



## An Empirical Study on Brand Preference Towards Edible oil in Rural Areas with Special Reference to Coimbatore District

### KEYWORDS

Groundnut oil, Healthy oil, Price, Quality & Sunflower oil

**Ms. R. Prema**

Assistant Professor, Department of Commerce, Dr. N. G. P. Arts and Science College, Coimbatore -48.

**ABSTRACT** *This article provides an introduction of Edible oil, there are several brands of Edible oil exists in the market, an attempt is being made to study the sunflower and groundnut oil and to know which is more popular, preferred and purchased by the consumer. Now expectation and the level of satisfaction of consumers is an essential one for withstanding a brand. The factors influencing the consumers for purchasing branded oil like quality, healthy, tasty, availability and fat content. Today consumer market is flooded with various brands of sunflower and groundnut oil. Each branded sunflower and groundnut oil stands out distinctly when grouped with other branded edible oil. Consumers have specific preference or choice and they analyze the price, quality, packaging aspects etc. before they buy the product and hence, it is up to the different brands of sunflower and groundnut oil manufacturers to concentrate on those aspects and workout better strategy to attract more consumers for their brands.*

### Introduction

India is blessed with many positive factors that enable it to stand at a unique position in agro-based products. After achieving independence, Indian agriculture is a positive whereby it has become not employer of agricultural based products.

India is one of the largest producers of oilseeds in the world. The nine major oilseeds cultured in India are groundnut, mustard /rapeseed, sesame, safflower, linseed, Niger seed, castor seed, soybean and sunflower. Coconut is the most important source of edible oil amongst plantation crops, while in non-conventional oils, rice bran oil and cottonseed oil are the most important. Groundnut, soybean and mustard together contribute about 85 percent of the country's oilseeds production. In India, oilseeds are producing in various areas. Some of the major oilseeds producing areas are Andhra Pradesh, Maharashtra, Gujarat, Tamilnadu, Karnataka, Uttar Pradesh, Madhya Pradesh, Rajasthan and Bihar.

Currently India accounts for 7.4 percent of world oilseeds output, 5.8 percent of world vegetable oil production, 11.2 percent of world vegetable oil imports and 9.3 percent of the world edible oil consumption. Edible oils consumption increased from around six million tons in the early 1990s to around 11 million tones recent years.

Edible Oil is purified fat of plant or animal origin, which is liquid at room temperature. The different kinds of edible vegetable oils includes olive oil, palm oil, soybean oil, canola oil, pumpkin seed oil, corn oil, sunflower oil, safflower oil, peanut oil, grape seed oil, sesame oil and rice bran oil. Many other kinds of vegetable oils are also used for cooking.

The generic term "vegetable oil" when used to label a cooking oil product refers to a blend of a variety of oils often based on palm, corn, soybean or sunflower oils. The appropriate amount of fat as a component of daily food consumption is the topic of some controversy. The FDA recommends that 30% or less of calories consumed daily should be from fat. Other nutritionists recommend that no more than 10% of a person's daily calories come from fat. In extremely cold environments, a diet that is up to two-thirds fat is acceptable and can, in fact, be critical to survival.

While consumption of small amounts of saturated fats is essential, an excessive amount of such fats has been shown to be correlated with coronary heart disease. Oils that are particularly high in saturated fats include coconut, palm oil and palm kernel oil. Oils with lower amounts of saturated fats,

and higher amounts of unsaturated (preferably monounsaturated) fats, are generally healthier.

### Sunflower Oil

Sunflower oil is the non-volatile oil expressed from sunflower (*Helianthus annuus*) seeds. The seeds of the sunflower are obtained from the brown hub in the center of the flower, which has yellow petals surrounding it. The diameter of the flower can reach as large as one foot. The seeds have a tough black and white striped shell, which is often removed for easier consumption of the seeds and for adding the seeds to various recipes. When the seeds are served as a snack, many people prefer to leave the shells on and eat them with the seeds.

Sunflower seed oil is a light yellow color and has a mild flavor. It is suitable for use as a base for salad dressings or in combination with stronger flavored, more expensive oils that can be used more economically when combined with sunflower oil. It is also used for cooking because like most other refined oils, it has a fairly high smoke point.

There are several types of sunflower oils produced, some examples are: high linoleic, high oleic and mid oleic. High linoleic sunflower oil typically has at least 69% linoleic acid. High oleic sunflower oil has at least 82% oleic acid. Variations in fatty acid profile are strongly influenced by both genetics and climate.

Sunflower was introduced in India as an oilseed crop for the first time in 1969. Sunflower is a drought tolerant crop due to its deep tap root; therefore, it is the best substitute to all rainfed commercial crops. Sunflower seed has an oil recovery of 35%. The protein content is around 25% and sunflower meal is used as a protein source in animal feed preparation. Sunflower oil is considered as healthy oil. The sunflower oil is used for culinary purposes, in the preparation of Vanaspathi and in the manufacture of soaps and cosmetics. The refined sunflower oil is rich in minerals and vitamins A, D, E and C.

The sunflower oil production of the world is around 8-9 million tons in a normal year. The exports are traditionally around 30% of the total production. Russia and Ukraine is respectively the first and second largest producer of sunflower seed in the World. The other major producers are Argentina, France, Romania, Hungary, China, India and United States of America.

### Groundnut Oil

These are the most commonly consumed oils in India, particularly in the rural areas. They contain heart-friendly MUFA that lower the levels of bad cholesterol in our body without lowering the levels of good cholesterol.

Peanut oil obtained from peanuts is almost clear and has a mild flavor due to the refining process that is used. The Chinese version has more of a peanut taste and aroma. Refined peanut oil has a high smoke point and is popular for sautéing and frying. It does not absorb or transfer flavors from food during the cooking process. It is also high in monounsaturated and polyunsaturated fats, which makes it a healthy oil to use for cooking or as a base for dressings. It will keep for long periods if stored in its original container in a cool, dark place. Peanut oil is also known as groundnut oil and it should be remembered that its use in cooking might cause severe illness in people allergic to peanuts.

Its major component fatty acids are palmitic acid, oleic acid, and linoleic acid. The oil also contains some 6–8% (total) of arachidic acid, arachidonic acid, behenic acid, lignoceric acid and other fatty acids.

In the market, it is available in refined form as well as filtered form. Although the filtered oils are nutritionally superior, they often contain toxic compounds or adulterants. Peanut oil is most commonly used when frying foods, particularly french fries and chicken.

### Statement of the Problem

Of all the essential products in the market the edible oils is one of the most important products and frequently used product by all the people. Edible oil is one of the basic and important ingredients traditionally used by all the people for all food items and is essential for everything that is cooked. The market is flooded by various kinds of edible oils such as groundnut oil, gingili oil, coconut oil, sunflower oil, mustard oil etc.

Traditionally people have been using unrefined oils such as gingili oil, groundnut oil and coconut oil. In recent years, there is a growing awareness among the consumer towards quality and they have also become health conscious which resulted in the arrival of refined oils. Thus in the recent past, the edible market is catered by many branded refined oil available in loose and in consumer packs. The refined oils is available for different varieties of edible oils like gingili oil, groundnut oil etc. this has resulted in the growth of many brands in these different varieties which ultimately led to competition among the manufactures.

Some of the important varieties of refined oils are groundnut oil, coconut oil, sunflower oil, which is being widely accepted by all the people. The popularity of the oil is mainly attributed to the facts and claims towards conscious population who demand the healthy foods have directed their preference towards branded edible oils.

Since there are several brands of sunflower and groundnut oil exists in the market, attempt is being made to know which is more popular, preferred and purchased by the consumer. Now expectation and the level of satisfaction of consumers is an essential one for withstanding a brand. The factors influencing the consumers for purchasing branded oil are quality, healthy, tasty, availability and fat content. For this purpose, an attempt is made by the researcher to study about the brand of sunflower oil and groundnut oil used by the consumers and the extent of their loyalty towards the brand. Hence, the article entitled "Brand preference towards Edible oil" has been selected for the current research work.

### Objectives of the Study

- To study customer's awareness towards various branded Edible oil.
- To study the factors influencing the customers in buying a branded edible oil.
- To know the customers idea, opinion and preference for branded Edible oil.
- To find out the satisfaction level of customers regarding branded Edible oil.
- To offer suggestion on the basis of results of the study.

### Review of Literature

Kathleen Warner, Monoj Gupta<sup>1</sup> revealed that potato chips fried in either Low Linolenic Acid Soybean (LLSBO) or in the 1:1 blend had significantly higher intensities of deep fried flavor than chips fried in High Oleic Soybean (HOSBO). Hexanol was significantly higher in potato chips than in the chips fried in the other oils, indicating low oxidative stability during storage. Blending HOSBO with LLSBO in a 1:1 ratio not only improved flavor quality of chips compared with those fried in HOSBO, but also improved oil fry life and oxidative stability of chips compared with LLSBO.

Kim, Park, Jung, Lim and Kim<sup>2</sup> focused to develop a novel cooking method for fried meat products, to improve their nutritional value, and to provide superior taste and texture. The total Trans Fatty Acids (TFA) contents were significantly lower in the AROF samples compared to the DFF samples. Moreover, the sensory evaluation results showed that the crispy texture of the Alternate Roasting with its Own Fat (AROF) samples was not significantly different from that of the DFF (Deep-Fat Frying); the AROF samples had higher scores for the characteristic fried flavour and for overall acceptability. This study shows the potential value of products prepared by AROF, which can successfully replace DFF methods used for chicken and other neat products and improve their nutritional value.

Fritsch, Hofland and Vickers<sup>3</sup> conducted a study where the quality of the stored samples was monitored by an expert sensory panel, peroxide, hexanal, free fatty acids and moisture determinations. The shelf life for roasted sunflower kernels was greater than 12 months when stored in nitrogen flushed pouches and as low as 8 wks when exposed to air at 38°C. The shelf life of raw sunflower kernels was greater than 12 months in packages providing some moisture but no oxygen protection.

Isabel Lima, Harmeet Guraya<sup>4</sup> in their study sunflower butter product was formulated and processing conditions were varied to study their effect on the overall sensory and physical characteristics of the final product. Sunflower butter formulations were rated more "earthy" and less "salty" than peanut butter, but differences in the "sweet" attribute were small. With panel judging sunflower butter samples less spreadable and having a higher initial firmness. Cluster analysis on the instrumental hardness, adhesion oil separation, and color profile revealed the formulation closest to the controls to have the same amount of sugar and roast level, but 1.6% of stabilizer and 0.9% salt instead.

Ramana and Viswanath<sup>5</sup> revealed that edible oils as an important item of consumption have rightly acquired considerable importance all these days. Being an essential food item for general populace, its importance can be gauged from the fact that it is used all over the world, as a major source of nutrition for human beings. Oils are used in the form of raw oils, refined and vanaspathi constituting 15 to 20 percent of the consumer's monthly budget. Besides, oil industry has become a major organized sector with over 100 units in operation all over the country providing direct or indirect employment to over a million people.

### Methodology of the Study

#### Research Design

A research design is purely and simply the framework of plan for a study that guides the collection and analysis of data.

The research design is descriptive in nature.

#### Area of the study

The study has been conducted in rural areas in Coimbatore District. Coimbatore is a major industrial city in India and second largest city in the state of Tamilnadu. It is known as Manchester of south India. It is also a part of Kongu Nadu region of Tamilnadu. Rural areas are settled places outside towns and cities. Such areas are distinct from more intensively settled urban and suburban areas. As major part of consumers

in Coimbatore city are using Edible oil for cooking, so the researcher has considered that rural areas in Coimbatore District as the suitable area for studying Brand preference towards Edible oil.

#### Period of study

Period for the study is 3 months i.e. October 2012 to December 2012

#### Methods for data collection

The study is based on primary data only. The primary data were collected from men and women respondents who are using Edible oil with special reference to Sunflower oil and Groundnut oil. Interview schedule method is used to collect data from respondents.

#### Sampling

The researcher has adopted convenient sampling method. However, the researcher was much careful to ensure that sample represents the whole area of the study. A sample of 300 respondents has been selected for the study using the convenient sampling method.

#### Hypotheses of the study

- There is no significant relationship between age group, gender, marital status, educational qualification & occupational status of the respondents with awareness level of sunflower & groundnut oil.
- Gender, marital status, educational qualification & occupational status of the respondents with satisfaction level of factors regarding price, quality, package, healthy, consumption level and availability are independent.
- Age group, gender, marital status, educational qualification & occupational status of the respondents with satisfaction level of branded sunflower & groundnut oil are independent.
- There is no significant relationship between age group & marital status of the respondents with opinion about the price of sunflower & groundnut oil.

#### Tools for analysis

The tools used for analysis are:

- Percentage analysis.
- Likerts Summated scale
- Correlation Analysis
- One way ANOVA
- t test.
- Chi – Square Test
- Rank Correlation.

#### Operational Definition:

Edible oil: For the purpose of the study, Edible oil of Sunflower and Groundnut has only been considered.

#### Limitations of the Study

The following are the limitations of the study:

- The study was confined to rural areas only in Coimbatore District and hence the results cannot be generalized to other areas.
- Due to time constraints, the number of respondents taken for the study is limited to 300.
- Only selected brands of Edible oil have been studied.

#### Findings of the study

- It is found that majority of the respondents are female belonging to the age group of 31 to 40 years.
- It is found that majority of the respondents are married qualified with higher secondary & below, having monthly income level of Rs 15001 to Rs 25,000 and they have 3 or 4 members in their family.
- It is found that majority of the respondents are aware of gold winner and ganapathy oil among various branded sunflower oil and groundnut oil respectively and they come to know about edible oil through advertisement by television.

- It is found that majority of the respondents are presently using gold winner and ganapathy oil among various branded sunflower and groundnut oil respectively for a period of more than 3 years and they spent amount Rs500 to Rs1000 for purchasing oil per month & using 4 to 6 liters of edible oil per month for cooking.
- It is found that majority of the respondents are purchasing edible oil in grocery stores.
- It is found that Quality of Edible oil influences respondents to buy branded edible oil.
- It is found that majority of the respondents are changing their brand when new brand is introduced in the market, which is more advantages and healthy due to price.
- It is found that majority of the respondent's states that branded edible oil plays highly effective in user's health.
- It is found that majority of the respondent's states that gold winner sunflower oil has more reputation.
- It is found that majority of the respondent's states that they are not providing complements at the time of purchase of edible oil & Minority of the respondents is receiving complement at the time of purchase as gift.
- It is found that most of the respondents are dissatisfied with present branded edible oil due to higher price and rests are satisfied with edible oil due to healthy oil.
- It is found that majority of the respondents are recommend the branded Edible oil to others

#### Likerts Summated Scale Results:

- It is found that majority of the respondents stated that price of branded sunflower and groundnut oil is high and they satisfied with quality, attractive package, advertisement, availability and healthy sunflower oil and groundnut oil & dissatisfied with consumption level while using of sunflower oil and groundnut oil.
- It is found that majority of the respondents are satisfied with Nature Fresh, Gemini, Fortune, Poorna, Saffola, and Sundrop Heart sunflower oil and dissatisfied with Gold winner, Dhara, Usha sunflower oil.
- It is found that majority of the respondents are satisfied with Idhayam Mantra, Ganapathy, Maharaja, and Kalki groundnut oil and dissatisfied with Dhara groundnut oil.

#### Correlation Results:

- There is negative correlation between the amount spent on edible oil and income. It indicates that amount spent on Edible oil decreases when income increases. i.e. When income is more for the respondents and out of income, the expenses for edible oil are constant or less.

#### ANOVA Results:

- Different age group of respondents gets same level of awareness towards sunflower oil.
- Different age groups of respondents do not get an average and same level of awareness regarding groundnut oil. It is found that 41 – 50 yrs age group gets higher level of awareness compared to other age groups of respondents.
- Educational qualifications of respondents do not get a same level of awareness towards sunflower oil. It is found that the higher secondary and below respondents get high level of awareness than the illiterate and post graduate.
- Educational qualifications of respondents do not get a same level of awareness of groundnut oil. It is found that postgraduate respondents get high level of awareness towards groundnut oil than other educational respondents.
- Occupation status of respondents does not get a same level of awareness towards sunflower oil. It is found that employees get high level of awareness than other status of respondents.
- Occupation status of respondents does not get a same level of awareness of groundnut oil. It is found that agriculture, homemaker and employees get high level of awareness of groundnut oil than the other status of respondents i.e. business and professional.
- Educational qualifications of respondents do not get same level of satisfaction of factors like price, quality, consumption level, package, healthy & availability. It is found that professional, under graduate and higher sec-

ondary & below get high level of satisfaction of factors than the other educational respondents.

- Occupation status of respondents has direct relationship with satisfaction of factors like price, quality, consumption level, package, healthy & availability. It is found that agriculture, employees and homemaker get higher level of satisfaction of factors than other status of respondents.
- There is a direct relationship between satisfaction of branded sunflower oil and age groups. It is found that less than 30 years age group respondents get high level of satisfaction than other age group of respondents.
- All age groups of respondents get same level of satisfaction towards branded groundnut oil.
- Educational qualifications of respondents get a same level of satisfaction of branded sunflower and groundnut oil.
- Occupational status of the respondents does not get same level satisfaction of branded sunflower oil. It is found that agriculture respondents get high level of satisfaction than the other occupational status.
- There is a direct relationship between satisfactions of groundnut oil and occupational status. It is found that professional qualification gets high level of satisfaction than the other group of occupational status.

#### t -Test Results:

- Both male and female respondents get equal level of awareness of various branded sunflower and groundnut oil.
- There is no relationship between marital status of respondents and awareness level of various branded sunflower and groundnut oil i.e both married and unmarried respondents get equal level of awareness.
- There is a relationship between marital status of respondents and satisfaction of factors like price, quality, consumption level, package, healthy & availability i.e both married and unmarried respondents do not get equal level of satisfaction of factors.
- Both male and female respondents get equal level of satisfaction of factors like price, quality, consumption level, package, healthy & availability
- Both male and female respondents get equal level of satisfaction of various branded sunflower and groundnut oil.
- There is no relationship between marital status of respondents and satisfaction level of various branded sunflower and groundnut oil i.e both married and unmarried respondents get equal level of satisfaction.

#### Chi-Square Results:

- Respondents come to know about edible oil through various sources of advertisement are not equally considered.
- It is found that respondents do not consider all types of stores equally.
- Respondent's states that all factors affecting to buy edible oil are not equally considered.
- Different age group of the respondents influences the opinion on price.
- There is a significant relationship between marital status of respondents and opinion about price.

#### Rank Correlation Results:

- It was found that "price" is the main factor (Rank I) which influences to buy edible oil, "quality and quantity" is the next factors (Rank II) influences the respondents, "healthy" is the next factor (Rank III) influences the respondents to buy edible oil. Fourth factor is availability followed by package as fifth factor influences the respondents to buy edible oil.

#### Suggestions

The following are some of the suggestions given on the basis of respondents of study and oral discussions held with customers:

- Quality is always important for any production. But it is more important in case of edible oil for reason that it

is more related to health. Hence, it is suggested to the manufacturer of branded edible oil to have focus on the quality aspect and make consumer to feel reliable. Manufacturers have to produce good quality of edible oil that is healthier.

- It is found from this study that majority of consumers feel the price of branded edible oil is high. This use an indication that consumers may at any time be dissatisfied with pricing aspect in the long run. Hence the manufacturer of branded edible oil shall keep the pricing strategies to suit the market environment so as to remain in the market for a long period.
- Nowadays people are very much health conscious on the basis of various observations made in the study, the consumers feel that edible oil is necessary for day-to-day life. Hence the manufacturers of edible oil follow the concept of being hygienic and healthy oil to attract the consumers.
- It is recommended that edible oil may be made available in various small packages like ¼ litter, ½ litter bottles, 50 ml pouches, 100 ml and 200 ml pouches etc. This will enable the consumers to purchase in small quantities to satisfy their needs.
- Like any other product of edible oil also needs better advertisement. The advertisement will not only create awareness but also influences the consumers to buy the product. However, the edible oil is not advertised for many brands available in the market. Hence it is suggested that advertisement may be given more important for various branded edible oil and can be advertised through different Medias.
- Among the various brands of edible oil available in the market, gold winner is preferred by majority of the respondents. It is information for the manufacturers of other brands of edible oil. They have to analyze the market and to develop such marketing strategies for capturing and key share in the market. Otherwise they lose their market share slowly in the long run.
- The companies may participate in consumer exhibitions and fairs, awareness shows or sponsor certain cooking contests, so that the consumer may get an opportunity to experience the quality, price and other features of the product.
- The top most importance should be given to increasing the productivity of oil seeds. At present our farm productivity is just 950/970 Kgs/ha, Which is almost half of world average or one-third on increasing productivity by just 100kgs per hectare every year for the next five years, i.e. increase from a level of 950kgs to 1450kfs per hectare, we will be able to meet the growing demand and check the rising import of vegetable oils. Hence it is suggested that for this purpose the government institutions, research institutions and private sector companies have to provide sufficient fund for development and cultivation of high yielding varieties of oilseeds.

#### Conclusion

The modern market is a highly competitive and transitional one. A company must first decide what it can sell, how much it can sell and what approaches must be used to entice the vary consumers. The consumers today do not accept any product, which does not give them complete satisfaction, and so many products do not find a place in the market. So it can be said that the modern market is consumer oriented and only the consumers determine any product success for failure. One of the products, which was very successful and had found a permanent place for itself in the minds of the consumers, is the sunflower and groundnut oil. Today consumer market is flooded with various brands of sunflower and groundnut oil. Each branded sunflower and groundnut oil stands out distinctly when grouped with other branded edible oil. Consumers have specific preference or choice. Consumers analyze the price, quality, packaging aspects etc. before they buy the product and hence, it is up to the different brands of sunflower and groundnut oil manufacturers to concentrate on those aspects and workout better strategy to attract more consumers for their brands. Hence, manufac-

urers should feel the pulse of consumers. They should plan their production and distribution activities as per the needs and convenient of the customers.

#### Scope for future research

This study in its usual course, offers scope for further research

in the following areas: 1.Consumer satisfaction of Edible oil. 2. Production functions of Edible oil 3. Women Workers Perception about Work Place in Edible oil Industry. 4. Marketing Strategies of Edible oil.

#### REFERENCE

- Kothari C.R, (2005). Research Methodology, New Delhi, New Age International Publishers. | Kothari C.R, (1978). Quantitative Techniques, New Delhi, Vikas Publishing House Pvt LTD.. | Gupta S.P, (2000). Statistical Methods, New Delhi, Sultan Chand & Sons. | Kathleen Warner, Monoj Gupta, (2005). "Potato chip quality and grying Oil stability of high oleic acid soybean oil", Journal of food science, Vol 70(6), pp395-400. | Moreno, Bouchon, (April 2008). "A different perspective to study the effect of freeze, air and osmotic drying on oil absorption during potato frying", Journal of Food science, Vol 73(3), pp122-128. | Kong, Dougherty, Perkins and Canuire, (April 2008). "Comparison and consumer acceptability of a novel extrusion – cooked samlon snack", Journal of Food science, Vol 73(3), pp118-123. | Kim, Park, Jung, shin, Lim and Kim, (May 2008). "The Development of a Novel cooking method for chicken to improve nutritional value", Journal of food science, Vol 73(4), pp180-184. | Fritsch, Hofland and Vickers, (March 1997). "Shelf life of sunflower kernels", Journal of food science, Vol 62(2), pp425-428. | Perez – Granados, Vaquero and Navarro, (August 2000). "Calcium absorption in rates consuming oliver oil or sunflower oil unused or used in frying", Journal of food science, Vol 65(5), pp892-896. | Isabel Lima, Harmeet Guraya, (Aug 2005). "Optimization analysis of sunflower butter", Journal of food science, Vol 70(6), pp365-370. | Radwan Farag, Mostafa Farag and Rehab F.M, (2008). Ali "Use of sunflower oil mixed with jojoba and paraffin oils in deep- fat frying process", International Journal of food science and technology. | Eric Stauffer M.S, (Sep 2006). "A review of the analysis of vegetable oil residues from fire debris samples", Journal of forensic sciences, Vol 51(5), pp1016-1032. | Zhang and Addis, (May 1992). "Evaluation of frying oil filtration systems", Journal of food science, Vol 57(3), pp651-654. | Choe and Min, (June 2007). "Chemistry of Deep fat frying oils", Journal of food science, Vol 72(15), pp77-86. | Ramana and Viswanath, (March 2005). "Consumer behaviour and awareness with special reference to edible oil users – A study", Indian journal of marketing, Vol xxxv(3). | Sangani VR, Patel NC & Golatia BA, (2005). "Extraction of oils from cumin seeds", Journal of food and science technology, Vol 42, pp 92-95. | Gowri R, Ishminder Kaur and Amandeepbatra, (2005). "Relevance of non-conventional oil in India", Journal of food science and technology, Vol 41, pp47-50. | Dilip Karkarey, (March-April 2005). "Edible oils: Hidden Dangers", Indian food Industry, Vol 24, p23. | Bhawna Garg, (August 2007). "Rural marketing – study of consumer behaviour with reference to hair oils", Indian journal of marketing, Vol XXXVII No8.