

Preferences of Stakeholders Towards Health Foods

V. G. Vairagar¹, Gopal Sankhala², R. B. Kale³ and S. V. Kad⁴

ABSTRACT: Study was conducted in North India, which was purposively selected. The states of North India have well developed market for health foods, large number of stakeholders of health foods. They are producers, sellers, doctors and consumers. In case of total stakeholders their first preference of health food was milk products. Total rank order score was 446 with 1st rank. Fruit and vegetables were the second preference followed by curd and fat free and low cholesterol products in the available study area. Confectionaries and other products like cereals base products were less preferred among the respondents. In overall respondents' category, highest preferred factor was health and nutrient contents followed by price and flavour of health food (ranked II and III; respectively). Children were most sensitive to taste and flavour so it affects their liking and disliking irrespective of health and nutrient contents.

Key words: Health foods, health and nutrients, milk and its products Stakeholders

INTRODUCTION

Growing incomes and faster pace of lives have had a strong impact on lifestyles of the urban population. With more sedentary living, higher work stress, rising pollution levels and growing consumption of unhealthy fast food, lifestyle disorders / diseases are gaining prominence in India. Some of the widely experienced disorders include obesity, heart disorders and digestive disorders diabetes.

Health foods are generally thought to include products that influence specific functions in the body and thereby offer benefits for health, well-being or performance, beyond their regular nutritional value. These products result from technological innovation, such as cholesterol lowering spreads, xylitol sweetened chewing gum and dairy products fermented with specific lactic acid bacteria, or are naturally functional foods including soyabean, oats and grains high in fiber. Functional foods have been developed in most food categories and even by conservative estimates, the global market size already exceeds that for organic foods. In addition to providing consumers options for improving their health and well-being, functional foods as an

attractive market sector, provide new economic opportunities

Functional food is a segment in food processing. Recently many functional foods have been introduced in Indian market. However, despite projected demand producers are risk in nature. There is always fear of product failure in market place. There is always need for product related data related to consumer preference have institute-based study for making further insight apropos stakeholders' preference towards health foods.

RESEARCH METHODOLOGY

Selection of the Research Area

The study was conducted in North India, which was purposively selected due to the following specific reasons:

- a) North Indian states are the leading state in terms of dairy product consumption in the country.
- b) No systematic research has been conducted on health foods as emerging venture in the country.

1 Subject Matter Specialist KVK Jalgaon Maharashtra 425001

2 Principal Scientist, Division of Dairy Extension, NDRI Karnal Haryana132001

3 Scientist Zonal Project Directorate, Zone VI, Jodhpur Rajasthan 342005 4Scientist, CSSRI Karnal Haryana132001

Corresponding Author E-mail: vishalgv@rediffmail.com

- c) The states of North India have well developed market for health foods, large number of stakeholders of health foods. They are producers, sellers, doctors and consumers.
- d) Familiarity of the area to the investigator, which made possible for the investigator to elicit the information from the respondents within the limited time.

The present study was conducted in northern India. Four cities, namely Delhi, Chandigarh, Lucknow and Dehradun were selected randomly, for this study. Four types of stakeholders, namely consumers, producers, sellers and doctors were selected as the respondents for this study. From each city, 30 consumers were selected by using systematic sampling, whereas, 5 producers, 5 sellers and 5 doctors were selected by using simple random sampling. Thus, a total of 120 consumers, 20 producers, 20 sellers and 20 doctors were selected as respondents for this study. Finally, the sample size for the study happened to be 180. The data were collected by personal interview method, through pre-tested interview-schedule and the collected data were scored, tabulated and subjected to various kinds of analyses using appropriate statistical tools in order to draw meaningful conclusions.

STATISTICAL ANALYSIS OF DATA

The collected data were classified and tabulated in the light of objectives of the study. Based on the nature of the study the tabulated data were analysed statistically with the help of following statistical methods;

Percentage

The percentage value was calculated to make simple comparisons. Percentage value was calculated by dividing the frequency in the particular cell by number of respondents and multiplying it by 100.

$$\text{Percentage (P)} = \frac{n}{N} \times 100$$

Where,

n = Frequency of particular cell

N = Total number of the respondents in a particular cell

Mean

The arithmetic average of the set of the data had to be often computed during the analysis of data. This measurement was used to see the central tendency of

the data. The mean score of a series of data was equal to the sum of the individual measures divided by the total number of respondents. The mean scores for each group were worked out by computing with this formula:

$$\bar{X} = \frac{\sum X_i}{N}$$

Where,

\bar{X} = Mean

$\sum X_i$ = Sum of each of the individual measurement of the scores

N = Number of respondents

RESULTS AND DISCUSSIONS

It is apparent (Table 1) revealed that different milk products stood first choice amongst consumers followed by fruit and vegetables; curd and fat free products. Confectionaries and other beverages came last among choices of health food consumers.

Producers and manufacturers were asked to put their preferences on the listed health foods. It was found from the Table 1 that producers' first preference was on milk and milk products followed by fruit and vegetable based products; calcium and iron rich foods; confectionaries and different kinds of juices.

But, in case of doctors, it was found that calcium and iron rich products were most preferred health foods among them followed by fruits and vegetable based products; fat free and cholesterol free products; and milk products. They didn't prefer confectionaries for their family members.

Sellers used to consume health foods. They mostly preferred milk and milk products over fruit and vegetables for their family members. They also preferred fat free products as well as calcium and iron rich products.

In case of total stakeholders their first preference of health food was milk products. Total rank order score was 446 with 1st rank. Fruit and vegetables were the second preference followed by curd and fat free and low cholesterol products in the available study area. Confectionaries and other products like cereals base products were less preferred among the respondents.

Reason of milk products preferred over other due to high consumption in nearby locality. People in this northern cities consumes higher than other part of India. Also production is higher in north Indian states so it leads to high consumption. Products like cereals and confectionaries demand were much lower. Consumer said when doctor or nutritional expert

Table 1
Distribution of stakeholders on the basis preferences about health foods

Category / Respondents	Consumers (n ₁ =120)		Producers (n ₂ =20)		Doctors (n ₃ =20)		Sellers (n ₄ =20)		Total Stakeholders (n=180)	
	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank
Curd	248	III	40	IV	43	VI	44	III	375	III
Yogurt	214	V	36	VI	41	VIII	39	VI	330	VII
Ca/ I Rich Foods	214	V	42	III	50	III	40	V	346	V
Fruits & Vegetables	270	II	47	II	53	II	46	II	416	II
Fat free products	233	IV	39	V	49	IV	38	VII	359	IV
confectionaries	206	VI	40	IV	42	VII	33	IX	321	VIII
Milk & milk products	294	I	49	I	55	I	48	I	446	I
Others beverages	203	VII	42	III	49	IV	41	IV	335	VI
Any other	184	VIII	39	V	46	V	34	VIII	303	IX

recommended then only they go for these products. Study area consumption of traditional cereals was higher; rarely preferred to newly developed cereal products. Jong *et al.* (2003) observed that the Dutch participants can clearly distinguish between functional foods and drugs and they preferred health food to drug with the benefits. Also Chinnici *et al.* (2002), Moon and Balasubramanian (2002), Bech-Larsen and Grunert (2003), Ciocca (2003) Studies revealed that preference of different health foods over other conventional foods.

Factor affecting consumer’s preference and choice

Table 2 clearly represents the factors influencing in preference of health foods among different stakeholders. On the basis of stakeholders’ choices, Total Rank Order Score (TROS) of each factor were calculated and ranked them in last column of the table.

From the Table 2 it is revealed that among different factors health and nutrient contents, price of health foods and sensory factor i.e. taste and flavor were most important motivating factors in preference and choices of health foods. Consumers’ ranks Health and nutrients was most important factor among the consumers with first rank followed by cost of health foods. But colour, packaging and advertisement (Ranked VII, VI, and V; respectively) were least affecting factors for preferring health foods.

From the Table 2 it shown that producer category had given high rank to health and nutrient content. Its total rank order score 52 and followed by price and advertising of health food products. (Ranked II and III; respectively) It indicates importance of these factors while developing and production of health foods. The colour and flavour (ranked VI and V;

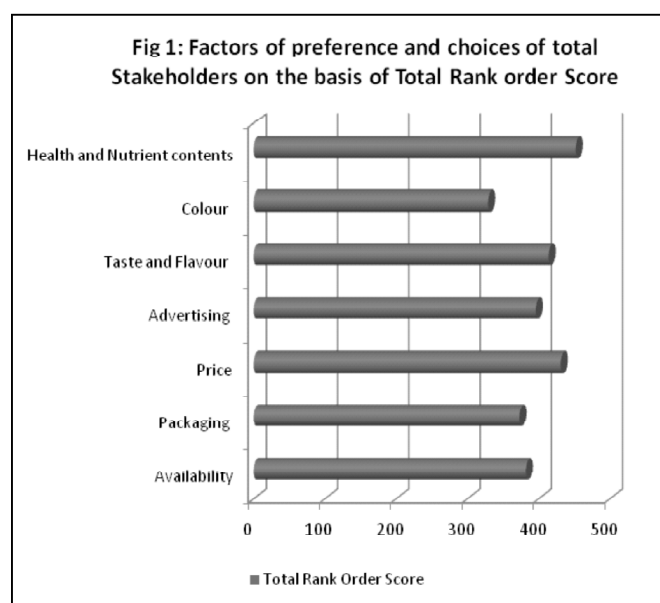
Table 2
Factor Affecting Stakeholders’ Preference and Choice

Factors / Respondents	Consumers (n ₁ =120)		Producers (n ₂ =20)		Doctors (n ₃ =20)		Sellers (n ₄ =20)		Total Stakeholders (n=180)	
	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank	Total Rank Order Score	Rank
Availability	250	IV	46	IV	40	VI	46	V	382	V
Packaging	243	VI	46	IV	42	V	42	VI	373	VI
Price	280	II	49	II	52	II	50	III	431	II
Advertising	247	V	48	III	50	III	51	II	396	IV
Taste and Flavour	277	III	41	V	48	IV	48	IV	414	III
Colour	218	VII	38	VI	35	VII	38	VII	329	VII
Health and Nutrient contents	289	I	52	I	59	I	52	I	452	I

respectively) were least preferred factors from the producers point of view

A close analysis of Table 2 indicates that the perception of doctor's category was similar to the producer category. They perceived that health and nutrient content was most important factor in preferences of health foods. (Rank I and Total rank order score 59) followed by price of health foods and advertising (ranked II and III respectively). This category had given least preference to colour of health of food products.

Sellers felt that factors like nutrient contents, advertizing and price of health foods (Ranked I, II and III; respectively) in local markets for the consumer were most preferring factors while colour and flavour were least affecting factors (ranked VII and VI; respectively) (Fig. 1).



In overall respondents' category, highest preferred factor was health and nutrient contents followed by price and flavour of health food (ranked II and III; respectively). Children were most sensitive to taste and flavour so it affects their liking and disliking irrespective of health and nutrient contents.

While considering factors of preferring health foods, health and nutrients content was most important factor to motivate consumer to choose health foods. At the time of investigation of study area, the stakeholders revealed that purpose behind consumption of health food to protect self and their family members from the diseases and to solve other health related issues.

Findings of above study were well supported by the study of Jaduon (2010) and Milosevic *et al.* (2012)

in which they mentioned the health and nutrients content, taste and price of health foods were preferred factor while choosing health foods. But study of Yiridoe *et al.* (2005) revealed that packaging was most important factors for purchasing of health food as well as organic foods. Bourn and Prescott (2002) found that consumer preference for organic food was based on a general perception that organic products had more desirable characteristics than conventionally grown alternatives. Apart from health, food safety and environmental considerations, several other product characteristics such as nutritive value, taste, freshness, appearance, color and other sensory characteristics influence consumer preferences While prices were not yet important in explaining demand for food, as people become more affluent to income and prices play a smaller role in food purchasing decisions.

CONCLUSIONS

In case of total stakeholders their first preference of health food was milk products. Total rank order score was 446 with 1st rank. Fruit and vegetables were the second preference followed by curd and fat free and low cholesterol products in the available study area. Confectionaries and other products like cereals base products were less preferred among the respondents.

It was found that the consumers perceived that health and nutrient content were the most affecting factors, followed by availability of health foods; whereas, colour, flavour and advertisements happened to be the least affecting factors vis-à-vis their preferences to health foods. Therefore, due attention should be given on nutrients, advertisement and availability of health foods for its promotion. Particular marketing strategy must be made for each of the health food products and for different types of consumers. Such strategies could include variations in prices, quantities, flavours, nutrient contents and packaging of the health food products to suit their needs, tastes, perceptions and preferences.

REFERENCES

- Bech-Larsen, T., Grunert, K. G., and Poulsen, J. B. (2003), The acceptance of Functional Foods in Denmark, Finland and the United States, MAPP working paper 73, The Aarhus School on Business.
- Bourn, D., and Prescott, J. (2002), A comparison of the nutritional value, sensory qualities and food safety of organically and conventionally produced foods. *Critical Reviews in Food Science and Nutrition*. **42**(1): 1-34.
- Chinnici, G., D'Amico, M. and Pecorino, B. (2002), A multivariate statistical analysis on the consumers of organic products, *British Food Journal* 187-199

- Ciocca, L. (2003), Key European and Asian Consumer Data Unveiled. *Functional Foods & Nutraceuticals, j fun foods*, **32**(3) 221-229.
- Jadoun, Y. (2010), A pilot level testing of health foods developed at NDRI in Karnal District of Haryana, Unpublished M.Sc. Thesis, NDRI Karnal (Haryana)
- Milošević, J., Žeželj, I., Gorton, M., and Barjolle, D. (2012), Understanding of motives of food choice in Western Balkan Countries, *Appetite*, **58**(1): 205-214.
- Moon, W. and Balasubramanian, S. K. (2002), Estimating the Effect of Health Knowledge in the Consumption of Soy-Based Foods, paper presenting at the AAEA Annual Meeting, Long Beach, CA
- Yiridoe, E. K., Bonti-Ankomah, S., and Martin Ralph, C. (2005), Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature *Renewable Agriculture and Food Systems* **20** (04): 193-205.

