

Consumption of Functional Foods in Terms of Variety and Frequency

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Abstract:

To effectively promote family health, it is important to understand how women see functional foods and nutraceuticals. The goals of this research are to provide nutrition education using visual and audio-visual aids, and to determine the level of awareness of functional foods and nutraceuticals among college-educated working women. Although the functional food sector has grown, there has been little study on how consumers see these products. Age-related health problems make older folks a potential market demographic for functional foods. The purpose of this paper was to collect data on functional food intake among older persons (>60 years old, n=200) living in the community. As a post-test result of the education campaign, the percentage of people increasing their weekly consumption of soy goods from 30% to 50%, cauliflower group from 20% to 66.7%, cocoa products from 20% to 46.7%, almonds from 13.3% to 30%, amla from 13.3% to 36.7%, fish & fish oil from 0% to 36.7%, and aloe vera from 3.3% to 56.7%. The average monthly consumption of soy products, fish, and fish oil both increased. A review of the numbers showed that the awareness project had a beneficial effect on the consumption of the Functional Foods categories.

Keywords Consumption, Functional food, Awareness, Food science

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Introduction

The scientific community has not come to a consensus on what exactly the phrase "functional foods" means. The term "functional foods" has been used in a variety of ways by nutritionists and medical experts. According to Thomas and Earl (1994), the "Committee on Opportunities in the Nutrition and Food Sciences" at the Institute of Medicine defines "functional foods" as "the foods in which the concentrations of ingredients have been modified or manipulated, to improve their contribution to a healthy diet." "Foods that provide health benefits beyond basic nutrition," as defined by the International

Food Information Council (IFIC), are called "Functional Foods."

Evidence from 2001 (Wildman) suggests that The "food as medicine" school of thinking faded into oblivion when modern medical drug therapy emerged in the 19th century. Interest in food's therapeutic potential was reignited in the latter part of the 20th century as a result of the rise of diet-related diseases including diabetes, obesity, and cardiovascular disease. Scientists began to identify the physiologically active components in plant and animal-based foods. Numerous chronic

disease risks are lowered when these conditions are present, according to research (Martirosyan, 2011). The concept of "functional foods" emerged in the 1990s as a result of a confluence of factors, including an aging and health-conscious population, new technology, and revised food regulations. It has been established that eating functional foods as part of a well-rounded diet improves health. The American Dietetic Association (ADA) issued a position statement in 1999. "Any potentially healthful food or food ingredient that may provide health benefit beyond the traditional nutrients it contains" is what the American Dietetic Association means when they refer to "functional foods." The following are important factors to keep in mind while researching functional foods:

- "Functional foods" include a wide range of modified foods with varying degrees of use.
- A Functional Food may improve health when consumed regularly as part of a balanced diet, but only if consumed in large enough amounts.
- There is a physiological need for every meal. According to the research published by Shibamoto et al.

Literature Review

Precup, Gabriela & Cristina Bianca, Pocol & Bernadette-Emoke, Teleky & Vodnar, Dan. (2022). Rising public awareness of the link between diet and health has led to an uptick in the production and promotion of foods with health claims. The scientific literature describes them as functional foods with a role in improving health and preventing sickness, and their 2019 market share was estimated at over 200 million EUR. The International Scientific Association for Probiotics and Prebiotics defines prebiotics as "functional foods," or substrates that are preferentially utilized by host bacteria to provide a health advantage. Although prebiotics have been associated with several purported health benefits, establishing a causal connection

between the prebiotic and the result in issue is notoriously difficult. Products marketed in the European Union must undergo a rigorous evaluation of their labeled health benefits and be supported by substantial scientific evidence before they may be distributed there. The many groups involved in this topic all have an effect on consumer opinion. The purpose of this study was to assess how well Romanian consumers comprehend the idea of prebiotics. Consumer interest was quantified using Google Trends, a web-based data tool, and a questionnaire-based survey was designed. Using the SPSS program, we crosstabulated the collected data to see how different demographic variables affected respondents' dietary choices and how much they knew about prebiotics. The online poll received 303 responses from adults between the ages of 15 and 24 and 25 and 64. There was a wide range of responses about respondents' level of familiarity with the term "prebiotics," although 74% of people said they were at least somewhat acquainted with it. The necessity for clear information for consumers based on a comprehensive examination of the scientific data, as well as the need of education efforts on the relationship between particular food components and health consequences, were also emphasized.

Ali, Akhter & Rahut, Dil Bahadur. (2019). This study employs a large primary dataset with answers from 400 individuals throughout Pakistan's four major regions to assess consumers' knowledge, awareness, and perception of functional foods. Consumers in Pakistan are mostly unaware of the benefits of functional foods, according to survey data. This meant that people in rural areas were less likely to consume foods with added health benefits. There was a significant difference in interest in trying functional foods between consumers in better health and those with health difficulties. Acceptance and consumption of functional meals in Pakistan are affected by health, education

level, and gender (female). People in urban areas have a greater awareness of and willingness to pay more for functional foods than those in rural areas. Most consumers feel that consuming functional meals might help them maintain good health, thus policymakers should increase information about the advantages of eating these foods.

Kapoor, Deepa & Munjal, Alka. (2017). Increases in disposable income, urbanization, and health consciousness are all contributing to a growing demand for functional foods in India. The global market for functional foods and beverages has been boosted by an increase in health-conscious customers. Based on their beliefs about health and functional foods, readers of this article are placed into one of many clusters. The adoption of functional meals was correlated with the participants' level of health awareness using a correlation analysis. This investigation relies on primary data gathered from a sample of 150 Delhi-area women. The data analysis showed a little association between health ethos and the assessment of functional meals. Professionals in the fields of fitness and nutrition are the best people to turn to for information regarding functional meals. The women who filled out the study were broken up into three categories depending on their beliefs about the relationship between functional foods and health. Both people's perceptions of their own health and how often they consume functional meals are influenced by their age to a large extent.

SEHGAL S (2022) There has been a major shift in how people live during the last several decades. Now more than ever, individuals understand that eating well is essential to their health. Because of people's growing interest in maintaining a healthy diet, the market for functional foods has exploded. Thus, a change in consumer tastes and lifestyle has led to an increase in interest in functional foods. However, functional foods can only be successful if consumers accept and value them. In this

article, we examine Indian consumers' thoughts on functional meals, their willingness to try novel functional foods, and the barriers they see to doing so. Many individuals were intrigued by the idea of sampling these dishes, but many were turned off by things including their perceived taste, their incomprehension, and their expensive pricing. Respondents' positive views on functional foods provide credence to the idea that consumers may benefit from an informational campaign aimed at increasing their knowledge and trust in the category.

Anitha R (2021) Malnutrition in India may be traced back to a number of different factors. It affects children's ability to learn and their overall health and development. The purpose of this study was to evaluate the impact of various intervention strategies on the nutritional status and cognitive function of undernourished children ages 6 to 12 enrolled in both public and private schools. Six hundred students took part in the study. Data on socioeconomic status, nutrition, brainpower, and scholastic involvement were collected. Nutritional status was assessed by applying industry norms for the kids. Ravan's Colored Progressive Matrices were used to evaluate the children's IQ alongside their academic performance and school attendance. We assessed mothers' nutritional literacy, attitudes, and behavior. Overall, 17.7% of the children were underweight, 28.1% were underweight and thin, and 27.1% were stunted. With rates of stunting (28.6%), underweight (43.6%), and thinness (37%) being higher in public school children than in private school children, it is clear that public school children are more likely to be malnourished. Overall, RCPM scores were lower for students attending public schools compared to those attending private institutions. Therefore, for three months, the developed PNEP was utilized to provide the selected undernourished children in public school with the formulated health mix using the potentially rich source nutrients like protein, iron, zinc, selenium,

and Brahmi leaves, in addition to providing nutrition and health education to their mothers. The children in Group II improved their nutritional status and cognitive function significantly after receiving the health mix supplement and health and nutrition education in the present intervention trial, compared to the children in Groups I and II. As a result, there are a number of successful intervention strategies available.

Methodology

A research technique is an approach to resolving research issues in a methodical manner. To do research, one must systematically look for answers to specific questions on a subject. The term "serious inquiry" may also refer to a critical and thorough "investigation" or "experiment." Simply said, it is the never-ending pursuit of wisdom.

Selection of samples

Functional Food Frequency Questionnaire (FFFQ)

The Functional Food Frequency Questionnaire was designed to elicit data on five major fronts: how often people consume functional foods, what motivates them to do so, how well they understand functional foods, what health advantages they get from doing so, and what precise functions those foods provide. Subjects' familiarity with and interest in functional foods were measured using the Functional Foods and Functioning Questionnaire (FFFQ). The ICMR1954 questionnaire was tweaked and pilot tested. Before and after the awareness session, participants in the test and control groups had their dietary consumption of functional foods evaluated using the twenty-four-hour recall technique.

Functional foods groups studied in FFFQ were –

1. The Oatmeal, Bran, and Cornflake Categories.

2. Probiotic foods including yogurt, cheese, and milk
3. Soy products (Nuggets, soy flour, soy milk, tofu)
4. Green leafy vegetables
5. Vegetables belonging to the cruciferous family include broccoli, cabbage, radishes, and turnips.
6. Fruits (Pomegranate, Black Grapes, Jamun, and Citrus)
7. Cocoa & Cocoa products
8. Nuts (Almonds, Walnuts, Flaxseed)
9. Garlic
10. Methi seeds
11. Honey
12. Amla
13. Green Tea
14. Fish & Fish Oil
15. Alovera.

Operational Definitions

Functional Foods– The term "Functional Foods" refers to foods that go above and beyond basic nutrition to promote health by virtue of physiologically active dietary components. Foods that have been fortified, supplemented, or improved, as well as whole foods, are collectively known as functional foods.

Beyond their nutritional value, functional foods are formulated to prevent or postpone the development of illness.

Functional Foods Frequency Questionnaire (FFFQ)- Subjects' knowledge and intake of functional foods are measured using this questionnaire and the 24-hour recall technique.

Mean- Mean refers to the arithmetical average of a set of numbers. You can figure it out by dividing the grand total by the entire number of scores.

Standard Deviation- The square root of the geometric mean of the squared

deviations of measurements from their means is a definition of standard deviation”.

Paired ‘t’ test: The paired t-test compares two sets of data collected at separate times from the same population.

Data Analysis

Impact of awareness programme on consumption of functional foods

Previous research shows that nutritional education programmes do have an effect on behavior, outlook, and knowledge. Evidence from a variety of intervention trials showed that dietary changes were found with gains in knowledge. Table No. 1 displays pre- and post-test observations of the influence of the awareness training on the consumption pattern of the study's participants.

Table No. 1 shows how the Functional Foods awareness program affected the consumption of the test group's working women who had completed at least some

college. Green leafy vegetables were consumed by all individuals at the beginning of the study, however the subjects' intake of oat groups (oat goods and bran), dairy products, soy products, the cauliflower group of vegetables, fruits, nuts, methi, amla, and green tea varied widely. All participants began using these Functional Foods once the tests were over.

After the awareness program was over, people were significantly more likely to consume oat groups, dairy products, green leafy vegetables, fruits, garlic, methi, honey, and green tea on a daily basis, while the percentage of people who consumed soy products rose from 3.3% to 30%, the percentage of people who consumed the cauliflower group rose from 0% to 33.3%, the percentage of people who consumed cocoa products rose from 0% to 50%, the percentage of people who consumed nuts rose from 13.3% to 60%, the percentage of

Table 1: Pre-Post Test Observations on Intake of Selected Functional Foods among Gainfully Employed Women of Test Group (up to UG level education) n=30

S. No.	Functional Foods	No Intake		Daily		Weekly		Monthly		Occasionally		Seasonal	
		Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %
1.	Oat & Bran	33.3	-	36.7	86.7	20.0	13.3	6.7	-	3.3	-	-	-
2.	Dairy Products	6.7	-	30.0	90.0	43.3	10.0	20.0	-	-	-	-	-
3.	Soy Product	46.7	-	3.3	30.0	30.0	50.0	3.3	20.0	16.7	-	-	-
4.	Green Leafy Vegetables	-	-	63.3	96.7	36.7	3.3	-	-	-	-	-	-
5.	Cauliflower Group	13.3	-	-	33.3	20.0	66.7	30.0	-	20.0	-	-	16.7
6.	Fruits	3.3	-	43.3	86.7	23.3	13.3	20.0	-	10.0	-	-	-
7.	Cocoa	43.3	3.3	-	50.0	20.0	46.7	3.3	-	33.3	-	-	-
8.	Nuts	16.7	-	13.3	60.0	13.3	30.0	20.0	10.0	36.7	-	-	-
9.	Garlic	13.3	13.3	43.3	86.7	36.7	-	6.7	-	-	-	-	-
10.	Methi	56.7	-	3.3	93.3	13.3	6.7	6.7	-	20.0	-	-	-
11.	Honey	56.7	10.0	10.0	90.0	10.0	-	16.7	-	6.7	-	-	-
12.	Amla	23.3	-	3.3	63.3	13.3	36.7	-	-	13.3	-	-	46.7
13.	Green Tea	60.0	-	13.3	93.3	6.7	6.7	-	-	20.0	-	-	-
14.	Fish	96.7	53.3	-	-	-	36.7	3.3	10.0	-	-	-	-
15.	Aloevera	80.0	26.7	6.7	16.7	3.3	56.7	-	-	10.0	-	-	-

Post-test results show that people are eating more soy products (up from 30% to 50%), more cauliflower (up from 20% to 66.7%), more cocoa goods (up from 20% to 46.7%), more almonds (up from 13.3% to 30%), more amla (up from 13.3% to 36.7%), more fish (up from 0% to 36.7%), and more aloevera (up from 3.3% to 56.7%).

Improvements were also made in the monthly consumption of soy products and fish and fish oil. Values examined suggested that the education campaign had a beneficial effect on the use of Functional Food categories.

In Table No. 2, we see the before-and-after consumption patterns of a few

day, and from once per month to once per week.

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