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## ASSESSMENT OF KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS FUNCTIONAL FOODS

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### ABSTRACT

In recent times, there have been remarkable changes in human lifestyle. Consumers now understand the correlation between health and good nutrition. The approach to healthy diet facilitates the evolution of functional foods. Thus, changing lifestyle and food habits provides a greater opportunity for functional foods market. However, acceptance and sustenance of functional foods largely depends upon consumer's awareness level and perception. This study reviews the disposition and orientation towards functional food, eagerness to try these products and perceived barriers among Indian purchasers. Consumer's perceived taste, paucity of knowledge and costs were the major barrier but still major proportions were curious to try these foods and incorporate in daily lifestyle. The outcome shows that respondents have positive view towards functional foods and furthermore energized the need for an instructive program to make and reinforce the mindfulness and certainty among purchasers.

**Keywords: Consumer attitudes; functional foods; probiotics; trends; health**

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## INTRODUCTION

A strong correlation has been validated between a nutritious diet and active lifestyle. In recent times, the focus has been directed towards balanced diet or healthy lifestyle. Major proportion of people believes that wholesome food should provide other merits besides basic nutrition. Taking all this into consideration, the functional foods have been developed to quench the growing demand of the consumers. The concept of “functional food” was formulated with a motive to impart an accessible and affordable solution to lasting health problems, and now it has paved its way to various tributaries of science and technology [1]. A convincing purpose behind flourishing of practical food is the craving among consistently expanding individuals to carry on with sound and long lives. Functional food is a smart combination of well-being and diet which reduces the likelihood of diseases and enhances health [2].

Consistently, various different meanings of these foods have been given by subsequent countries and various scientific agencies. According to the latest/current version of definition quoted by FFC (Functional Food Centre): *“Innate or processed foods that contains known or obscure biologically-active compounds; which are innocuous, non-poisonous, give a clinically*

*demonstrated and archived positive wellbeing impacts for the avoidance,, or assistance of persistent and recurring disease”*. The elucidation of functional food which is pertinent in Indian framework is broadly defined as a “food which influences peculiar roles in the body that may provide added health assistance or cure from some ailing condition following the addition/centralization of a flavorful ingredient, or replacement of an ineffective or harmful ingredient”. Nourishments may inherently have these probably valuable characteristics, or they might be changed as well as hereditarily modified [3]. Although, this definition is not very rigid.

Owing to the gradual popularity and increased momentum of functional food among consumers, this industry has shown considerable growth in India. Globally, nutraceutical industry was worth USD 169.32 billion (1,100.58 thousand crore) in 2015 and was flourishing at a CAGR (compound yearly development rate) of 6.5%. It is anticipated to expand at a CAGR of 7.3% from 2015 to 2021. In India, this market is predicted to grow from \$ 4 billion in 2017 to \$ 18 billion in 2025. Although it is still in its preliminary stage and confers short of one per cent of the functional food and beverages around the world, the chief foods are functional

yoghurt, invigorated convenience items (bread, biscuit, breakfast ready to eat cereals), fortified edible oil and functional gum. The attention in functional food is increasing perpetually by virtue of steady rise in longevity and the inclination for the consumers to augment their quality of life [4]. Currently, there are few commercialized functional products in the Indian market. The milk items are the primary representatives of probiotics. The abundance of functional foods offers many opportunities to enhance the healthfulness. The functional food enterprises in India are aching at a speedy pace as “health is wealth” has streamed down in the attitude of Indian purchasers [5]. In India, eating trends of consumers are changing rapidly. Understanding consumer knowledge, attitude, perceptions and behaviors is important as it strongly impacts consumers’ outlook and knowledge regarding functional foods. However, a better understanding and measured insight into consumer’s awareness and behavior against functional food is needed for effective marketing campaigns, better decisions and their acceptance. The purpose to undertake this research is to determine the behavior and various factors affecting the purchaser mindset such as their learning, perception and belief.

## **MATERIALS AND METHODS**

This survey was done on sample size  $n=317$  (males= 51.1% and females =48.9%) to adjudge the level of cognizance, expertise, viewpoint and approach towards functional foods. A self-administered questionnaire was created which included 21 questions and general information such as age, gender, name, educational qualification and household income. The questionnaire was fractionated into 3 sections. In the questionnaire, to ascertain the status of knowledge of interviewees towards general welfare and nutrition ( $n=4$ ) questions were used, to get an overview of the level of alertness and interest of respondents pertaining to functional foods ( $n=13$ ) questions were designed and rest 4 questions about the perceived barriers to consume these products. Subjects were expected to give explicit reactions for one question. All these questions were evaluated using codes (1=positive attitude) and 0 depicted negative attitude of the respondents.

### **Survey**

An analysis took place in Delhi to have an insight of perception and opinion of consumers about the functional foods which are accessible in the market.

### **The target population**

Indian consumers falling in the age group of 18-23 were chosen to be samples. A minimal sample size of 317 was required

for a population of 19,861,488. Only volunteers who were above 18 years were included.

### **Data Collection**

The questionnaires were distributed arbitrarily to the respondents who were consenting to partake in the study. The questionnaire was self-administered, nonetheless  $\frac{1}{3}$  were helped with finishing the questionnaire.

### **Data processing and analysis**

Factual analysis of coded information was performed using SPSS version 21 and graphs were generated using Microsoft excel 2007. Frequencies of all factors were figured. Pearson chi square test was processed to discover gender wise insightful distinction in the variables of interest. The difference was considered to be statistically significant at  $p < 0.05$ .

## **RESULTS AND DISCUSSION**

### **Profile of Respondents**

All respondents (n=317) aged above 18 participated in the study, where 51.1% were men and 48.9 % were women. The significant extent of the respondents was between the age group of 18-20. Overall study suggested that 46.4 % respondents were having high awareness whereas 49.8% had medium level of understanding, leaving 3.8% people who had low level of discernment towards the importance of health and nutrition. The grouping was

done and on the basis of groups, scores i.e. low (0-6 = Low scorers), medium (7-12= Medium scorers) and high (13-20= High scorers) were assigned.

### **General attitude towards health and nutrition**

The welfare of the consumer is greatly affected by the functional foods because of special ingredient added in it. Therefore, it is essential that consumer must understand the analogy between health and good diet. To examine the respondents' attitude and degree of interpretation, questions were probed pertaining to health. The survey findings stated that 71% consumers had control over their health. This indicates nowadays buyers are worried about their wellbeing and request more information and insights about food and sustenance benefits. 92.1% believed that balanced diet can give other benefits and were fully appraised of the thought of functional food. This shows the consumers' growing awareness, intent to adopt healthy lifestyle choices and meeting the nutritional needs. 58% people agreed that taste is not a concern if food is wholesome and healthy. This indicated that people have constructive approach towards foods with nutrition which enhance human health irrespective of taste. Buyers frequently consider taste the above all else necessity in buying and expending foods. The less

tastefulness of food, there will be high possibility of dismissal disregarding their nourishment and advantages to human. On the contrary, 59% consumers stated that their weight is primary health concern as obesity increases the chances of cardiovascular disease, cancer, arthritis, gout etc. and consider it as major threat. This comprehends the opportunities of development of Functional food in the market (**Figure 1**).

#### **Mindfulness and enthusiasm in functional foods for health, especially Probiotics**

A large portion of the sample respondents 96.2% (n=317) were aware of the linkage between sound physical condition and nutrition and 94.6% population believed that healthy foods provide numerous benefits to health. This result indicated the consumers' increasing concern of healthy lives and demand of longer life expectancy. In self-administered questionnaire, 13 questions were used to assess the extent of respondents about functional foods. On the basis of questions, high (9-13=21.1%), medium (5-8= 53.6%) and low (0-4=25.2%) groups were assigned. Almost ¼ sample population (n=317) were nearly unaware of the functional foods. The data indicated that 57.7 % (183 out of 317) had erudition about the functional food and significant respondents (75.1%) consumed

these foods. On the contrary 70% of the sample population was aware of probiotics and ½ of the population had tried or consumed probiotics once in a lifetime. Probiotics are “live microorganisms, as they are consumed in adequate numbers bestow a health benefit on the host”. It was noted that 38.5 % respondents were reluctant to prefer functional foods over fast food as they perceived taste, cost, and unavailability as major constraints. In spite of knowing the health benefits, only 19.9% respondents frequently purchased probiotics, but 41 % (n=317) showed willingness to pay more for probiotics (**Figure 2**).

#### **Perceived barriers to consuming functional foods**

It has been noted since long that a large proportion of people prefer food apart from functional food to gratify their hunger, hence it becomes extremely important to understand the underlying reason behind this. In questionnaire, 4 questions were designated to get clarity regarding the perceived obstacles to accept these functional foods.

It was observed that insufficient information was the biggest barrier with 32.17% of the total respondents (n=317) being unaware of functional foods whereas cost was deemed to be the least barrier with only 10.09% respondents. It has been

established that buyers are looking for information from the various sources. The manufacturers and marketer need to reduce the differences with consumers for its sustainability in the market. Though cost is the least barrier but it should be consumed on regular basis for good health benefits but it incurs a high food budget which makes them unattractive to few of the consumers. It is noteworthy that 26.49% respondents had expressed their apprehensions towards consuming when the taste is not as per their requirement. It suggested that over half of the consumers were ready to compromise on taste. 18.6% felt inaccessibility of the functional foods was the issue. The data also indicated that some people perceived no barriers and their % is 16.4% and are willing to incorporate these products in the daily lifestyle pattern in enhancing or maintaining the health **(Figure 3)**.

Similar studies have been carried out in different nations of the world. An IFIC study in 2013 showed that 86% of Americans are interested in becoming familiar with nourishments that have positive wellbeing sway past fundamental sustenance. Some researchers also showed that Belgian buyers comprehend the significance of nourishment for wellbeing expanded altogether [6]. Functional food is accepted to frame a generous aspect of a

sound and classy eating regimen. Other researchers did a similar examination on functional food impression on purchasers from United States, Canada and French. In Canada, they found presence of low propensity or less enthusiasm among students towards functional foods and feeble relationship between medical advantages and functional foods. Likewise, members didn't know whether the data about these nourishments is valid, or not. Moreover, there were fewer propensities to purchase practical nourishments [7]. In Turkey, older female participants were more leaned towards the labeling of a product as compared to younger participants who were more inclined towards nutrition and energy tables. Moreover, the member's age and instruction level raises the expectation limit for wellbeing improving properties of functional foods [8]. Another group of investigators led an examination on Spanish purchasers to recognize their personal conduct standard and considerations about these foods [9]. Exploration revealed that functional food mindfulness was low with a score of 25%. In spite of the fact that the functional food type had an effect on buyer practices, most youthful shopper bunches had a negative propensity to food perceived as useful. Yet others led a review on secondary school

and college students utilizing multiple-choice questions to gauge respondent's information, expenditure mentalities about functional food and their socio-segment properties also. The results of data analysis were estimated, and it was observed that 40% respondents were aware about

functional food approximately. Taste and cost were the dominating properties of functional food. Likewise, wellbeing improving outcomes of these foods had more significant impact on young customers [10].

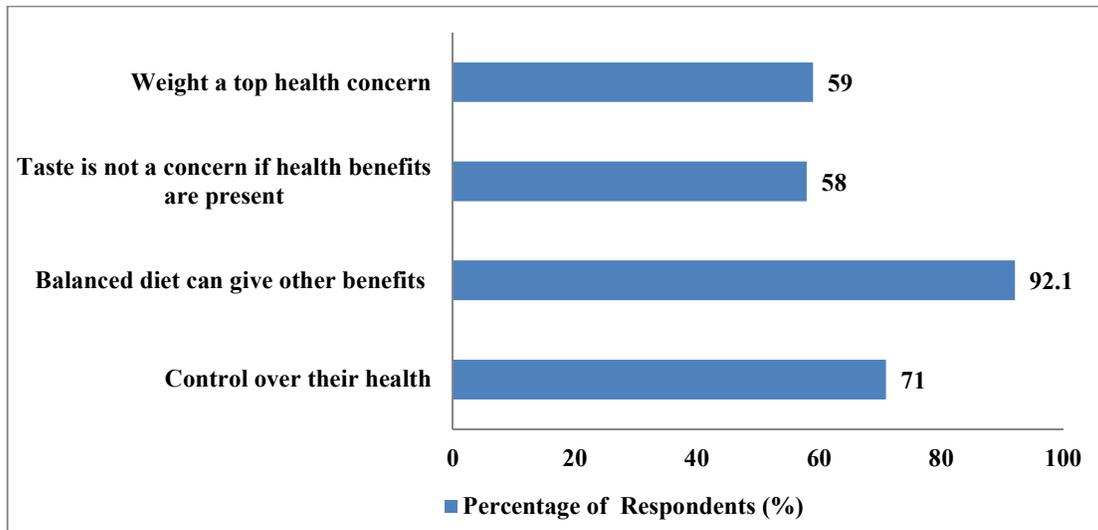


Figure 1: Attitude of consumers towards health and nutrition

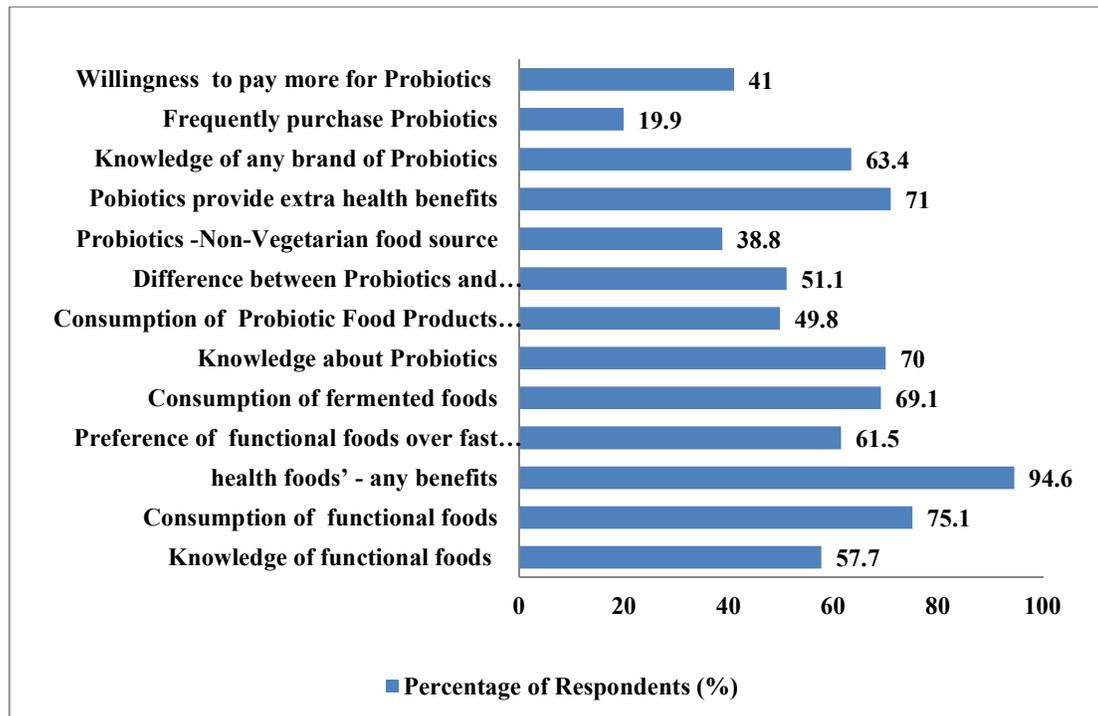


Figure 2: Awareness of consumers about functional foods

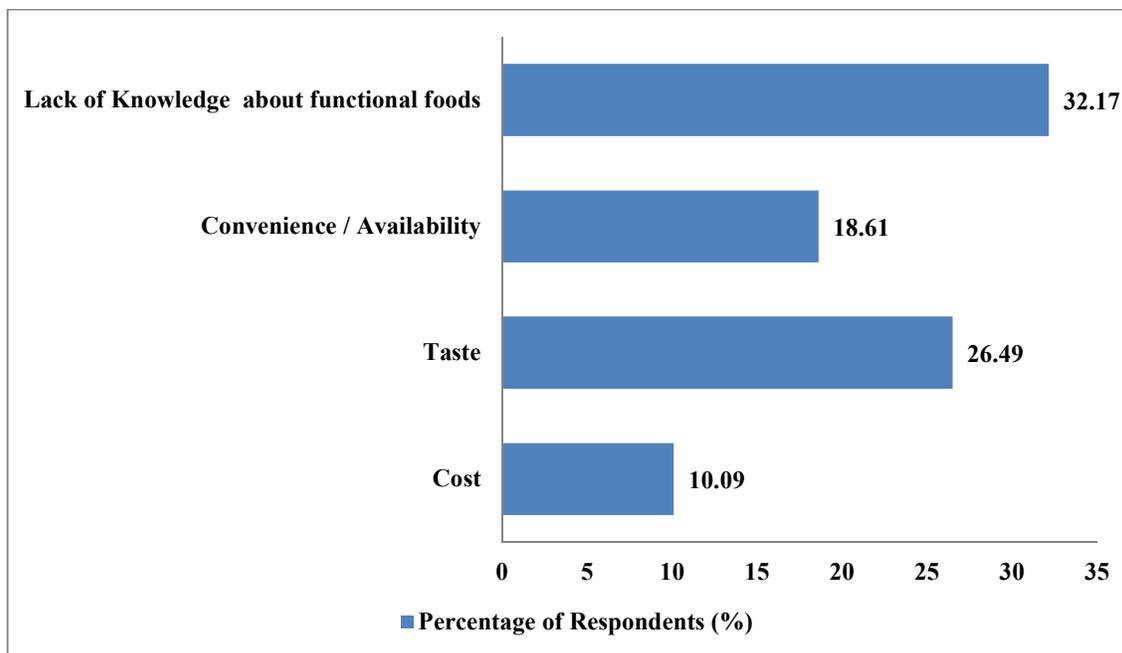


Figure 3: Barriers in consumption of functional foods

## CONCLUSION

The objective of the study was to assess awareness and perception about functional foods among the Indian consumers. This was conducted in Delhi on 317 literate adult subjects with the help of a structured questionnaire. The data divulged that 96.2% of the sampled Indian consumers were conscious of the connection between health and nutrition and 57.7% were familiar with the term “functional food” and 75.1% have consumed the functional foods. Familiarity with such a relationship is accepted to be the initial move in persuading enthusiasm for obtaining information concerning good dieting decisions. In comparison to males, females were more aware of functional foods, a perception which corresponded with the

way that women were the essential food customers and were regularly responsible for larger part of the family food buys and planning. One of the significant hindrances among customers with respect to utilization of functional food is the absence of information and its taste.

This study indicated that the Indian consumers are willing to try functional foods; there is an interest but lack of education and information about functional foods especially probiotics. Purchasers’ experience and thought with respect to calory count and wellbeing have become imperative in view of the developing worries about eating routine's effect on wellbeing. With the accentuation being on affordability and availability, the significance of functional food for generally improving

wellbeing and illness counteraction is broadly recognized.

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### Conflict of Interest

Authors declare that there are no conflicts of interest.

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