RESEARCH PAPER

Consumer buying behaviour towards "Healthy foods": A case of Tier-I Cities in India

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Abstract : Food is the most basic need for all humans to live a healthy and active life. The study was carried out in the Bangalore Urban area of Karnataka between 2021 and 2022 to investigate consumer buying behaviour toward healthy foods. Ninety sample consumers were selected using random sampling method for the study. The data were collected from each consumer through personal interview with the help of structured schedule. Distribution of the respondents based on personal and socio-economic characteristics showed that he majority of customers were middle-aged (80%), are male (52.2%) had education postgraduates and above (54.4%), and employees (40%) having family size up to 4 members (65.6) with monthly income Rs. 25,000 – 50,000 (40%) and are non-vegetarian (69%). Majority of the consumers perception based on major group of nutrients in the foods was highest for products rich in vitamins and minerals and products with a balanced nutrition with a mean score (4.61) and (4.52), perception on major ingredients in the foods was highest for products with dry fruits and nuts, fruits with a mean score (4.66) and (4.61), perception based on labels on the pack was highest for the products with natural and organic label on the pack with a mean score (4.46) and (4.43), and perception based on preservatives and additives was highest for fresh foods with a mean score (4.69). From the sample consumers, majority of consumers preferred the attributes health benefits and quality to be considered while buying healthy foods and taste/aroma/flavour/colour, affordability these attributes preferred by the consumers while buying conventional foods.

Key Words : Healthy foods, Nutrients, Ingredients, Labels, Preservatives, Additives, Perception, Preference

INTRODUCTION

Food is the most basic need for all humans, and in the twenty-first century, food is used not only to satisfy hunger and provide necessary nutrients for humans, but also to prevent disease and improve consumer physical and mental well-being.

The concept of purchasing and consuming foods was very different in the 1980s and 1990s. India has always had a sizable population of middle-class families. As a result, the concept of purchasing and consuming foods was more budget-oriented than a complete focus on nutrition-based aspects of each food item.

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Food markets in India have become more complex and competitive in the twenty-first century. Changing lifestyles, increased spending power, disposable incomes, the entry of large international and domestic companies into the food sector and changing consumer tastes all contribute to the transformation of India's food market.

The emphasis of research has shifted to the identification of biologically active components in foods that have the potential to improve physical and mental well-being while also lowering the risk of disease. Many traditional foods, such as fruits, vegetables, soya, whole grains, and milk, have been discovered to contain components with potential health benefits. New foods are being developed to enhance or incorporate these beneficial components for their health benefits or desirable physiological effects, in addition to these foods.Consumers want foods that are not harmful to them, but also need foods that will help them be healthier Wendy *et al.* (2011).

Consumer awareness of the importance of maintaining their health is growing, as evidenced by increased access to health information, changes in lifestyle, increased urbanization and consumption of processed foods and calorie-rich food products. The critical importance of healthy foods is highlighted in this context. Any fresh or processed food that is assumed to have properties that promote health, boost the immune system, and/or prevent disease in addition to the basic nutritional mechanism of supplying nutrients is considered healthy food. Healthy foods are categorized into four groups based on major group of nutrients in the foods, major ingredients in the foods, labels on the pack of foods and based on the preservatives and additives in the foods to study the consumer buying behaviour.

Beyond their nutritive value, it is widely assumed that healthy foods include products that truly influence unique functions within the body and thus, offer benefits for well-being or performance, health. Healthy food categories are a desirable market segment that also offers greater business opportunities for expanding consumer opportunities and improving their health and well-being. Countries such as India, where opportunities exist due to a larger number of consumers and an abundant supply of raw materials, should also have access to national-level opportunities for healthy food sector growth. This study provides knowledge of consumer demand and importance for healthy foods, which in turn helps the farming community address current market needs and plan production accordingly. This can also help farmers make decisions about which crops to grow in order to meet high consumer demand.

The present study was conducted to understand the consumer buying behavior towards "healthy foods": A case of tier-I cities in India withfollowing stated objectives :

– Studies on consumer perception towards "healthy foods"

– Studies on consumer preferences towards "healthy foods".

MATERIAL AND METHODS

Bangalore was purposefully chosen for the investigation. It is the fastest developing metropolitan city and is very cosmopolitan in nature. It is the hub of information technology and a floating population of professionals. People of many religions, castes, vocations, cultures, and languages, as well as distinct cuisine preferences, live here. This demographic is expected to be aware of their diet and its related advantages. Using a random sampling approach, a representative sample of 90 customers from Bengaluru city was collected. Bangalore was chosen for the study because it is home to many retail outlets, multi-store, hypermarkets, and shopping complexes. Food retail outlets and multi-brand stores are a segment of the retail sector that is studying consumer buying behavior for healthy foods in Bangalore. Furthermore, several companies have started their trade through retailers and wholesalers in Bangalore during the last decade, with the goal of marketing their products by researching consumer perception and preferences for healthy foods. Primary data was collected through personnel interviews with the help of a well-structured questionnaire based on objectives required. Secondary data was collected from the appropriate sources such as articles, journals, company reports, etc.

The data collected was analyzed using both quantitative and qualitative research techniques. Mainly the data collected was tabulated and analyzed using appropriate statistical tools such as percentage analysis, Likert scale analysis, Garrett ranking technique and factor analysis.

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized

under following heads :

Consumer buying behaviour towards "Healthy foods" :

The buying behaviour of sample consumers was analyzed by collecting the data pertaining to "healthy foods" are categorized into four groups. perception of consumers based on major group of nutrients in the foods, major ingredients in the foods, labels on the pack of foods and based on preservatives and additives in the foods.

Major sources of information regarding "healthy food products":

Source of awareness and its contribution are important for designing the promotional strategies to boost the consumer stand and product sales. Consumers in general get to know about products through different sources such as *viz.*, Speciality stores/supermarkets, social media (WhatsApp, YouTube, Facebook), peer group (friends, relatives, health clubs), internet (articles, blogs, Wikipedia), nutritionist, mela/ exhibitions, print media (Newspapers, Magazines, Journals) and traditional media (Television, radio) as provided in Table 1.

From the above Table 1 and Fig. 1 inferred that social media (WhatsApp, YouTube, Facebook) 17.78 per cent were the major source of information regarding healthy food products followed by Peer group (friends, relatives, health clubs) 16.67 per cent and Speciality stores/supermarkets 15.56 per cent. Internet (articles, blogs, Wikipedia) 13.33 per cent, mela/ exhibitions (Newspapers, Magazines, Journals) 11.11 per cent print media (Newspapers, Magazines, Journals) 10 per cent. Traditional media (Television, radio) and nutritionist were the least source of information 8.89 per cent and 6.67 per cent preferred by the sample consumers while buying
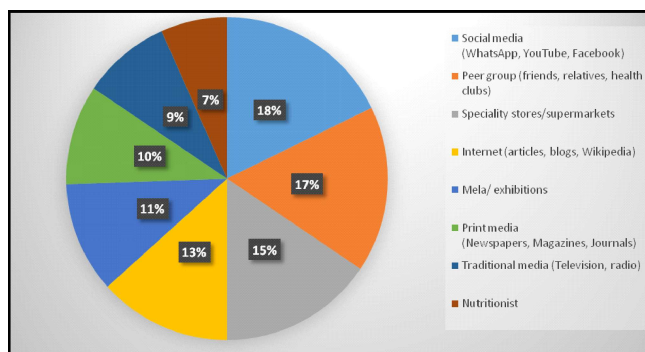

Fig. 1: Sources of awareness related to online meat products

healthy food products in the study area.

Preferred sources to purchase of "healthy foods" by sample consumers :

The information regarding the source of purchase of "healthy foods" by sample consumers were collected under seven categories *viz.,* supermarket, E-store (online shopping), farmers, convenience store, speciality store, departmental stores, mom and pop store and the results of the same was provided in the Table 2.

From the Table 2, it was found that most of the respondents (22.22%)were purchased from supermarket, followed by (16.67%) of them purchased from speciality store and E-store (online shopping) separately. The next was convenience store (13.33%), Departmental stores (12.22%) and mom and pops stores (10%). Only 8.89 per cent of the respondents were purchased the healthy food products from the farmers.

Perception of the consumers based on major group of nutrients in the foods :

The data regarding perception of the consumers based on major group of nutrients in the foods were

Table 1 : Major sources of information regarding "Healthy food products"			
Sr. No.	Source	Frequency no. of respondents	Per cent
1.	Social media (WhatsApp, YouTube, Facebook)	16	17.78
2.	Peer group (friends, relatives, health clubs)	15	16.67
3.	Speciality stores/supermarkets	14	15.56
4.	Internet (articles, blogs, Wikipedia)	12	13.33
5.	Mela/ exhibitions	10	11.11
6.	Print media (Newspapers, Magazines, Journals)	9	10
7.	Traditional media (Television, radio)	8	8.89
8.	Nutritionist	6	6.67
	Total	90	100

Table 2 : Preferred sources to purchase of "healthy foods" by sample consumers

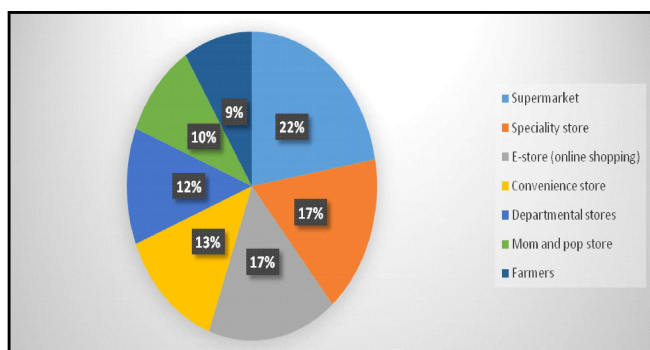| Sr. No.	Place	Frequency (No. of consumers)	Per cent (%)
1.	Supermarket	20	22.22
2.	Speciality store	15	16.67
3.	E-store (online shopping)	15	16.67
4.	Convenience store	12	13.33
5.	Departmental stores	11	12.22
6.	Mom and pop store	09	10
7.	Farmers	08	8.89
	Total	90	100

Fig 2 : Preferred sources to purchase of "healthy foods" by sample consumers

collected and categorized into carbohydrate rich products, proteins rich products, Fat rich products, Fibre rich products seeds, Products with Vitamins and minerals, and Products with balanced nutrition. The replies were gathered on a five-point scale had Healthiest foods, Health foods, can't say, not healthy, Un healthy, with scores of 'five, four, three, two, and one' assigned to each statement. The data was analyzed and presented in the following Table 3.

From Table 3, according to the sample consumers responses the level of perception based on major group of nutrients in the foods unveils that products rich in vitamins and minerals (fruits, juice) were perceived healthy with a mean score (4.61), followed by the products with balanced nutrition with a mean score

(4.52), products rich in protein (egg) had a mean score (4.50) and the products rich in carbohydrate (millets, oats) had a mean score (4.36). The least mean scores were given to the products rich in fibre (4.03), and products rich in fat (3.56), respectively.

Perception of the consumers based on major ingredients in the foods :

The data regarding perception of the consumers based on major group of ingredients in the foods were collected and categorized into dry fruits and nuts, fruits, multigrain based foods, vegetables, herbals, super foods, millet based, egg and egg products, pulses based, tuber, milk and milk protein, animal proteins and fats, prebiotics and probiotics, spices, cereal based, and oil and fats. The replies were gathered on a five-point scale. The data was analyzed and presented in the following Table 4.

Table 4 represents the consumers perception based on major group of ingredients in the foods. It can be inferred that products with dry fruits and nuts are healthy with a mean score (4.66), followed by the fruits with a mean score (4.61), the multigrain based products (4.54), the vegetable-based products (4.53). Further the herbal based products, super food products, millet-based food products, egg and egg products and the pulses-based products had a mean score (4.44), (4.37), (4.26), (4.24) and (4.19). The tuber-based food products, milk and milk

Table 3 : Perception of the consumers based on major group of nutrients in the foods

Sr. No.	Product	Healthiest foods	Health foods	Can't say	Not healthy	Un healthy	Mean score
1.	Products rich in Vitamins and minerals (fruits, juices)	60	26	3	1	0	4.61
2.	Products with balanced nutrition	52	34	3	1	0	4.52
3.	Products rich in proteins (Egg)	48	39	3	0	0	4.50
4.	Products rich in carbohydrates (millets, oats)	42	41	5	1	1	4.36
5.	Products rich in fiber (whole grains)	30	41	13	4	2	4.03
6.	Products rich in fats (butter, yogurt)	14	38	23	14	1	3.56

protein-based food products, animal proteins and fat-based products, prebiotics and probiotics food products and spices-based food products had a mean score (4.10), (4.09), (3.89), (3.88) and (3.83). The least mean scores were given to the cereal-based food products had a mean score (3.14), and the oil and fats food products had a mean score (3.07).

Perception of the consumers based on the labels on the pack of foods :

The data regarding perception of the consumers based on labels on the pack of foods were collected and categorized into natural, organic, fresh, pure, vegan, fortified, functional, refined, fermented. The replies were gathered on a five-point scale. The data was analyzed and presented in the following Table 5.

Table 5 indicates that the sample consumers perception based on major group of ingredients in the foods. It can be inferred that natural label food products are healthy with a mean score (4.46) followed by the organic label food products with a mean score (4.43), the fresh label food products (4.42) and the pure label food products with a mean score (4.33). The next was vegan label food products with a mean score (4.06), fortified label food products (3.76), and the functional label food products with a mean score and (3.70). Refined label food products and the fermented food products had least mean scores (3.49) and (3.48),

Table 4 : Perception based on major ingredients in the foods

Sr. No.	Products	Healthiest foods	Health foods	Can't say	Not healthy	Un healthy	Mean score
1.	Dry fruits and nuts	59	31	0	0	0	4.66
2.	Fruits (Banana, apple etc.)	59	28	2	1	0	4.61
3.	Multigrain based (oats, gram, millets)	53	33	4	0	0	4.54
4.	Vegetables (tomato, leafy vegetables)	49	40	1	0	0	4.53
5.	Herbals (tulasi)	50	32	6	2	0	4.44
6.	Super foods (quinoa, green tea, moringa, honey)	42	39	9	0	0	4.37
7.	Millet based (whole millet, millet flour)	41	35	11	2	1	4.26
8.	Egg and egg products	37	40	11	2	0	4.24
9.	Pulse based (soya, green gram, chickpea)	36	40	9	5	0	4.19
10.	Tubers (potato, Carrot, tapioca)	27	51	7	4	1	4.10
11.	Milk and milk protein (panner, butter)	22	58	7	2	1	4.09
12.	Animal proteins and fats (meat, sea food)	19	47	21	1	2	3.89
13.	Pro-biotics and prebiotics	23	39	22	6	0	3.88
14.	Spices (Coriander, clove cardamon)	26	34	19	11	0	3.83
15.	Cereals based (bread, pasta, noodles)	16	22	18	27	7	3.14
16.	Oil and fats	6	28	27	24	5	3.07

Table 5 : Perception based on the labels on the pack of foods

Sr. No.	Labels	Healthiest foods	Health foods	Can't say	Not healthy	Un healthy	Mean score
1.	Natural	51	30	8	1	0	4.46
2.	Organic	48	34	7	1	0	4.43
3.	Fresh	47	36	5	2	0	4.42
4.	Pure	43	36	10	0	1	4.33
5.	Vegan	32	31	27	0	0	4.06
6.	Fortified	14	44	28	4	0	3.76
7.	Functional	14	38	35	3	0	3.70
8.	Refined	20	22	32	14	2	3.49
9.	Fermented	11	28	38	10	3	3.38

respectively.

Perception of the consumers based on preservatives and additives in the foods :

The data regarding perception of the consumers based on preservatives and additives in the foods were collected and categorized into fresh foods, food products with no preservatives and additives, food products with natural preservatives and additives and food products with preservatives and additives. The replies were gathered on a five-point scale. The data was analyzed and presented in the following Table 6.

Table 6 shows that the sample consumers perception based on major group of ingredients in the foods was the highest for the fresh food products were accessible (4.69) followed by the food products with no preservatives and additives had a mean score (4.32), the food products with natural preservatives and additives had a mean score (3.94). The least mean score was given to the food products with artificial preservatives and additives had a mean score (2.70).

Preferences of various attributes while buying healthy foods :

Information regarding the reasons for preferences of the consumers towards healthy foods by sample consumers was collected, analyzed and the results were presented in the Table 7.

From Table 7 that, health benefits was the major attribute preferred by sample consumers while buying healthy foods (with mean score of 47.92) followed by quality and nutrition (mean score 47.70) and (mean score 47.62). The attributes namely taste/aroma/flavour/colour, freshness, availability, and packaging/attractiveness, were ranked four, five, six, seven by sample consumers with mean scores of 47.41, 46.19, 45.26, and 44.85 respectively. The least preferred attributes while buying healthy foods by sample consumers were wide varieties, affordability, and preservatives/additives with mean scores of 43.50, 43.34 and 42.45 respectively. Thus, health benefits, quality and nutrition were the major preferred attributes by the sample consumers while buying the healthy foods and affordability, preservatives/

Table 6 : Perception based on the preservatives and additives in the foods

Sr. No.	Products	Healthiest foods	Health foods	Can't say	Not healthy	Unhealthy foods	Mean score
1.	Fresh foods	65	22	3	0	0	4.69
2.	Food products with no preservatives and additives	41	37	12	0	0	4.32
3.	Food products with natural preservatives and additives	27	36	22	5	0	3.94
4.	Food products with artificial preservatives and additives	10	11	25	30	14	2.70

Table 7 : Preference of the consumers towards healthy foods

Sr. No.	Attributes	Total score	Garretts mean score	Rank
1.	Health benefits	3978	47.92	1
2.	Quality	3816	47.70	2
3.	Nutrition	4048	47.62	3
4.	Taste/aroma/flavor/color	3556	47.41	4
5.	Freshness	3973	46.19	5
6.	Availability	3757	45.26	6
7.	Packaging and attractiveness	3813	44.85	7
8.	Wide varieties	3741	43.50	8
9.	Affordability	3901	43.34	9
10.	Preservatives/additives	3396	42.45	10

additives were the least preferred attributes by sample consumers.

Preference of the consumers towards conventional foods :

Information regarding the reasons for preferences of the consumers towards conventional foods by sample consumers was collected, analyzed and the results were presented in the Table 8.

From Table 8 that, taste/aroma/flavour/colour was the major attribute preferred by sample consumers while buying conventional foods (with mean score of 45.62) followed by affordability and quality (mean score 45.31) and (mean score 45.10). The attributes namely freshness, wide varieties, availability, health benefits were ranked four, five, six, seven by sample consumers with mean scores of 44.89, 44.18, 43.90, and 43.73 respectively. The least preferred attributes while buying conventional foods by sample consumers were nutrition, packaging/attractiveness, and preservatives/additives with mean scores of 40.93, 40.43 and 40.01, respectively. Thus,

taste/aroma/flavour/colour, affordability and quality were the major preferred attributes by the sample consumers while buying the conventional foods and packaging/attractiveness, preservatives/additives were the least preferred attributes by sample consumers.

Family preferences of consumers towards healthy foods :

The data regarding family preferences of consumers towards healthy foods were collected and categorized into healthy foods are affordable and fit in family budget, family prefer healthy foods over junk and processed foods, kids relish healthy foods in our family, healthy foods are preferred by sick and old aged family members, my family prefers healthy foods over conventional foods, my family prefer nutrition is more important than taste, healthy foods are preferred by all the family members, my family makes healthy food choices only and prefer to spend more on healthy food options only. The replies were gathered on a five-point scale had always, most often, often, sometimes, and never, with scores of 'five,

Table 8 : Preference of the consumers towards conventional foods

Sr. No.	Particulars	Total score	Garretts mean score	Rank
1.	Taste/aroma/flavour/colour	3787	45.62	1
2.	Affordability	3761	45.31	2
3.	Quality	3608	45.10	3
4.	Freshness	3771	44.89	4
5.	Wide varieties	3756	44.18	5
6.	Availability	3732	43.90	6
7.	Health benefits	3324	43.73	7
8.	Nutrition	3275	40.93	8
9.	Packaging and attractiveness	3437	40.43	9
10.	Preservatives/additives	3641	40.01	10

Table 9 : Family preferences of consumers towards healthy foods

Sr. No.	Family preferences	Always	Most often	Often	Sometimes	Never	Total score	Mean score
1.	Healthy foods are preferred by Sick and old aged family members	21	24	21	9	15	243	2.70
2.	Family prefers healthy foods over junk and processed foods	22	24	21	21	2	227	2.52
3.	My family believe that nutrition is more important than taste	23	27	25	13	2	214	2.38
4.	My family prefers healthy foods over conventional foods	30	29	13	9	9	208	2.31
5.	My family makes healthy food choices only	32	21	27	9	1	196	2.18
6.	Healthy foods are preferred by all the family members	28	33	18	9	2	194	2.16
7.	Kids relish healthy foods in our family	36	23	19	9	3	190	2.11
8.	Healthy foods are affordable and fit in family budget	33	33	17	6	1	179	1.99
9.	Prefer to spend more on healthy food options only	40	36	9	1	4	163	1.81

four, three, two, and one' assigned to each statement. The data was analyzed and presented in the following Table 9.

Table 9 shows that the sample consumers family preferences towards healthy foods was highest for the healthy foods are preferred by the sick and old age family members with a mean score (2.70) followed by family prefers healthy foods over junk and processed foods with a mean score (2.52) and my family believe that nutrition is more important than had a mean score (2.38). The next was My family prefers healthy foods over conventional foods, my family makes healthy food choices only, healthy foods are preferred by all the family members, and kids relish healthy foods in our family had a mean score (2.32), (2.18), (2.16), and (2.11). The least mean scores were given to attributes healthy foods are affordable and fit in family budget (1.99) and prefer to spend more on healthy food options had a mean score (1.81).

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