



CUSTOMERS' PREFERENCE TOWARDS SELECTED MILLET FOOD PRODUCTS, WITH SPECIAL REFERENCE TO COIMBATORE DISTRICT

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Abstract : Millets offer numerous advantages to both consumers and farmers, while also benefiting the environment. As more individuals become aware of their nutritional benefits, millets are gaining popularity among health-conscious consumers. These grains are rich in dietary fiber, vitamins, minerals, and gluten-free proteins. They possess less glycaemic indices, bringing them as a good option for the people having celiac disease or gluten allergic attitude. The present study focuses on customers' preference for millet food products, specifically in Coimbatore district. The main objectives were to investigate customer preferences for millet food products and analyze the factors that influence these preferences. A questionnaire was designed specifically for this study to achieve these objectives. The study included a sample size of 160 respondents from Coimbatore district, selected through convenient sampling. The results revealed that 31.5% of the respondents occasionally purchase millet food products. The majority (54%) stated that they choose millet food products for their health benefits. There is no association between age of the respondents and preferences of millet products. An association between respondents' annual income and factors impacting the preferences. This study provides a foundation for further research in related areas.

Index Terms - Customers' Preferences, Millets, Millet Products, Organic Foods, Health Consciousness, Millet Sweets and Snacks, Organic Movement, Healthy Lifestyle.

I. INTRODUCTION

Millets serve as a rich source of nutrients and act as a safeguard against various insecurities such as food scarcity, lack of fodder, limited fiber availability, and health issues. But, the cultivation of millets witnessed a decline in the past years. It is crucial for reviving millet cultivation for its nutritional advantages and encourage consumers to incorporate millets into their regular food system to combat mal-nutrition. To achieve this, it is essential to comprehend the level of consumer acceptance of millet made products and find out the factors that influence their purchasing behaviour towards millet products. This will contribute to promoting the consumption of nutritious food and addressing the health complications prevalent in our generation. Millets cultivation have been in practice since ancient times in regions like Northern Africa and Asia (Central), although their exact origin remains uncertain. The majority of millet production takes place in Asia and Africa. In Europe and the United States, millet is primarily grown as foods for poultry and bird feed. The present study focuses on understanding customers' preferences towards selected millet food products, with a specific emphasis on the district of Coimbatore in Tamilnadu.

II. REVIEW OF LITERATURE

Alekhyia et al. (2019) carried out a research to examine the purchasing patterns of users towards millet food products. The main goals of the study were to determine the factors which try to influence consumers' purchasing behaviour towards millet based products and to evaluate the level of consumer acceptance towards millet products provided by various organizations in the study area. The findings indicated that the respondents' income did not have an impact on their purchase of millet-used products. Of the various channels used to disseminate information about the health purposes of millet products, social media was found to have a greater impact as it can easily reach individuals of all age categories.

Deepak Kumar et al. (2020) aimed to analyze the consumer preference for major millet products in Tamilnadu. Its objective was to gain insights into the consumer choices for millet-used products and identify the key factors that influence their purchasing behaviour. The findings revealed that the most of consumers were women belonging to the young age group and had medium-sized families. Ragi, Kambu, and Sorghum emerged as the selected millets among consumers. The nutritional value of millets was identified as the primary factor influencing their consumption, succeeded by the interests to use new products and the desire for alternatives to wheat and rice.

Ambana Gouda Durgad et al. (2021) analyzed the consumer selection for foxtail and little millets in the north-eastern region of Karnataka state. The main goal of the study was to investigate the consumer preference for these millets. The findings revealed that both urban and rural consumers prioritized a reduction in the price of millets over taste and aroma. This preference stemmed from the fact that millets were considerably more expensive compared to other cereals available in the market. Consumers displayed awareness regarding the nutritional aspects of millets and expressed a desire for further improvement, particularly in reducing the sweetness. This was crucial as millets were predominantly consumed by individuals with diabetes, obesity, and those who were health-conscious.

Arjuman Banu et al. (2022) conducted a study to analyze the preferences of consumers in Tumakuru district, Karnataka, India, regarding minor millet products. The primary motive of this study was to assess consumer preferences for these products. The sample consumers were divided into two categories: urban and rural consumers. The results indicated that although the prices of millets were high, urban consumers consumed a wider variety of millets compared to rural consumers. On the other hand, rural consumers relied more on locally available millets or those produced in their own fields. Both urban and rural consumers allocated a significant portion of their expenditure towards groceries.

Rajesh Reddy et al. (2023) investigated the level of awareness and preference among consumers in Vizianagaram district, Andhra Pradesh, India, regarding millets and its various products. The main objective was to gain insights into consumers' purchasing behaviour and the factors that influence their choices. The findings indicated that seniors and adults tend to consume millets more frequently, with dinner being the most popular mealtime for millet consumption, followed by breakfast. Supermarkets were found to be the preferred platform for purchasing value-added millet products, while Kirana stores were favoured for raw millets.

III. STATEMENT OF THE PROBLEM

The objective of the present study is to examine the customers' preferences towards selected millet food products, with special reference to Coimbatore district. While previous studies have covered various aspects of millets products, this study particularly aims to explore the customers' preferences towards selected millet food products, with special reference to Coimbatore district. The preferences towards millet food products and the factors influencing customers to prefer millet food products are to be researched.

IV. OBJECTIVES OF THE STUDY

Following were the research objectives framed for the study.

- ❖ To understand socio-economical background of the respondents.
- ❖ To explore the preferences of customers towards millet food products.
- ❖ To analyze the factors influencing the preferences towards millet food products.

V. RESEARCH METHODOLOGY

The study utilized data from primary and secondary sources. Structured questionnaires helped to collect the survey data was collected through and websites, books, and printed and e-journals supplied the secondary data. The questionnaire was specifically designed to meet the objectives of the study. The study included a sample size of 160 respondents in Coimbatore district, selected through non-random sampling. The respondents were requested to fill out the questionnaire, and assistance was provided to non-formally educated respondents. The millet food products taken for the present study were: Cookies, Snacks, Sweets, Noodles and Batter Mixes.

5.1 Hypotheses of the study

Following hypotheses were framed for the study to test the relationship between the variables.

- ❖ There is relationship between age and preferences of millet products.
- ❖ There is no relationship between annual income and factors influencing the preferences.

5.2 Data and Sources of Data

For this study, primary data were collected using the structured questionnaire. The questionnaire was circulated in the form of Google form. 160 respondents were approached for data collection. Secondary data were collected from the journals, websites and articles.

5.3 Variables

Variables of the study contains dependent and independent variable. The socio economic variables such as Gender, Age, Area of residence and so on form part of independent variable whereas preferences of customers and factors influencing the consumption of millet food products form part of dependent variable.

5.4 Statistical tools used

The study employed specific statistical tools like: Percentage Analysis, Rank Analysis, Chi-square Test and Correlation. The tools helped in analyzing the distribution of data and the existence of relationship between the independent and dependent variables.

VI. THEORETICAL BACKGROUND

Millets are rich in nutrients and health benefits. In the growing technology driven, people often face the problems of health issues and losing stamina in the day-to-day life. The millet food products are widely available in different quantity. The awareness of consuming millet food products keeps on increasing. Many companies involved in designing the food products based on the millets components. The food products like Biscuits, Noodles, Batters, Mixes and so on are available with the mixture of millets. They offer a wide range of health benefits for the people.

VII. RESULTS AND DISCUSSION

The following are the results of the study carried out. The responses collected were analyzed using the statistical tools proposed. The results were duly derived.

7.1 Simple Percentage Analysis

Table 7.1: Socio-economic profile

Factor	Components	No. of Respondents	Percentage (%)
Gender	Male	68	42.5
	Female	92	57.5
Age group	15-30	36	22.5
	31-45	66	41.25
	46-60	40	25
	Above 60	18	11.25
	School level	74	46.25
Level of Education	UG	42	26.25
	PG	16	10
	Diploma	18	11.25
	Professional degree	10	6.25
	Others	0	0
Occupation	Student	20	12.5
	Salaried	44	27.5
	Business	28	17.5
	Profession	10	6.25
	Homemaker	30	18.75
	Retired	14	8.75
	Others	14	8.75
Annual Income	Below Rs.150000	26	16.25
	Rs.150001 to Rs.200000	74	46.25
	Rs.200001 to Rs.300000	34	21.25
	Above Rs.300000	26	16.25
Health Issues	Diabetes	14	8.75
	Blood Pressure	22	13.75
	Both Diabetes and BP	54	33.75
	Minor health issues	10	6.25
	No health issues	60	37.5

Source: Primary data

The above table shows the socio-economic factors of the respondents. 57.5% of the respondents are female. 41.25% of the respondents belongs to the age group 31-45. 46.25% of the respondents are educated upto school level. 27.5% of the respondents are salaried people. 46.25% of the respondents' annual income is Rs.150001 to Rs.200000. 37.5% of the respondents do not have any health issues.

7.2 Chi-Square Analysis

(i) There is relationship between age and preferences of millet products:

Age and Preferences of millet products are compared. The calculated chi-square value is 17.02 and table value at five percent level is 12.59. Since the calculated Chi-square value is higher than the table value at five percent level, there is no significant association between age and preferences of millet products. Therefore, the hypothesis is rejected.

(ii) There is no relationship between annual income and factors influencing the preferences:

Annual income and Factors influencing the preferences are compared. The calculated chi-square value is 17.79 and table value at five percent level is 12.59. Since the calculated Chi-square value is higher than the table value at five percent level, there is a significant association between annual income and factors influencing the preferences. Therefore, the null hypothesis is rejected.

7.3 Rank Analysis**Table 7.2: Factors Influencing Preferences**

Factors influencing preferences	Total	Mean Score	Rank
Health benefits	616	3.85	I
Quality	570	3.56	III
Aroma	596	3.73	II
Taste	460	2.88	IV
Quantity	370	2.31	V

Source: Primary Data

With the help of the primary data, the factors affecting preferences towards millet products are ranked. Health benefits is ranked I with mean score of 3.85. II rank is given to Aroma with mean score of 3.73. Quality and Taste are given ranks III and IV with mean score of 3.56 and 2.88 respectively. Quantity is ranked V with mean score of 2.31.

7.4 Correlation Analysis**Table 7.3 Correlation between level of preferences and factors influencing preference**

Preferences	Factors influencing Preferences
20	22
36	24
30	20
40	54
34	40

Source: Primary Data

The above table depicts the correlation between the preferences of millet food products and factors influencing the preferences. The correlation value arrives at 0.6822 which is the positive value. It interprets that there is a direct relationship between preferences of millet food products and factors influencing the preferences.

8. SIGNIFICANT FINDINGS

Following were the significant findings of the study.

- ❖ Most (57.5%) of the respondents are female.
- ❖ Most (41.25%) of the users belongs to the age group 31-45.
- ❖ Almost half (46.25%) of the respondents are educated upto school level.
- ❖ About one-third (27.5%) of the respondents are salaried people.
- ❖ Many (46.25%) of the respondents' annual income is Rs.150001 to Rs.200000.
- ❖ Most (37.5%) of the respondents do not have any health issues.
- ❖ More than one-fourth (27%) of the respondents mentioned that they like millet cookies.
- ❖ One-third (31.5%) of the respondents mentioned that they sometimes purchase millet food products.
- ❖ Majority (54%) of the respondents stated that they go with millet food products for health benefits.
- ❖ One-tenth (10%) of the respondents mentioned that the colour of the millet products are not attractive.
- ❖ There is an association between age and preferences of millet products.
- ❖ There is an association between annual income and factors influencing the references.
- ❖ Among the factors impacting preferences, Health benefits of the millet food products is ranked I with mean score of 3.85.
- ❖ There is a direct relationship between preferences of millet food products and factors influencing the preferences.
- ❖ The Ragi and Kambu based food products are highly preferred by the customers.
- ❖ The Thinai (Foxtail Millet) is preferred only for cookies.

9. SUGGESTIONS

The most preferred places for consumers to buy millets are small stores, followed by supermarkets, special health stores, and e-commerce sites. However, when it comes to millet products specifically, supermarkets are the most preferred, followed by bakeries, e-commerce, and other stores. Consumers have a preference for purchasing millets from small stores. Snack products made from millets are not popular among consumers. Consumers prefer medium-sized packs of millet products.

In terms of specific products, respondents are not interested in soups but show more interest in Idli Rava and Dosa mix, cookies and Muruku (which are already popular and widely available), millet Upma mix, vermicelli, and Laddu. The majority of respondents are willing to try newer millet products. They are somewhat cautious about taste and quality, but are open to trying the product at least once. When it comes to existing products, respondents prefer medium-sized packs, with biscuits in sizes of 5 and 10 cookies being more desirable.

The ready mixes containing millet is mostly preferred by the sample respondents across all types of millet products. The majority of respondents purchase millet based products from small stores. Friends and family, as well as social media, play a major role in influencing respondents' awareness of the health benefits of millet products. Ragi, Kambu, Kuthiraivali, Thinai, and sorghum are available in the market, while other small millets are less readily available. Many consumers feel that value-added products made from small millets are not available sometimes in all the stores and that the price of these products is also high.

10. CONCLUSION

Nowadays, the awareness surrounding millets is gradually increasing. This can be attributed to two main factors: the growing health-consciousness among individuals and the government's efforts to promote millets in both consumption and production. Millets serve as a crucial staple food in numerous semi-arid and tropical regions across the globe, ensuring food security in challenging environments due to their exceptional nutraceutical characteristics. These facts about millets, which do not harm the environment during production, can be effectively utilized to promote their consumption. To boost the sales of millets, practical marketing strategies should be implemented, such as providing cooking instructions, implementing reasonable pricing policies, and utilizing social media platforms for promotional purposes. Including cooking instructions on the packaging will attract individuals who are interested in millets but lack knowledge on how to cook them. Furthermore, leveraging social media platforms will enable greater promotion of millets and their products, as their potential remains untapped. It is crucial to enhance awareness regarding the health benefits and understanding of millet products, as they have a positive impact on consumer behaviour.

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