



## Awareness and Consumption of Millets by Women – A Study on Coimbatore city

### KEYWORDS

Millets, Awareness, Nutritious, Health Benefits.

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**ABSTRACT** Millets are amazing in their nutrition content. Each of the millet is three to five times nutritionally superior to the widely promoted rice and wheat in terms of proteins, minerals and vitamins. The millet is highly nutritious and contains important amino acids and also has several health benefits such as anti-diabetic, anti-tumorigenic, atherosclero-genic effects, and antioxidant. Millets need very little water for their production and it is not dependent on the use of synthetic fertilizer and pesticides. In spite of all these amazing qualities and capacities of millet farming system, the area under millet production and consumption has been decrease over the last five decades. In this article we analyzed the awareness and consumption of millets by women.

### INTRODUCTION

Millets are one of the oldest foods known to humans and possibly the first cereal grain to be used for domestic purpose. In India, lack of dietary diversity is one of the key factors behind malnutrition and the prevalence of non-communicable diseases such as diabetics, small millets grown as a complement to existing crops, contribute to an answer. Millets are highly nutritious, non – glutinous and not acid forming foods. Hence they are soothing and easy to digest, and contain a high amount of lecithin and are excellent for strengthening the nervous system. (Michael Raj and Shanmugam, 2013). Small Millets are one of the important food groups that had been moved out of the food basket in recent firms. While cereals provide a cheaper source of dietary calories, small millets provide vital micro nutrients like vitamin B , Calcium, Iron Folic acid and Sulphur, as well as dietary fiber making them a valuable tool in the fight against nutrition.

### HEALTH BENEFITS AND NUTRITIONAL VALUE OF MILLETS

Millets possess some of the health benefits includes to protect heart health and reduce the effects of migraines, protect from diabetes, improve digestive system, lower risk of cancer, detoxify the body, boost respiratory health, optimize immune system, increase energy levels and improve muscle and nerve health. Millets are store house of nutrition, by any nutritional parameter; millets are miles ahead of rice and wheat in terms of their mineral content, compared to rice and wheat. Each one of the millets has more fibre than rice and wheat. Finger millet has thirty times more calcium than rice. In their Iron content, foxtail and little millet are so rich that rice is nowhere in the race.

Millets Nutrient	Protein (g)	Fibre (g)	Minerals (g)	Iron (mg)	Calcium (mg)
Pearl /Kambu Millet	10.6	1.3	2.3	16.9	38
Finger/Ragi Millet	7.3	3.6	2.7	3.9	344
Foxtail/Tenai Millet	12.3	8	3.3	2.8	31

Proso/Panivaragu Millet	12.5	2.2	1.9	0.8	14
Kodo/Varagu Millet	8.3	9	2.6	0.5	27
Little/Samai Millet	7.7	7.6	1.5	9.3	17
Barnyard/Kuthiraivali Millet	11.2	10.1	4.4	15.2	11

Source: Nutritive Value of Indian Foods

### REASONS FOR DECLINE IN MILLETS

In India, production and consumption of millets are declined due to many reasons. Despite their superior nutritional qualities and climate resilience cultivation of small millets in India declined from 7.22 million hectares to 2.29 million hectares from 1961 – 2009. Michaelraj and Shanmugam (2013), harvested area and the consumption of millets in India gradually decreased in an alternative years of 2005-2008 & 2009 onwards it was increased but in the year of 2012 onwards it came to falling. Low productivity, high labour intensity, drudgery of agricultural operations and lack of alternative farm gate prices, easy availability of rice and wheat through public distribution system, inadequate investment in product development and commercialization, inadequate availability of small millets in local markets and high prices, inadequate policy support for small millets when compared to crops like rice and wheat, were the reason for decline of millets.

### REVIEW OF LITERATURE

**Gruere et al (2008)** analyzed the role of collective action in the marketing of underutilized plant species like minor millet. Due to weak demand and trading cooking knowledge, the establishment of long run market for minor millets will require sustained efforts and will likely need to target a specific, stable segment of consumers and consumer subsidies that would enhance their appeal and increase their consumer base. **Michaelraj and Shanmugam(2008)** studied the millets based cultivation and consumption in India. The study concluded that consumption and harvesting of millets are falling 2012 onwards. Hence they suggested that developmental effort should be made through

minikit demonstration, state level training programs, providing improved seeds, non-monetary inputs and research, start a massive education and promotional programs on millets and government must use its media campaign funds to take up millet promotion. Its fiber content also helps to prevent constipation and may reduce the risk of developing bowel disorders including bowel colour. **Ama-dan et al (2013)** reviewed the nutrition composition and health benefits of millets. Millets are the staple food for millions of poor people in Asia & Africa. Comparing to other cereals, millets have high carbohydrate energy content and nutritious combination of millets with other source of protein would compensate the deficiency of certain amino acids. **Gull et al (2014)** review assessed the nutritional and health attributes of finger millet and its utilization in value added foods. The minor millet contains important amino acids and also known for several health benefits such as anti-diabetic, anti-tumorigenic, atherosclero-genic effects, antioxidant. Besides this it is also used as a nourishing food for infants when malted and is regarded as wholesome food for diabetic's patients.

### STATEMENT OF THE PROBLEM

India is the biggest producer of millets in the world and millets remain a stable crop for the numerous households. Millets have been eaten for a very long time and were probably the first cultivated foods. In India people used to eat these grains in the past, but with the shift in agricultural practices and government support to rice and wheat, their eating pattern also shifted. Because of changing food processing technology of modern milling process, the grains available today are there refined. Moreover, the intake of millets have been completely vanished and it is prudential to reinforce millet consumptions, as millets are rich sources of complex carbohydrates, dietary fiber, vitamins, minerals in addition being a reserve of health beneficial phytochemicals. A consumer in fast paced environment, the focus on healthy lifestyle is a growing trend. Consumer awareness that ancient grains provide a much better nutritional balance is highly increasing. Since growing interest for foods which have high protein, complex carbohydrates and high fiber content interest in gluts free diet. These traits provide to the consumer however they are willing or unwilling participation in millet diet in their day to day life.

### OBJECTIVES OF THE STUDY

- To find out the socio-economic status of the respondents.
- To find out the awareness and purchase of millets by the respondents in their day to day life.
- To analyses the reasons for usage of millets among women consumers.

### RESEARCH METHODOLOGY

This study was carried out in Coimbatore City, Tamilnadu, which is located in the southern part of India. Non-Probability sampling method i.e., convenience sampling method was used to collect the sample. By descriptive research survey, the primary data were collected by questionnaire method. 450 samples were collected from Coimbatore city. SPSS 16.0 version (Statistical Package for the Social Sciences) is used in this study to analyze the data using the Statistical tools such as frequency analysis, Chi-square and Rank analysis.

### LIMITATIONS OF THE STUDY

The study has all the limitations of non-random sampling.

This study has been confined to Coimbatore city only. So it

may not be universally applicable.

Due to time constraints the sample has been limited to 450 respondents.

### ANALYSIS AND INTERPRETATIONS

**Table No.1 Demographic factor of the Respondents**

Age		
Factors	Frequency	Percent
20-30 years	198	44
31-40 years	203	45.1
41-50 years	28	6.2
Above 50 years	21	4.7
Total	450	100
Education		
No Formal Education	42	9.3
School Level	100	22.2
Collegiate Level	140	31.1
Professional Course	168	37.3
Total	450	100.0
Occupation		
Private Employee	258	57.3
Government Employee	37	8.2
Home Maker	118	26.2
Business	30	6.7
Others	7	1.6
Total	450	100.0
Monthly Income		
Below Rs. 10,000	160	35.6
Rs.10,001-Rs.20,000	209	46.4
Rs.20,001-Rs.30,000	53	11.8
Above Rs.30,000	28	6.2
Total	450	100.0
Nature of the Family		
Joint Family	158	35.1
Nuclear Family	292	64.9
Total	450	100.0
Members in the Family		
2 Members	49	10.9
3-4 Members	280	62.2
Above 4 Members	121	26.9
Total	450	100.0

Source Primary Data

### CHI-SQUARE ANALYSIS

**Table No 2 Respondents Monthly Income and Purchase of Millets**

Monthly Income	How Often Purchase			Total	P - Value
	Daily	Weekly Twice	Rarely		
Below Rs. 10,000	31	84	45	160	0.000
Rs.10,001-Rs.20,000	49	132	28	209	
Rs.20,001-Rs.30,000	7	46	0	53	
Above Rs.30,000	21	7	0	28	
Total	108	269	73	450	

Source: Primary Data

H<sub>0</sub>: There is no relationship between the respondent monthly income and purchase of millets.

The Pearson Chi-Square value is 76.465 with the DF - 6, P value < .000. Hence it is clear that it is statistically significant at 5% level. Hence there is a relationship between the respondent monthly income and purchase of millets.

**Table No. 3 Respondent Age and Amount Spent on Purchase**

Age	Amount Spent on Purchase			Total	P - Value
	Rs.100-200	Rs.201-300	Above Rs.301		
20-30 Years	63	70	65	198	.000
31-40 Years	20	101	82	203	
41-50 Years	0	0	28	28	
Above 50 Years	0	7	14	21	
Total	83	178	189	450	

Source: Primary Data

H<sub>0</sub>: There is no relationship between the respondent age and amount spent on purchase.

The Pearson Chi-Square value is 96.988 with the DF - 9, P value < .000. Hence it is clear that it is statistically significant at 5% level. Hence there is a relationship between respondent age and amount spent on purchase.

**Rank Correlation**

**Table No.7 Reasons for Purchase of Millets**

Rank	Nutritious Food	Price	Tasty	Convenience	Weight Reduction	Best Food for Diabetics	To Reduce Consumption of Rice and Wheat
Rank 1	281	50	69	14	119	36	14
Rank 2	82	57	77	15	93	23	108
Rank 3	43	68	35	71	65	110	59
Rank 4	15	106	63	69	7	67	71
Rank 5	14	74	72	138	57	51	42
Rank 6	8	66	104	77	64	49	77
Rank 7	7	29	30	66	114	45	79

Source: Primary Data

From the above table it is clear that out of 450 respondent 281 respondents prefer millets for their nutritional value. Next reason for purchasing of millets is to reduce the consumptions of wheat and rice which is at the position of rank 2. Followed by "Best Food for Diabetics" and "Price" subsequently in the third and fourth rank. Fifth rank goes to Convenience factor with 138 respondents. Next rank (sixth) is obtained by the reason of "Tasty". The last rank goes to the reason "Weight reduction".

**SUGGESTIONS**

Millets are a store house of amazing in their nutrition content and different millets have different features. These

**Table No. 4 Respondent Education and Awareness of Millets**

Education	Awareness of Millets		Total	P - Value
	Yes	No		
No Formal Education	133	35	168	.000
School Level	96	4	100	
Collegiate Level	95	45	140	
Professional	35	7	42	
Total	359	91	450	

Source: Primary Data

H<sub>0</sub>: There is no relationship between the respondent education and awareness of millets.

The Pearson Chi-Square value is 29.012 with the DF - 3, P value < .000. Hence it is clear that it is statistically significant at 5% level. Hence there is a relationship between respondent education and awareness of millets.

**Table No. 5 Respondent Age and Awareness of Millets**

Age	Awareness of Millets		Total	P - Value
	Yes	No		
20-30 years	148	50	198	.023
31-40 years	168	35	203	
41-50 years	22	6	28	
Above 50 years	21	0	21	
Total	359	91	450	

Source: Primary Data

H<sub>0</sub>: There is no relationship between the respondent age and awareness of millets.

The Pearson Chi-Square value is 9.572 with the DF - 3, P value < .023. Hence it is clear that it is statistically significant at 5% level. Hence there is a relationship between respondent age and awareness of millets.

millets aid in weight management, controlling diabetic problems, blood pressure, resist malnutrition etc. So government should adopt some technique to increase the awareness and consumption of millets such as

Government can provide incentives to the farmers to produce more millet at low cost and supported for procurement and storage.

Government can open up new markets for millets and encourage research and development of millet production.

Millets can make available at ration shop at the lowest

price.

All media can broadcast and expose the importance of using millets which helps to overcome the problem of malnutrition among children.

People must have aware about usage of millets through attending nutrition/awareness programs and media campaign.

## CONCLUSION

India is endowed with hundreds of nutritious crops whose research and development is still poorly addressed; production of millets has numerous securities, such as securities of food, nutrition, fodder, fiber, health, livelihood and ecology and at the same time increase the development of vulnerable people. Millets are storehouse of dozens of nutrition in large quantity and long term consumption of millets may bring several health benefits of the people. Hence they can help resist malnutrition.

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