

**CONSUMER BEHAVIOUR FOR DRY FRUITS IN  
BANGALORE CITY**

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**MBAL 2011**

**DEPARTMENT OF AGRICULTURAL MARKETING,  
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**2014**

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BANGALORE CITY**

**MOHAMMAD HAMED KHUSRAWY**

**MBAL 2011**

*Project Report submitted to the  
University of Agricultural Sciences, Bangalore  
in partial fulfillment of the requirements for the degree of*

***Master of Business Administration***

***(Agribusiness Management)***

**BANGALORE**

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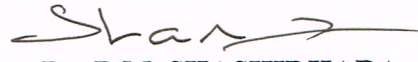
*Affectionately  
Dedicated  
To My Beloved  
Parents*

**DEPARTMENT OF AGRICULTURAL MARKETING,  
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UNIVERSITY OF AGRICULTURAL SCIENCES  
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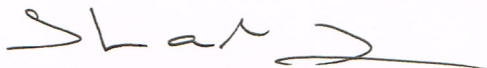
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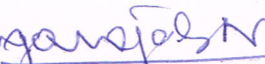
This is to certify that the Project Report entitled, “**CONSUMER BEHAVIOUR FOR DRY FRUITS IN BANGALORE CITY**” submitted by **Mr. MOHAMMAD HAMED KHUSRAWY, ID No. MBAL 2011**, in partial fulfillment of the requirements for the degree of **MASTER OF BUSINESS ADMINISTRATION (Agribusiness Management)** to the University of Agricultural Sciences, GKVK, Bangalore, is a record of bonafide research work carried out by him during the period of his study in this University under my guidance and supervision and the project work has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar titles.

Bangalore  
July, 2014

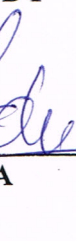
  
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**Mr. P. V. RAME GOWDA**

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*Bangalore*

*July, 2014*

*(Mohammad Hamed Khusrawy)*

# **CONSUMER BEHAVIOUR FOR DRY FRUITS IN BANGALORE CITY**

**MOHAMMAD HAMED KHUSRAWY**

## **THESIS ABSTRACT**

Today the consumption of dry fruits is gaining importance particularly in urban areas. The important dry fruits consumed are Dates, Almonds, Raisins, Cashews, Figs, Apricots, Walnuts etc. These are referred to as "conventional" or "traditional" dry fruits. Dry fruits are consumed either as snack food or as a breakfast, ready-to-eat snacks and desserts. This study conducted in Bangalore city attempted to assess the consumer behaviour for dry fruits. A total of 90 respondents belonging to different age and income groups were selected for study. The data regarding the consumer awareness and preference for dry fruits in Bangalore city was collected by a pre-tested schedule. The study has revealed that 64 per cent of the consumers were aware of dry fruits brands. Among the consumers' preference, the highest was for Dates, followed by Almonds and Cashews. The consumers on an average consumed 818 grams of Dates per month, followed by Almond (529 grams). The frequency of consumption of dry fruits was highest in the case of Dates (20 days per month). More than 58 per cent of the consumers preferred branded dry fruits and the remaining 42per cent preferred unbranded dry fruits. Among the consumers, the important factors influencing purchasing of dry fruits are health, taste and quality. Morning was the most preferred time for consumption of dry fruits. Two thirds of consumers have been consuming dry fruits for more than 5 years. The consumers' satisfaction was highest in the case of Pistachio (85.14%), followed by Dates (75.29%).

Signature of the Student

(Mohammad Hamed Khusrawy)

Signature of the Major Advisor

(B. M. Shashidhara)

## ಒಣ ಹಣ್ಣುಗಳ ಬಳಕೆಯಲ್ಲಿ ಬೆಂಗಳೂರು ನಗರದಲ್ಲಿನ ಗ್ರಾಹಕರ ವರ್ತನೆ

### ಪ್ರಬಂಧ ಶೀರ್ಷಿಕೆ

#### ಮೊಹಮ್ಮದ್ ಹಮೇದ್ ಕುಶ್‌ರಾವಿ

ಒಣ ಹಣ್ಣುಗಳ ಬಳಕೆ ಇತ್ತೀಚೆಗೆ ಭಾರತದ ನಗರ ಪ್ರದೇಶಗಳಲ್ಲಿ ಹೆಚ್ಚಾಗುತ್ತಿದೆ. ಒಣ ಹಣ್ಣುಗಳುಗಳಲ್ಲಿ ಪೋಷಕಾಂಶಗಳು ಮತ್ತು ಜೀವಸತ್ವಗಳು ಸಮೃದ್ಧ ಮೂಲವೆಂದ ಪರಿಗಣಿಸಲಾಗುತ್ತದೆ. ಪ್ರಮುಖ ಒಣ ಹಣ್ಣುಗಳು ಬಾದಾಮಿ, ಒಣದ್ರಾಕ್ಷಿ, ಗೋಡಂಬಿ, ಕರ್ಜೂರ, ಎಪ್ರಿಕಾಟ್ ಇತ್ಯಾದಿಗಳಾಗಿದ್ದು, ಇವುಗಳನ್ನು “ಸಾಂಪ್ರದಾಯಿಕ” ಒಣ ಹಣ್ಣುಗಳು ಎಂದು ಉಲ್ಲೇಖಿಸಲಾಗುತ್ತದೆ. ಗ್ರಾಹಕರು ಒಣ ಹಣ್ಣುಗಳನ್ನು ನೇರವಾಗಿ, ಲಘು ಆಹಾರವಾಗಿ ಮತ್ತು ಉಪಹಾರವಾಗಿ ಸೇವಿಸುವರು. ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವನ್ನು ಬೆಂಗಳೂರು ನಗರದಲ್ಲಿ ಒಣ ಹಣ್ಣುಗಳ ಗ್ರಾಹಕರ ವರ್ತನೆಯನ್ನು ತಿಳಿಯಲು ಅನುಕೂಲವಾಗುವಂತೆ ಈ ಸಂಶೋಧನೆಯನ್ನು ಸಂಯೋಜಿಸಲಾಗಿತ್ತು. ಪ್ರಸ್ತುತ ಸಂಶೋಧನೆಗೆ ಆಯ್ದು ೯೦ ಗ್ರಾಹಕರಿಂದ ಮಾಹಿತಿಯನ್ನು ಪಡೆಯಲಾಯಿತು. ಸದರಿ ಸಂಶೋಧನೆಯಿಂದ ಕಂಡುಬಂದ ಮುಖ್ಯ ಪರಿಶೋಧನೆಗಳೆಂದರೆ ಶೇಕಡಾ ೬೪ ರಷ್ಟು ಗ್ರಾಹಕರು ಒಣ ಹಣ್ಣುಗಳ ಬ್ರಾಂಡ್‌ಗಳ ಬಗ್ಗೆ ಅರಿವಿರುತ್ತದೆ. ಒಣ ಹಣ್ಣುಗಳು ಗ್ರಾಹಕರ ಆದ್ಯತೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಕರ್ಜೂರ ಮೊದಲ ಸ್ಥಾನದಲ್ಲಿದ್ದು ನಂತರ ಬಾದಾಮಿ ಮತ್ತು ಗೋಡಂಬಿ ಇರುತ್ತದೆ. ಕರ್ಜೂರ ಹಣ್ಣುಗಳನ್ನು ಒಂದು ತಿಂಗಳಿನಲ್ಲಿ ಸರಾಸರಿ ೨೦ ದಿನಗಳಲ್ಲಿ ಸೇವಿಸುವುದು ಕಂಡುಬಂದಿದ್ದು, ಇದು ಬೇರೆ ಹಣ್ಣುಗಳಿಗಿಂತ ಅತಿ ಹೆಚ್ಚಿಗೆ ಇರುತ್ತದೆ. ಶೇಖಡಾ ೫೭.೭೦ ರಷ್ಟು ಗ್ರಾಹಕರು ಬ್ರಾಂಡ್ ಒಣ ಹಣ್ಣುಗಳಿಗೆ ಆದ್ಯತೆ ನೀಡಿರುವರು ಮತ್ತು ಶೇಖಡಾ ೪೨.೨೩ ರಷ್ಟು ಗ್ರಾಹಕರು ಬ್ರಾಂಡ್ ಅಲ್ಲದ ಒಣ ಹಣ್ಣುಗಳಿಗೆ ಆದ್ಯತೆ ನೀಡಿರುವರು. ಗ್ರಾಹಕರು ಒಣ ಹಣ್ಣುಗಳ ಖರೀದಿಗೆ ಪ್ರಭಾವ ಬೀರಿರುವ ಪ್ರಮುಖ ಅಂಶಗಳೆಂದರೆ ಆರೋಗ್ಯ, ರುಚಿ ಮತ್ತು ಗುಣಮಟ್ಟ. ಗ್ರಾಹಕರ ತೃಪ್ತಿ ಪಡೆಯುತ್ತಿರುವುದು ಅತಿ ಹೆಚ್ಚಾಗಿ ಪಿಸ್ತಾ (ಶೇ. ೮೫.೦೪) ಆಗಿದ್ದು ನಂತರ ಕರ್ಜೂರ ಸೇವನೆಯಾಗಿದೆ (ಶೇ. ೭೫.೨೯). ವಿವಿಧ ಆಧಾರದ ಗುಂಪುಗಳ ಬಳಕೆದಾರರು ಒಣ ಹಣ್ಣುಗಳನ್ನು ಸೇವಿಸಲು ಬೆಳಗಿನ ಸಮಯವನ್ನು ಆರಿಸಿಕೊಂಡಿರುತ್ತಾರೆ. ಶೇ. ೨/೩ ರಷ್ಟು ಗ್ರಾಹಕರು ಕಳೆದ ೫ ವರ್ಷಗಳಿಗೂ ಮೇಲ್ಪಟ್ಟು ಒಣ ಹಣ್ಣುಗಳನ್ನು ಸೇವಿಸುತ್ತಿದ್ದಾರೆ, ಉಳಿದವರು ಕಳೆದ ೩ ರಿಂದ ೫ ವರ್ಷಗಳಿಂದ ಸೇವಿಸಿರುತ್ತಾರೆ. ಆದ್ದರಿಂದ ಬೆಂಗಳೂರು ನಗರದಲ್ಲಿ ಈ ಎರಡೂ ಒಣ ಹಣ್ಣುಗಳ ವ್ಯಾಪಾರ ಅವಕಾಶಗಳು ಅತ್ಯಂತ ಹೆಚ್ಚಾಗಿರುವುದು ಕಂಡುಬಂದಿದ್ದು, ಈ ಅವಕಾಶಗಳನ್ನು ವ್ಯಾಪಾರದ ದೃಷ್ಟಿಯಲ್ಲಿ ಬಳಸಿಕೊಳ್ಳಬಹುದಾಗಿದೆ.

(ಮೊಹಮ್ಮದ್ ಹಮೇದ್ ಕುಶ್‌ರಾವಿ)  
ವಿದ್ಯಾರ್ಥಿ

(ಬಿ. ಎಮ್. ಶಶಿಧರ)  
ಪ್ರಧಾನ ಸಲಹೆಗಾರರು



# Consumer Behaviour For Dry Fruits in Bangalore City

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## Introduction:

The Dry Fruit Market in India is showing remarkable growth owing to the rising health awareness among the consumers. General consumer awareness of dry fruits remains low, because most are traditionally used as ingredients in the production of confectioneries and bread-making, rather than direct consumption. Also, dry fruits have higher prices than peanuts, etc., so consumption has not expanded. The high nutritional value of dry fruits, such as dietary fiber and abundant vitamins, has started to be recognized, and a health food image has started to form as the health-consciousness and beauty interests of consumers increase.

## Objectives

1. To document the consumption of various types of dry fruits by consumers in Bangalore city,
2. To analyze consumers preference for branded and unbranded dry fruits and
3. To analyze the awareness, attitude and factors influencing the consumption of dry fruits.

## Methodology

Bangalore city is purposefully selected for the study. The primary data was collected from 90 consumers who were consuming dry fruits, through pre-tested schedule. The secondary data was collected from Indiastat, web sites and modern retail format.

The following analytical tools and techniques were used in the present study.

- Regression analysis
- Percentage analysis
- Garret's ranking technique

## Results

The consumers most preferred among dry fruits was ranked to Dates (2.20), followed by Almond (2.41) second ranked, third ranked was Cashew (2.72), Raisin (3.16) was fourth ranked, Pistachio (4.48) fifth and Walnut (5.18) sixth. The least preferred dry fruits by the consumers were Fig (6) seventh ranked. (Table 1)

The brand awareness of consumers about dry fruits. It is clear from the table that out of 90 consumers only (64.4%) were aware of brands and the rest have no idea about dry fruits brands. Nearly 40 per cent of the consumers were aware of Lion brand, followed by store brand (12.20%). 10 per cent of the consumers were aware of Manuk Mewa brand. With respect to Kemia brand the awareness level was very low 2.2 per cent. (Table 2)

There were ten factors which lowest the score most preferred and highest the score less preferred. It was observed from the table 3 that the important factors considered on health which got 1.12 score. For the taste factor which one of the important factors for purchasing dry fruits got 3.07 the second reason of purchasing. Availability, family tradition and habit got respectively 4.99, 5.26 and 5.52 scores. Whereas price and friends were got 6.92, price of dry fruits in Bangalore is much high and this factor not any affect on the purchasing of dry fruits. Religion got 7.06 score and other reasons got 7.67.

## Discussion

1. Among all consumers maximum of the respondents preferred Dates, followed by Almond. Least preferred among all selected dry fruits was Fig.
1. Consumers only (64.4 %) were aware of dry fruits brands. 40 per cent of the consumers were familiar with Lion Dates brand. Therefore, Lion brand of Dates was popular among the consumers.
2. Health, taste and quality are three important factors influencing the consumers buying behaviour.

**Table 1: Preference for dry fruits by consumers in Bangalore city**

Product	Rs.10,000-50,000	Rs. 0.5-1 lakh	Rs. >1 lakh	Average	Rank
Dates	2.12	1.89	2.52	2.20	I
Almond	2.50	2.38	2.38	2.41	II
Cashew	2.50	2.89	2.74	2.72	III
Raisins	3.32	2.95	3.17	3.16	IV
Pistachio	3.89	4.41	4.96	4.48	V
Walnut	5.63	5.11	4.96	5.18	VI
Fig	6.57	6.08	5.75	6.00	VII

**Table 2: Awareness of dry fruits brand among consumers in Bangalore city**

Brand	Dates	Dry fruits	Grand Total
Lion	36		36 (40)
Manuk Mewa		9	9 (10)
Kemia	2		2 (2.2)
Brand store		11	11 (12.2)
Grand Total	38 (42.22)	20 (22.22)	58 (64.44)

**Table 3: Factors influencing the buying behaviour towards dry fruits in Bangalore city**

Factor	Rs. 10,000-50,000	Rs. 0.5-1 lakh	Rs. >1 lakh	Average
Health	1.22	1.10	1.06	1.12
Taste	2.68	3.07	3.36	3.07
Quality	3.28	3	3.91	3.42
Availability	4.75	5.08	5.09	4.99
Family tradition	5.61	5.71	4.70	5.26
Habit	5.50	5.40	5.63	5.52
Price	7.43	7.22	6.35	6.92
Friends	7	6.56	7.16	6.92
Religion	6.25	7.35	7.34	7.06
Others		4	9.50	7.67

## Summary

Consumers most preferred Dates because of nutrients content, taste, price and availability.

There is no strong and popular brand of dry fruits except Lion brand of Dates.

Preferring health was considered as the foremost factor, it indicated all consumers very health conscious.

## Advisory Committee:

Dr. B.M. Shashidhara (Chairperson)

## Members:

Dr. G. N. Nagaraja

Mr. T. N. Venkata Reddy

Dr. P. V. Rame Gowda

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# CHAPTER I

## INTRODUCTION

Drying is the oldest method of preserving food. Fruit drying is one of the oldest methods of preserving fruit for later use. Throughout history, the sun, the wind, and a smoky fire were used to remove water from fruits. Leaving fruits out to dry in the sun and air is one of the oldest methods of preserving food-whether it's turning Grapes into Raisins, or fresh Figs, Dates, Apricots, and Plums into their dried counterparts. By definition, food dehydration is the process of removing water from fruit by circulating hot air through it, which prohibits the growth of enzymes and bacteria.

The spread of dried fruit particularly Raisins, Figs and Apricots was a result of the ancient Egyptians and Phoenicians, who brought dried fruit to other cultures in the west, with the most notable being the Roman Empire. The West Asia and North Africa regions have traditionally been one of the world's major producing areas of variety of nuts and dried fruits crops since ancient times. Major contributing factors in this connection have included climatic and soil conditions, favouring cultivation of said crops, technical knowledge of their growing, harvesting and processing, and experienced labour force as well as, capability of meeting cultural needs. In addition, large domestic markets and relatively simple storage characteristics provide a stimulus for production. Among the major edible nuts tree species and dried fruits, almond (*Prunes amygdalus Batsch*) Hazelnuts (*Corylusp*), Walnut (*Juglanceregia L.*) Pistachio nuts (*Pistaciavera L.*) dried Apricots (*Prunes armeniaca L.*) and Fig (*Ficus carica L.*).

Dry fruits are used by consumers directly or consumed as a snack food or as breakfast, ready-to-eat snacks and desserts. Besides bakeries are also largest users of dry fruits. ([http://en.wikipedia.org/wiki/Dried\\_fruit](http://en.wikipedia.org/wiki/Dried_fruit))

### 1.1 Origin of dry fruits

In the late Neolithic and Bronze Ages between 6000 and 3000 B.C., the ancient Mediterranean fruits (Date, Olive, Grape, Fig, and Pomegranate) were domesticated (Zohary and Spiegel-Roy 1975). Stone fruits such as Almond, Apricot, Cherry, Peach, and Plum were domesticated in Central and East Asia and reached the West. The Egyptians began cultivating Grapes for the purpose of drying as early as 2440 B.C., while Figs became a vital crop along the Nile River. By 1600 B.C., figs could be found in the near east and into the Mediterranean region. Grape cultivation was memorialized in temple carvings, mosaics, and paintings. Figs also gain favor as a foodstuff along the Nile, where they are seized as war prizes and used as tomb offerings to the dead.

The date palm was one of the earliest cultivated trees. It was domesticated in Mesopotamia more than 5000 years ago. It grew abundantly in the Fertile Crescent and it was so productive (an average date palm produces 50 kg of fruit a year for more than 60 years) that Dates became the cheapest of dry fruits. The villagers in Mesopotamia dried them and ate them as sweets. They were valued by travelers for their energy and were recommended as stimulants against fatigue.

In Egypt temple of Nahkt, grapes were converted dry into Raisins. Further Figs were also used daily in Mesopotamia, Israel and Egypt. In Greece and Crete, Figs grew were the staple food of poor and rich.

Grape cultivation first began in Armenia and the eastern regions of the Mediterranean in the 4th century BC. Here, Raisins were processed by burying grapes in the desert sun. Very quickly, viticulture and raisin production spread across northern Africa including Morocco and Tunisia. The Phoenicians and the Egyptians popularized the production of Raisins, probably due to the perfect environment for sun drying. They put them in jars for storage and allotted them to the different temples. They also included them in their breads and various pastries, some made with honey, some with milk and eggs.

From the Middle East, these fruits spread across Greece to Italy where they became a major part of the diet. Ancient Romans used Raisins in large quantities and at all levels of society, including them as a key part of their common meals, along with olives and fruits. Raisined breads were common for breakfast and were consumed with their grains, beans and cultured milks. Raisins were so valued that they transcended the food realm and became rewards for successful athletes as well as premium barter currency. Figs in basket, Pompeii, dry Figs were very popular in ancient Rome.

Figs again were extremely popular in Rome. Dry Figs were mixed with bread and formed a major part of the winter food in the country. They were also mixed with spices such as cumin, anise and fennel seeds, or toasted sesame, wrapped in Fig leaves and stored in jars.

Plums, apricots and peaches had their origins in Asia. They were domesticated in China in the 3rd millennium BC and spread to the Fertile Crescent where they were also very popular, fresh and dry alike. They arrived in Greece and Italy much later and were very expensive but valued in the preparation of gourmet dishes with honey and spices.

## **1.2 Benefits of dry fruits**

Dry fruits are considered rich source of nutrients and regarded as delicacies. Several fruits that come under dry fruits category are: Cashews, Walnuts, Almonds, Raisins, Pistachio, Dates, Peanuts, Macadamia nuts, Hazelnuts etc. These fruits are packaged in aesthetic designs either as assorted or as a mix in different proportions and sold as gift pack in the market at good prices.

The dry fruits are packed in accordance to their weight, size and quality. Packaging style changes with taste and preferences of consumers. Several packaging styles include silver serving trays with bowls, baskets and hard board packets.

Dry fruits are processed and enriched with high nutritional elements to make them delicious and ready to be consumed either in raw form or used in various food items. Other food items which are made up of different type of dry fruits are mango pulp, fruit

cocktail, canned fruits/juices etc. Cashew nuts and peanuts are also sold as roasted nuts in various flavors like garlic, salt, pepper, chocolate, chilli, sugar and honey. These nuts are hygienically packed in vacuumized nitrogen flushed foil packs to increase shelf life. Raisins are natural sweeteners and used in various food items to enhance the taste. These are processed and dehydrated from seedless grapes and the light colour of the Raisins is preserved with sulphur treatment. Raisins are consumed either raw or mixed in with Cakes, rolls, pies, or in combination with dried fruits.

Dry fruits have special importance during long journeys because of high nutritive value. Nuts are like small powerhouses that nourish and provide energy when needed. Moderate use of nuts is believed to decrease risk of heart disease, gallstone and certain kinds of cancer. The fiber and magnesium found in nuts help to maintain balanced levels of glucose and insulin and thus reducing the risk of type 2 diabetes. Variety of peanut items includes groundnut Kernels, blanched peanuts and redskin. Blanched Peanuts are packed peanuts which can be readily used for consumption and Redskin Groundnut Kernels have red colored skin over it. (<http://cvsingh.hubpages.com/hub/Dry-fruits-taste-consumption-and-health>)

### **1.3 Production and consumption of dry fruits**

During the year 2011 the production of Almond was 2 million tones. The United States is the largest producer of almonds with a production of 0.73 million tonnes. Egypt was the largest producer of Dates with 1.37 million tonnes in 2011, followed by Saudi Arabia with 1.12 million tonnes. Besides Iran, the United States and Turkey are the major producers of Pistachios.

Nigeria was the world's largest producer of Cashew nuts in 2010. The Cashew nut production has varied over the years. African countries used to be the major producers before 1980s. India became the largest producer during 1990s, followed by Vietnam in mid 2000s. However from 2008 onwards, Nigeria has become once again the largest producer of Cashew.

The worldwide production of Walnut seeds has been increasing rapidly in recent years, with the largest share coming from Asia. The world production was about 2.55 million metric tonnes of Walnut seeds in 2010. China was the world's largest producer of Walnut seeds, with 1.06 million metric tonnes. The other major producers of Walnut seeds are Iran, United States, Turkey, Ukraine, Mexico, Romania, India, France and Chile. With regard to Raisins the United States is the major producer with 304,000 million metric tonnes. Turkey, Egypt and Iran are the largest producers of Fig in the world.

The International Nut and Dry Fruit Council (INC) (2007-2012) a Global Statistical Review, has estimated that the total production for tree nuts in 2012 was 3.5 million metric tonnes, and the production of dry fruits was 9.5 million metric tonnes, representing a 13 per cent increase from 2011.

The world consumption of tree nuts in 2011 exceeded 3.02 MT. Dry fruit consumption increased 5 per cent in 2011, while peanut consumption was slightly over 36 million metric tonnes, a 7 per cent increase from the previous year.

The nuts and dry fruit total supply value was 25.65 billion US dollars in case of tree nuts in 2012 (19% up from 2011), and 6.66 billion US dollars in the case of dry fruits (4% down from 2011). Source: (Nuts and dried fruits global statistical review 2007-2012).

#### **1.4 Consumers' awareness of dry fruits**

The consumer awareness of dried fruits remains low, because most are traditionally used as ingredients in the production of confectioneries and bread-making, rather than direct consumption. Also, nuts and dried fruits have higher prices, so consumption has not expanded. However, preference has diversified beyond Almonds and Pistachios in the past few years. The high nutritional value of nuts and dried fruits, such as dietary fiber and abundant vitamins, has been recognized, and a health food image has started to form as the health - consciousness and beauty interests of consumers increase. Popularity is expected to increase and demand is expected to expand, as nuts and dried fruits are consumed as supplements and are used as part of dietary supplements by more women and young people in the future.

The dry fruits have gained consumer attention in the world recently, as consumers began to recognize the various functions of nuts, such as oleic acid (mono-unsaturated fatty acid) to reduce cholesterol, and abundant dietary fiber to slow digestion and encourage effective dieting. As such, each manufacturer aims to expand the demand for nuts, not as traditional snacks, but by promoting them as health food, such as the introduction "no-salt types" which can be eaten every day. At present dried fruits, are used not only as traditional items, but also other fruits, such as Figs, mangos, and berries, and packaged products in the handy, carrying packages with a zipper are now sold, for casual eating as a snack have become available.

The distribution route for nuts and dried fruits is expanding not only to supermarkets, but also convenience shops, general merchandise stores, etc, so availability to consumers in these stores is increasing. Various programs are planned to raise the awareness by consumers, such as health seminars, in addition to advertisements via the mass media and Internet.

The exploitation of dry fruit as a carrier of functional ingredients is a relatively new concept, although the functional properties of such products originated from the nature of drying process, where the removal of water leads to a natural concentration of healthy fruit components. (Jesionkowska, 2009).

**Table 1.1: Top selected dry fruits production countries 2010-2011**

<b>Almonds</b>		<b>Dates</b>		<b>Cashews</b>		<b>Pistachios</b>	
<b>Countries</b>	<b>Million Tonnes</b>	<b>Countries</b>	<b>1000 MT</b>	<b>Countries</b>	<b>1000 MT</b>	<b>Countries</b>	<b>1000 MT</b>
UAS	0.73	Egypt	1,373	Nigeria	650,000	Iran	472,097
Spain	0.21	Saudi Arabia	1,122	India	613,000	USA	201,395
Iran	0.17	Iran	1,016	Côte d'Ivoire	380,000	Turkey	112,000
Italy	0.10	UAE	900	Vietnam	289,842	China	74,000
Morocco	0.13	Algeria	690	Indonesia	145,082	Syria	55,610
Syria	0.13	Iraq	619	Philippines	134,681	Italy	10,801
Afghanistan	0.061	Pakistan	557	Brazil	104,342	Greece	9,580
Turkey	0.070	Oman	268	Guinea-Bissau	91,100	Afghanistan	2,300
Tunisia	0.061	Tunisia	180	Tanzania	80,000	Tunisia	2,100
Algeria	0.050	Libya	165	Benin	69,700	Kyrgyzstan	888

**Cont...**

<b>Walnuts</b>		<b>Raisins</b>		<b>Figs</b>	
<b>Countries</b>	<b>1000 MT</b>	<b>Countries</b>	<b>1000 MT</b>	<b>Countries</b>	<b>1000 MT</b>
China	1,655,508	USA	304,000	Turkey	254,838
Iran	485,000	Turkey	260,000	Egypt	184,972
USA	418,212	China	160,000	Iran	76,414
Turkey	183,240	Iran	150,000	Morocco	74,300
Ukraine	112,600	Chile	75,000	Algeria	99,100
Mexico	96,476	South Africa	45,000	Syria	41,000
France	38,314	Uzbekistan	30,000	U.S.A.	37,113
India	36,000	Afghanistan	29,000	Greece	11,014
Romania	35,073	Argentina	29,000	Spain	26,800
Chile	35,000	Australia	15,000	Afghanistan	25,000

MT = Metric Tonnes

## **1.5 Importance of the study**

The study attempt to assess the consumer behaviour for dry fruits in Bangalore city. This study provides an overview about dry fruits among the citizens of Bangalore city and it provides valuable information to many traders, retailers and consumers which may improve their business. The result of this study pertaining to the constraints would help to make appropriate remedial measures to consumers and retailers.

## **1.6 Objectives of the study**

With this background, the present study was conducted in Bangalore city of Karnataka state with the following objectives.

1. To document the consumption of various types of dry fruits by consumers in Bangalore city,
2. To analyze consumer preference for branded and unbranded dry fruits and
3. To analyze the awareness, attitude and factors influencing the consumption of dry fruits.

Based on the above objectives, the following hypotheses were formulated.

1. The consumption of consumers varies across dry fruits.
2. The consumer prefers branded products.
3. Health and nutrition contents are the important factors influence the consumers' preference for dry fruits.

## **1.7 Presentation of the study**

The study has been presented in six chapters. Chapter-I deals with the nature, importance and specific objectives of the study; Chapter-II describes the comprehensive review of the relevant research work done in the past related to the present study; Chapter-III outlines the features of the study area, nature and source of data, sampling procedure and analytical tools and techniques employed in the study; Chapter-IV is devoted to present the main findings of the study through tables; Chapter-V discusses the results of the study; Chapter-VI provides the summary of the whole study and also suggests the policy implications based on findings of the study. At the end, important references have been listed relating to the present study.

## **1.8 Limitations of the study**

One of the main limitations of the study is the sample size limited to Bangalore city. The study is based on the primary data collected from consumer perception on dry fruits. The study is restricted to Bangalore city only. Thus, the results of the study are interpreted with the above limitation in view.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

A review of the research work relevant to the objectives of the present study is presented in this chapter. The studies on consumer's behaviour of dry fruits are very few in number. Hence, reviews of studies of other comparable dry fruits products pertaining to the objectives of the present study have been presented under the following sub-heading.

- 2.1 Awareness of consumers towards branded products
- 2.2 Consumption pattern
- 2.3 Brand preference
- 2.4 Purchase behaviour of consumers
- 2.5 Factors influencing consumption of dry fruits

#### **2.1 Awareness of consumers towards branded products**

Brown *et al.* (2000) in their study on nutritional awareness and food preferences of young consumers in Northern Ireland indicated the need for effective education on nutrition to young consumers given their food habits and behaviour, particularly during adolescence stage and analyzed that the interaction between young consumers' food preferences and their nutritional awareness behaviour, within three environments (home, school and social interaction). The authors suggested that food preferences of young are of a 'fast food' type and consequently the food habits of many young consumers may fuel the consumption of poor nutritionally balanced food. While young consumers were aware of healthy eating, their food preference behaviour did not always appear to reflect such knowledge, particularly within the school and social environments.

Beverland (2001) studied creating value through brands and the level of brand awareness within New Zealand market for ZESPRI kiwi fruit. The effectiveness of branding strategy employed by kiwi fruit, New Zealand was studied. The findings of the study indicated that the level of brand awareness for ZESPRI is low among consumers. The author suggested the brand awareness can be increased through targeted marketing and supply chain management.

Chen (2001) examined the relationship between the characteristics of brand associations and brand equity. The author that brand awareness was a necessary asset but not a sufficient method for building strong brand equity.

Yee and Young (2001) in their study highlighted the public health approach to reducing the fat content of meat pies in Auckland. The authors' analyzed seven leading pie brands for fat content ranged from 7.10 to 19.20 per cent fat. With respect to content Potato topped and cottage pies had the lowest fat content (7.10 - 9.20% fat). Most of the brands did not display nutritional labeling on packaging. Over half of the consumers (52%) who responded to the survey were aware of the campaign. The study was successful in raising consumer awareness about the high fat content of pies and

influencing the food environment with a greater availability of lower fat pies. The study revealed that it is possible to produce acceptable lower fat pies and food companies should be encouraged to make small changes to the fat content of food products.

Nandagopal and Chinnaiyan (2003) conducted study on Brand preference of soft drinks in rural Tamil Nadu. The study indicated the level of awareness among the rural consumers about the soft drinks brands was high. The major source of brand awareness was word of mouth followed by advertisement, awareness through family members, relatives and friends.

Ramasamy *et al.* (2005) studied the consumer behavior towards instant food products and indicated that the buying behaviour is influenced by awareness and attitude towards the product. The commercial advertisement through television was said to be the most important source of information, followed by displays in retail outlets. Consumers do build opinion about a brand on the basis of product features. A large number of respondents laid emphasis on quality and felt that price is an important factor while the others attached importance to image of the manufacturer.

## **2.2 Consumption pattern**

Gursharn (1995) in his study on consumption of Walnut found that family size, family education and disposable income of the family were the major factors influencing the consumption. Furthermore, per family consumption of Walnut increased with the increase in income group. The study revealed that the poor class consumed 3.11 kgs of Walnut, whereas the rich class consumers 13.08 kgs of Walnut.

Daisy *et al.* (1999) conducted a study on consumption pattern and consumer preference for milk products in Madras city. The study revealed that family size; monthly income and education levels had a significant and positive influence on consumption of milk and milk products. Furthermore, the preference of the households was more for toned milk among all income groups. The preference for other milk products like standardized milk, skim milk and skim milk powder, table butter, cooking butter, khoa and yoghurt increased as income increased which was linked to the higher educational level of the head of the household.

Apoorva Palkar (2004) studied the consumer preferences in the purchase of branded potato chips. Random sampling technique was employed covering 150 consumers and 50 retailers. The results revealed that nearly 60 per cent of the consumers prefer Lays to Peppy, Cheetos and Kurkure. The spicy and the salty flavors were found to be most preferred in chips by the consumers and they revealed that taste or time pass was the most important reason for purchasing chips. Nearly 66 per cent of the consumers purchase the products at least once in a week. The habitual purchasers' buy Lays brand indicating the loyalty of the consumers towards the brand.

Radhakrishnan (2004) conducted a study on perspectives and prospects of coffee consumption in India. The result indicated that coffee consumption had shown an annual average growth of 2.14 per cent between 1951 to 2003. In absolute terms the off take in

domestic market had grown from about 18,400 tonnes to about 70,000 tonnes during 2003. For various reasons the decade between 1991 to 2000 did not show any noticeable growth in consumption. Most of the earlier growth had come from Robusta than Arabica. Though, during the pool marketing, the period between 1981-90 showed higher volume of consumption (well above 50, 000 MT and peaked about 63, 000 MT) and the highest growth rates were achieved during the period 1951-1960 and 1971-1980 at a CGR of 7.23 and 3.28 per cent, respectively. Market development in non- traditional areas, consolidating traditional markets, retail outlets and distribution, product forms, consumer education and focus on the youth are the some of the suggestions made by the author to increase coffee consumption.

Randhwa and Chahal (2005) conducted a study on consumption pattern of milk and milk products in rural Punjab. The study was conducted to examine the consumption pattern of milk and milk products and to investigate the factors affecting their consumption in rural Punjab. The requisite data was collected through personal interview method by adopting multistage sampling technique. The results showed that the expenditure elasticities were 0.89 and 0.65 for liquid milk and for milk products, respectively.

Sarker *et al.*, (2005) studied that the consumption pattern, marketing channel and prices of spices in West Bengal. The study indicated that, of the total consumption, turmeric stood the highest from 65.63 per cent to 67.63 per cent among the spices, turmeric solid was also consumed significantly, i.e., 13.53 per cent to 15.40 per cent, followed by cumin (8.44 to 8.86 per cent) and chili (8.44 to 8.86 per cent). The study also revealed that the consumption of spices was highest in winter season compared to other seasons.

Amy and Alka (2006) studied the household food consumption pattern in North Eastern states of India. The study revealed that the per capita consumption of cereals was 13.17 kgs in rural areas and 13.28 kgs in urban areas as compared to all India consumption of 10.72 kgs and 10.42 kgs in rural and urban areas, respectively. Rice contributed to more than 90 per cent of total cereal consumption in the region. The share of rice in total cereal consumption was found nearly two times higher than that of all India average, whereas the share of wheat and coarse cereals was found to be very low. The per capita consumption of pulses, milk and milk products, fruits, edible oils and sugar were relatively lower in North Eastern states as compared to the all India average, but the consumption of vegetables was relatively higher.

Jabir Ali (2006) in his study made an attempt to examine the structural changes in consumption and nutrition of livestock products in India. The study revealed that the consumption pattern in India had undergone significant changes towards high value commodities like fruits and vegetables, milk, meat and egg due to increase in per capita income, urbanization, changes in lifestyle, preference, relative prices and increased awareness about food nutrients among consumers. During 1983 to 1999, consumption of cereals declined from 192 to 152 kg per year in rural areas and 147 to 125 kgs in urban areas. But, on the other hand, consumption of fruits increased by 553 per cent, vegetables

by 167 per cent, milk and milk products by 105 per cent and of meat, eggs and fish by 85 per cent in rural areas over the same period. These changes in diet were even more dramatic in urban areas.

Mahajana Shetty *et al.* (2006) conducted a study on consumption pattern and consumer preference of milk and milk products in Hubli-Dharwar urban conglomeration. A multi-stage sampling procedure was followed for the selection of the respondents. Households' preferences for the attributes of liquid milk were studied using conjoint analysis. The important attributes of liquid milk that influenced the consumers' decision to purchase liquid milk were identified in consultation with a sample of decision makers of liquid milk consumption across different households in the twin cities. While liquid milk was used by all the households; curds, butter, ghee and paneer were used by 87 per cent, 53 per cent, 44 per cent and 29 per cent families respectively. The results of the study revealed that the per capita expenditure incurred on liquid milk and the use of liquid milk for drinking purpose increased with increasing family incomes. The results of conjoint analysis indicated that price was of maximum relative importance and brand was of minimum relative importance in the overall decisions regarding the purchase of liquid milk. They concluded that milk of any brand needs to be price competitive with good fat content in urban conglomeration.

Soe and Singh (2006) indicated that the households' food consumption pattern in North Eastern states of India. The study examined the level and pattern of household food consumption pattern. They estimated the expenditure elasticities and projected the household food consumption. The analysis indicated clearly that North eastern states consumed lower quantities of food items like pulses, milk and milk products, edible oils and fruits as compared to all India averages and recommended levels. The projected household demand for the year 2016 based on 7 per cent growth in net state domestic product (NSDP) suggested the substantial increase in food demand, which necessitates more capital investment in agriculture including greater financial support to research and extension.

Sangeeta *et al.* (2007) studied the consumption pattern and consumer satisfaction for milk and milk products in urban Punjab. The results indicated that the family size was the major variable for determining the demand for food items both at family level and at aggregate level. The study also revealed that the whole milk was consumed by 99 per cent while 17 per cent preferred skimmed milk. The income of the family affected the consumption levels of milk and milk products. The per capita consumption of whole milk was highest for the business category (954 ml), followed by service category (635 ml) and the house wives (559 ml). The study concluded that per capita consumption of milk and milk products showed a positive relationship with income level, occupational structure and the literacy levels, while it was negative with the food habits. Variation in the consumption levels of milk and milk products across different socio-economic groups implied that the designing of a uniform policy and treating the entire population as one homogeneous group could mislead the marketers.

Yesodha Devi and Kanchana (2007) conducted a study on consumption pattern and consumer preference for processed chicken in Coimbatore city. Simple random sampling was adopted in selecting the respondents from Coimbatore city in Tamil Nadu. The results indicated that, of the 200 respondents selected for the study, 65 per cent consumed chicken once in a week and 62 per cent of the respondents preferred broiler chicken. It was also evident that 60 per cent of the respondents preferred to consume non-vegetarian items hotels. The study found that the personal factors of the respondents have no significant influence on the quantity of the chicken purchased per week. It was concluded that age, occupation, religion, income level and number of members in the family have significant influence on the quantity of chicken purchased.

Jesionkowska *et al.* (2008) conducted a study on preferences and consumption of dried fruit and dried products among Dutch, French and Polish consumers. The results revealed that dried fruit as well as products with dried fruit are eaten rather occasionally; however, Polish respondents occurred to be more familiar with dried fruit than Dutch or French ones. The highest number of consumers indicated that they eat dried fruit once a day or few times a week. Although 58.3% of Dutch respondents claimed that they never eat dried fruit, 8.6% admitted that they eat Raisins once a day. Moreover, Raisins occurred to be the most preferred fruit not only for Dutch but also for French and Polish respondents. In general cereals occurred to be one of the most preferable products among all 3 nationalities. With respect to consumption pattern, Dutch and French respondents indicated that dried fruit consumption mainly in the morning, whereas Polish indicated that they eat dried fruit in the afternoon and evening. All the 3 nationalities strongly felt that they eat dried fruit as well as other products at home.

### **2.3 Brand Preference**

Shanmugsundaram (1990) studied about demographic and psychological factors that influence the pattern and selection in soft drink and tetra pack drinks – A study in Veollore. The study revealed that, the most preferred soft drink among respondents as Gold spot (26%), followed by Limca (24.80%). It was found that the taste was the main factor for preference of particular brand and among the media; television played a vital role in influencing consumer to go for a particular brand. Because of convenience in carrying, tetra pack was most preferred one.

Veena (1996) studied brand switching and brand loyalty of processed fruit and vegetable products in Karnataka state by using Markov Chain analysis. The result of the study revealed that Maggi, Sil and Kissan were having market retention of 74.20, 55.78 and 48.74 per cent, respectively for jam products. The equilibrium shares determined in order to predict future market position among the different brand showed that in long run shares of Kissan, Rex. Other brands were likely to decline, mainly on account of increased market shares of Gala, Sil and Maggi.

Padmanabhan (1999) conducted study on brand loyalty, which revealed that the price of the preferred brand, efficiency of the preferred brand and influence of advertisement significantly influenced the brand loyalty. Only when the price of a

particular brand is comparatively low, the farmers would naturally prefer to low priced brand. Otherwise farmers would naturally continue to purchase the same brand.

Low and Lamb Jr. (2000) in their study on the measurement and dimensionality of the brand associations indicated that interesting conclusion that well known brands tend to exhibit multi-dimensional brand associations, consistent with the idea that consumers have more developed memory structures for more familiar brands. Consumers might be willing to expend more energy in processing information regarding familiar brands compared to unfamiliar brands.

Kamenidou *et al.* (2002) in their study on household purchasing and consumption behaviour towards processed peach products indicated that findings on the purchasing and consumption behaviour of Greek households towards three processed peach products: canned peaches in syrup, juice and peach jam. The results revealed that 47.50 per cent of the households purchased canned peaches in syrup, 67.40 per cent purchased peach juice and 42.60 per cent purchased peach jam. Reasons for such purchase were satisfactory taste and qualities and household's perception that they were healthy products. The results also indicated that the consumption quantities were considered low, while households usually purchased the same brand name, meaning that there was a tendency for brand loyalty.

Nandagopal and Chinnaiyan (2003) conducted a study on brand preference for soft drinks in rural Tamil Nadu, using Garrets ranking technique, to rank factors influencing the soft drinks preferred by rural consumers. They found that the product quality was ranked first followed by retail price.

Kim-Hyunah *et al.* (2005) in their study cause-effect analysis of brand equity factors in contract food service management company in college and university in Incheon area indicated that relationship among brand equity factors (brand awareness, brand image, brand preference and brand loyalty) and suggested a strategy for brand management in contract food service management companies. He concluded that brand awareness has positive effect on brand image and brand preference and recommended that the contract food service companies should focus on improving brand awareness as a brand strategy. In addition, brand preference and brand image had significant positive effects on brand loyalty. Thus, the companies should strive to strengthen brand loyalty through building brand preference and brand image. Brand loyalty promoted more customer visits, which was directly related to profitability of contract food service management companies, the authors concluded.

Narang (2006) conducted a study on branded foods indicated that a buyer does not stick to one brand in case of food purchasing. They should be able recall different brand names when they go for purchase. Repetitive advertising can be used to promote brand recall. The product should be associated with style and trend, so that it appeals to the youth and the brand name should be developed as a fashion statement. Promotional schemes such as discounts and free offers with purchase were suggested to increase rates.

Vincent (2006) conducted a study on brand consciousness among children and its effect on family buying behavior in Bangalore city indicated that brand consciousness among children. The study showed that children start to recognize product brands at an early age, which influence family buying behaviour. It was helpful for parents in making purchase decision of durable goods for the family.

## **2.4 Purchase behaviour of consumers**

Balaji (1985) in his study on A case of fish consumption behaviour in Vishakapatnam. The study revealed that 77 per cent of respondents consumed fish for dinner and 22 per cent for lunch. About 30 per cent of the respondents did not consume fish on festival days, as those days were considered auspicious, while the rest consumed fish, irrespective of festivals.

Puri and Sanghera (1989) analyzed the nutritive value and consumption pattern of some processed foods indicated the consumption pattern of processed products in Chandigarh. Jam was found to be most popular, irrespective of income. Orange squash consumption was maximum in high and middle – income families. Pineapple juice consumption increased with a rise in the income.

Rees (1992), revealed that the factors influencing the consumer's choice of food were flavour, texture, appearance, advertising, a reduction in traditional cooking, fragmentation of family means and an increase in 'snacking' etc. Demographic and household role changes and the introduction of microwave ovens had produced changes in eating habits. Vigorous sale of chilled and other prepared foods was related to the large numbers of working wives and single people, who require value convenience. Development in retailing with concentration of 80 per cent of food sales in supermarkets was also considered to be important. Consumers were responding to messages about safety and healthy eating. They were concerned about the way in which food was produced and want safe, 'natural', high quality food at an appropriate price.

Joshi (1993) conducted the study on Food purchase habits and consumer awareness of rural and urban housewives in Dharwad indicated that food purchasing habits and consumer awareness among rural and urban housewives indicated that majority of the urban respondents purchased the groceries like cereals (52%), pulses (64%), oils (73%), spices (72%) and sugar (69%) on monthly basis. While perishables like fruits (48%), eggs (41%) and meat (46%) were purchased once in week and milk (48%) was purchased daily. Rural respondents purchased cereals (70%), pulses (71%), oils (71%), spices (71%), sugar (71%) and fruits (73%) once in week and milk (78%) daily. Both rural and urban respondents purchased groceries (99 % each), perishables (89 % and 99 % respectively), ready to use foods (97 % and 87 % respectively) and commercially available foods (96.00% and 6 % respectively) from retail shops. Price, quality and weight of the products were the important factors considered by both rural and urban respondents while purchasing of food items.

Ragavan (1994) conducted A study on the consumer response towards franchise vegetable outlets and indicated that quality, regular availability, price, accuracy in

weighing and billing, range of vegetables and accessibility as the factors in the order of importance which had influenced purchase of vegetables by respondents from modern retail outlet.

Dhillon *et al.* (1995), in their study on preference of place and factors associated with purchase of food items and durable goods by rural and urban consumers indicated the purchase behaviour in Ludhiana, rural and urban respondents ranked nearby market (mean score of 1.47 for rural and 2.10 for urban) and main market (mean score of 0.88 for rural and 1.38 for urban) as their first and second preference of order respectively for the purchase of food items. The prime factor indicated by the rural respondents for buying their food items was appearance with mean score of 4.01, followed by price, quality and place of buying to which they ranked second, third and fourth with mean scores of 3.81, 3.45 and 2.96 respectively. But urban respondents visualized these factors little differently and ranked quality, appearance, place of buying and expiry date as first, second, third and fourth ranks with mean score of 4.69, 4.01, 3.20 and 3.05 respectively.

Singh *et al.* (1995) in their study on factors influencing consumer preferences for type of milk supply in Hissar city. The study revealed that the factors influencing consumers preference for milk are milk quality, convenient, availability, supply in quantity desired, flavour, colour, freshness and mode of payment which showed higher levels of consumer satisfaction.

Kulkarni and Murali (1996) in their study on purchasing practices of consumers of Parbhani Town indicated that 83.50 per cent of consumers were seeking the information from television regarding the products availability, followed by neighbors (71%) and newspapers (69.50%). Consumers preferred retail market for the purchase of groceries (65%), milk and milk products (100%), vegetables (100%), fruits (100%) and snacks (75%) and they adopted cash payment. Majority (75.00%) of the consumers preferred quality for the purchase of food.

Amitha (1998) in her study - A study of household consumption pattern of selected dairy products in Bangalore city. The results of the study revealed that, income and price significantly influenced the consumption of table butter. The price of dairy products had a negative impact on the consumption and income had a positive impact on the consumption.

Sayulu and Reddy (1998) in their study on socio-economic influence of rural consumer behaviour – An empirical study indicated the frequency of purchase of commodities by rural consumers was highly influenced by the type and nature of the products. Products like groceries (40.35%) and others which included vegetables, milk etc. (48.25%) purchased on daily basis and 33.33 per cent and 42.98 per cent of them purchased these products on weekly basis. Cash purchase was highest in case of products like groceries (44.74%) followed by credit purchase with 38.60 per cent and 21.06 per cent respectively. Price of the goods was considered to be the most important factor by more than 88.00 per cent of the respondents followed by easy availability (66.66%) and neighbours (54%).

Kamalaveni and Nirmala (2000) in their study on consumers behaviour in instant food products indicated that there is complete agreement between ranking given by the housewives and working women regarding the reasons prompting them to buy Instant Food Products. Age, occupation, education, family size and annual income had a positive influence on the per capita expenditure towards the Instant Food Products.

Hugar *et al.* (2001) carried out a study on dynamics of consumer behaviour in vegetable marketing in Dharwad city. Low income groups purchased lesser quantity (3.25 kg/week) of vegetables as compared to medium (5.40 kg/week) and high income groups (4.66 kg/week). Majority of low income group preferred to purchase vegetables from producers because of reasonable price. High and medium income families preferred stall vendors for the purchase of vegetables because of better quality and correct weighing.

Cavard and Moreau (2003) undertook a survey among 2000 French consumers in 2002 to study their behaviour regarding the purchase of fruit and vegetables. The study revealed that with respect to places of purchase, supermarkets come first, followed by markets. In terms of modes of purchase, the self-service with assisted weighing was the preferred option. Consumer expectations concern better control of labeling and quality on the selling place, with an indication of consumed-by date. The main consumers, the old-aged people, appear, however, to be less concerned with this additional information.

Usha (2007) in her study on buying behaviour of consumers toward instant food products in Kolar district indicated that 96.11 per cent consumers prepare Dosa/Idli mix and more than half of consumers prepare pickles and Sambar masala on their own. Low cost of home preparation and differences in tastes were the major reasons for non-consumption, whereas ready availability and save time of preparation were the reasons for consuming Instant Food Products. Retail shops are the major source of information and source of purchase of Instant Food Products. The average monthly expenditure on Instant Food Products was found to be highest in higher income groups. The average per capita purchase and per capita expenditure on Instant food Products had a positive relationship with income of households. Housewives were the major decision makers on consumption of Instant Food Products. Most of the Dosa/Idli mix consumers found to be medium loyal and majority pickles and Sambar masala consumers belonged to higher loyalty group. High price and poor taste were the reasons for not purchasing particular brand whereas best quality, retailers influence and ready availability were considered for preferring particular brand of products by the consumers.

## **2.5 Factors influencing consumption of dry fruits**

Gluckman and Robert (1986) in their study - A consumer approach to branded wines indicated the explicit factors identified were, the familiarity with brand name, the price of wine, quality or the mouth feel of the liquid, taste with regards to its sweetness or dryness and the suitability for all tastes. Some of the implicit factors identified through extensive questioning were, colour and appearance. Most consumers seemed to prefer white wine to red. Packaging, appearance, colour, ornateness, use of foreign language

and graphics were taken as important clues for quality and price. Consumers preferred French or German made wines to Spanish or Yugoslavian wines.

Jorin (1987) conducted a study on consumer behaviour in spending power and buying habits of Swiss consumers. The study revealed that the current trends include greater emphasis on health and safety of foodstuffs and less attention to price, increased demand for low calorie light products and increased demand for organically grown foods. For young people, more concern with enjoyment and less for health, with more meals eaten away from home, and generally an increased demand for convenience foods. The prospects for high quality branded products are seen to be good.

Sundar (1997) in his study on Store image of Saravana Bava super market in Cuddalore district indicated that grocery department of Saravana Bava Cooperative Supermarket, Cuddalore was enjoying favorable images of consumers in the attributes, such as, equality of price, behaviour of sales persons, moving space, location, correctness of weight, packaging of goods, number of sales persons and convenient shopping hours. At the same time, the image is weak in the attributes, such as, quality of goods, availability of range of products, variety of goods, acceptance of returns, credit facility, door delivery and in sales promotional measures.

Sheeja (1998) in his study - An analysis of consumer buying behaviour towards processed spices indicated that the quality aspects like aroma, taste, freshness and purity as the major factors deciding the preference for a particular brand of processed spices.

Srinivasan (2000) studied the consumer perception towards processed fruits and vegetable products indicated that consumer with higher educational level was found to consume more processed products. The quantities of processed fruit and vegetable products were consumed more in high-income group. The tolerate limit of price increase identified was less than 5%, any price change above this limit, would result in discontinuance of the use processed product. Consumers preferred processed products because of convenience of ready to eat form.

Shivkumar (2004) in his study on, buying behaviour of consumers towards the products produced by SSI units indicated that the consumer, irrespective of income groups, was mainly influenced to purchase by the opinions of their family members. Consumers are influenced by the dealers' recommendation, followed by advertisement.

Nagaraja (2004) analyzed the consumer behaviour in rural areas: A micro level study on consumer behaviour in Kavi mandal indicated that buying behaviour is very much influenced by experience of their own and of neighbour consumers and his own family. The involvements of his own family members were exerting maximum influence on his purchases. Above all, the quality of the product and its easy availability were the primary and the vital determinants of his buying behaviour. Consumers were influenced by touch and feel aspect of any promotional activity.

Kubendran and Vanniarajan (2005) in their study on comparative analysis of rural and urban consumers on milk consumption indicated that the change in consumption pattern was due to changes in food habits. If income and urbanization increase among consumers, the percentage of income spent on consumption increases. The urban consumers preferred mostly branded products compared to rural consumers. The most significant factors influencing buying decisions were accessibility, quality, regular supply, door delivery and the mode of payment.

Anna Koutroulou and Lambros Tsourgiannis (2011) conducted survey on factors affecting purchase behaviour on local food in Greece and they found that 45 per cent of consumers were influenced by curiosity, prestige, and freshness of the product and 55 per cent of the consumers were interested in the topicality of the product.

## **CHAPTER III METHODOLOGY**

Methodology refers to the theoretical analysis of the methods appropriate to a field of study. Clear understanding and interpretation of collected data is possible with the adoption of suitable method of analysis. This chapter essentially maps out of the methods used in this study for analysis of the data.

The details of the methodology adopted for the study is presented under the following heads.

3.1 Selection and description of the study area

3.2 Sampling procedure

3.3 Collection of data

3.4 Analytical tools and techniques employed

### **3.1 Selection and description of the study area**

#### **3.1.1 Selection of the study area**

Bangalore city is purposefully selected for the study. It is the hub of information technology and biotechnology of India. It is fastest growing metropolitan city and is highly cosmopolitan in nature. People of different religions, castes, occupations, cultures, speaking diverse languages with diverse food preferences reside here.

#### **3.1.2 Description of the study area**

Bangalore, the capital city of Karnataka, is a veritable melting pot of various cultures. The City has well – laid out parks, gardens, long avenues of blossoming trees and salubrious climate.

According to 2011 census Bangalore has population of 8.5 million, making it India's, fourth largest city, with a decadal growth rate of 38 per cent. Bangalore is the second fastest growing Indian metropolis after New Delhi. Bangalore is situated halfway between the coasts in southern Indian state of Karnataka. The city was founded during the 16th century, by great dynasties like the Kadambas, and the Hoyasalas.

Bangalore city is situated at an altitude of 920 meters above sea level. It is the principal administrative, cultural, commercial and industrial centre of the state. The city, which is spread over an area of 2190 square kilometers, enjoys a pleasant climate throughout the year due to its elevation. According to 2011 census, the literacy rate of the city is 88.48 per cent. Its tree-lined streets and abundant greenery have led to it being called the 'Garden City' of India. It is now home to more than 250 high-tech companies including homegrown giants like Wipro and Infosys. As a result now Bangalore is also called as the 'Silicon Valley' of India.

The highest temperature recorded is 39°C (102°F) and the lowest is 11°C (52°F). The wettest months are August, September and October; with a heaviest rainfall of 180 mm in 24-hour period.

### **3.2 Sampling Procedure**

Bangalore city was selected for the study since it is the hub of many retail outlets, multi-store, hypermarkets shopping malls. As the food retail outlets and multi brand stores are the subset of the retail business which is in order to study the consumer preference for dry fruits in Bangalore city. Also many dry fruit product companies have started their trade through the retailers and whole sellers nearly from the last one decade in Bangalore as their focal point is to market their products by analyzing the consumer awareness and preference towards the dry fruits.

Data regarding the consumer awareness and preference for dry fruits in Bangalore city was collected administrating pre-tested structured schedule. A convenient sampling method was adopted to select the respondents. The sample respondents were selected from different localities of Bangalore city where the data for consumer awareness, attitude and factors influencing the consumption of dry fruits was collected. A total 90 respondents belonging to different age group and income levels and profession were interviewed.

### **3.3 Collection of Data**

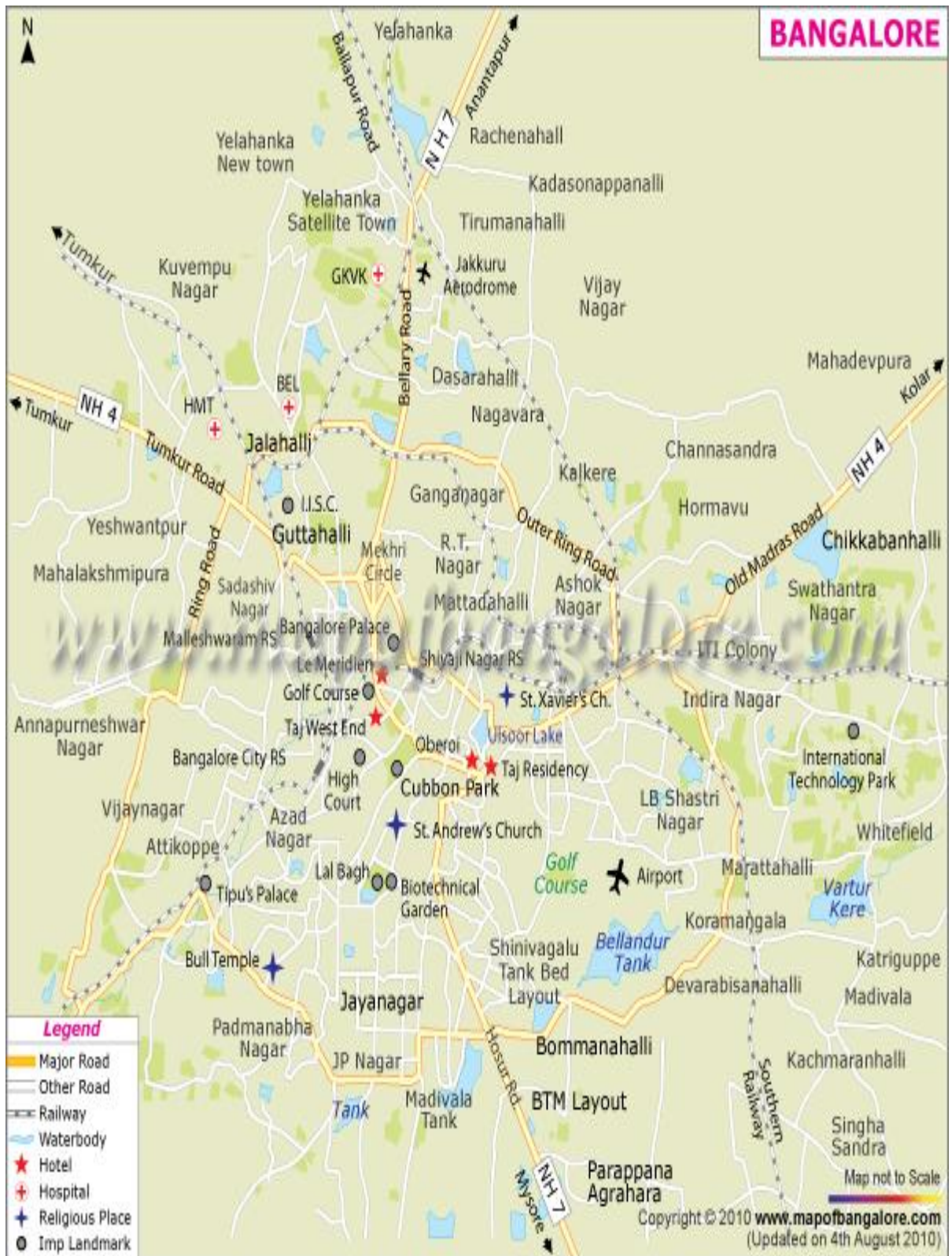
The study is based on both primary and secondary data. The primary data regarding the socio- economic characteristics of the consumers and the consumer's perception towards dry fruits was collected administrating pre-tested schedule which included questions regarding age, education, occupation, religion, income, type of family, food habit, consumption of dry fruits, nature of purchase decision, frequency of purchasing dry fruits, monthly expenditure on dry fruits, place of purchase, level of satisfaction, awareness of dry fruits brands, source of information on dry fruits, season of consumption, reason of purchase etc.

#### **3.3.1 Period of study**

The reference year of the study was 2012-13 and the collection of data was carried out during the period of January and February 2014.

### **3.4 Analytical tools and techniques employed**

Analysis of the data is the process of inspecting, cleaning, transforming and modeling the obtained data with the goal of highlighting useful information, suggesting conclusions and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names in different domains.



**Fig. 1: Map of Bangalore city showing the study area**

The methods of analysis employed in the current study are described under the following headings:

#### 3.4.1 Percentage analysis

#### 3.4.2 Garret's ranking technique

#### 3.4.3 Functional/Regression analysis

##### **3.4.1 Percentage analysis**

A percentage is a way of expressing a number, especially a ratio, as a fraction of 100. Percentages are used to express how large/ small one quantity is, relative to another quantity. The first quantity usually represents a part of, or a change in, the second quantity, which should be greater than zero.

##### **3.4.2 Garret's ranking technique**

Garret's ranking technique was adopted for studying brand preferences and factors influencing for preference of a particular brand.

In the first stage, ranking given by 60 consumers for each factor was analyzed. E.g.: Rank given to 10 different factors were analyzed through the rank given to these factors by each respondent. Respondents have to give 1 to 10 ranks to these factors.

##### **3.4.3 Functional/Regression analysis**

To study the factors influencing on the quantity of beverage purchased by the sample respondents, multiple linear regression analysis was used. In the analysis, monthly quantity of beverage consumed was used as a dependent variable and the independent variables used were price of the beverage, monthly family income, number of family members, age and education. The functioned form of regression equation used was

$$D = f (X1, X2, X3, X4, X5)$$

Where,

D = Demand for dry fruits (Gram per month)

X1 = Marital status (Male, Female)

X2 = Food habits (Vegetarian and Non vegetarian)

X3 = Earning members (number)

X4 = Number of family (number)

X5 = Total family income (Rs. per month)

## **CHAPTER IV RESULTS**

In consistence with the objectives of the study, the data collected from sample respondents was analyzed. The results of the analysis are presented under the following headings.

- 4.1 Socio-demographic profile of the sample consumers in Bangalore City
- 4.2 Socio-economic profile of the sample consumers in Bangalore City
- 4.3 Consumer awareness about the dry fruits in Bangalore City
- 4.4 Consumer preference for dry fruits in Bangalore City
- 4.5 Factors influencing the purchase of dry fruits

The study is based on both primary data and secondary data. The primary data was collected from 90 consumers in Bangalore City. The secondary data with respect to prices of dry fruits was collected from various sources. Regression, Percentages, Garret's ranking was employed to analyse the data.

### **4.1 Socio-demographic profile of the consumers in Bangalore City**

The socio-demographic profiles of the consumers is furnished in table 4.1., which includes information about the gender, age group, marital status and family type.

The table reveals that among the 90 consumers studied majority of the consumers (61.11%) were females and the remaining (38.89%) were males. With respect to the age group, 43.33 per cent of the respondents were in the age group of 30-45 years, 37.78 per cent fall under the age group of less than 30 years. Further 18.89 per cent of consumers were in the age group of above 45 years. With respect to marital status, a vast majority of the respondents (71.11%) were married and the rest 28.89 per cent were not married. With respect to the family type 64.45 per cent of the family belonged to nuclear type and remaining 35.55 per cent were joint type.

### **4.2 Socio-economic profile of the consumers**

#### **4.2.1 Socio-economic profile of the sample consumers in Bangalore City**

The socio-economic profile of the consumers in Bangalore city is presented in the table 4.2. The socio-economic profile includes the education level, occupation, earning members in the family and family income. A majority of the consumers were graduates (50 %), 25.56 per cent were post graduates, 10 per cent studied up to PUC, and 14.44 per cent studied up to high school. It is interesting to note that none of the consumers were illiterates.

Among the consumers studied 35.56 per cent were professionals, 20 per cent were housewives, 12.22 per cent were students. Further, 11.11 per cent of the consumers were

**Table 4.1: Socio-demographic characteristics of the consumers in Bangalore city****n=90**

<b>Sl. No.</b>	<b>Characteristics</b>	<b>Category</b>	<b>Number of consumers</b>	<b>Percentage to total</b>
1.	Gender	Male	35	38.89
		Female	55	61.11
<b>Total</b>			<b>90</b>	<b>100</b>
2.	Age group (years)	Less than 30	34	37.78
		30 to 45	39	43.33
		Above 45	17	18.89
<b>Total</b>			<b>90</b>	<b>100</b>
3.	Marital status	Unmarried	26	28.89
		Married	64	71.11
<b>Total</b>			<b>90</b>	<b>100</b>
4.	Type of family	Nuclear Family	58	64.45
		Joint Family	32	35.55
<b>Total</b>			<b>90</b>	<b>100</b>

**Table 4.2: Socio-economic characteristics of the consumers in Bangalore City****(n=90)**

<b>Sl. No.</b>	<b>Characteristics</b>	<b>Category</b>	<b>Number of consumers</b>	<b>Percentage to total</b>
1.	Education	High School	13	14.44
		PUC	9	10.00
		Graduate	45	50.00
		Post- graduate	23	25.56
	<b>Total</b>		<b>90</b>	<b>100</b>
2.	Occupation	Academics	10	11.11
		Business	7	7.78
		Housewife	18	20.00
		Professional	32	35.56
		Student	11	12.22
		Others	12	13.33
	<b>Total</b>		<b>90</b>	<b>100</b>
3.	Earning Members in the family	One	31	34.44
		Two	41	45.56
		More than Two	18	20.00
	<b>Total</b>		<b>90</b>	<b>100</b>
4.	Family income (Rs./month)	10,000 to 50,000	23	25.56
		0.5 to 1 lakh	36	40.00
		More than 1 lakh	31	34.44
	<b>Total</b>		<b>90</b>	<b>100</b>

academicians, 7.78 per cent were business people and the remaining 13.33 per cent were from various other categories.

In respect of earning members in the family, 34.44 per cent of families had one earning member, followed by 45.56 per cent of families had 2 earning members and 20 per cent of families had more than two earning members. With respect to the family income, 40 per cent of the families were earning in the range of Rs. 50,000 to one lakh per month, 34.44 per cent earning more than Rs. one lakh per month and the remaining 25.56 per cent were earning in the range of Rs. 10,000 to 50,000 per month.

#### **4.2.2 Regression coefficients of socio-economic factors influencing consumption of dry fruits**

To identify the factors influencing the demand for the dry fruits, a multiple linear regression method was used to analyse the data. The independent variables were marital status, food habit, number of family members, earning members in family, income (Rs. per month), and the dependent variable was expenditure on dry fruits. The results of the regression are presented in table 4.3. The results show a very significant positive effect of the variable (marital status). This means the consumers who were married are consuming higher quantity of dry fruits compared to unmarried consumers. The results also show that vegetarian consumers were consuming more dry fruits than non vegetarian consumers. The study showed a moderate but significant correlation between earning members of family and consumption of dry fruits. The number of family members also shows significant positive association to consumption of dry fruits. The results also indicated that income and consumption of dry fruits were not significantly related.

### **4.3 Consumer awareness about the dry fruits in Bangalore city**

#### **4.3.1 Source of information about dry fruits among different income group**

The source of information with respect to dry fruits by the sample respondents is presented in the table 4.4. It is clear from the table that, 58.89 per cent of the consumers were relying on information from friends and relatives. The next important sources were TV and magazines (46.67%). 25.56 per cent of the consumers were getting information through newspapers, followed by shopkeeper/retailers (24.44 %), window display (23.33%) and radio 12.22 per cent. The remaining 21.11 per cent of the consumers were getting information through other sources.

#### **4.3.2 Behaviour of dry fruits brands among consumers**

The brand behaviour of consumers about dry fruits is presented in table 4.5. It is clear from the table that only 64.4 per cent were aware of brands and the rest have no idea about dry fruits brands. Nearly 40 per cent of the consumers were aware of Lion brand, followed by store brand (12.20 per cent). Ten per cent of the consumers were aware of Manuk mewa brand. With respect to Kimia brand the awareness level was very low with 2.2 per cent.

**Table 4.3: Regression coefficients of socio-economic factors influencing consumption of dry fruits**

Sl. No.	Variable	Coefficients	Standard Error	t Stat	P-value
1	Intercept	1242.32	678.36	1.83	0.07
2	Marital status	804.79	446.47	1.80	0.07
3	Food Habit	-170.66	426.20	-0.40	0.68
4	Earnings members	148.53	280.59	0.52	0.59
5	No. of family members	43.79	87.96	0.49	0.61
6	Income	-0.00063	0.00066	-0.95	0.34

Note: Significant at 5 per cent level of significance

**Table 4.4: Source of information about dry fruits among different income group**

(Number/Percentage)

Sl. No.	Sources	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total
1	Friends/relatives	19	16	18	53 (58.89)
2	Television	15	15	12	42 (46.67)
3	Magazines	10	11	21	42 (46.67)
4	Newspapers	9	3	11	23 (25.56)
5	Shopkeeper/retailer	5	9	8	22 (24.44)
6	Window display	8	7	6	21 (23.33)
7	Radio	4	3	4	11 (12.22)
8	Any other	2	11	6	19 (21.11)

Note: Figures in the parentheses represent percentage to the total.

**Table 4.5: Behaviour of dry fruits brands among consumers****(Number/Percentage)**

<b>Sl. No.</b>	<b>Brand</b>	<b>Dates</b>	<b>Dry fruits</b>	<b>Grand Total</b>
1	Lion	36	-	36 (40)
2	Manuk mewa	-	9	9 (10)
3	Kimia	2	-	2 (2.2)
4	Brand store	-	11	11 (12.2)
	<b>Grand Total</b>	<b>38 (42.22)</b>	<b>20 (22.22)</b>	<b>58 (64.44)</b>

Note: Figures in the parentheses represent percentage to the total.

#### **4.4 Consumer behaviour for dry fruits in Bangalore city**

##### **4.4.1 Behaviour for dry fruits by consumers among different family income group in Bangalore city**

The consumer behaviour among various income groups is furnished in table 4.6. The consumers were asked to indicate type of dry fruits and frequency of consumption. The results clearly reveal that the preference was inversely related to the value. Among the consumers, highest performance was to Dates (2.20), followed by Almond (2.41), Cashew (2.72), raisin (3.16), Pistachio (4.48) and Walnut (5.18). The least preferred dry fruit by the consumers was Fig (6).

With respect to preference of consumers based on income groups, the table reveal that high income group preferred Dates more (1.89), followed by middle income group (2.52) and low income group (2.12). With respect to other dry fruits like Almond, Cashew, Raisins, Walnut, Pistachio and Fig similar trend was also observed.

##### **4.4.2 Details of monthly average consumption of dry fruits among different income group in Bangalore city**

The average consumption of dry fruits per month is presented in table 4.7. It could be seen from the table that the highest consumption of dry fruits in case of high income group was 4055 grams per month, followed by middle income group (2242 grams) and low income group (1703 grams).

Among the consumers the average monthly consumption of Dates was found to be highest, (818 gram per month). The next important dry fruit consumed by consumers was Almond (529 grams per month), followed by Cashew (433 grams) and Raisin (422 grams per month). The consumption of Walnut and Pistachio was significantly less (207 grams and 200 grams per month respectively). The lowest consumption of dry fruit was Fig (151 gram per month).

##### **4.4.3 Frequency of dry fruits consumption time of the day**

The information related to time of consumption of dry fruits is presented in table 4.8. Most of the consumers consumed dry fruits in the morning (0.83), followed by evening (0.71). The consumption during dinner (0.32) and lunch (0.06) was relatively less. With respect to income group, low income group preferred to consume dry fruits in the morning (0.78), followed by evening (0.67) and during dinner (0.33). In case of middle income group most of them consumed in the morning (0.93), followed by evening dinner and lunch (0.76, 0.38 and 0.07 respectively). Consumers in the high income group preferred to consume dry fruits during morning time (0.79), and at evening (0.71), dinner (0.24) and lunch time (0.09).

##### **4.4.4 Monthly average consumption of dry fruits by consumers in Bangalore city**

The frequency of consumption of different types of dry fruits is presented in table 4.9. It can be seen from the table that most of the respondents (44.07%) were from high income group, followed by middle income group (35.59 per cent) and low income group (20.34%) consuming Dates. Similar trend was noticed with respect to other items like

**Table 4.6: Behaviour for dry fruits by consumers among different family income group in Bangalore city** (Scores)

Sl. No.	Product	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average	Rank
1	Dates	2.12	1.89	2.52	2.20	I
2	Almond	2.50	2.38	2.38	2.41	II
3	Cashew	2.50	2.89	2.74	2.72	III
4	Raisins	3.32	2.95	3.17	3.16	IV
5	Pistachio	3.89	4.41	4.96	4.48	V
6	Walnut	5.63	5.11	4.96	5.18	VI
7	Fig	6.57	6.08	5.75	6.00	VII

Note: Score range from (1-7) highest score indicate the lowest preferred.

**Table 4.7: Details of monthly average consumption of dry fruits among different income group in Bangalore city** (Gram/Month)

Sl. No.	Items	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average
1	Dates	478	525	1339	818
2	Almond	355	493	704	529
3	Cashew	285	386	591	433
4	Raisins	220	358	642	422
5	Walnut	153	170	282	207
6	Pistachio	162	193	236	200
7	Fig	50	117	261	151
	<b>Total</b>	<b>1703</b>	<b>2242</b>	<b>4055</b>	<b>2666</b>

Note: Figures in the parentheses represent percentage to the total.

**Table 4.8: Frequency of dry fruits consumption time of the day**

(Score)

Time	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average
Morning	0.78	0.93	0.79	0.83
Lunch	0	0.07	0.09	0.06
Evening	0.67	0.76	0.71	0.71
Dinner	0.37	0.38	0.24	0.32

**Table 4.9: Monthly average consumption of dry fruits by consumers in Bangalore city**

(Days/month)

Sl. No.	Product	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average total No. of days
1	Dates	12 (20.34)	21 (35.59)	26 (44.07)	20
2	Almond	13 (26.00)	17 (34)	20 (40.00)	17
3	Cashew	9 (25.00)	11 (30.56)	16 (44.44)	12
4	Raisins	7 (21.21)	12 (36.36)	14 (42.42)	11
5	Pistachio	4 (26.67)	5 (33.33)	6 (40.00)	5
6	Walnut	3 (25.00)	3 (25.00)	6 (50.00)	4
7	Fig	1 (16.67)	1 (16.67)	4 (66.67)	2

Note: Figures in the parentheses represent percentage to the total.

Almond, Cashew, Raisin, Walnut, Pistachio and Fig. In general the most preferred dry fruit was Dates (20 days per month), followed by Almond (17 days per month), Cashew, Raisin, Pistachio and Walnut (12 days, 11 days, 5 days and 4 days respectively). The consumers' preference for Fig was very less (2 days per month), due to taste and lack of availability of the fruit.

## **4.5 Factors influencing the purchase of dry fruits**

### **4.5.1 Factors influencing of dry fruits' brand in Bangalore city**

The factors influencing the brand preference of dry fruits by the consumers is presented in table 4.10. The scores given by the consumers were analyzed and presented in the table. The consumers preference was highest to the nutrients (0.57), followed by easy availability (0.51), hygiene (0.46), appearance and quality (0.38), shelf life (0.28), brand image (0.24). In respect of prices (-0.41) and advertisement (-0.55) consumers indicated least preference.

In case of low income groups nutrients content influenced more in purchasing branded dry fruits' (0.67), followed by readily available (0.59), hygiene (0.52), appearance (0.48), quality (0.37), brand image (0.26), shelf life (0.15), attractive packaging (0.12), reasonable price (-0.22) and advertisement (-0.74). With respect to middle income group nutrients content, readily available, hygiene and quality got (0.48). Appearance got (0.34), shelf life (0.24), brand image (0.03), attractive packaging (-0.10), advertisement (-0.29) and reasonable price (-0.62) were influencing of purchasing of dry fruits' brand. In the high income group category, most important factor was nutrients content (0.56), shelf life and brand image were got (0.41), followed by hygiene (0.38), appearance (0.32), quality (0.29), attractive packaging (0.18), reasonable price (-0.38) and advertisement (-0.61).

### **4.5.2 Influence of brand on the consumption of dry fruits in Bangalore**

The influence of brand on alternative purchase plans of dry fruits is indicated in table 4.11. Thirty per cent of the consumers were not bothered about dry fruits brands, but considered quality and appearance of dry fruits as the important factors. Further 26.67 per cent of the consumers were changing the brands of dry fruits, if their preferred brand was not available. In case of importance of the brand, about 20 per cent believed that dry fruits brands are not much important. However 18.89 per cent of the consumers trusted dry fruits' brands. Only 11.11 per cent of the consumers opined few brands of dry fruits are good. Among the income group 37.04 per cent of the middle income group were not bothered about brand, followed by low income group (33.33 %) and 29.63 per cent of the high income group. Most of the high income group (41.67 per cent) often changed the brand. Even the middle income group and low income group also changed the brand (33.33 per cent and 25 per cent).

### **4.5.3 Period of consumption of dry fruits by the consumers in Bangalore city**

The period of consumption of dry fruits is presented in table 4.12. Among the consumers majority of them (63.33%) were consuming dry fruits for more than 5 years, followed by 14.44 per cent of the consumers were consuming for the period from 3-5

**Table 4.10: Factors influencing of dry fruits' brand in Bangalore city**

(Score)

Sl. No.	Factor	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average
1	Nutrients content	0.67	0.48	0.56	0.57
2	Readily available	0.59	0.48	0.47	0.51
3	Hygiene	0.52	0.48	0.38	0.46
4	Appearance	0.48	0.34	0.32	0.38
5	Quality	0.37	0.48	0.29	0.38
6	Shelf life	0.15	0.24	0.41	0.28
7	Brand image	0.26	0.03	0.41	0.24
8	Attractive Packaging	0.12	-0.10	0.18	0.07
9	Reasonable price	-0.22	-0.62	-0.38	-0.41
10	Advertisement	-0.74	-0.29	-0.61	-0.55

Note: Score range from (-2 to 2) highest score indicate the highest preferred.

**Table 4.11: Influence of brand on the consumption of dry fruits in Bangalore**

(Number/percentage)

Sl. No.	Alternative purchase plans	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Total
1	Not bother about brand	9 (33.33)	10 (37.04)	8 (29.63)	27 (30)
2	Often change the brand	6 (25.00)	8 (33.33)	10 (41.67)	24 (26.67)
3	No much important	2 (11.11)	7 (38.89)	9 (50.00)	18 (20)
4	Trusted brand	4 (23.53)	5 (29.41)	8 (47.06)	17 (18.89)
5	Few brands are good	1 (10.00)	4 (40.00)	5 (50.00)	10 (11.11)

Note: Figures in the parentheses represent percentage to the total.

**Table 4.12: Period of consumption of dry fruits by the consumers in Bangalore city**

(Number/percentage)

Sl. No.	Period	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total
1	> 5 years	13 (22.81)	21 (36.84)	23 (40.35)	57 (63.35)
2	3-5 years	3 (23.08)	7 (53.85)	3 (23.08)	13 (14.44)
3	1-3 years	2 (16.67)	5 (41.67)	5 (41.67)	12 (13.33)
4	Last year	3 (50.00)	3 (50.00)	-	6 (6.66)
5	Last 6 months	2 (100)	-	-	2 (2.22)

Note: Figures in the parentheses represent percentage to the total.

years. 13.33 per cent of the consumers consuming from 1-3 years. Only 2.22 % of the consumers were consuming dry fruits for the last six months. In the high income group 40.35 per cent were consuming more than five years, followed by middle income group (36.84 %) and low income groups (22.81 per cent). Majority of the middle income group consuming dry fruits between 3 to 5 years.

#### **4.5.4 Nature of purchase decision of dry fruits in Bangalore city**

The nature of purchase decision among different income groups is presented in table 4.13. In case of Pistachio, 63.16 per cent of low income group planned their purchases. 76.19 per cent of high income group purchased dry fruits through advance planning. The middle income group purchased Raisins and Cashew by planning (80.95 % and 92.86 % respectively). In case of Walnut 68 per cent of high income group purchased through planning.

In general, maximum number of consumers opted for planned purchase (58.21%) in case of Pistachio and 41.79 per cent did impulsive buying. 89.02 per cent of the consumers were purchasing Dates by plan and only 10.98 per cent of the consumers did impulsive buying. In the case of Fig 63.41 per cent of consumers were buying by plan and remaining (36.59%) were purchasing impulsive. Majorities (77.63 %) of consumers were purchasing Raisins by plan and (22.37%) were purchasing impulsive. Vast majority of the consumers were purchasing Almond (90.80%) by plan and only 9.20 % preferred buying impulsive. But in the case of Cashew (87.21%) of the consumers were purchasing by plan and (12.79 %) of the consumers preferred impulsive purchasing. In the case of Walnut 59.32 % of the consumers were purchasing by plan and (40.68 %) of the consumers were purchasing impulsive.

#### **4.5.5 Period of consumption in different seasons by consumers**

The frequency of consumption of dry fruits in different seasons is indicated in table 4.14. In Bangalore basically there are 3 seasons (rainy, winter and summer). Nearly two thirds (68.89 %) of the consumers consumed dry fruits in all the three seasons followed by 11.11 per cent during winter season. In case of high income group and middle income groups 28.57 per cent and 42.86 per cent of the respondent consumed dry fruits during Rainy season. 37.10 per cent of the high income group, 40.32 per cent of the middle income group and 22.58 per cent of the low income group were consuming in all three seasons. 40 per cent of the low income group and middle income group consuming dry fruits in summer also.

#### **4.5.6 Decision maker regarding the purchase of dry fruits among different income family group**

The decision makers in purchase of dry fruits across different income groups are presented in table 4.15. It could be noticed from the table that in case of middle income group both wife and husband (37.93 per cent) took decisions, followed by low income group (34.48 %) and high income group (27.59 %). Most of the high income groups (41.67 %) made decision on their own. 36.11 per cent on the middle income group and the remaining 22.22 per cent of the low income group made decision on their own.

**Table 4.13: Nature of purchase decision of dry fruits in Bangalore city (Percentage)**

<b>Sl. No.</b>	<b>Product</b>	<b>Nature of purchase decision</b>	<b>Rs. 10,000-50,000</b>	<b>Rs. 0.5 - 1 lakh</b>	<b>More than Rs. 1 lakh</b>	<b>Average</b>
1	Pistachio	Impulsive	36.84	45.45	42.31	41.79
		Planned	63.16	54.55	57.69	58.21
2	Dates	Impulsive	0	19.23	12.50	10.98
		Planned	100	80.77	87.50	89.02
3	Fig	Impulsive	42.86	53.85	23.81	36.59
		Planned	57.14	46.15	76.19	63.41
4	Raisins	Impulsive	20	19.05	26.67	22.37
		Planned	80	80.95	73.33	77.63
5	Almond	Impulsive	3.85	7.14	15.15	9.20
		Planned	96.15	92.86	84.85	90.80
6	Cashew	Impulsive	8.33	7.14	20.59	12.79
		Planned	91.67	92.86	79.41	87.21
7	Walnut	Impulsive	46.67	47.37	32	40.68
		Planned	53.33	52.63	68	59.32

**Table 4.14: Period of consumption in different seasons by consumers**

(Number/percentage)

Sl. No.	Seasons	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total
1	Rainy	3 (42.86)	2 (28.57)	2 (28.57)	7 (7.78)
2	Rainy, Summer, Winter	14 (22.58)	25 (40.32)	23 (37.10)	62 (68.89)
3	Summer	2 (40)	2 (40)	1 (20)	5 (5.56)
4	Winter	3 (30)	3 (30)	4 (40)	10 (11.11)
5	Summer, Winter	2 (33.33)	3 (50)	1 (16.67)	6 (6.67)
	<b>Grand Total</b>	<b>23 (100)</b>	<b>36(100)</b>	<b>31(100)</b>	<b>90 (100)</b>

Note: Figures in the parentheses represent percentage to the total.

**Table 4.15: Decision maker regarding the purchase of dry fruits among different income family group**

(Number/percentage)

Sl. No.	Decision Makers	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Total
1	Wife & Husband	10 (34.48)	11 (37.93)	8 (27.59)	29 (32.22)
2	Respondent only	8 (22.22)	13 (36.11)	15 (41.67)	36 (40.00)
3	Parents	3 (15.00)	10 (50.00)	7 (35.00)	20 (22.22)
4	Other persons	2 (40.00)	2 (40.00)	1 (20.00)	5 (5.56)
	<b>Grand Total</b>	<b>23 (100)</b>	<b>36 (100)</b>	<b>31 (100)</b>	<b>90 (100)</b>

Over all, forty per cent of the consumers were taking decisions on their own. 32.22 per cent of the purchase decision made by husband and wife together. 22.22 per cent of the purchase decision made by parents. The remaining 5.56 per cent of purchase decisions made by other persons in the family.

#### **4.5.7 Place of purchase of dry fruits by the consumers**

The place of purchase of Pistachio by the consumers is furnished in table 4.16. It could be seen from the table that, majority of the consumers purchased dry fruits from combination of Retail outlets, supermarket and wholesaler (36.67 %), followed by retail outlet (23.33%) super market (15.56%). With respect to departmental store 10 per cent of consumers were purchasing. Only 8.89 per cent of the consumers were purchasing from wholesaler.

#### **4.5.8 Consumer preference for branded and unbranded of dry fruits**

The branding of food products has undergone change in the recent past, both in terms of branding as well as preference by consumers to branded products. Consumer's preferences for branded and unbranded dry fruits are indicted in table 4.17. Majority (57.77 per cent) of the consumers preferred brand of dry fruits, only 42.23 per cent preferred unbranded dry fruits.

#### **4.5.9 Monthly expenditure of consumers on dry fruits**

The average expenditure of dry fruits per month is presented in table 4.18. It could be seen from the table that the highest monthly expenditure of consumers on dry fruits was in case of high income group 1714.15 Rs. per month, followed by middle income group 1198.08 Rs. and low income group 618.92 Rs. per month. In general, monthly expenditure on dry fruits increased with increase in monthly income. The average monthly expenditure on Almond Rs.268.46 was found to be highest which had the highest share 22.81 per cent, followed by Dates Rs.211.07 per month with the share of 17.93 per cent. On an average consumers were spending Rs. 192.98 per month on Cashew with the share of 16.39 per cent. Rs.174 consumers were expending on Pistachio with the share of 14.79 per cent. Consumers spend Rs. 160.22 per month on Raisins which was around 13.61 per cent of their monthly expenditure. The average expenditure on Walnut was Rs. 96.81 per month which had 8.22 per cent share of the total consumption. Nearby Rs.73.44 consumers were spending on Fig with the lowest share of 6.24 per cent.

#### **4.5.10 Important reasons for buying dry fruits among different family income group**

The factors which influenced the consumers in buying dry fruits is indicated in table 4.19. In all, ten factors were considered. It is clear from the table that the important factors considered by consumers were health (1.12) indicating that the consumers were highly health conscious. The next factor was taste (3.07). The other important factors are availability (4.99), family tradition (5.26) and habit (5.52) respectively. The other factors are price and influence of friends (6.92). The purchase of dry fruits was also due to festivals particularly among Muslim community especially during Ramadan month.

**Table 4.16: Place of purchase of dry fruits by the consumers**

(Number/percentage)

Sl. No.	Values	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total	Percentage to the total
1	Departmental Store	1	4	4	9	10.00
2	Retail outlets	7	10	4	21	23.33
3	Retail outlets, Departmental store, Super market	-	4	1	5	5.56
4	Retail outlets, Super market, Wholesaler	10	10	13	33	36.67
5	Super market	2	5	7	14	15.56
6	Wholesaler	3	3	2	8	8.89
	<b>Grand Total</b>	<b>23</b>	<b>36</b>	<b>31</b>	<b>90</b>	<b>100</b>

**Table 4.17: Consumer preference for branded and unbranded of dry fruits**

(Number/percentage)

Sl. No.	Type	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total	Percentage to the total
1	Branded	14	17	24	52	<b>57.77</b>
2	Unbranded	9	19	7	38	<b>42.23</b>
	<b>Grand Total</b>	<b>23</b>	<b>36</b>	<b>31</b>	<b>90</b>	<b>100</b>

**Table 4.18: Monthly expenditure of consumers on dry fruits**

(Rs. / month)

Sl. No.	Family income	Pistachio	Dates	Fig	Raisins	Almond	Cashew	Walnut	Total expenditure
1	Rs. 10,000-50,000	95.44	94.26	35	95.15	140.11	98.89	60.07	618.92
2	Rs. 0.5 - 1 lakh	180.66	218.07	72.07	155.45	290.41	189.66	91.76	1198.08
3	More than Rs. 1 lakh	246.15	320.88	113.24	230.06	374.85	290.38	138.59	1714.15
4	<b>Average consumption</b>	<b>174.08</b>	<b>211.07</b>	<b>73.44</b>	<b>160.22</b>	<b>268.46</b>	<b>192.98</b>	<b>96.81</b>	<b>1177.05</b>
5	share of each dry fruits	14.7 9%	17.93 %	6.24 %	13.61 %	22.81 %	16.39 %	8.22 %	100.00 %

**Table 4.19: Important reasons for buying dry fruits among different family income group** (Score)

Sl. No.	Factor	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Average
1	Health	1.22	1.10	1.06	1.12
2	Taste	2.68	3.07	3.36	3.07
3	Quality	3.28	3	3.91	3.42
4	Availability	4.75	5.08	5.09	4.99
5	Family tradition	5.61	5.71	4.70	5.26
6	Habit	5.50	5.40	5.63	5.52
7	Price	7.43	7.22	6.35	6.92
8	Friends	7	6.56	7.16	6.92
9	Religion	6.25	7.35	7.34	7.06
10	Others	-	4	9.50	7.67

Note: Scores range from (1-10) highest score indicate the lowest preferred.

In case of low income groups', health was also the important reason for buying dry fruits (1.22), followed by taste (2.68), quality (3.28), availability (4.75), and family tradition (5.61), habit (5.50), price (7.43), friends (7) and religion (6.25). With respect to middle income group health (1.1), quality (3), taste (3.07), others factors (4), availability (5.08), habit (5.4), family tradition (5.71), friends (6.56), price (7.22) and religion (7.35). Among the high income group category, health was the important factor influencing factor buying dry fruits (1.06), taste (3.36), quality (3.91), family tradition (4.7), availability (5.09), habit (5.63), price (6.35), friends (7.16), and religion (7.34).

#### **4.5.11 Satisfaction level of consumers among different income family group in Bangalore city**

The consumers satisfaction about Pistachio based on their income level is presented in the table 4.20. Vast majority of consumers (78.38 %) were satisfied about the Pistachio. 12.16 per cent consumers were highly satisfied and only 9.46 per cent consumers were not satisfied. In the case of Dates vast majority of the consumers (75.29 %) were highly satisfied, remaining of the consumers 21.71 per cent were satisfied. With the respect of Fig 68.42 per cent of the consumers were satisfied, 26.32 per cent of the consumers were not satisfied and only 5.26 per cent of the consumers were highly satisfied. Majority (88.46 per cent) of the consumers were satisfied from consumption of Raisins and the remaining 11.54 per cent of the consumers were highly satisfied. Majority (83.91 per cent) of the consumers were satisfied from consumption of Almond, and 16.09 per cent of the consumers were highly satisfied. Vast majority of the consumers (76.74 per cent) were satisfied from Cashew, 23.26 per cent of the consumers were highly satisfied from Cashew. Most of the consumers (67.65 %) were satisfied of Walnut, 26.47 per cent of the consumers were not satisfied and, only 5.88 per cent of the consumers were highly satisfied of Walnut.

**Table 4.20: Satisfaction level of consumers among different income family group in Bangalore city** (Number/percentage)

Sl. No.	Product	Level of satisfaction	Rs. 10,000-50,000	Rs. 0.5 - 1 lakh	More than Rs. 1 lakh	Grand Total
1	Pistachio	Highly satisfied	2	4	3	9 (12.16)
		Satisfied	17	17	24	58 (78.38)
		Not satisfied	1	2	4	7 (9.46)
		<b>Total</b>	<b>20</b>	<b>23</b>	<b>31</b>	<b>74 (100)</b>
2	Dates	Highly satisfied	17	21	26	64 (75.29)
		Satisfied	6	10	5	21(24.71)
		<b>Total</b>	<b>23</b>	<b>31</b>	<b>31</b>	<b>85 (100)</b>
3	Fig	Highly satisfied		2	1	3 (5.26)
		Satisfied	7	12	20	39 (68.42)
		Not satisfied	5	4	6	15(26.32)
		<b>Total</b>	<b>12</b>	<b>18</b>	<b>27</b>	<b>57 (100)</b>
4	Raisins	Highly satisfied	3	2	4	9 (11.54)
		Satisfied	20	23	27	69 (88.46)
		<b>Total</b>	<b>23</b>	<b>25</b>	<b>31</b>	<b>78 (100)</b>
5	Almond	Highly satisfied	6	4	4	14 (16.09)
		Satisfied	20	26	27	73 (83.91)
		<b>Total</b>	<b>26</b>	<b>30</b>	<b>31</b>	<b>87 (100)</b>
6	Cashew	Highly satisfied	7	8	5	20 (23.26)
		Satisfied	16	24	26	66 (76.74)
		<b>Total</b>	<b>23</b>	<b>32</b>	<b>31</b>	<b>86 (100)</b>
7	Walnut	Highly satisfied		3	1	4 (5.88)
		Satisfied	11	15	20	46 (67.65)
		Not satisfied	6	4	8	18 (26.47)
		<b>Total</b>	<b>17</b>	<b>22</b>	<b>29</b>	<b>68 (100)</b>

Note: Figures in the parentheses represent percentage to the total.

## **CHAPTER V DISCUSSION**

The discussions of the result of investigation presented in the previous chapter are discussed in this chapter under the following headings:

- 5.1 Socio-demographic profile of sample consumers in Bangalore City
- 5.2 Socio-economic profile of the sample consumers in Bangalore City
- 5.3 Consumer awareness about the dry fruits in Bangalore City
- 5.4 Consumer preference for dry fruits in Bangalore City
- 5.5 Factors influencing the purchase of dry fruits

### **5.1 Socio-demographic characteristics of the sample consumers in Bangalore City**

The socio-demographic profile of the consumers is presented in the table 4.1., which includes the information about the gender, age group, marital status and type of the family. Among the 90 consumers studied nearly 61.11 per cent of the consumers were females the remaining 38.89 per cent were males, indicating that the majority of females involved in buying of dry fruits and play an important role with respect to health of the family members. In the study area majority of consumers belonged to the age group of up to 30 to 45 years. This age group seems to be critical because most of the people will be married and earning income and tend to spend more on dry fruits to improve their health.

About 18.89 per cent of the consumers were in the age group of more than 45 years which included most of the housewives and professionals and employees.

Majority (71.11 per cent) of the consumers were married and only 28.89 per cent were unmarried, which clearly indicates that the family requirements increase after the marriage and also purchase decision will be influenced by the spouse. With reference to the type of family, about 64.45 per cent consumers had a nuclear family and 35.55 per cent of the consumers were of joint family. It clearly depicts that nuclear families are more in number.

### **5.2 Socio-economic characteristics of the sample consumers**

#### **5.2.1 Socio-economic characteristics of the sample consumers in Bangalore City**

The socio-economic profile of the consumers in Bangalore City is presented in the table 4.2. The socio-economic profile includes education level, occupation, earning members in the family, family income. With regard to literacy level, nearly 50 per cent were graduates and 25.56 per cent were post graduates. Among the respondents none of them were illiterates. With respect to earning members 45.56 per cent of the families had two earning members and 40.00 per cent of the family had the income, ranging between Rs. 50,000 to Rs. one lakh per month.

### **5.2.2 Socio-economic factors influencing consumption of dry fruits**

Consumption of any dry fruits is influenced by a host of socio-economic factors. Table 4.3 reveals that marital statuses, food habit, earning members in the family and number of family members, these factors were positively significant with respect to the consumption of dry fruits by consumers. It was observed that marital status, earning members in the family and number of family members had a positive influence on the consumption of dry fruits. This means that, increase in the family income increase the consumption of dry fruits, and also it is observed that marital status has positive influence on consumption of dry fruits. Vegetarian consumers were consuming more than non vegetarians. Number of earning members in the family has also influenced consumption of dry fruits.

The results of the study are in line with the study conducted by Inamke *et al.* (1995) who found similar result.

## **5.3 Consumer awareness about the dry fruits in Bangalore city**

### **5.3.1 Source of information of consumers based on family income group**

It is clear from the table 4.4. that most of the respondents were aware of dry fruits mainly from friends and relatives (58.89%), since it is easy to get information through word of mouth from friends and relatives. Television is one of the important mass media in today's world. Nearly 46.67 per cent of the consumers were aware of dry fruits through television. Apart from these magazines (46.67 %) and newspapers (25.56 %) were also the major sources of information for dry fruits. This is because newspapers are the cheapest and easily available means of getting information regarding various dry fruits. Radio was the least preferred media for dry fruits.

### **5.3.2 Awareness of dry fruits brand among consumers**

It was observed from table 4.5 that among the consumers only 64.4 per cent were aware of dry fruits brands. Among them 40 per cent consumers were familiar with Lion brand. With respect to other brands, Manuk mewa brand and brand store e.g. Reliance Fresh, More Fresh etc, only (22.22 %) of the consumers were aware of it. Hence, consumers' preference for branded dry fruits was very marginal.

## **5.4 Consumer preference for dry fruits in Bangalore city**

### **5.4.1 Consumers Preference for dry fruits based on family income group**

It could be inferred from table 4.6 that, among the consumers majority of the respondents preferred Dates because of its taste, moderate price, easily availability and nutrition content. The other important dry fruits preferred by consumers were Almond Cashew and Raisins. Fig is the least preferred dry fruits among the consumers because of its taste. With respect to preference of consumers based on income groups, the table reveal that high income group preferred Dates more (1.89), followed by middle income group (2.52) and low income group (2.12). With respect to other dry fruits like Almond, Cashew, Raisins, Walnut, Pistachio and Fig similar trend was also observed.

#### **5.4.2 Average consumption of dry fruits per month among different family income group**

With respect to frequency of consumption of dry fruits the highest consumption was of Dates (818 grams per month), followed by Almond (529 grams per month) (Table 7). With respect to Pistachio and Fig consumers were consuming very less (200 grams and 151 grams per month respectively). However consumers preferred and consumed more Dates and Almond because of availability of national and international brands of Dates. The price of Pistachio is significantly high and as a result most of the consumers' preference for it was low. With respect to Fig, low quality and less availability was the main reason for least consumption. The highest consumption of dry fruits in case of high income group was 4055 grams per month, followed by middle income group (2242 grams) and low income group (1703 grams).

#### **5.4.3 Frequency of dry fruits consumption at certain time of the day**

It is evident from the table 4.8 that most of the consumers preferred to consume dry fruits in the morning, followed by evening. The consumption during dinner and afternoon was very less. The consumption during dinner (0.32) and lunch (0.06) was relatively less. With respect to income group, low income group preferred to consume dry fruits in the morning time (0.78), followed by evening (0.67) and during dinner (0.33). Consumers in the high income group preferred to consume dry fruits during morning time (0.79), and at evening (0.71), dinner (0.24) and lunch time (0.09). Jesionkowska *et al.* (2008) reported similar results in their studies.

#### **5.4.4 Frequency of consumption by the consumers per month among different family income group**

The frequency of consumption of dry fruits among the sample consumers was the highest in the case of Dates (20 days per month) (Table 4.9.) The consumers also preferred Almond (17 days per month) because of nutrients content and taste, followed by Cashew, Raisins, Pistachio and Walnut (12 days per month, 11 days per month, 5 days per month and 4 days per month respectively). With respect to Fig it was very low (2 days per month). In general the most preferred dry fruit was Dates (20 days per month), followed by Almond (17 days per month), Cashew, Raisins, Pistachio and Walnut (12 days, 11 days, 5 days and 4 days respectively). The consumers' preference for Fig was very less (2 days per month), due to taste and lack of availability of the fruit.

### **5.5 Factors influencing the purchase of dry fruits**

#### **5.5.1 Factors influencing brand preference of dry fruits**

Table 4.10 presents the factors influencing brand preference of dry fruits by the consumers. The consumers attached highest score (0.57) to nutrients content, followed by easy availability (0.51). The least score was assigned to advertisement (-0.55). The other important factors influencing the consumers to go for branded dry fruits were hygiene, appearance, quality, shelf life, brand image, attractive packaging and reasonable price. In case of low income groups nutrients content influenced more in purchasing branded dry fruits' (0.67), followed by readily available (0.59). With respect to middle income group

nutrients content, readily available, hygiene and quality got (0.48). In the high income group category, most important factor was nutrients content (0.56).

### **5.5.2 Influence of brands on the consumption of dry fruits**

Table 4.11 depicts alternative purchase brand of dry fruits. Most of the consumers (30 %) were not much bothered about the brands. About 26.67 per cent of the consumers often change the brand and 20 per cent indicated that they did not attach much to brands. Instead they were trying to find best quality of dry fruits and few brands are good. Among the income group 37.04 per cent of the middle income group were not bothered about brand. . Most of the high income group (41.67 per cent) often changed the brand. Even the middle income group and low income group also changed the brand (33.33 per cent and 25 per cent).

### **5.5.3 Period of consumption by the consumers among different family income group**

The majority (63.33 %) of the consumers were consuming dry fruits for more than 5 years, (Table 4.12). Nearly 14.44 per cent of the consumers were consuming between 3 to 5 years, followed by 1 to 3 years (13.33%). Only 2.22 per cent of the consumers were consuming dry fruits for last the 6 months. Hence, the consumers were very familiar with dry fruits and consuming dry fruits for a long period. In the high income group 40.35 per cent were consuming more than five years, followed by middle income group (36.84 %) and low income groups (22.81 per cent). Majority of the middle income group consuming dry fruits between 3 to 5 years.

### **5.5.4 Nature of purchase decision among different family income groups**

The nature of purchase decisions among different family income groups is presented in table 4.13. Among the consumers majority of them planned and purchased Pistachio (58.21%) and 41.79 per cent of Pistachio purchasers did impulsive buying. In case of Almond and Dates (90.80 % and 89.02 %) vast majority of the consumers were purchasing planned, and 9.20 per cent of Almond were purchasing impulsive and 10.98 % of Dates consumers did impulsive buying. The nature of purchase decision among different income groups is presented in Table 4.13. In case of Pistachio, 63.16 per cent of low income group planned their purchases. 76.19 per cent of high income group purchased dry fruits through advance planning. The middle income group purchased Raisins and Cashew by planning (80.95 % and 92.86 % respectively). In case of Walnut 68 per cent of high income group purchased through planning.

### **5.5.5 Frequency of dry fruits consumption**

It clears from the table 4.14 that vast majority of the consumers (68.89 %) were consuming dry fruits in all the seasons (Rainy, summer and winter). The remaining (11.11 %) were consuming during winter season. In case of high income group and middle income groups 28.57 per cent and 42.86 per cent of the respondent consumed dry fruits during Rainy season. 40 per cent of the low income group and middle income group consuming dry fruits in summer also.

### **5.5.6 Decision-making regarding the purchase of dry fruits**

It could be observed from the table 4.15 that on the whole, 40 per cent of the consumers purchasing dry fruits on their own, followed by both husband and Wife (32.22%). In case of middle income group both wife and husband (37.93 per cent) took decisions, followed by low income group (34.48 %) and high income group (27.59 %). Most of the high income groups (41.67 %) made decision on their own. The results of the study are similar to the study conducted by Nagaraj (2004) reported similar result.

### **5.5.7 Place of Purchase by the consumers among different family income group**

Table 4.16 depicts that place of purchase by the respondents. It could be observed from the table that, nearly 36.67 per cent of the consumers purchased dry fruits from combination of retail outlets, super market and wholesaler, followed by only retail outlets (23.33 %). Very few (10.00 %) of the respondents purchased dry fruits from departmental stores. It shows the availability of dry fruits in all the stores and outlets. Consumer preferred retail outlets and super markets because of easily availability, and preferred wholesalers because of low price.

### **5.5.8 Consumer preference for branded and unbranded of dry fruits**

The branding of food products has emerged as a major thrust area in food marketing (Table 4.17). The consumers' preference for branded food products has increased in the recent past. The 57.77 per cent of the consumers of dry fruits have preferred to buy branded dry fruits is testimony to this change in consumer behavior.

### **5.5.9 Monthly expenditure of consumers on dry fruits**

It could be seen from the table 4.18 that, there exist a positive relationship between monthly expenditure and monthly income. As the monthly income increases, the monthly expenditure also increased. The amount spent on dry fruits was found to be highest in case of high income groups (Rs. 1714.15) followed by middle income groups (Rs. 1198.08) and low income groups were spent (Rs.618.92). With respect to share of dry fruits, Almond has the highest share (22.18 %), followed by Dates (17.93%). Cashew, Pistachio, Raisins and Walnut had (16.39 per cent, 14.79 per cent, 13.61 per cent and 8.22 per cent respectively). Fig had lowest share among selected dry fruits 6.24 per cent. The highest monthly expenditure of consumers on dry fruits was in case of high income group 1714.15 Rs. per month, followed by middle income group 1198.08 Rs. and low income group 618.92 Rs. per month.

The results of the study are similar to the study conducted by Kubendran and Vanniarajan (2005) reported similar result.

### **5.5.10 Factors influencing the consumer in buying dry fruits among different family income groups**

Table 4.19 indicated the factors influencing the consumers in buying dry fruits. While, purchasing dry fruits health was considered as the foremost factor (1.12). Taste was considered as the second important factor with 3.07. Quality of dry fruits resulted as

third factor (3.42). Sheeja (1998) reported similar results in her study. Among all income groups' health was most imported factor.

#### **5.5.11 Level of satisfaction of consumers among different family income group**

It is clear that most of the consumers (85.14 %) were satisfied from Pistachio, and the remaining (9.46 %) were not satisfied (Table 4.20). In the case of Dates vast majority of the consumers were highly satisfied (75.29 %), and the remaining (24.71 %) of the consumers were satisfied. 68.42 per cent of the consumers were satisfied from Fig, and 26.32 per cent of the consumers were not satisfied. With respect to Raisins, Almond and Cashew (88.46 %, 83.91 % and 76.74 %, respectively) were satisfied, the remaining (11.54 %, 16.09 % and 23.26 %, respectively) were highly satisfied. 67.65 per cent of the consumers were satisfied, 25.47 per cent of the consumers were not satisfied from the Walnut.

## **CHAPTER VI**

### **SUMMARY AND POLICY IMPLICATIONS**

Dry fruit has a long tradition of usage dating back to the fourth millennium BC in Mesopotamia. Dry fruits are widely used due to sweet taste, nutritive value, and long shelf life. Traditional dry fruits such as, Figs, Dates, apricots and apples have been a staple of Mediterranean diets for millennia. This is due partly to their early cultivation in the Middle Eastern region known as the Fertile Crescent, made up by parts of modern Iraq, Iran and Syria, southwest Turkey and northern Egypt. Drying or dehydration also happened to be the earliest form of food preservation grapes, Dates and Figs that fell from the tree or vine would dry in the hot sun.

Today, dry fruit consumption is widespread. The important dry fruits are Dates, Almond, Raisins, Cashew, Figs, apricots, etc. These are referred to as "conventional" or "traditional" dry fruits.

Dry fruits retain most of the nutritional value of fresh fruits. In general, all types of dry fruits provide essential nutrients and an array of health protective bioactive ingredients, making them valuable tools to improve health and help to reduce the risk of chronic diseases.

Exploitation of dry fruit as a carrier of functional ingredients is a relatively new concept, although the functional properties of such products originated from the nature of drying process, where the removal of water leads to a natural concentration of healthy fruit components.

Dry fruits are used by consumers directly or consumed as a snack and as an ingredient for breakfast, ready-to-eat snacks and desserts. Bakeries and cereal mixes are one of the largest end users of dry fruit.

Keeping the above issues in mind the study was taken up with the following objectives:

1. To document the consumption of various types of dry fruits by consumers in Bangalore city,
2. To analyze consumers preference for branded and unbranded dry fruits and
3. To analyze the awareness, attitude and factors influencing the consumption of dry fruits.

The present study was conducted in Bangalore City. The sample for the study consisted of 90 respondents. The primary data was collected through pre tested schedule prepared for the purpose. The data was collected from consumers from different locations of Bangalore city using convenient sample technique.

The data collected for the study was analyzed using percentage analysis, regression analysis and garret's ranking technique.

### **6.1 Major findings of the study**

1. Among the 90 consumers studied a majority (61.11 %) were females and only 38.89 per cent were males. It clearly indicates that females play a dominant role in the purchase of dry fruits in the family.
2. The Majority (71.11 %) of the consumers were married and the rest 28.89 per cent were unmarried.
3. Nearly 43.33 per cent of the consumers fall under the age group of 30 to 45 years.
4. Nearly 64.45 per cent of the consumers were from nuclear families and 35.55 per cent of the consumers were from joint families.
5. Nearby 50 per cent of the respondents were graduates and 25.56 per cent were post graduates, indicating that a vast majority of consumers were highly educated.
6. Among the respondents 35.56 per cent were professional and 20 per cent were housewives.
7. Nearly 45.56 per cent of the respondents had two earning members, followed by one earning members (34.44%).
8. With respect to family income 40 per cent of the family had income ranging from Rs. 50,000 to one lakh per month, followed by 34.44 per cent had more than one lakh.
9. The age group 30 to 45 years is more exposed to the mass media communication and modern technology where the life style pattern is changing and people adopt for the recent innovations and modernizations.
10. Marital status, food habit, number of earning members and number of family members are the positive factors which contributed significantly for higher these consumption of dry fruits.
11. Friends and relatives were the major source of information, followed by television for getting information about dry fruits.
12. The brand awareness of consumers about dry fruits among different family income group showed that, 64.4 % were aware of dry fruits brands. 40 per cent of consumers familiar with Lion brand.
13. With regard to preferences of consumers for dry fruits, Dates ranked first, followed by Almond and Cashew.
14. With respect to average consumption of dry fruits per month the highest consumption was Dates (818 grams), followed by Almond (529 grams).
15. Morning time was the most preferred time for consumption of dry fruits among different income groups.

16. The frequency of consumption of dry fruits among the sample consumers was the highest in the case of Dates (20 days per month).
17. The major factor influencing brand preference by the consumers was nutritional value, followed by easy availability of dry fruits.
18. The brand preference among consumers was very low indication purchase of unbranded dry fruits.
19. 57.7 per cent of the consumers were preferred branded dry fruits and 42.23 per cent of the consumers were preferred unbranded dry fruits.
20. Majority (63.33%) of consumers of dry fruits are consuming dry fruits for more than 5 years and remaining one third are less than five years.
21. The average monthly expenditure on dry fruits was found to be highest in the case of high income group (Rs. 1714.15) followed by middle income group (Rs. 1198.08) and low income group (Rs. 618.92). Among the dry fruits the highest expenditure was Almond (22.81 %), followed by Dates (17.93 %).
22. Among the consumers the important factors influencing purchasing of dry fruits were health, taste and quality.
23. The consumers' satisfaction was highest (85.14%) in case of Pistachio, followed by Dates (75.29%).

## **6.2 Practical Utility**

- ❖ The consumers' preference among the dry fruits was highest for Dates and Almond. Hence, business opportunities for these two dry fruits in the Bangalore city are very high.
- ❖ Health, taste and quality are the major factors which influenced the purchase of dry fruits by the consumers. Hence, product promotion of dry fruits should be positioned as health products and there is a need to create awareness among public through mass media about the usefulness of dry fruits to public.
- ❖ A majority of the consumers in Bangalore city are purchasing dry fruits. Hence, there is a ample scope to expand this type of business particularly in high income group residential areas through retail outlets or departmental stores.
- ❖ The study revealed that housewives have played an important role in purchase of dry fruits. Hence, there is a need to target housewives in the promotional strategies for increasing the sale of dry fruits.

## CHAPTER VII REFERENCES

- Amita, K., 1998, A study of household consumption pattern of selected dairy products in Bangalore city. *M.Sc. (Agri.) Thesis*, University of Agricultural Sciences, Bangalore.
- Amy, Soe and Alka, Singh, 2006, Household food consumption pattern and demand in North Eastern states of India. *Indian Journal of Agricultural Marketing*, **20**(1): 57-67.
- Apoorva, Palkar, 2004, Consumer preferences in purchase of ready to eat snacks-branded potato chips. *Indian Journal of Marketing*, **34**(9): 34-38.
- Balaji, U., 1985, Fish consumption: A case of fish consumption behaviour in Vishakapatnam. *Indian Journal of Marketing*, **14** (2) : 15-18.
- Banumathy, S. and Hemameena, M., 2006, Analysis of brand preference of soft drinks in the global environment. *Indian Journal of Marketing*, **36** (6) : 12-16.
- Beverland, M., 2001, Creating value through brands: The ZESPRITM kiwi fruit case. *British Food Journal.*, **103** (6) : 383-399.
- Bristow. D. N, Schneider. K. C., and Schuler. D. K., (2002), The Brand Dependence Scale: Measuring consumers' use of brand name to differentiate among product alternatives, *Journal. Product & Brand Management*, **11** (6): 343-356.
- Brown, K., McIlveen, H. and Strugnell, C., 2000, Nutritional awareness and food preferences of young consumers in northern Ireland. *Journal of Nutrition and Food Sciences*, **30** (4/5) : 230-235.
- Cavard, P. and Moreau Rio, M. A., 2003, Consumer behaviour in purchasing fruit and vegetables: places of purchase/ selling patterns, Barometre-2002, 131 pp.
- Chen, A., 2001, Using free association to examine the relationship between the characteristics of brand associations and brand equity. *Journal of Nutrition and Food Sciences*, **30** (4/5) : 230-235.
- Daisy, Rani., Selvam, S., Safiullah, A. M. and Prabakaran, R., 1999, Consumption pattern and consumer preference for milk products in Madras city. *Indian Journal of Agricultural Marketing*, **13**(1): 36-39.
- Dhillon, M.K., Miglani, S.S. and Singh, M.K.B., 1995, Preference of place and factors associated with purchase of food items and durable goods by rural and urban consumers. *Journal of Research - Punjab Agricultural University*, **32** (1): 112-120.

- Gluckman, L., and Robert, 1986, A consumer approach to branded wines. *European Journal of Marketing*, **20** (6): 21-31.
- Gursharan, S. K., 1995, Consumption of Walnut: Consumer's views, pattern and determinants. *Indian Journal of Agricultural Marketing*, **9**(1): 16-26.
- Hugar, L.B., Shivaraya, B. and Verriswamy, J., 2001, Dynamics of consumer behaviour in vegetable marketing. *Indian Journal of Marketing*, **31**: 27-33.
- Jabir Ali, 2006, Structural changes in consumption and nutrition of livestock products in India: Implication for food security. *Indian Journal of Agricultural Economics*, **6**(3): 374.
- Jesionkowska K., Konopacka D., Płocharski W., Sijtsema S. and Zimmermann K. 2008. Preferences and consumption of dried fruit and dried products among Dutch, French and Polish consumers. *Journal of Fruit and ornamental Plant Research*, **16**: 261-274.
- Jesionkowska K., Sijtsema S. J., Konopacka D. and Symoneaux R., 2009, Dried fruit and its functional properties from a consumer's point of view. *Journal of Horticultural Science & Biotechnology ISAFRUIT Special Issue* 85–88.
- Jorin, R., 1987, Consumer behaviour is changing and offering new opportunities. *Berater- Information*, **26** (9): 8-14.
- Joshi, M.S., 1993, Food purchase habits and consumer awareness of rural and urban housewives in Dharwad. *MHSc. Thesis*, University of Agricultural Sciences, Dharwad.
- Kamalaveni, D. and Nirmala, 2000, Consumer behaviour in instant food products. *Indian Journal of Marketing*, **30** (5-7): 12-18.
- Kamenidou, L., Zimitra-kalogianni, L., Zotos, Y. and Mattas, K., 2002, Household purchasing and consumption behaviour towards processed peach products. *New-Medit*. **1** (1): 45-49.
- Kim-Hyunah., Yang-Ilsun. and Heo-EunJung., 2005, Cause-effect analysis of brand equity factors in contract food service management company in college and university in Incheon area. *Korean Journal of Nutrition*, **38** (5): 395-403.
- Koutroulou, A., and Tsourgiannis, L., 2011, Factors Affecting Consumers' Purchase Behaviour towards Local Foods in Greece: The Case of the Prefecture of Xanthi. *Scientific Bulletin - Economic Sciences*, **10** (16), 2.
- Kubendran, V. and Vanniarajan, T., 2005, Comparative analysis of rural and urban consumers on milk consumption. *Indian Journal of Marketing*, **35** (12): 27-30.

- Low. G. and Lamb. J., 2000, The Measurement and Dimensionality of the Brand Associations. *Journal of Product and Brand Management*, **9** (6): 350-368.
- Mahajana, S. B., Shetti, Ramappa, K. B. and Basavaraja, H., 2006, Milk and milk products: A study of consumption pattern and consumer preference in Hubli-Dharwad twin cities of Karnataka. *Indian Journal of Agricultural Marketing*, **20**(2):16.
- Nagaraja, B., 2004, Consumer behaviour in rural areas : A micro level study on consumer behaviour in Kavi mandal. *Indian Journal of Marketing*, **34** (11) : 30-36.
- Nandagopal, R. and Chinnaiyan, P., 2003, Brand preference of soft drinks in rural Tamil Nadu. *Indian Journal of Marketing*, **33** (1): 14-17.
- Narang, R., 2006, A study on branded foods, *Indian Journal of Marketing*, **36** (11): 3-9.
- Nuts and dried fruits global statistical review 2007-2012.
- Padmanaban, N.R. and Sankaranarayanan, K., 1999, Business Experience, product lines of dealers and farmers loyalty to dealer for pesticides in southern Tamil Nadu. *Indian Journal of Agricultural Marketing*, **13** (3): 69-74.
- Radhakrishnan, S., 2004, Coffee consumption in India- Perspectives and Prospects. *Indian coffee*, April: 27-35.
- Ragavan, R., 1994, A study on the consumer response towards franchise vegetable outlets – A case of just picked. *M.Sc. (Agri.) Thesis*, Tamil Nadu Agricultural University, Coimbatore.
- Ramasamy, K., Kalaivanan, G., and Sukumar, S., 2005, Consumer behavior towards instant food products. *Indian Journal of Marketing*. **35** (6): 24-25.
- Randhawa, G. S. and Chahal, S. S., 2005, Consumption pattern of milk and milk products in rural Punjab. *Indian Journal of Agricultural Economics*, **61**(3): 141.
- Rees, A.M., 1992, Factors influencing consumer choice. *Journal of Society of Dairy Technology*, **45** (4): 112- 116.
- Sabeson, R., 1992, Consumer preference towards processed fruits and vegetable products – A case study in Coimbatore city. *M.Sc. (Agri.) Thesis*, Tamil Nadu Agricultural University, Coimbatore.
- Sampathkumar, 2003, Brand preferences acidity of soft drink market. *Indian Journal of Agricultural Marketing*. **23** (2): 64-67.
- Sangeeta Verma, Veena Goel and Toor, T. S. 2007, A study of milk and milk products in urban Punjab. *Indian Journal of Agricultural Marketing*, **21**(2): 125-140.

- Sanjaya, S. Gaur and Abdul, K. Waheed, 2002, Study of buying behavior of branded fine rice. *Indian Journal of Marketing*, **32** (7) : 3-8.
- Sarker, S. C. and Das, J. K., 2005, Consumption pattern, marketing channel and prices of spices. *Journal of Agricultural Marketing*, **42** (2): 2-11.
- Sarwade, W.K., 2002, Emerging dimensions of buyer behavior in rural area. *Indian Journal of Marketing*, **32** (1-2) : 13-19.
- Shanmugasundaram, S., 1990, Demographic and psychological factors that influence the pattern and selection in soft drink and tetra pack drinks – A study in Veollore. *Indian Journal of Marketing*, **20** (7): 102-106.
- Sheeja, A., 1998, An analysis of consumer buying behaviour towards processed spices. *M.Sc. (Agri.) Thesis*, Tamil Nadu Agricultural University, Coimbatore.
- Shivkumar, J., 2004, Buying behaviour of consumers towards the products produced by SSI units. *Indian Journal of Marketing*, **34** (3): 19-25.
- Singh, S., Srivastava, D.N and Kapoor, C.M., 1995, Factors influencing consumer preferences for type of milk supply in Hissar city. *Indian Journal of Animal Production and Management*, **11** (4): 226-228.
- Soe, and Singh., 2006, Household food consumption pattern and demand in North-Eastern states of India. *Indian Journal of Agricultural Economics*, **20**(1); 57-67.
- Srinivasan, N. and Elangovan, D., 2000, Consumer perception towards processed fruits and vegetable products. *Indian Journal of Marketing*, **30** (11-12) : 22-25.
- Usha, V., 2007 A study on buying behaviour of consumers toward instant food products in Kolar district. MBA (ABM) thesis, University of Agricultural Sciences, Dharwad.
- Veena, U.M., 1996, Growth dimension of horticulture in Karnataka-An econometric analysis. *Ph.D. Thesis* (unpublished), University of Agricultural Sciences, Dharwad.
- Vincent, N., 2006, A study on brand consciousness among children and its effect on family buying behavior in Bangalore city. *Indian Journal of Marketing*, **36** (1): 12-18.
- Yee, J. and Young, L., 2001, A public health approach to reducing the fat content of meat pies in Auckland. *Journal of New-Zealand Dietetic Association*. **55** (1): 22-27.
- Yesodha Devi, N and Kanchana, V. S., 2007, A study on chicken consumption pattern and consumer preference for processed chicken in Coimbatore city. *Indian Journal of Marketing*, **37**(2): 11.

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Title of the Project : Consumer Behaviour for Dry Fruits in Bangalore City

Name of the Investigator : Mohammad Hamed Khusrawy

Objective of the study:

1. To document the consumption of various types of dry fruits by consumers in Bangalore city,
2. To analyze consumer preference for branded and unbranded dry fruits and
3. To analyze the awareness, attitude and factors influencing the consumption of dry fruits.

1. Name: .....

2. Address:.....

3. Age: .....

4. Marital status: Single  Married

5. Food Habit: Vegetarian  Non-vegetarian

6. Family composition: Nuclear family  Joint family

No. of Male  No. of Children

No. of Female  Total

7. Education level:

Primary School  High School  Graduation

Middle School  PUC  Post-Graduation

8. Occupation:

Academics  Business  Professional

Student  Housewife  Retailer

Others  Kirana shopkeeper  Student  Housewife

9. Number of earnings members in the family.....

10. Monthly family income (from all the sources) Rs.:

5000-10,000  10,000-50,000  0.5-1 lakh  >1 lakh

11. Who is buying grocery and food items in your household?

- a) Myself
- b) Wife / Husband
- c) Parents
- d) Other Person: .....

12. Are you consuming dry fruits? a) yes b) no

If yes, which type of dry fruits you prefer most?

(Rank it between 1 – 7)

Name of dry fruits	Pistachio	Dates	Fig	Raisins	Almond	Cashew	Walnut	Others

13. Nature of purchase decision

Nature of purchase decision	Pistachio	Dates	Fig	Raisins	Almond	Cashew	Walnut
Impulsive buying							
Planned purchase							

14. Frequency of purchasing dry fruits

Type of dry fruits	Daily	Weekly twice	Weekly once	Monthly once	Regularly	Occasionally
Pistachio						
Dates						
Fig						
Raisins						
Almond						
Cashew						
Walnuts						

15. Frequency of consuming dry fruits

Type of dry fruits	Daily	Weekly twice	Weekly once	Monthly once	Regularly	Occasionally
Pistachio						
Dates						
Fig						
Raisins						
Almond						
Cashew						
Walnuts						

16. When do you consuming more dry fruits

Type of dry fruits	Morning	Afternoon	Evening	During dinner
Pistachio				
Dates				
Fig				
Raisins				
Almond				
Cashew				
Walnuts				

17. Monthly expenditure on dry fruits, Purchasing for yourself or gift

Sl. No.	Dry fruits Products	Expenditure (Amount in Rs.)		For yourself	Gift
		Qty	value		
1.	Pistachio				
2.	Dates				
3.	Fig				
4.	Raisins				
5.	Almond				
6.	Cashew				
7.	Walnuts				

18. Place of purchase

Place of purchase	Pistachio	Dates	Fig	Raisins	Almond	Walnut	Cashew
Retail outlets							
Departmental stores							
Bakeries							
Wholesaler							
Super Market							

19. Level of satisfaction

Level of satisfaction	Very satisfy	satisfy	Dissatisfy
Pistachio			
Dates			
Fig			
Raisins			
Almond			
Cashew			
Walnuts			

20. Approximately when did you buy your first dry fruits products?

- a) More than 5 years
- b) 3-5 years
- c) 1-3 years
- d) Last year
- e) Last 6 months

21. Awareness of Consumers about Dry fruits Brand:

Are you aware of dry fruits brands? a) Yes b) No

Sl. No.	Name of dry fruits	yes	Name of the brand

22. What do you like in the dry fruits brands?

Sl. No.	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Brand name according to preference:						
1.	Appearance					
2.	Quality					
3.	Hygiene					
4.	Nutrients content					
5.	Brand image					
6.	Reasonable price					
7.	Readily available					
8.	Attractive Packaging					
9.	Advertisement					
10.	Shelf life					
11.	Others(specify)					

23. Your opinion about brand which you are purchasing

- a) Trusted brand
- b) Few brands are good
- c) Often change the brand

- d) No much importance to the brands
- e) Don't bother about brands

24. Source of information on dry fruits

Source	Pistachio	Dates	Fig	Raisins	Almond	Walnut	Cashew
Television							
Radio							
Newspapers							
Magazines							
Friends/relatives							
Shopkeeper/retailer							
Window display							
Any other							

25. Which seasons you are consuming more dry fruits and who are consumed?

Dry fruits	Rainy season	Winter season	summer	Who are consumed			
				Adult	children	Women	Seiner citizen
Pistachio							
Dates							
Fig							
Raisins							
Almond							
Cashew							
Walnut							

26. Reasons for purchasing dry fruits?

(Rank it between 1-10)

Sl. No.	Rank the	Pistachio	Dates	Fig	Raisins	Almond	Cashew	Walnuts
1	Price							
2	Taste							
3	Health							
4	Quality							
5	Availability							
6	Religion							
7	Habit							
8	Friends							
9	Family tradition							
10	Others							

27. Which product in the table you would like to consume in the future?

Items	Future consumption
Pistachio	
Dates	
Fig	
Raisins	
Almond	
Cashew	
Walnut	

28. I would like to buy more dry fruits if

Factors	Strongly agree	agree	Neutral	disagree	Strongly disagree	Don't know
Reasonable prices						
More income						
More accessibility in the market						
More assortment availability						
Better appearance and taste						
More time to look for dry fruits						
More recognizable label and product						
More trust to origin/production						
More seasonal products						
More Products from my local region						
More information in the media						