chi^2=0.79$  is significant at  $p<0.05$  Table 2 shows Chest Circumferences of Working and Nonworking Women

**Table 2 Chest Circumferences of Working and Nonworking Women**

Group	Chest Circumferences of Working women before supplementation	Chest Circumferences of Working women after supplementation	Chest Circumferences of Non-Working women before supplementation	Chest Circumferences of Non-Working women before supplementation	$\chi^2$
A	72.5 cm	72.82 cm	72.75 cm	73.0 cm	0.0022
B	72.5 cm	72.05 cm	72.50 cm	72.5 cm	

The results indicate that the mean chest circumference of Group 'A' working women increased from 72.5 cm before supplementation to 72.82 cm after supplementation. In contrast, the mean chest circumference of working women in the control group (Group 'C') remained unchanged at 72.5 cm over the 90-day period. For non-working women, the mean chest circumference in Group 'A' increased from 72.75 cm to 73.00 cm following supplementation. However, in Group 'C' non-

working women, the mean chest circumference remained constant at 72.5 cm, indicating no improvement in the absence of supplementation. These findings suggest that nutritional supplementation had a positive effect on the chest circumference of women in Group 'A'. This effect was statistically significant, as indicated by  $\chi^2 = 0.79$ ,  $p < 0.05$ . Table 3 shows Mean Mid Arm Circumferences of Working and Nonworking Women

**Table 3 Mean Mid Arm Circumferences of Working and Nonworking Women**

Group	Mean mid arm Circumferences of Working women before supplementation	Mean mid arm Circumferences of Working women after supplementation	Mean mid arm Circumferences of Non-Working women before supplementation	Mean mid arm Circumferences of Non-Working women before supplementation	$\chi^2$
A	27.0 cm	29.40 cm	27.00 cm	29.50 cm	0.79
B	26.25 cm	26.80 cm	27.25 cm	27.25 cm	

The data show that the mean mid-arm circumference of working women in Group 'A' increased from 27.0 cm before supplementation to 29.4 cm after supplementation. Similarly, non-working women in Group 'A' showed an increase in mid-arm circumference from 27.0 cm to 29.5 cm following supplementation. In contrast, the control group (Group 'C'), which did not receive any supplementation, showed minimal to no change. The mean mid-arm circumference of working women in Group 'C' increased slightly from 26.25 cm to 26.80 cm after 90 days. For non-working women in Group 'C', the measurement remained constant at 27.25 cm, indicating no significant improvement over the study period. These findings suggest that nutritional supplementation had a significant positive impact on the mid-arm circumference of both working and non-working women in Group 'A'. The result was found to be statistically significant with  $\chi^2 = 0.79$  at  $p < 0.05$ . The clinical data presented in the table highlight the presence of nutritional deficiency symptoms among working and non-working women. A greater proportion of non-working women 86 percent were clinically normal, compared to only 44 percent of

working women. Among working women, 17 percent exhibited symptoms of a rough tongue, whereas this was observed in only 10% of non-working women. Additionally, 34 percent of working women showed dullness of the face and 24 percent had white nails, in contrast to 18 percent of non-working women who reported both symptoms. Symptoms such as excessive hair fall and gum swelling were reported simultaneously by 22 percent and 20 percent of working women, respectively, while 18 percent and 10 percent of non-working women experienced the same. Furthermore, 12 percent of working women and 8 percent of non-working women showed signs of swelling in the hands and legs. These findings indicate that clinical signs of anaemia and other nutritional deficiencies were more prevalent among working women, suggesting a greater nutritional burden possibly due to higher physical and mental workload without adequate dietary support. Table 4 shows Working and Non-Working Women responsibilities of women in relation to their nutritional habits and assess the current status of women's nutrition. the mean weight of non-working women

**Table 4 Working and Non-Working Women**

Sr. No.	Symptoms Occur in Clinical Measurement	Working women		Non-working women	
		Nos.	Percentage	Nos.	Percentage
1.	Normal	22	44	43	86
2.	White nails	12	24	05	18
3.	Swelling on gums	10	20	05	10
4.	Swelling on hands and legs	06	12	04	08
5.	Swelling on body	03	06	0	0
6.	Dullness on face	19	38	25	50
7.	Easily hair falling	11	22	09	18
8.	Rough tongue	17	34	05	10

### Conclusion

Women's nutrition plays a crucial role in maintaining their own health as well as the well-being of their families. Healthy women are better able to fulfil multiple roles, including bearing healthy children and ensuring good nutrition for family members, which directly impacts the nutritional status of the entire household. However, it is often observed that women, who are primarily responsible for managing the health and nutrition of their families, tend to neglect their own nutritional needs. Therefore, increasing awareness about healthy food habits is essential for both working and non-working women. This study highlights the need for targeted educational programs to inform women about the importance of proper nutrition and nutrient intake. Such initiatives can empower women to improve their own health and reduce the risk of nutrition-related diseases.

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