

Study on Awareness of Consumers about Transfats in Chandigarh

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Abstract

Background: Transfats also infamous as ugly fat is an unsaturated fat which is formed in industries by hydrogenation of monosaturated fat by thermal processing etc in order to make cheaper plant fat look like animal fat. Though we also have natural transfats which are formed by biotransformation in rumen of animal, they are not so dangerous for our health. Transfats is stated to increase level of LDL and decrease level of HDL thereby causing increase risk of cardiovascular diseases; it is also linked to obesity, dementia in many studies and is emerging as one of the major challenge to public health in 21st century. Various organizations like FSSAI has given guidelines on transfats, WHO has committed to remove industrially produced transfats by 2023.

Objective: we conducted the study to understand consumer awareness about transfats.

Methods: Study was conducted 15 different grocery shops, questions were asked via interview, schedules. Total N=362. Data was analyzed by comparing on basis of gender, educational level.

Results: 60.8% of participants said they look for food label in packaged food, 74.3% were found aware about harmful effects of transfats, 30.4% said they are aware about fssai limit for transfats, Only 63.3% graduate & above, 33.3% above matriculation and 13.3% below matriculation consumers said they look for food label.

Conclusion: The study found out that many educated people also lack awareness about transfers and a very few percentage of people were found aware about fssai limit for transfats.

Keywords: transfats, cardiovascular disease, consumer, obesity, packaged.

Introduction

Transfats also infamous as ugly fat is an unsaturated fat which is formed in industries by hydrogenation of monosaturated fat by thermal processing etc in order to make cheaper plant fat look like animal fat. Though, we also have natural transfats

which are formed by biotransformation in rumen of animal, they are not so dangerous for our health. Denmark was the first country to eliminate transfats in 2004. Transfats are stated to increase level of LDL and decrease level of HDL thereby causing increase risk of cardiovascular diseases; it is also linked to obesity, dementia in many studies and emerging as

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one of the major challenge to public health in 21st century. SDG goal no. 3 talks about maintenance of good health also various organizations like FSSAI has given guidelines on transfats. WHO has committed to remove industrially produced transfats by 2023.^[1] FSSAI has made commitment of reducing percentage of transfats by 5 percent, also they sought for mandatory declaration of quantity of transfats on product label. **ISSUES** sometimes transfats information is not mentioned. Many a time's simply hydrogenated oil is mentioned. WHO has released REPLACE – step by step guide to eliminate industrially produced transfats.

Examples in Indian Market: margarine, spread, artificial butter, Dalda, Vanaspati oil.

Material and Methods

Study Area: Chandigarh is a city, district and union territory in India that serves as the capital of the two neighbouring states of Punjab and Haryana.

Study Units: 15 grocery shops , Chandigarh.

Study Design: A Cross-sectional observational community based study.

Study Tool: Pre-Structured Questionnaire developed for the Study.

Sampling Technique: Convenient sampling

Sample Size:: Optimum sample size on proposed study is calculated on basis of anticipated 62 % awareness among community observed in “a cross sectional study to assess the awareness of the presence of transfat in packaged food items and their harmful effects in a metropolitan city of central India”(R bonsai and s. Kumar) on the basis of 95% confidence level and 5% relative precision optimum

size sample size comes 362. The questionnaire was reviewed by dietician for content and face validity. Minor adjustments were made and a copy of the questionnaire is available from corresponding author upon request.

Data collection tool –Data was collected with the help of questionnaire.

Data analysis tool –Data was analyzed with the help of Microsoft excel and SPSS version 20 for windows of (IBM Corp. Armonk, New York, USA)

Study Period: Jan 2022-june 2022

Inclusion criteria: Those consumers who gave consent for participation in study.

Exclusion criteria: Those consumers who do not give consent to be participant in the study, semifilled questionnaire.

A pilot study was conducted on 15 April 2022 on 10 subjects to test the questionnaire framed for the study. The relevant changes were made in the questionnaire.

Data were analyzed using descriptive statistics including frequency distribute-

Tin and inferential statistics. Chi- square test was performed to test the statistical significance.

Results

40.9% of respondents have knowledge about transfats, 60.8% of participants said they look for food label in packaged food, 77.4% were found aware about harmful effects of transfats, 30.4% said they are aware about FSSAI limit for transfats.

Table 1: Responses of Customers in the Questionnaire.^[23]

		Responses		Percent of Cases
		N	Percent	
knowledge transfats	DO YOU KNOW ABOUT TRANSFATS?	148	8.0%	40.9%
	ARE INDUSTRIAL PRODUCED TRANSFATS HAZARDOUS?	195	10.5%	53.9%
	DO YOU CHECK LABEL ON PARTIALLY HYDROGENATED VEGETABLE OILS?	265	14.2%	73.2%
	DO YOU KNOW ABOUT REPLACE INITIATIVE TAKEN BY WHO?	248	13.3%	68.5%
	DO YOU CHECK LABEL ON PACKAGED PRODUCTS?	220	11.8%	60.8%
	DO YOU KNOW ABOUT PARTIALLY HYDROGENATED VEGETABLE OILS?	197	10.6%	54.4%
	DO YOU KNOW ABOUT FSSAI LIMIT OF TRANSFAT?	110	5.9%	30.4%
	IS THERE ANY DIFFERENCE BETWEEN NATURAL AND ARTIFICIAL PRODUCED TRANSFATS	252	13.5%	69.6%
	DO YOU KNOW REUSED OIL IN SWEET SHOPS HARMFUL FOR OUR BODY?	226	12.1%	62.4%

Table 2: Chi-Square Test to Check Relation between Education and Knowledge about Transfats.

		Count													Total
		Scored values for knowledge													
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	
Education	Graduate	2	12	26	30	49	44	27	15	13	4	1	0	0	223
	Postgraduate	0	5	5	17	35	46	15	10	1	2	1	1	1	139
Total		2	17	31	47	84	90	42	25	14	6	2	1	1	362

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.278 ^a	12	.019
Likelihood Ratio	27.826	12	.006
Linear-by-Linear Association	1.957	1	.162
N of Valid Cases	362		

Discussion

The study was conducted to assess the knowledge of consumers regarding trans fats. Similar studies have been conducted in different regions too. In the year 2006 a study was conducted titled "Americans awareness, knowledge and behavior regarding fats" by Excel and Penny in which it was found that majority of respondents (62%) report that they were concerned with both the amount and type of fat they consume.^[13] Later in the year 2010 a study titled "effect of nutrition education on knowledge, attitude and behavior relating to trans fats acids in food" by Pletzke and Henry (2010) in which it was reinforced that nutrition education session is an option to consumer to understand "why to" make changes.^[20] In the same year 2010 another study titled "Trans fats sources, health risks and alternative approach – a review" by V Dhaka, N Guile." in which it was stated banning all TFA from the diet would be detrimental as this would include banning trans fats which are good for health.^[5] In 2016 a study titled "a cross sectional study to assess the awareness of the presence of trans fats in packaged food items and their harmful effects in a metropolitan city of central India." the study clearly signifies the importance of knowledge, awareness and consumption behavior among young generation.^[21] In the same year 2016 another study titled "level of nutrition knowledge and its association with fat consumption among college students." by N Yahiya and Carrie was conducted, which magnifies the role of nutrition education as a potential tool in health campaign to promote healthy eating patterns among college students.^[22] In the recent study titled "knowledge, awareness and practices among consumers regarding trans fats: A cross sectional study" by P Khanna and S Goel (2021). Suggested strict monitoring of marketing methods and package food labels can be recommended for providing reliable information.^[23]

These all studies show lack of knowledge and awareness among different populations regarding trans fats. In our study 60.8% of participants said they look for food label in packaged food, 74.3% were found aware about harmful effects of trans fats, 30.4% said they are aware about FSSAI limit for trans fats. On performing chi-square test to check the relation between education level and knowledge about

trans fats, it was $p < 0.05$, which shows significant relationship between level of education and knowledge about trans fats. Lack of awareness would lead to wrong choices of food and will lead to surge in cases of non-communicable diseases in future.

Cis- and Trans-Fatty Acids

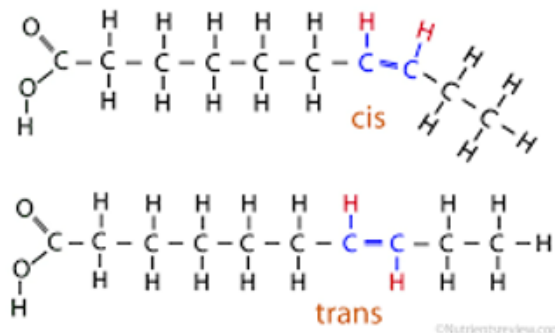


Figure: Difference between cis-fats and trans fats.^[24]

Conclusion

Since the study found out that many educated people also lack awareness about trans fats and a very few percentage of people were found aware about FSSAI limit for trans fats and a significant relation is found between level of education and knowledge of trans fats. There is a need for the increased awareness campaign among consumers so that they can make healthier choices for themselves and prevent non-communicable diseases in future.

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Conflict of Interest: NIL

Ethical Consideration: Informed consent form was signed by each participant.

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