



# Awareness on Functional Foods and Nutraceuticals for Educated Working Women

POORNIMA JEYASEKARAN<sup>1</sup>, R.SHENBAGA LAKSHMI<sup>2</sup>, M.SATHYABAMA<sup>2</sup>, A.POORNA<sup>3</sup>, S.  
PRABHAVATHI<sup>3</sup>, M.PRASANNA VENKATESH<sup>3</sup>, S. SALAMAN RAJA<sup>3</sup>.

1. Assistant Professor, Department of Food Science and Nutrition, The American College, Madurai.

2. B.Sc Students, Department of Food Science and Nutrition, The American College, Madurai.

3. B.Sc Students, Department of Food Science and Nutrition, The American College, Madurai.

## ABSTRACT

Knowledge about the women's perceptions of functional foods and nutraceuticals is necessary for designing interventions to target the health promotion of the family. This study aims to find the knowledge of Functional foods and Nutraceuticals among educated working women by questionnaire method and to impart nutrition education through visual aids and Audio visual aids. The impact of the study is evaluated by KAP score. Among the 50 random samples the study revealed that the level of significant before awareness the mean score was 11.26 and after awareness the mean score was 14.72. The p value of the paired t- test was 0.4827 which shows that the study is significant at 5% level.

**Key words:** Functional foods, Nutraceuticals, Nutrition education, KAP score.

## INTRODUCTION

“Let food be your medicine and medicine be your food”, said Hippocrates about 2500 years ago. The philosophy of “Food as medicine” is more relevant than ever before. As concepts in nutrition move towards emphasizing the use of foods to promote better health and to help reduce the risk of disease, new concept of functional food has emerged [7]

The term nutraceutical is hybrid or contraction of nutrition and pharmaceutical. Reportedly, it was coined in 1989 by Stephen DeFelice and the Foundation for Innovation in Medicine. DeFelice proceeded to define nutraceutical as, “a food (or part of a food) that provides medical or health benefits, including the prevention and/

or treatment of a disease”[9]. Nutraceutical and supplements do not meet these requirements and are not classified as medical Food [1].

Currently, dozens of physiologically-active functional food components, from plants (i.e., phytochemicals) as well as animals (i.e. Zoochemicals), are under investigation for their potential role in disease prevention and health promotion. The potential beneficial role of functional foods in the American diet was emphasized in a recent position paper by the American Dietetic Association [2].

Women’s education in India plays a very important role in the overall development of the country. It not only helps in the development of half of the human resources, but in improving the quality of life at home and outside. Educated women not only tend to promote education of their girl children, but also can provide better guidance to all their children [3].

## **METHODOLOGY**

The study is designed to investigate the Awareness on functional foods & nutraceuticals for educated working women in The American College, Madurai.

### **OBJECTIVES OF THE STUDY:**

To assess and impact basic concepts of functional foods and nutraceuticals through nutrition education to the educated working women in The American College, Madurai.

### **SELECTION OF AREA:**

The area selected for the study is The American College, Madurai. Madurai is a major city in the Indian state of Tamil Nadu. It is the cultural capital of Tamil Nadu and the administrative headquarters of Madurai District, the third largest city in Tamil Nadu and 44<sup>th</sup> most populated city in India [11]. As the investigators are studying in The American College and ease of carrying out the study The American College is selected as the study area.

### **SELECTION OF RESPONDENTS:**

50 samples are selected by Random sampling method for this study. “Random sampling is those in which every item of the universe has a known chance, or probability of being chosen for the sample. This implies that the selection of sample items is independent of the person making the study that is; the sampling operation is controlled so objectively that the items will be chosen strictly at Random [10].

### **FORMULATION OF THE QUESTIONNAIRE:**

A questionnaire is often the first tool that people consider when undertaking a research project. However, designing a questionnaire is complex and time-consuming and the quality of the data collected is determined by the quality of the questionnaire used [6].

The questions included in the questionnaire were based on the objective of the study this was collected from various sources like Books, Journals, and e-references which comprises of socio-economic background and knowledge on functional foods and nutraceuticals.

## **NUTRITION EDUCATION**

A pamphlet was designed after collecting relevant information under the topic of functional foods and nutraceuticals. The pamphlet was made colorful and attractive so as to kindle the curiosity of the reader. As it is designed for educated working women to avoid elaborate reading, tables were framed for easy reading. Certain recipes were attached, which could help them to incorporate functional foods and nutraceuticals in their daily diet. As Kishore in 2003[4] said “visual aids stimulated thinking and cognize.” The use of visual aids in teaching learning process has multifarious values [8].

## **ASSESSMENT AND IMPACT OF NUTRITION EDUCATION ON KNOWLEDGE, ATTITUDE AND PRACTICES (KAP Scores)**

To study the impact of nutrition education on knowledge, attitude and practices of subjects Pre and Post knowledge, attitude and practices test was conducted. Scoring was done on following basis. Scores of one and zero were awarded respectively to each correct and wrong answer. Gain in scores and percent improvement was calculated using following education. Gain in score = score of post test – score of pre test

## **STATISTICAL ANALYSIS**

Mean and standard error were computed for variables. To test the level of significance Students‘t’ test was calculated.

## RESULTS

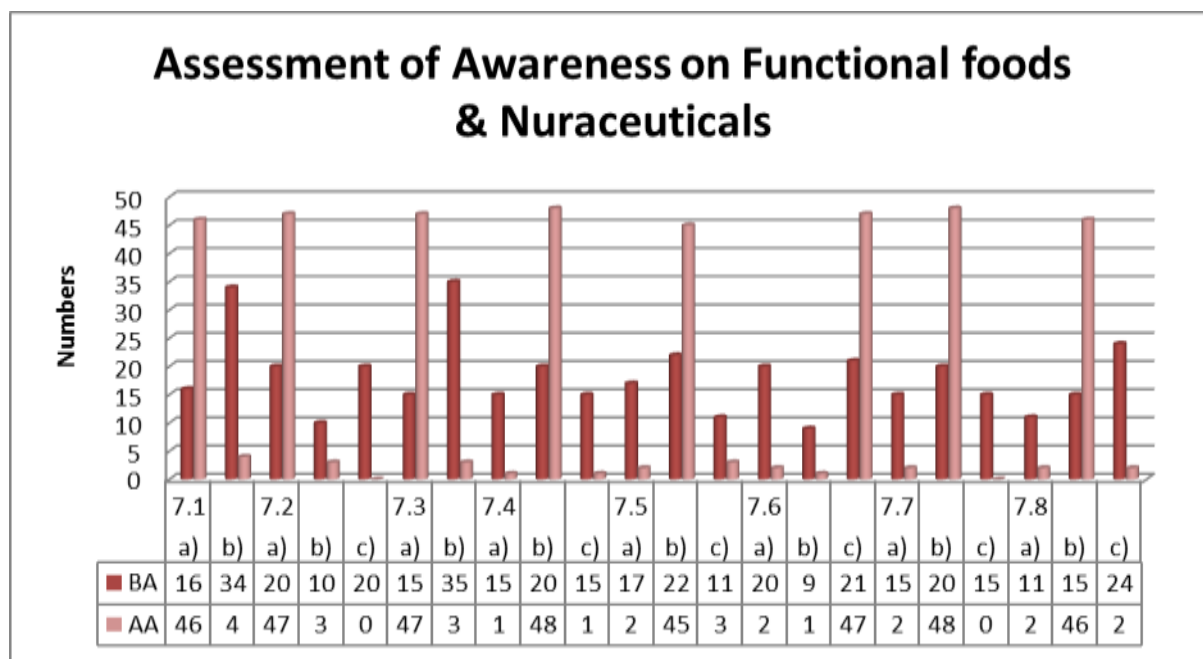
The results were tabulated and discussed below:

**Table 1: Assessment of scores on knowledge, attitude and practices (KAP)**

s.no	Knowledge aspects	Before nutrition education		After nutrition education	
		No	%	No	%
7.1	Have you come across the word “Functional foods”?	16	32	46	92
7.2	What are “Functional foods”?	20	40	47	94
7.3	Have you heard about the word “Nutraceuticals”?	15	30	47	94
7.4	Can Functional foods be taken in the form of pills?	20	40	48	96
7.5	How do you define “Nutraceuticals”?	22	44	45	90
7.6	An active component named “Allyl sulphur” is present in which vegetables?	21	42	47	94
7.7	Lycopene ,a functional component is present richly in which fruit?	20	40	48	96
7.8	Beta Glucan is present in which food item?	15	30	46	92
7.9	Have you observed the word enriched with / fortified with in the food stuffs you purchase? If yes give some example:	30	60	50	100

The impact of awareness of the selected educated working women are assessed and represented in Table 1 and graphically shown in Figure I. It clearly shows that only 32 percent of the educated working women already knew about functional foods and this increased to 92 percent after awareness through pamphlet distribution. 40 percent of the educated working women already know that the correct meaning of functional foods and this increased to 94 percentages after awareness through pamphlet distribution and before awareness only 30 percentages of the working women heard the term nutraceuticals then this increased to 94 percent after awareness. It can be clearly inferred that only 40 percentages of the respondents answered that nutraceuticals could be taken in pills form before awareness and after awareness it is increased to 96 percentages. 94% of them reported that “Allyl sulphur” is present in onion & garlic, which was 42% before awareness. Before pamphlet distribution 40 percent of the working women knew that tomatoes are rich in Lycopene and after the pamphlet distribution it increased to 96%. Tomatoes provide the body with lycopene, a valuable source of nutrition. Lycopene has shown that it prevents damage to the cells causing cancers of many types [4]. 30% of the working women knew that Beta Glucan present in wheat and this is increased to 92% after the pamphlet distribution. The words fortified and enriched were already identified by 60 percentages of the respondents which was improved

to the maximum of 100 percent after the nutrition education. Thus this study imparts nutrition education effectively among the targeted educated working women with significant results.



**Figure I: Graphical representation of the impact in KAP before and after awareness.**

The paired t- test performed to find the significance difference between before awareness and after awareness. The impact of the knowledge of the working women by imparting awareness on functional foods and nutraceuticals were found to be significant that before awareness the mean score was 11.26 and after awareness the mean score 14.72. The p values were 0.4827 for working women which shows that the study is significant at 5% level.

## CONCLUSION

A total of 50 educated working women were selected. The area selected for the study was The American College, Madurai. The sample was selected on the basis of random sampling. The method adopted for the collection of data was A pre structured questionnaire was formulated and administered to the selected subjects. Then pamphlet was distributed as a teaching aid for creating awareness among the respondents. The same questionnaire was again administered to them and they are assessed before and after awareness. The paired t- test was performed to find the significance difference between mean score of the impact of awareness and the results were significant by the p. value < 005. The results of the study revealed that on an average 19.88 of the total sample were able to answer the questionnaire correctly but after awareness the average was increased to 47.11 which is shows a huge transformation of knowledge imparted to the subjects through nutrition education.



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