

# An Analysis the importance of Nutritional and Health Status of Lactating Mothers

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**Abstract-** A woman's nutritional state is especially crucial because the harmful impacts of malnutrition are passed down through her children and grandchildren. Lactating moms have unique dietary requirements due to the increased caloric and nutrient intake necessary for breastfeeding. Lactating women should be wisely given nutritional supplements since they have the potential to boost the infant's nutrition intake by increasing the efficiency of lactation. Lactation is the process by which a mother produces and secretes milk from her breasts for her newborn to consume. 10 randomly selected villages from Vidarbha will participate in this study. For the area-wise analysis of the samples, we will select 135 lactating moms from rural areas and 115 from urban areas, since they all reside in both types of locations. The socioeconomic status, place of area, and level of education of the women will be used to stratify the selection of 250 lactating moms. The age of the mothers will range from fifteen days to four months. In order to assess their nutritional status and overall health, all 250 women who choose to participate in the study are asked to keep a 24-hour memory journal.

**Keywords-** Health, Lactating, Mothers, Nutrition Intake, dietary

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## INTRODUCTION

Under nutritional considerations, lactating mothers are at the greatest risk. As a result of deeply ingrained cultural norms, women in our nation, at whatever age, appear to be the most marginalised demographic. Numerous studies have demonstrated that a mother's nutritional status and food consumption have the greatest impact on her newborn's nutritional status. One of the times when the body is under a lot of stress is during lactation, which means that more nutrition is needed. A nursing mother's diet is typically supplemented with a few particular items. Mothers' diets are given extra consideration during nursing, along with nourishing supplements. Both the production of mother's milk & recuperation from lactation-related stress are extremely important during this time. It has been discovered that the majority of rural Indian women's regular meals are deficient in both quantity & quality of nutrients. Breastfeeding women are responsible for preserving both their own and their developing child's health. During lactation, the mother provides nearly as efficient nutrition to her infant as the placenta does while also safeguarding him or her. Nutrition supplements are prudently given to nursing mothers as they may enhance lactation performance & thus improve the infant's intake of nutrition. It has been discovered that in underdeveloped nations, a mother's intake of all the nutrients is insufficient to support her growing infant's needs. The type of diet that women consume

throughout pregnancy & nursing has a direct impact on the health of the newborn as well as the success of lactation. Consequently, the food of the mother plays a crucial role during lactation.

## OBJECTIVES

1. To assess lactating women's health & nutritional status through clinical examination and anthropometric measurements.
2. To assess the lactating mothers chosen and their dietary & nutritional intake.

## METHODOLOGY

A field of study's methodologies are systematically and theoretically analysed in methodology. Methodology constitutes the fundamental and a significant component of every research project. This includes sorting of variables, independent and dependent, tools to be used for their measurement followed by the decision about the locale and sampling process. The goal of the current study is to improve the nutritional condition of lactating women in the Vidarbha district by providing interventions.

## Study location

A total of 10 villages from Vidarbha will be choose at random for this research. The 135 lactating mothers from the rural & 115 from the urban areas will be

choose for the area-wise analysis of the samples, as they reside in both urban and rural areas.

**Sample**

A stratified random sample of 250 lactating mothers, ranging in age from 15 days to 4 months, will be selected based on the women's socioeconomic status, place of residence, and level of education.

**Research tools**

A structured, semi-structured open-ended interview schedule will be developed to extract data from the sample woman & her family members regarding their background & study's aims. The primary topics of discussion during the interview schedule will be various aspects of lactating women's food habits, nutrition, & overall health.

**Data collection**

The data for this study will be collected via the survey schedule, personally interviews with a chosen group of nursing women, their families, close observation of the subjects, and conversations with the gynaecologist they will be consulting. The chosen women will have their anthropometric measurements taken in accordance with normal protocol. The nutritional intake will be ascertained by visiting their homes and employing a weighment method that will be compared with the recommended daily allowance (RDA). The dietary survey will be carried out with the assistance of an interview schedule, or food intake will be evaluated using a 24-hour approach. It will take to complete the survey of the target population, which included 250 lactating women. The survey protocol entailed travelling to Vidarbha villages using either public transportation or private automobile, given that the majority of the villages were situated 20–25 km beyond the district centre.

**RESULTS AND DISCUSSION**

Data on the selected lactating mothers broken down by SES. There were 71 low-SES, 108 middle-SES, and 71 high-SES lactating women in the sample. Table 1 shows that between the low and middle socioeconomic status groups, the majority of the lactating women (70 out of 38) lived in rural areas, while only 11 people from urban areas filled out the survey. Contrarily, just a small fraction of the high SES respondents (66 out of 100) lived in rural areas. These findings make it very evident that the majority of the lactating women who responded were from rural areas, while the majority of the respondents from the low and middle socioeconomic groups were from urban areas. Regarding the educational background of the chosen nursing mothers, it is evident that the vast majority of the 28 respondents from the lowest socioeconomic status (SES) were illiterate. Following closely behind were 18 respondents who had completed elementary school, 12 who had completed middle school, and 5 who had completed high school. Nobody from the low-SES group who filled out the

survey had completed college. Out of this sample, around 40 had only completed elementary school. Twenty people filled out the survey, and ten of them had only completed elementary school. A mere 2% of respondents were determined to be illiterate. Among the high socioeconomic status groups, those with a bachelor's degree or above made up the vast majority of responses; 19 people in this group had a high school diploma or above; and 0 people in this category had a primary school diploma or below, or were illiterate. This finding suggests that a larger proportion of respondents from lower SES were illiterate, compared to those from medium and upper SES, where the majority of respondents had completed high school and the majority of respondents with bachelor's degrees were located.

**Table 1: Demographic and SES characteristics of the sample of lactating mothers**

| S. No. | Particulars            | SES |        |      | Total Frequency |
|--------|------------------------|-----|--------|------|-----------------|
|        |                        | Low | Middle | High |                 |
| 1      | Area                   | 60  | 70     | 5    | 135             |
|        | Rural<br>urban         | 11  | 38     | 66   | 115             |
| 2      | Education              | 28  | 2      | Nil  | 30              |
|        | Non- literate          | 18  | 10     | Nil  | 28              |
|        | Primary                | 12  | 40     | Nil  | 52              |
|        | Middle School          | 5   | 46     | 19   | 60              |
|        | High School<br>College | Nil | 20     | 60   | 80              |

**Background of chosen lactation women by area**

Table 2 shows the demographics of the chosen nursing mothers broken down by region. The data clearly shows that 86 out of the 100 rural respondents belonged to middle-class families, 47 to low-class families, and only 2 to high-class families. In contrast, most urban area respondents belonged to the upper socioeconomic class; 44 were middle class, and only 7 were low socioeconomic. It is evident from these results that low-SES respondents tended to live in rural areas, whereas high-SES respondents tended to live in metropolitan areas.

**Table 2: Demographics and Area-Based Variables on the Selected Lactating Mothers**

| S. No. | Particulars   | Area        |                  | Total Frequency |
|--------|---------------|-------------|------------------|-----------------|
|        |               | Rural (135) | Urban High (115) |                 |
| 1      | SES group     | 47          | 7                | 54              |
|        | Low           | 86          | 44               | 130             |
|        | Middle        | 2           | 64               | 66              |
|        | High          | 45          | 36               | 81              |
| 2      | Education     | 28          | 5                | 33              |
|        | Non- literate | 19          | 10               | 29              |
|        | Primary       | 46          | 10               | 56              |
|        | Middle School | 36          | 25               | 61              |
|        | High School   | 6           | 65               | 71              |
|        | College       | 117         | 93               | 210             |

Regarding the respondents' level of education, it is evident that 46 out of 100 were middle school educated, 36 were high school educated, 28 had become illiterate, 19 were female, and 6 were from rural areas with a bachelor's degree or higher. The

majority of respondents in the urban region had at least a bachelor's degree, while 25 had a high school, 10 had a middle school, 10 had a primary school, and 5 were non-illiterate. All things considered, a higher percentage of urban respondents had bachelor's degrees, and only 5% were illiterate. Conversely, the majority of rural respondents had only completed middle school, and only 1% had a bachelor's degree.

**Education-based background of selected lactation mothers.**

The table 3 provides statistics on the educational background of the selected lactating mothers. As a whole, the 34 respondents from the category of people with only a primary school education were illiterate. Among the 19 responses, 10 were from the middle school level, 8 were from the high school level, and none were from the college level, indicating that they were from a low socioeconomic status. On the one hand, there were a few responses from the medium socioeconomic class who were illiterate; on the other hand, there were 18 from the college educated group; and finally, there were 34 from the middle school educated group and 46 from the high school educated group. Most of the group with a bachelor's degree or higher 61 people participated, with only a small percentage having completed high school. Only 10 people in the high SES group filled out the survey, whereas no one in the middle school, primary school, or non-literate groups did so. As a total, it can be said that a higher percentage of respondents from the low SES group were illiterate and only had a primary school education, compared to a higher percentage of respondents from the middle SES group who had completed high school and middle, and finally a higher percentage of respondents from the high SES group who had completed college. Social class rises in tandem with educational attainment. Out of the total number of respondents, 30 were illiterate, 23 had only completed elementary school, and 42 had completed middle school; nevertheless, just 10 out of the 30 who had completed high school or college were from rural areas. In contrast, there were 56 responders with a bachelor's degree or above and 35 with a high school diploma. Ten students from middle school, eight from elementary school, and six from the non-literate group all lived in metropolitan areas.

**Table 3. Demographics and educational background of the lactating women**

| S. No. | Particulars    | Education    |                |               |             |         | Total Frequency |
|--------|----------------|--------------|----------------|---------------|-------------|---------|-----------------|
|        |                | Non-literate | Primary school | Middle School | High school | College |                 |
| 1      | SES group      | 34           | 19             | 10            | 8           | Nil     | 71              |
|        | Low            | 01           | 09             | 34            | 46          | 18      | 108             |
|        | Middle<br>High | Nil          | Nil            | Nil           | 10          | 61      | 71              |
| 2      | Area           | 30           | 23             | 42            | 30          | 10      | 135             |
|        | Rural          | 6            | 8              | 10            | 35          | 56      | 115             |
|        | Urban          | 30           | 22             | 32            | 58          | 68      | 210             |

**Dietary habits of lactating mothers.**

Consumption of food by the chosen lactating mothers categorised by SES

The selected lactating women's socioeconomic level and the association between their dietary intake are shown in Table 4. It is evident from the table results that most respondents from lower socioeconomic status were used to having roti and chutney for breakfast. Even in the middle socioeconomic class, a notable pattern emerged.

Twenty people with higher socioeconomic status regularly ate poha or upama with their morning meal. Up to 25 people in the high socioeconomic status group reported drinking milk in the middle of the morning. In contrast, just 8 people in the group with the lowest socioeconomic status reported drinking milk.

Regardless of socioeconomic status, a greater proportion of women reported going without breakfast. Of the 48 respondents in the high socioeconomic status category, 48 ate chapati and dhal for lunch. Both of the other groups showed a comparable pattern. The high-SES group, on the other hand, had 10 responders who regularly ate chapati, dhal, curry, and rice. They were ingested by only four people from the low socioeconomic status group.

At dinner, 40 people from low socioeconomic status groups were seen eating roti, dhal, and subji. Even in the middle socioeconomic class, a notable pattern emerged. Among the 42 respondents from the high socioeconomic status category, 42 of them reported eating roti or chapati with milk with their meal. It was discovered that some of the participants were consuming khichadi regardless of their socioeconomic status.

To sum up, it can be concluded that the majority of the breastfeeding mothers who were selected followed a three-meal pattern. Midmorning snacks and meals were not available, despite the fact that they needed to eat frequently due to breastfeeding. Because nursing takes a toll on the mother's body composition, this is a crucial time to be pregnant.

It requires a lot of nutrients from the mother. A healthy, well-balanced diet is especially important for nursing mothers because their caloric and nutritional needs are higher than those of the general population. Women who are nursing have higher recommended dietary allowances than women who are not nursing. For the sake of both her and her children's health, proper nutrition during lactation is essential.

**Table 4 Depending on their SES, the chosen lactating mothers' dietary consumption**

| S. No. | Particulars            | SES      |              |           | Total Frequency |
|--------|------------------------|----------|--------------|-----------|-----------------|
|        |                        | Low (71) | Middle (108) | High (71) |                 |
| 1      | Breakfast              |          |              |           |                 |
|        | Tea/Milk               | Nil      | 23           | 11        | 34              |
|        | Tea with bread/biscuit | 6        | 11           | 9         | 26              |
|        | Sheera                 | 7        | 12           | 19        | 38              |
|        | Boiled egg/omlet       | 4        | 6            | 8         | 18              |
|        | Poha/Upama             | 10       | 28           | 20        | 58              |
|        | Roti chutney/subji     | 30       | 42           | 4         | 76              |
| 2      | Mid-Morning            |          |              |           |                 |
|        | Milk                   | 8        | 17           | 25        | 50              |
|        | Nil                    | 54       | 96           | 50        | 200             |
| 3      | Lunch                  |          |              |           |                 |
|        | Chapati Dal            | 18       | 54           | 48        | 120             |
|        | Chapati Cury           | Nil      | Nil          | Nil       | Nil             |
|        | Chapati dal curry rice | 4        | 6            | 10        | 20              |
|        | Roti dal               | 40       | 50           | 20        | 110             |
| 4      | Dinner                 |          |              |           |                 |
|        | Roti Chapati Milk      | 18       | 30           | 42        | 90              |
|        | Khichadi               | 10       | 17           | 8         | 35              |
|        | Roti Dal subji         | 40       | 70           | 15        | 125             |

**Dietary intake of chosen lactation mothers by area.**

The data about the correlation between the lactating women's food consumption and their living space is presented in Table 5. The bulk of respondents from rural areas typically have roti and chutney for breakfast, while fifteen of the women who took the survey also regularly ate poha or upama. Respondents from metropolitan areas had higher values in this category. In an urban setting, 23 out of the 40 women who participated in the survey reported eating sheera with their morning meal. Just six people from rural areas planned to have an omelette and boiled egg for breakfast, compared to thirteen people from metropolitan areas. In the middle of the morning, 35 women from urban areas reported drinking milk, compared to 7 from rural areas. No matter where they were staying, most people who took the survey did not eat breakfast. The majority of the 66 respondents from rural areas eat roti and chal with their lunch, whereas 55 respondents from urban areas have chapati and dhal. Lunchtime staples for most urbanites (n=9) included chapati, dhal, rice, and curry, in contrast to those in more rural areas. Because nursing is a crucial period. At this point, you should be eating healthily in accordance with the RDAs. Nonetheless, the results show that only a small percentage of respondents were eating a balanced diet according to the required daily allotment. Over half of the people surveyed reported eating roti, dhal, and subji with their evening meal. The rural areas also showed a comparable pattern. From a rural location, the bulk of the 60 respondents eat roti/chapati and milk with their dinner. The data show that most people eat three square meals a day, with very few people in rural and urban areas include snacks and mid-morning meals in their diet. Stick to plain preparations like plain dhal, milk, etc., and stay away from spicy foods. Mittal and Kakker (1989) also discovered that rural nursing women ate less fresh vegetables and fruits than their urban counterparts, therefore our findings are in line with theirs. However, breastfeeding mothers' needs

were adequately met by their consumption of milk and milk products.

**Table 5. Dietary intake of selected lactation mothers by area.**

| S. No. | Particulars            | Area        |             | Total Frequency |
|--------|------------------------|-------------|-------------|-----------------|
|        |                        | Rural (135) | Urban (115) |                 |
| 1      | Breakfast              |             |             |                 |
|        | Tea/Milk               | 18          | 12          | 30              |
|        | Tea with bread/biscuit | 14          | 17          | 31              |
|        | Sheera                 | 12          | 23          | 35              |
|        | Boiled egg/omlet       | 6           | 13          | 16              |
|        | Poha/Upama             | 27          | 35          | 62              |
|        | Roti chutney/subji     | 58          | 15          | 73              |
| 2      | Mid-Morning            |             |             |                 |
|        | Milk                   | 7           | 35          | 42              |
|        | Nil                    | 128         | 80          | 208             |
| 3      | Lunch                  |             |             |                 |
|        | Chapati Dal            | 60          | 55          | 115             |
|        | Chapati Cury           | Nil         | Nil         | Nil             |
|        | Chapati dal curry rice | 9           | 12          | 21              |
|        | Roti dal               | 66          | 48          | 114             |
|        |                        | Nil         | Nil         | Nil             |
|        |                        | 15          | 55          | 70              |
|        | 120                    | 60          | 180         |                 |
| 4      | Dinner                 |             |             |                 |
|        | Roti Chapati Milk      | 60          | 40          | 100             |
|        | Khichadi               | 32          | 10          | 42              |
|        | Roti Dal subji         | 43          | 65          | 108             |

**Dietary intake of the chosen lactating mothers based on their level of education.**

The chosen breastfeeding women's nutritional intake was analysed according to their educational level (Table 6). Regardless of their degree of education, the majority of women were observed to have a morning tea ritual. Twenty-six people from the college-educated group reported eating poha or upama for breakfast. The non-literate category was determined to be the source of roti and chutney for 16 respondents. This pattern was also observed in the group of 25 respondents who had completed middle school. While 24 people in the college-educated group drank milk in the middle of the morning, 48 people in the general population did not eat anything at all during that time. Fifty women from the college-educated group who participated in the survey reported eating chapati and dhal with their lunch. The 36 people who filled out the survey all had at least a high school diploma. Out of the non-literate group, 9 respondents were observed to be having chapati and dhal for lunch. Regardless of their level of education, the respondents were having roti/chapati and milk for dinner. Dinner consisted of roti, dhal, and subji for 17 of the respondents who were illiterate. We saw the same pattern in other categories as well. Perhaps the respondent and their family were under the impression that the baby

would be ill as a result of their frequent consumption of hot and spicy foods.

**Table 6 Education-based dietary intake of selected lactating women**

| S. No. | Particulars            | Education    |                |               |             |         | Total Freq |
|--------|------------------------|--------------|----------------|---------------|-------------|---------|------------|
|        |                        | Non-literate | Primary school | Middle school | High school | College |            |
| 1      | Breakfast              |              |                |               |             |         |            |
|        | Tea/Milk               | Nil          | Nil            | 3             | 10          | 21      | 34         |
|        | Tea with bread/biscuit | 3            | 3              | 7             | 10          | 3       | 26         |
|        | Sheera                 |              |                |               |             |         |            |
|        | Boiled egg/omlet       | 4            | 4              | 5             | 7           | 18      | 38         |
|        | Poha/Upama             | 2            | Nil            | 2             | 5           | 9       | 18         |
| 2      | Roti chutney/subji     | 5            | 4              | 7             | 16          | 26      | 58         |
|        |                        | 16           | 16             | 25            | 19          | Nil     | 76         |
|        | Mid-Morning            |              |                |               |             |         |            |
|        | Milk                   | 4            | 4              | 6             | 12          | 24      | 50         |
|        | Nil                    | 26           | 24             | 40            | 62          | 48      | 200        |
| 3      | Lunch                  |              |                |               |             |         |            |
|        | Chapati Dal            | 9            | 7              | 18            | 36          | 50      | 120        |
|        | Chapati Cury           | Nil          | Nil            | Nil           | Nil         | Nil     | Nil        |
|        | Chapati dal curry rice | 4            | Nil            | Nil           | 6           | 10      | 20         |
|        | Roti dal               | 25           | 16             | 15            | 17          | 37      | 110        |
|        |                        | Nil          | Nil            | Nil           | Nil         | Nil     | Nil        |
|        |                        | Nil          | Nil            | Nil           | 6           | 4       | 10         |
|        | 29                     | 26           | 50             | 65            | 70          | 240     |            |
| 4      | Dinner                 |              |                |               |             |         |            |
|        | Roti Chapati Milk      | 14           | 9              | 12            | 26          | 29      | 90         |
|        | Khichadi               | 4            | 4              | 8             | 10          | 9       | 35         |
|        | Roti Dal subji         | 17           | 18             | 29            | 26          | 35      | 125        |

**Nutrition of selected lactation women**

- **The nutritional health of the nursing women who were chosen based on their socioeconomic situation**

Based on their socio-economic position, Table 7 shows the nutritional status of the selected breastfeeding women. Regardless of their socioeconomic situation, a higher percentage of women had normal nutritional status, according to the table data. One quarter of the women in the lowest socioeconomic status category were underweight. A total of 88 women were determined to have a normal nutritional state, whereas only 8 women from high socioeconomic class were found to be underweight. When women's socioeconomic position rises, their nutritional status improves, and the number of underweight children ages out of the population. It might be because when one's socioeconomic status rises, their purchasing ability and the quality of their normal diet both rise.

**Table 7: Nutritional Status of SES-Selected Lactating Mothers**

| S. No | Particulars          | SES |        |      | Total frequency |
|-------|----------------------|-----|--------|------|-----------------|
|       |                      | Low | Middle | High |                 |
| 1     | Normal               | 68  | 88     | 33   | 189             |
| 2     | Underweight          | 16  | 37     | 8    | 61              |
| 3     | Severely underweight | Nil | Nil    | Nil  | Nil             |
| 4     | Over weight          | Nil | Nil    | Nil  | Nil             |

**Nutrition of selected lactation women by area**

Table 8 shows nutritional status information for the chosen lactating mothers based on their residential area. While just 17 women from urban areas were determined to be underweight, 48 responses from rural areas were. In a survey of women, 87% had normal nutritional status, with 87% of rural women

reporting the same. In conclusion, it is essential to consume all food stuffs in the recommended quantity in order to maintain nutritional status. Women in urban locations tend to keep up a healthy lifestyle. Women in rural areas were unable to keep up their nutritional status due to a lack of milk, fruits, and other veggies in their diet.

**Table 8: Nutritional condition of the lactating mothers taken to their residential area**

| S. No | Particulars          | Area        |             | Total frequency |
|-------|----------------------|-------------|-------------|-----------------|
|       |                      | Rural (135) | Urban (115) |                 |
| 1     | Normal               | 87          | 98          | 185             |
| 2     | Underweight          | 48          | 17          | 65              |
| 3     | Severely underweight | Nil         | Nil         | Nil             |
| 4     | Over weight          | Nil         | Nil         | Nil             |

**Nutritional status of chosen lactation mothers by education.**

Table 9 displays the nutritional status of the nursing mohers who were selected according to their educational level. The majority of the 24 non-literate respondents had normal nutritional status, according to the study. The groups consisting of those with intermediate, high school, and college degrees showed a comparable pattern. Nineteen women who had just completed elementary school reported being underweight. Six women from the college-educated group were found to be underweight. It follows from these findings that nutritional status improves in tandem with education level.

**Table 9: Education-based nutritional status of selected lactation women**

| S. No | Particulars          | Education    |                |               |             |         | Total frequency |
|-------|----------------------|--------------|----------------|---------------|-------------|---------|-----------------|
|       |                      | Non-literate | Primary school | Middle school | High school | College |                 |
| 1     | Normal               | 24           | 10             | 32            | 59          | 64      | 189             |
| 2     | Underweight          | 8            | 19             | 18            | 10          | 6       | 61              |
| 3     | Severely underweight | Nil          | Nil            | Nil           | Nil         | Nil     | Nil             |
| 4     | Over weight          | Nil          | Nil            | Nil           | Nil         | Nil     | Nil             |

**CONCLUSION**

Nutritional recommendations should encourage breastfeeding without placing undue constraints on women's daily lives, so it's crucial to inform lactating mothers and their families about the most well recognised differences. If mothers want to give their babies the best possible start in life by nursing, they need to be well-informed on what to feed them. Twenty to thirty ounces, or around 850 millilitres, of milk is produced daily by lactating women. The majority of breastfeeding mothers lived in urban areas, but women from lower & moderate socioeconomic backgrounds were more likely to reside in rural areas. Breastfeeding was the only feeding method used by almost all of the moms in the research, and this was true across all demographics. For reasons such as "less milk secretion," "child not growing well," and "going out for work," a few of these moms were only able to lactate their newborns partially. In the course of the study, we informed nursing mothers about the importance of a healthy diet and regular exercise. In

order to debunk preconceptions and myths about healthy eating, dietitians in the village used puppet shows, debate, role-playing, and drama to demonstrate inexpensive food preparation.

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