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Report on understanding trans fats: A Tamil Nadu focused multi-stakeholder study on usage, consumption, health implications of trans fat, and awareness on trans fat regulations in India

Introduction

Trans fats are silent killers - states the Food Safety and Standards Authority of India (FSSAI). Trans fats could be either natural or artificial. The natural form is present in milk, cheese, certain types of meats, etc. Artificial trans fats, also called industrially produced trans fats, are produced by the process of partial hydrogenation of vegetable oils, which turns into solid at room temperature. It is present in high quantities in margarine, bakery shortenings, fat spreads and mainly vanaspathi. This is used widely by the food processing industries as it is supposed to be cost effective, increases shelf life, and enhances the taste and texture of processed food. Food like chips, biscuits, baked products, pongal, poori, popcorn and the like, prepared using vanaspathi and related products are rich in trans fats.

Consumption of food items rich in trans fat lead to non-communicable diseases, especially cardiovascular diseases, stroke, cancers, diabetes, etc. Diets high in trans fats increase the risk of heart disease by 21% and deaths by 28%. Globally, intake of trans fatty acids (TFA) has resulted in more than 500,000 deaths annually from cardiovascular disease, according to the World Health Organisation. In India, the number is pegged at 60,000.

Objective

Since the time CAG took up the work on trans fats in 2019, it has been observed that there is very little awareness about trans fats and its ill-effects. Thus, to have a better understanding about the awareness levels of various aspects related to trans fats like basic knowledge of trans fats, food rich in trans fats, health implications, usage and consumption patterns, reading of labels, knowledge about existing regulations, among diverse stakeholders in Tamil Nadu, CAG undertook a study. Based on the outcome of the study, CAG aims to strategise its approach on working towards eliminating trans fat from the food supply chain. The survey, titled 'Understanding Trans fats - a Tamil Nadu focused multi-stakeholder study on usage, consumption, health implications, and laws', focussed on 5 categories viz. doctors, oil industries, bakeries, hotels/restaurants and general consumers.

Methodology

Survey questionnaires were developed and administered, targeting the five categories. Random sampling technique was followed and a total number of



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1124 samples were studied. The break up details of the samples are listed below:

Doctors - 178

Oil Industry* owners/representatives** - 174

Bakery owners/representatives**/bakery association members - 170

Hotels/restaurants owners/representatives** - 165

General consumers - 427

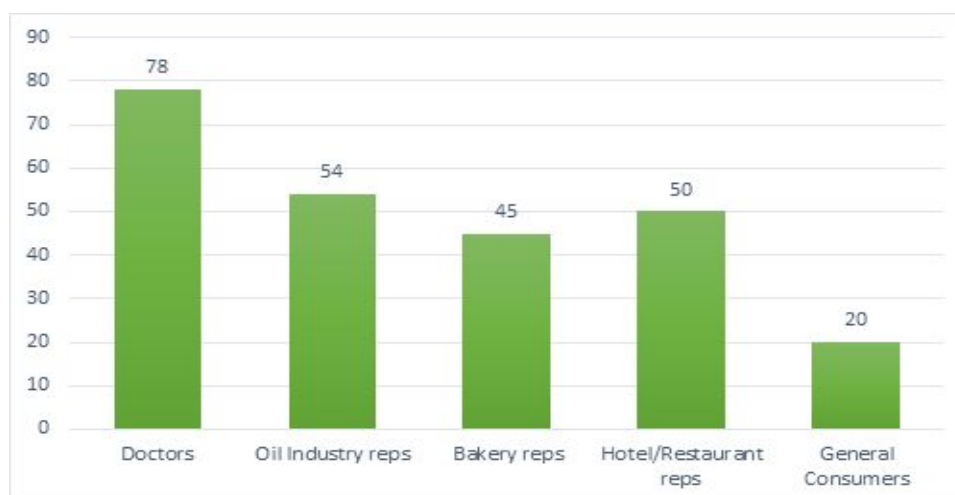
* includes medium and small scale units

** Representatives mean the staff, who spoke on behalf of the owner/industry

Findings

Awareness about trans fat and its ill effects

It was found that only 20% of general consumers knew about trans fat and its implications on health. It was also quite revealing that around 22% of the doctors were not familiar with trans fats and its ill effects! Awareness among the oil industry, bakery and hotel/restaurant representatives ranged between 45% and 55%.



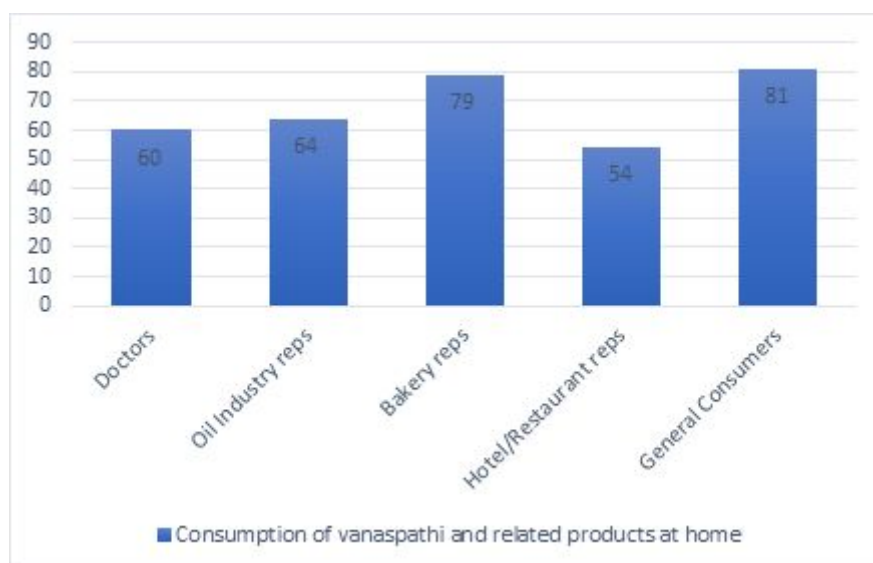
Consumption of vanaspathi and related products

It was noted that 81% of the general consumers, 79% of bakery representatives, 64% of oil industry representatives, 60% of the doctors and 54% of hotels/restaurants representatives consume vanaspathi and related products like margarines and fat spread at home.



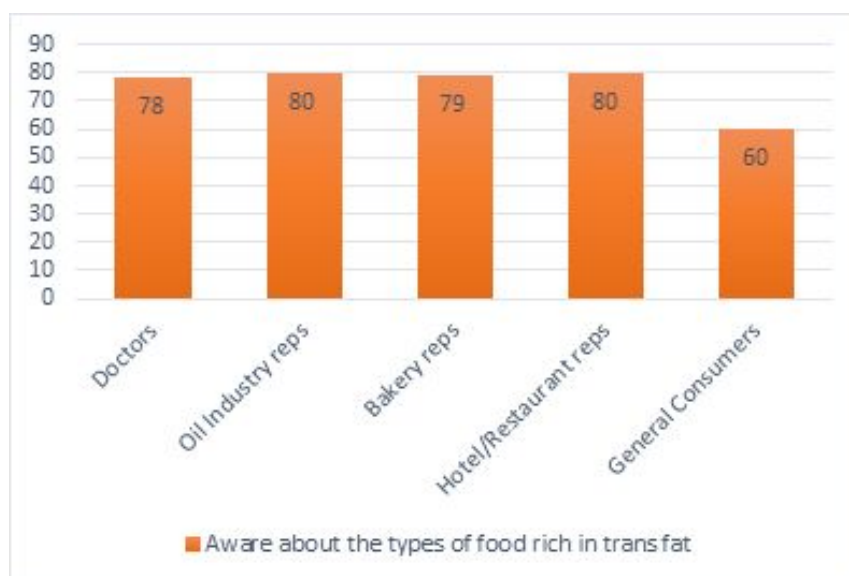
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Types of food rich in trans fat

The awareness levels about food rich in trans fat (chips, cookies and other baked products, pongal, poori, popcorn, etc) ranged from 60% to 80%. While the consumers' awareness was at 60%, for the rest of the categories it was nearer to 80% (hotels/restaurants representatives - 80%; bakery representatives - 79%; doctors - 78%).



Reusing of cooking oil

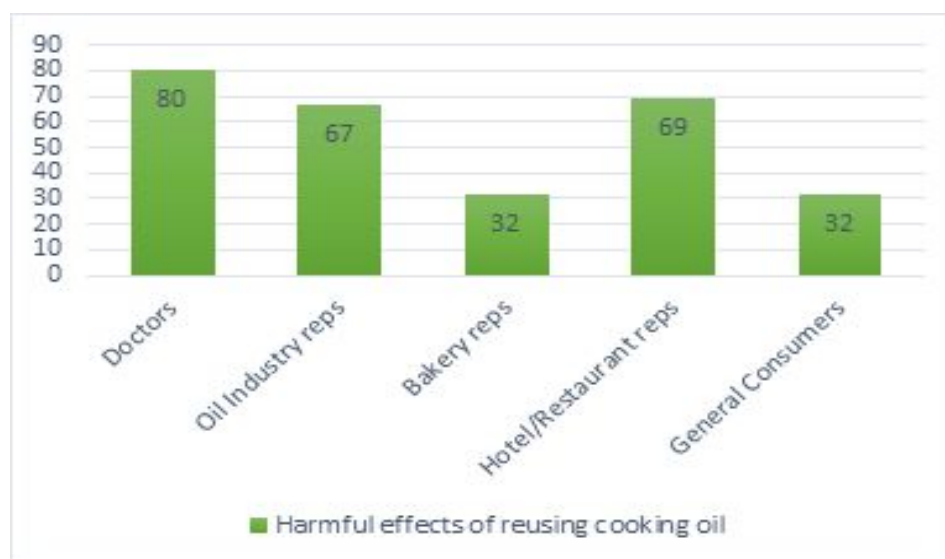
The survey revealed that only 32% of consumers and the same percentage of bakery representatives were aware of the harmful effects of reuse of cooking oil. Whereas, 80% of the doctors were aware that reuse of cooking oil increases



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trans fat content and is harmful. With the hotels/restaurants representatives the awareness levels stood at 69% and with the oil industry representatives it was 67%.



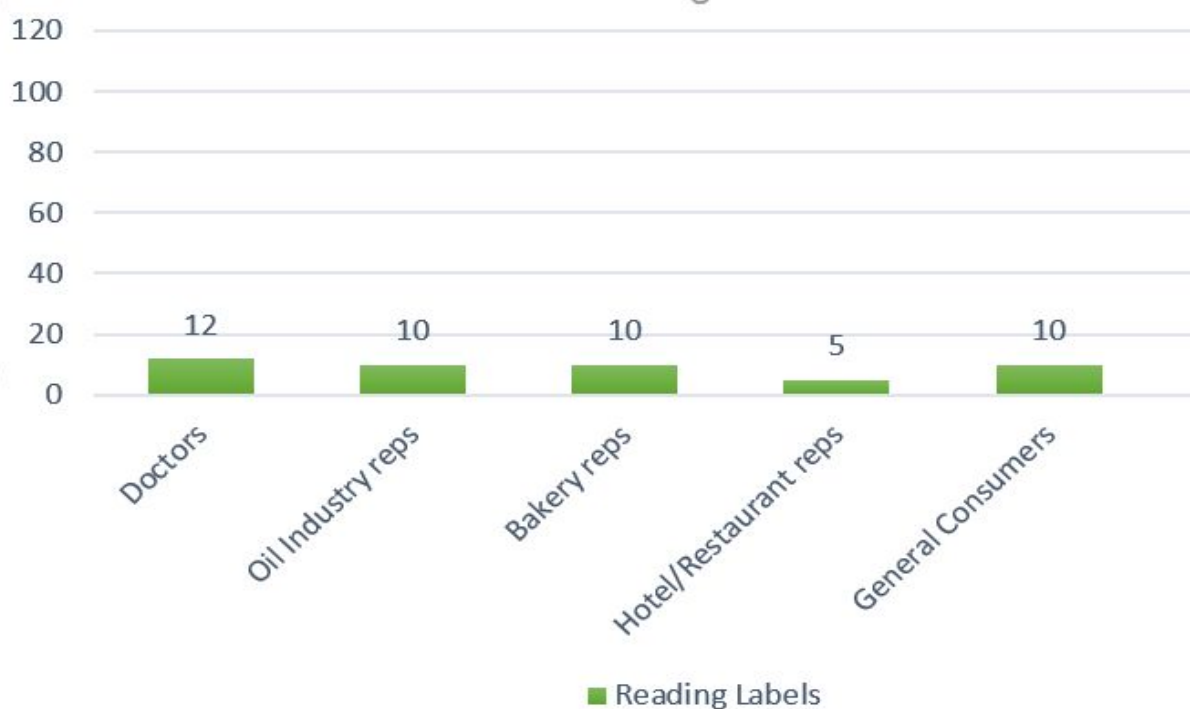
Reading of Labels

It was shocking and surprising to know that only 12% of the doctors; 10% of bakery, oil industry representatives; 10% of the consumers; 5% of hotels/restaurant representatives, read all details provided on labels, including nutritional information. Rest of the respondents said that they do not read nutritional information on the label but only look for information like price, expiry date, etc.



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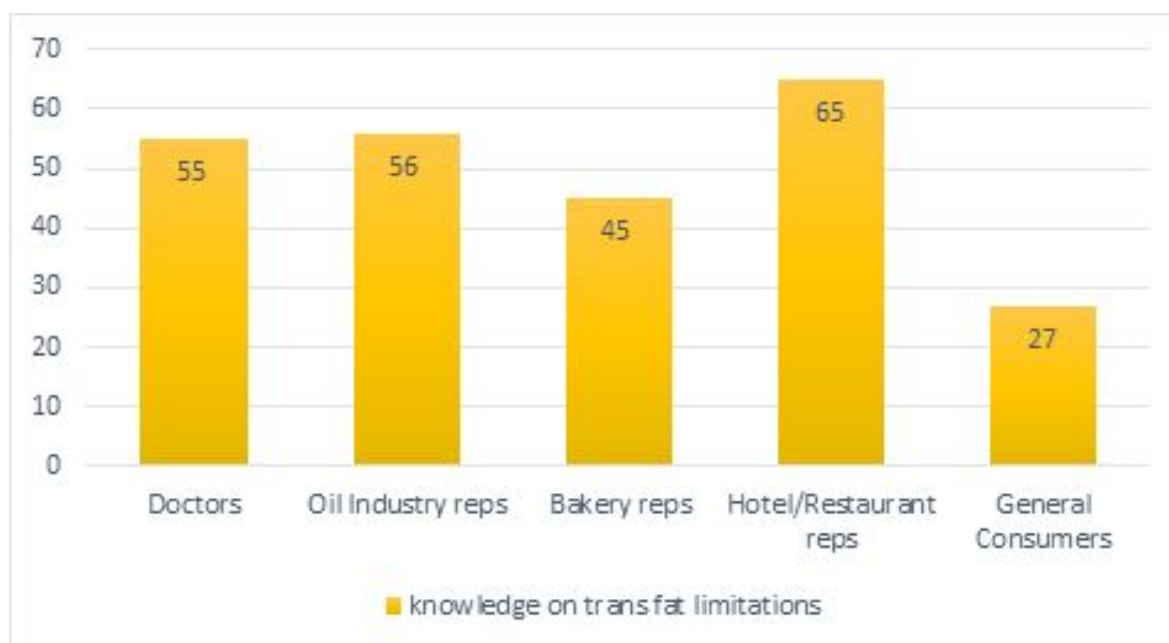
Awareness about laws/regulations

Only 27% of consumers are aware that the presence of trans fats in oils and fats is limited by regulations. While 65% of the hotels/restaurants representatives are aware that the limit of trans fat in oil and fats is 5 % as per the current regulations under the Food Safety and Standards Act, 56% of oil industry representatives, 55% of the doctors, and 45% of the bakery representatives are aware of the same.



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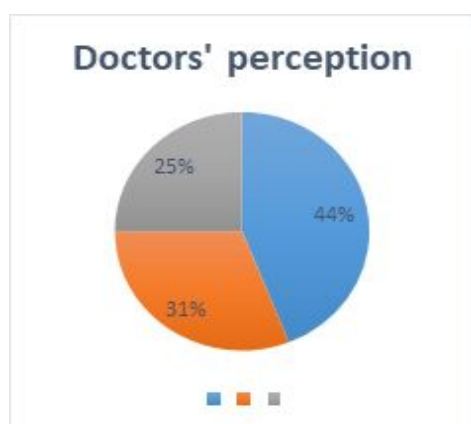


Targeted questions to each category

In addition to the above questions that were common to all the five categories of participants, there were specific questions asked to each category.

1. Doctors

Doctors' perception of consumer awareness on trans fat and ill effects



44% of the doctors said that consumers were not aware that consumption of trans fat rich food leads to heart diseases

31% of the doctors said that only people who suffered heart attacks, stroke, diabetes, etc were aware

25% said that only few consumers and patients were aware about trans fat and

health implications



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Advice to patients against consumption of trans fat

41% of the doctors advise all patients to not consume food rich in trans fat

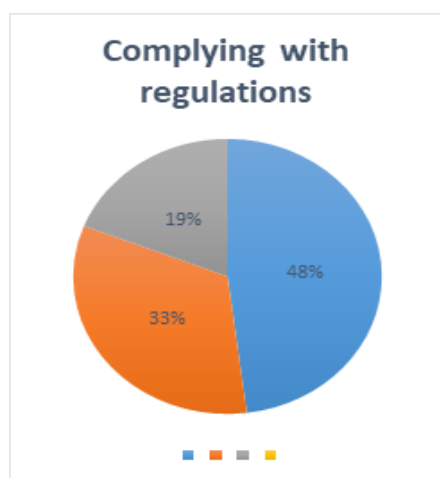
36% advise only those patients who are prone to disorders

23% advise rarely



2. Oil Industry Representatives

Statutory compliance



33% of them said that they were still working towards ensuring compliance

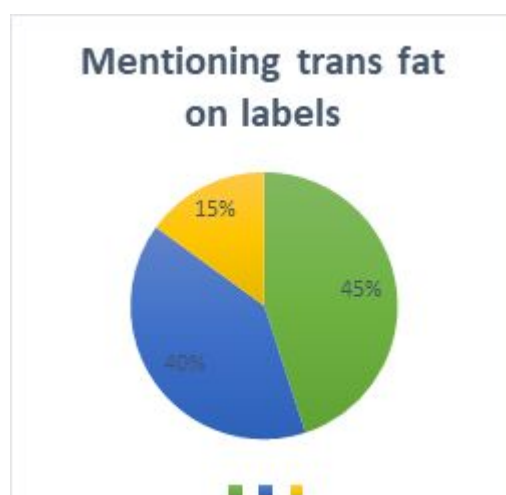
48% comply with the present limits of 5% in oils and fats

19% produce oils and related products with less than 2% trans fat content

Mentioning trans fat on the labels

45% mention trans fat levels

40% mention only the presence and not the levels of trans fat / partially hydrogenated vegetable oils

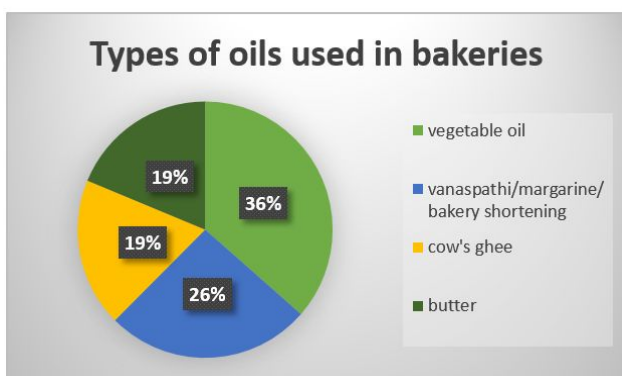


15% don't mention trans fats or its levels

(While we have the labelling regulations under the FSS Act and the Legal Metrology Act, this result was surprising!)

3. Bakery representatives

Types of oils used in bakeries



It is pertinent to note that 26% use vanaspathi/ margarine/ bakery shortening

36% use vegetable oil

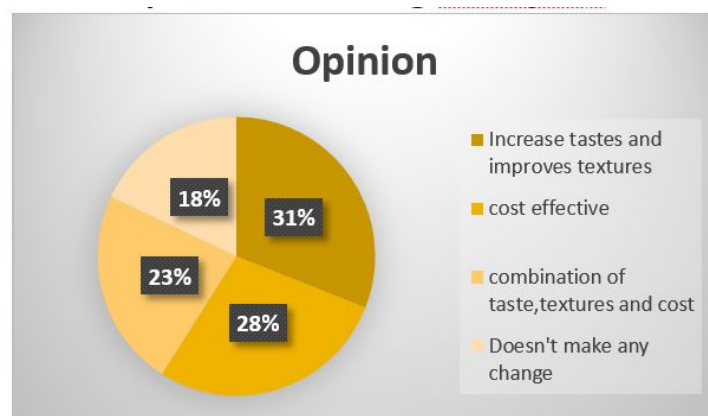
19% use cow's ghee

19% use butter

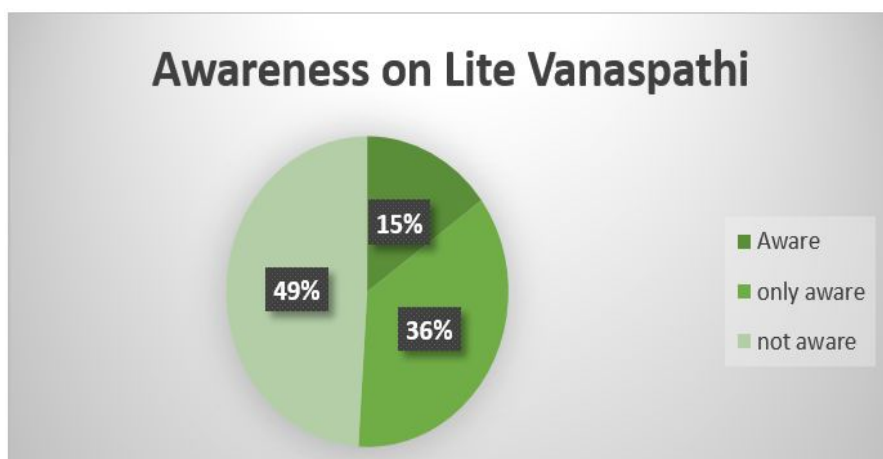
Bakers opinion about using

vanaspathi and related products

31% said that adding products like vanaspathi, bakery shortenings and related products increase the taste and improves the texture of products
 28% said that it is cost effective
 23% said that it is a combination of both taste and cost
 18% said that it doesn't make any change



Awareness and use of Lite Vanaspathi



15% of them are aware about the product which is considered to have lesser health impacts than the



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usual vanaspathi and use it in their bakeries
36% have only heard about it
49% not aware

4. Hotel/Restaurant representatives

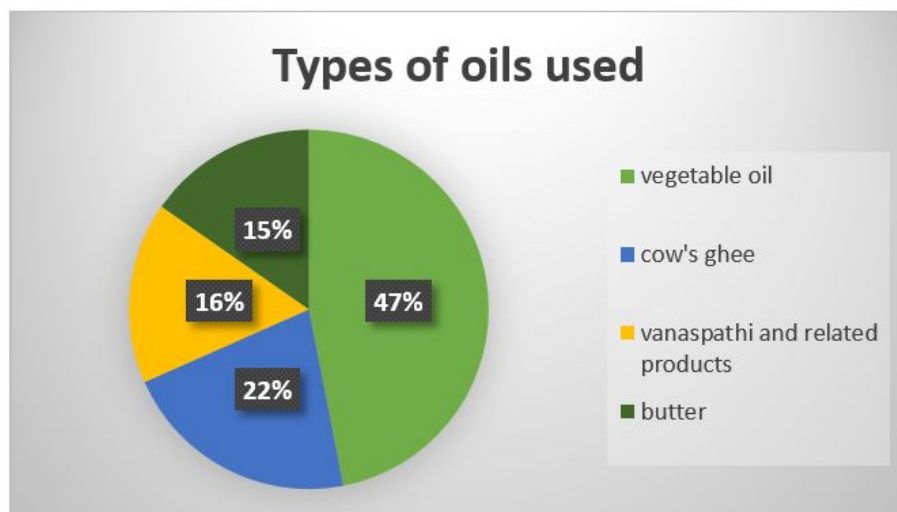
Types of oils used in hotels/restaurants

47% use vegetable oil

22% use cow's ghee

16% use vanaspathi and related products

15% use butter

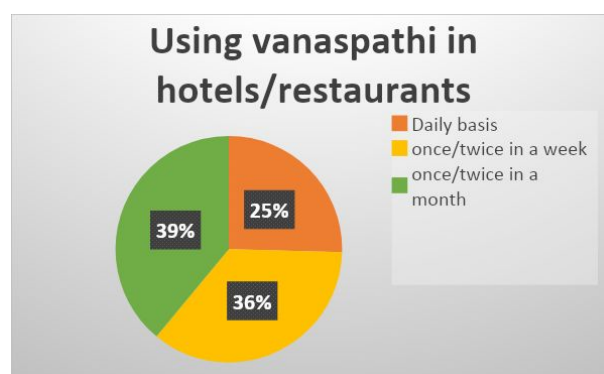


Using Vanaspathi in hotels/restaurants

25% said that they use it on a daily basis

36% use it once/twice in a week

39% use it once/twice in a month



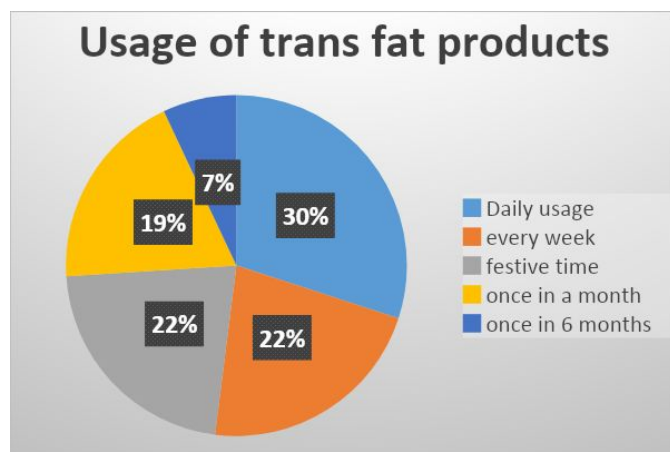
5. General Consumers



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Usage frequency of vanaspathi and related products



30% of the general consumers use it on a daily basis

22% use it every week

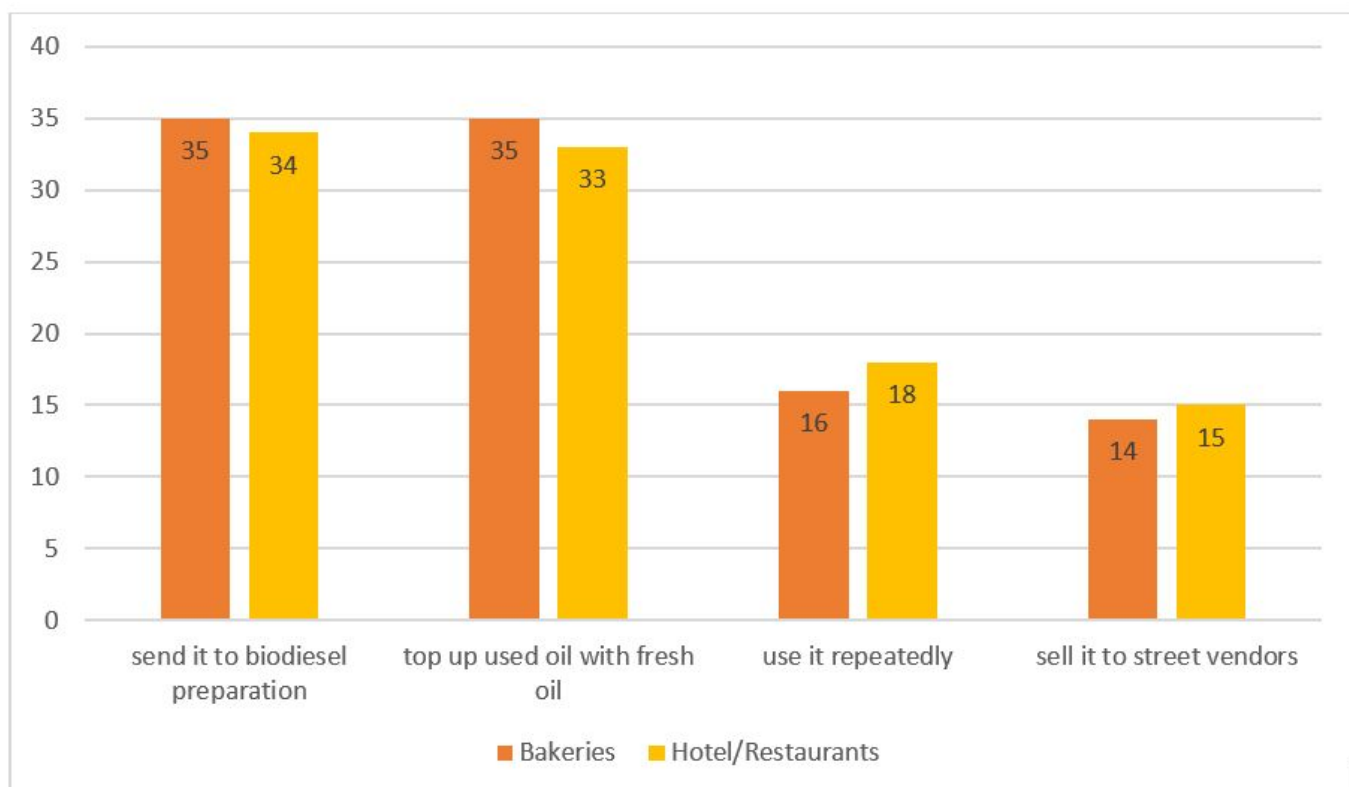
22% during festive times

19% use it once in a month

7% use it once in six months

Handling of used cooking oil by bakeries and hotels/restaurants

It is observed that around 35% of both bakeries and restaurants, add fresh oil on top of used oil; around 16% use it repeatedly; and 15% sell it to street vendors and only the balance 34% send it for biodiesel preparation.





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Suggestions and conclusions

While the study is limited in its scope, the results reveal the lack of awareness about trans fats, its sources, and ill effects among general consumers. In addition, it was surprising to note that some of the doctors interviewed were not aware of the connection between trans fat and heart health. Reusing of the cooking oil is very much prevalent and it is a matter of concern that most members from all categories fail to look for nutritional information on labels. From among the people surveyed, only 1 out of 10 consumers read food/nutrition labels even though at least 2 out of 10 consumers understand the importance of reading labels and are aware of trans fat regulations. This emphasises the need for clear/legible information on labels and also the requirement to highlight presence of potentially harmful ingredients like trans fats, salt, sugar, etc. so that it catches consumers' attention and they are able to make informed choices.

While the periodicity varies, it is observed that more than 50% of participants from all categories consume trans fat rich vanaspathi and related products at home. General consumers top the list at 81%, followed by the bakery representatives at 79%.

It is important for the oil industry, bakeries and hotels/restaurants to recognise the ill effects of trans fats and proactively reduce its content in oils, fats and food items. Reusing of cooking oil should be completely avoided as repeated heating of oil changes its contours to increase the trans fat levels. Medical practitioners, health workers and the government should widely spread the message of the health implications of trans fats to industry as well as consumers. Consumers should be educated on the importance of reading labels.

CAG will continue its efforts to spread awareness and engage with the Tamil Nadu Food Safety Department for effective implementation of the trans fat regulations in the state. We are also confident that the central government will take necessary measures to keep up its commitment of making India trans fat free by 2022, a year ahead of the WHO target, especially in light of the Union Health Minister's recent statement to this effect, on World Food Day.