

Content Analysis of Edible oil TV advertisements, and Consumer Perceptions Regarding these advertisements: a Mixed-Method

Fatemeh Mohammadi-Nasrabadi ¹, Hedayat Hosseini ², Yeganeh Salmani ¹ and Fatemeh Esfarjani ^{1*}

¹ Research Department of Food and Nutrition Policy and Planning, Faculty of Nutrition and Food Technology, National Nutrition & Food Technology Research Institute (NNFTRI), Shahid Beheshti University of Medical Sciences, Tehran, Iran

² Food Science and Technology Department, National Nutrition and Food Technology Research Institute, Shahid Beheshti University of Medical Sciences, Tehran, Iran

***Corresponding Author:** Fatemeh Esfarjani, Research Department of Food and Nutrition Policy and Planning, Faculty of Nutrition and Food Technology, National Nutrition & Food Technology Research Institute (NNFTRI), Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Received Date: December 05, 2020; **Accepted Date:** January 25, 2021; **Published Date:** January 30, 2021

Citation: Fatemeh M. Nasrabadi., Hedayat Hosseini, Yeganeh Salmani, Fatemeh Esfarjani (2021) Content Analysis of Edible oil TV advertisements, and Consumer Perceptions Regarding these advertisements: a Mixed-Method Study. *J. Nutrition and Food Processing* 4(1); DOI:10.31579/2637-8914/034

Copyright: © 2021 Fatemeh Esfarjani, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

This study aimed at the content analysis of edible oil TV advertisements and consumer perceptions regarding these advertisements in 2020. A total of 3266 edible oil advertisements broadcasted on five major Iranian national television channels were videotaped for content analysis during three months. The result of content analysis conducted that, the majority of edible oil advertisements were related to frying oils (62%), and olive oil advertising was the last one (6%). The most slogan contents of edible oil advertisements were no palm. During the prime time of TV viewing, the advertisements portrayed unhealthy messages. Then ten focus group discussions (FGDs) were held. Advertising was the main factor affecting consumer edible oil purchases that may motivate them to eat more frying foods and change their purchase behavior towards the consumption of edible oils more than the recommended limits. Advertisement marketing companies must use healthy and informative advertisement content to increase community awareness and promote building consumer trust. Policymakers should pass new laws for controlling edible oil advertisements to prevent non-communicable diseases

Keywords: television advertisements; edible oi; content analysis; consumer behavior; focus group discussions

Running title: Edible oil TV advertisements and consumer perceptions

Introduction

Advertisements can be a tool for the introduction of various foods to the public and also can teach customers some skills by influence the behavior of them as one of the important socialization agents (1, 2). Over the recent decade, the effect of TV food advertisements has been the issue of researches. They showed that watching TV is significantly associated with increased consumption of unhealthy foods, and there is sufficient evidence that TV advertising influences the consumers' food preferences, choices, purchases, and eating habits. [3]. Television is still the dominant avenue for advertising food items. In Iran, TV is the most popular media community [4], and studies show that food advertising can play an important role in increasing people's consumption behavior and beliefs [5, 6].

With technology's advancements, advertisers have provided easy and fast access of consumers to different advertisements by different mass media channels and means of communication [7]. Another side of this technology advancement is that consumers are now having plenty of information and can choose the best things. So it becomes very difficult for the advertisers to build brand awareness and condition the mind of the

consumers to make the final purchase decision, as consumers are gaining more control over the products and information [7]. Advertising of unhealthy food means that TV advertisements encourage the consumption of products with high fat, high sugar, and high sodium [8].

The results of a national study conducted by the National Nutrition & Food Technology Research Institute in 2016 showed that the per capita consumption of salt is 7 gr, sugar 11 gr, and fat 15 gr per day more than the recommended amounts. Which can lead to the prevalence of overweight, obesity, diabetes, hypertension, cardiovascular disease, and various types of cancer [9].

Obesity and overweight as public health problems lead to chronic diseases that are associated with high mortality rates [10]. The relationship between TV watching and obesity is well documented by research studies [11,12]. Food advertising is partially responsible for the outbreak of obesity and overweight [13]. A study in Iran (2011) indicated that the weighted prevalence of obesity and overweight were about 21% and 34%, respectively [14].

Consumer behavior is mostly affected by several factors, including family, culture, and brand image. Brand awareness helps the consumer to buy a particular product [1]. Due to this fact, edible oil companies focus on advertising their products through public media, especially TV. Advertisement creates awareness in the consumer thus motivate them to buy the product. Along with that advertisements also build a positive or negative perception of the brands. In Iranian culture, women generally are food keepers; therefore, understanding the level of their perception plays an important role in the health of the community [15].

There is not any study that has been conducted regarding edible oil advertisements. This is the first mixed-methods study aimed at the content analysis of edible oil TV advertisements and consumer perceptions regarding these advertisements in 2020.

Material and methods

This mixed-method study was conducted in two phases:

First phase

This phase was a content analysis of all food advertisements related to edible oils broadcasted on five major Iran national TV networks (Channels 1, 2, 3, 5, and Nasim). All advertisements broadcasted were videotaped for three months during October- December 2019. Primetime television (7:00 pm -10:00 pm) was selected for content analysis because it attracts the largest viewing audience. A trained assistant viewed the videotapes, and the type of brand and mode of presentation coded all references to edible oils. The coding was checked for reliability by double coding a subsample of programs by an independent observer. The following information was coded: product and company name, any expressed messages, or claims about the edible oil being advertised [16-18].

Second phase

Study design and subjects

In this qualitative study, ten Focus group discussions (FGDs) [19,20] were convened in ten health centers from five districts (North, East, West, South, and Center) of Tehran city. The districts were classified as high, moderate, and low socioeconomic status based on a report by the Ministry of Economic and Financial Affairs [21]. The FGDs were held until reaching saturation in each center (which means no new idea or comment) [22]. Executors conducted a pilot FGD in a health center with 12 women, who were not included in the main study. The purpose was to match the performance of all team members and to check the questions' intelligibility.

Participants

The participants included women who are responsible for home purchases, cooking, and also used to watch TV advertisements. They were invited by the health centers' staff through the phone call and informed about the purpose of the study to participate in the study based on their willingness on a specific date. In a continuous procedure, 115 consumers were contacted; 102 of them accepted to cooperate, and 13 consumers were excluded as they were not available and said that they never watch TV advertisements. Each FGD included 8-12 samples that took 50-70 minutes.

Data collection

An expert moderator defined the research team and explained the aim of the study. The participants were seated together with the moderator in a semi-circle in the center. Then they were informed that their voices would be recorded. The moderator's guide was designed based on the literatures [13,23, 24], research questions, and content analysis for study goals, which consisted of a series of open-ended questions developed by the research team and reviewed by an academic review panel to allow the respondents to explain their own opinions and experiences. (Table 1)

Questions
1) Do you watch oil advertisements on television? a. If yes, how many times a day?
2) What do you think about the slogans of edible oil advertising?
3) What impact do you think advertisements have on your edible oil purchase? a. Selection criteria b. What are the other factors affecting your edible oil purchase
4) Have you watched edible oil advertisements that have influenced your desire for fried foods? a. The pattern of consumption
5) In your idea, what are the approaches to improving oil advertising to increase the building of consumer trust?
6) What is your source of information about edible oils?

Table 1: Focus group discussion (FGD) moderator's guide

Triangulation was done by the collection of data through FGD with women with different socioeconomic statuses residing in different districts of Tehran to gain multiple perspectives and validation of data. The finding was also verified with five samples who met the inclusion

criteria but did not participate in the study; they approved the suitability of the findings. To confirm dependability, four academic members directed a second edition. The findings were double-checked with some of the key informants. All the items including procedures, actions, and

decisions were documented for audit goals. During the discussions, the views and perspectives were changed or developed that led to the generation of important comments and potential solutions to the issues [25].

Data Analysis

After each FGD, the notes were arranged based on the focus group questions and probes, and emotions such as expressions, laughter, and sighs were noted. The record of each focus group was transcribed verbatim and compared with the notes to check potential differences. Then each item was checked or compared with the rest of the data to develop analytical categories by writing, reading, and rereading the built codes and themes as well as discussing the transcripts at the team meetings (26). Then, the codes were divided into categories based on how different codes were related and linked. The emerged categories were used to organize and group the codes into meaningful themes. The inter-rater reliability was calculated using percent agreement (inter-rater

reliability $r = 0.87$). This agreement indicated that the coding list was reliable [27].

Ethics: This research was supported and approved by National Nutrition and Food Technology Research Institute (NNFTRI), Faculty of Nutrition Sciences and Food Technology, Shahid Beheshti University of Medical Sciences, Tehran, Iran (Grants No. 20743). Informed consent was obtained from voluntary participants of FGDs.

Results

For the first phase, a total of 3266 edible oil advertisements in 76983 seconds of 10 brands were broadcasted for three months. As oils mostly consume in two forms in Iran, the advertisements were divided into two types of *cooking* (Canola, Corn, Sunflower, Soybean oil, and Olive oil), and *frying oils*. The majority of edible oil advertisements were related to frying oils (62%), and olive oil advertising was the last one (6%) (**Table 2**).

Brands*	Type of oil	Frequency (%)	Time (Second)
Brand 1	Sunflower	6 (0.2)	120
Band 2	Sunflower	478 (14.6)	9125
Band 3	Corn	529 (16.2)	4354
Band 4	Frying	22 (0.7)	740
Band 5	Frying	373 (11.4)	13801
Band 6	Frying	561(17.2)	18513
Band 7	Frying	503 (15.4)	13982
Band 8	Frying	570 (17.5)	11460
Band 9	Olive	189 (5.8)	4048
Band 10	Cooking†	35 (1)	840
Total	-	3266	76983

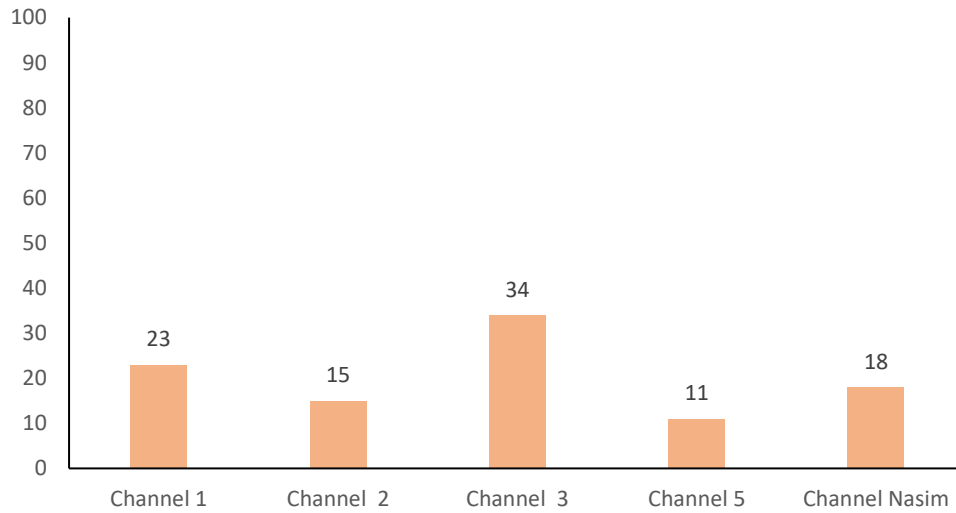
*The names of the brands are reserved by the research team.

†Cooking oil is usually mixed with soybean, canola and sunflower oil

Table 2: Broadcast of Edible oil advertisements in five Iranian TV channels for 3 months

The content of slogans included no palm, light, healthy, body fresher, transparent, zero Trans, no cholesterol, and no clogging of vessels. Channel 3, as the most popular channel, had the most edible oil

advertising (33%), and then channels 1 (23%), Nasim (18%), 2 (15%), and 5 (11%) had the most edible oil advertising respectively ().



: The percent of distribution of edible oil advertisements according to broadcast five Iranian television channels during 3 months (N=3266).

Our findings from the content analysis showed that messages related to eating practices are conveyed frequently during prime time TV viewing and that the TV advertised unhealthy practices with these contents: did not use a measure to consume oil in foods, re-used cooking oil in prepared foods, and even salads, and demonstrated children’s interest in high-fat fried foods.

In the second phase, the characteristics of women participating in the FGDs showed that the majority of the interviewed women (35%) were in the age range of 50-59 years. The majority of them held diploma and higher degrees (83%). The majority of participants reported that their information on this issue comes from social media, TV & radio, educational programs, family and friends, doctors, and reading magazines and newspapers, orderly (**Table 3**)

Variables	n	%
Age (year)		
20-29	14	14
30-39	27	27
40-49	6	5
50-59	35	35
Over 60	20	19
Education		
Primary	10	9
Under diploma	9	8
Diploma	35	35
University	48	48
Marital status		
Married	96	94
Single	6	6
Family size		
One	9	10
Two	16	15
Three	30	29
Four and over	47	46
Geographical area		
North	19	19
South	31	30
East	10	10
West	30	29
Center	12	12
Total	102	100

Table 3: Characteristics of the study participants

The FGD results, as presented in **Table 4**, showed that four categories (edible oil advertisement, edible oil purchases, the effect of edible oil advertising on consumers, and building consumer trust) emerged consisting of 5 themes with 23 sub-themes based on the views of the participants.

All participants watched the TV edible oil advertisements. The majority of them (82%) watched those advertisements on average 3 to 4 times per day.

Category	Theme	Subtheme
Edible oil advertisement	Advertisement slogans	<ul style="list-style-type: none"> • No palm oil • Light • Healthy(Vitamin D enrichment) • Body fresher • Transparent • Zero Trans • No cholesterol • No clogging of vessels
	Brand display	<ul style="list-style-type: none"> • Seductive • Dishonesty
Edible oil purchases	Selection criteria	<ul style="list-style-type: none"> • Advertising • Quality • Experience • Price • Flavors • Labels
Effect of edible oil advertising on consumers	Pattern of consumption	<ul style="list-style-type: none"> • Increase consumption • Decrease consumption • Effectless
Building consumer trust	Approaches	<ul style="list-style-type: none"> • Honesty in advertising • Provide advertisements by experts and community trusted • Clarify the contents of the product • Passing new laws for controlling the edible oil advertisements

Table 4: Open coding results (the most important concepts extracted according to priority)

Besides the advertising of edible oil which was stated as the main factor affecting women's intention of purchases, subsequent factors include quality, experience, price, taste, and expiration date. Only one of the women reported paying attention to the label on the product. Thirty consumers cited price and being on the sale as the first factors; they believed their purchasing power and income could affect the type of edible oil purchasing. The majority of consumers said watching TV advertisements increases their desire for fried food demand changes their diet habits.

Most of the participants (64%) in this study admitted that edible oil advertisements are seductive and they did not have any trust in them because they believed that although they are for consumers' awareness, dishonesty dominates the advertisements.

Discussion

Advertisements are very useful in creating awareness; however, they have failed to build strong perceptions in the mind of consumers [1]. In a study performed in Ireland, 322 TV advertisements of foodstuff and drinks were recorded, of which 66.3% were related to the food products, and most (27.3%) of the recorded advertisements concerned fast foods [28].

According to the Turkish Radio and Television Supreme Council's 2018 research report, the average TV watching time in Turkey is 3.5 h/day [29]. Based on a report by the Statistical Center of Iran, per capita, 91.4% of Iranian people view TV programs, and the coverage of TV programs in 2018 was ~ 4.52 h per day [30]. It revealed that they are subsequently more exposed to television advertising.

The most influential advertising slogan among the participants was frying oil without palm. It shows they were worried about the current challenges on palm oil issues. Similar findings from the study in 2019 in Italy showed that palm oil has recently become an issue among people [31]. However, it resists oxidation at high temperatures and gives a more desirable color to final products compared to other unsaturated oils [31,32].

It seems that advertising still plays an important role in encouraging consumers to buy products. According to a study in 2017 in the USA showed that advertising has been found to induce consumer reactions and directly influence their purchase intent (33). Contrary to the opinion of the participants in the present study, the results of a study in Turkey showed that price plays an important role in consumers' buying decisions for edible oil. In the other words, if food prices on the competitive market among expendable income of consumers increase, demand oil consumption decreases [34]. Advertisement is directly linked with the

sales of the products [35]; A similar study in India showed that among the lower-income groups, the price was a major influencing factor [36].

Nowadays, advertisement plays an important role in persuading consumers to purchase specific brands and services [37]. A brand is a name term, sign, or symbol intended to identify the products. It can create awareness, reputation, and so on in the market place (38). Companies spend a considerable amount of investment in the advertisement because they want to keep their products and brands at the top of the consumers' minds and they shape the perception of the consumers either positively or negatively [1]. Interestingly, the participants of this study believed that when a brand is advertised repeatedly, it would have an adverse effect on purchasing.

Based on literature and the annual report of Iran's Central Banks, the per capita consumption of edible oil in Iranian households is 19 kilograms, 58% more than the recommended limits [39, 40]. According to the findings of the present study, the majority of edible oil advertisements were related to frying oils that will motivate the consumer to eat fast foods. Health authorities believe that the accumulation of unhealthy messages communicated to the community through food advertising is a leading cause of the consumption of unhealthy foods [13]. Behaviors adopted early in life can predict later habits; it is not surprising that more time spent watching TV during youth is a strong predictor of compromised health later in life.

An important unanswered question is whether TV exposure has any impact on consumer actual eating behavior. It seems that frequent regular TV exposure might influence eating habits and health messages are disappear in the majority of oil advertisements. The findings of a study in Ireland indicated that new laws should be passed for controlling the advertisements of unhealthy foodstuff broadcasted during children's programs [28]. The effects of edible oil TV advertisements may greater in children when compared with adults. Therefore, it is important to consider the possible negative effects of exposure to food-related TV advertisements [41].

According to Rai (2013), advertisements are the source of motivation, and building consumers' trust, forcing them to buy a particular product [42]. Although most of our participants mentioned that they did not have any trust in advertisements, they had to buy it as a basic need for making food. They preferred to buy a famous brand of edible oil. This shows that advertising can affect consumer buying behavior. Honesty in advertising, winning the trust of consumers and the transparency of edible oil ingredients were mentioned as important factors from the perspective of study subjects. They suggested that advertisements must be produced by experts in the field of edible oil. According to Nielsen's Global Trust in Advertising report issued in 2012, 53 percent of consumers around the world say they don't have trust advertisements on TV [43].

The use of social media is a cost-effective way of directly connecting with consumers daily. Social media can be used as a communication and marketing tool, and even for market research and consumer service purposes [44]. The data of this study confirm this fact because the most

source of information of the participants was through it. We believe media, especially TV, can be important in creating social norms and promoting healthy eating practices. Much of the eating on TV programs is trivial and incidental, which is used for "stage business" that i.e., something to do with one's hands.

The primary responsibility of any organization is to gain knowledge about its consumers. In this way, marketers will be successful in fulfilling the needs and want of consumers and seek better opportunities in the market. However, producers, writers, and directors are in the business of delivering entertainment, and not with projecting health images. There is an opportunity to present health-promoting messages by having characters model good dietary practices. Health professionals should initiate and work with the TV industry to encourage the inclusion of healthy eating patterns in programming.

However, governments cannot place general restrictions on food advertising due to companies' rights to commercial speech. Nevertheless, food advertising is monitored and regulated in some ways, and laws and legal mechanisms exist to protect consumers' rights to misleading, confusing, and false advertising of food products. Therefore, it is necessary that advertisement companies use healthy and informative advertisements' contents to increase community awareness and promote building consumers' trust.

Limitations

The results of this study only explored the views of participants with various age and socio-economic groups that were exposed to TV edible oil advertisements in Tehran city. Other advertisements like newspapers, billboards, and social media platforms should be included in future studies. Moreover, the participants were selected only from the urban community and did not represent the rural areas. Further studies can focus on the views of health experts, health policymakers, and other stakeholders.

Conclusion

Based on the content analysis the most edible oil advertisements were related to frying oil brands, which may motivate women to eat more frying foods. Watching TV advertisements could increase their desire for fried foods and so change their diet habits. Advertising affects women's purchase behavior towards the consumption of edible oils more than the recommended limits. Advertising was the main factor affecting consumers' edible oil purchases; so must be honest to win the trust of the consumers, and transparently reflect the ingredients of edible oil. It is recommended that policymakers should pass new laws for controlling the advertisements of unhealthy foodstuffs to prevent non-communicable diseases to lead community health.

Acknowledgments

The authors would like to appreciate the Research Council of National Nutrition and Food Technology Research Institute, Faculty of Nutrition Science and Food Technology, Shahid Beheshti University of Medical Sciences for financial support. Thanks to Payesh Media Monitoring Company for data collection in the content analysis section. All

stakeholders are appreciated for their valuable help in conducting this study.

Competing interests: All authors declared no personal or financial conflicts of interest.

References

1. Samar F, Samreen L. Impact of Advertisement on Buying Behaviours of the Consumers: Study of Cosmetic Industry in Karachi City. *International Journal of Management Sciences and Business Research*. 2015;4(10):125-137.
2. Chang A, Schulz PJ, Schirato T, Hall BJ. Implicit messages regarding unhealthy foodstuffs in Chinese television advertisements: Increasing the risk of obesity. *International journal of environmental research and public health*. 2018;15(1):70.
3. Chang HH, Nayga Jr RM. Television Viewing, Fast-Food Consumption, and Children's Obesity. *Contemporary Economic Policy*. 2009;27(3):293-307.
4. Kalantari N, Doaei S, Malmir H, Gholamalizadeh M, Nematgorgani SH. The relationship between TV viewing and its impact on children with food groups intake and body mass index (BMI) in children with 2 to 6 years old in Tehran. *Journal of North Khorasan University*. 2015;7:369-380.
5. AKTAŞ ARNAS Y. The effects of television food advertisement on children's food purchasing requests. *Pediatrics International*. 2006;48(2):138-145.
6. Kern A. *The Effect of Watching Food-Related Television on Eating Behaviors and Cravings*: University of Michigan; 2014.
7. Kumar DP, Raju KV. The role of advertising in consumer decision making. *IOSR Journal of Business and Management*. 2013;14(4):37-45.
8. Rusmevichientong P, Streletskaia NA, Amatyakul W, Kaiser HM. The impact of food advertisements on changing eating behaviors: An experimental study. *Food Policy*. 2014;44:59-67.
9. Institute NNFT. Assessment of Salt and fat content and intake in basic foods highly consumed at Countries of the EMR December 2013- June 2014. 2016.
10. Adams J, Hennessy-Priest K, Ingimarsdóttir S, Sheeshka J, Østbye T, White M. Changes in food advertisements during 'prime-time' television from 1991 to 2006 in the UK and Canada. *British Journal of Nutrition*. 2009;102(4):584-593.
11. Boyland EJ, Halford JC. Television advertising and branding. Effects on eating behaviour and food preferences in children. *Appetite*. 2013;62:236-241.
12. Raynor HA, Steeves EA, Bassett Jr DR, Thompson DL, Gorin AA, Bond DS. Reducing TV watching during adult obesity treatment: two pilot randomized controlled trials. *Behavior Therapy*. 2013;44(4):674-685.
13. Harris JL, Bargh JA, Brownell KD. Priming effects of television food advertising on eating behavior. *Health Psychology*. 2009;28(4):404.
14. Kolahi A-A, Moghisi A, Ekhtiari YS. Socio-demographic determinants of obesity indexes in Iran: findings from a nationwide STEPS survey. *Health Promotion Perspectives*. 2018;8(3):187.
15. Bakouei S, Bakouei F, Omidvar S, Bakhtiari A. Health-promoting behaviors and their predictors in Iranian women of reproductive age: a cross-sectional study. *International quarterly of community health education*. 2017;38(1):3-8.
16. Akçil Ok M, Ercan A, Kaya FS. A content analysis of food advertising on Turkish television. *Health promotion international*. 2015;31(4):801-808.
17. Etemad K, Ebrahimi P, Azimi H, Lotfi M, Nojomi M. A content analysis of health-related advertisements in Islamic Republic of Iran broadcasting (IRIB). *Medical journal of the Islamic Republic of Iran*. 2016;30:353.
18. Guran T, Turan S, Akcay T, Degirmenci F, Avci O, Asan A, et al. Content analysis of food advertising in Turkish television. *Journal of paediatrics and child health*. 2010;46(7-8):427-430.
19. Krueger RA. *Focus groups: A practical guide for applied research*: Sage publications; 2014.
20. Pope C, Ziebland S, Mays N. *Qualitative research in health care: analysing qualitative data*. *BMJ: British Medical Journal*. 2000;320(7227):114.
21. Tajali-Pour M, Alikhani M. *Economic perspective of Tehran Province*. Ministry of Economic and Financial Affairs. 2012.
22. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods*. 2006;18(1):59-82.
23. Mohammadi-Nasrabadi F, Salmani Y, Banihashemi SM, Haghghian Roudsari A, Zargaraan A, Esfarjani F. Policy challenges of food advertisements from the viewpoints of Stakeholders: A qualitative study. *Food Science & Nutrition*. 2020;8(4):1949-1956.
24. Roose G, Mulier L. *Healthy Advertising Coming to Its Senses: The Effectiveness of Sensory Appeals in Healthy Food Advertising*. *Foods*. 2020;9(1):51.
25. Golafshani N. *Understanding reliability and validity in qualitative research*. *The qualitative report*. 2003;8(4):597-607.
26. Pope C, Mays N. *Qualitative Research In Health Care Second Edit*. London: BMJ books; 2000.
27. Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville AJ, editors. *The use of triangulation in qualitative research*. *Oncology nursing forum*; 2014.
28. Scully P, Macken A, Leddin D, Cullen W, Dunne C, Gorman C. Food and beverage advertising during children's television programming. *Irish Journal of Medical Science (1971-)*. 2015;184(1):207-212.
29. Radio & Television Supreme Council (RTSC). 2018. Available from:

30. Statistical Center of Iran. 2018.
31. Capecci S, Amato M, Sodano V, Verneau F. Understanding beliefs and concerns towards palm oil: Empirical evidence and policy implications. *Food Policy*. 2019;89:101785.
32. Esfarjani F, Khoshtinat K, Zargaraan A, Mohammadi-Nasrabadi F, Salmani Y, Saghafi Z, et al. Evaluating the rancidity and quality of discarded oils in fast food restaurants. *Food science & nutrition*. 2019;7(7):2302-2311.
33. Curtis T, Arnaud A, Waguespack BP. Advertising effect on consumer emotions, judgements, and purchase intent. *Asian Journal of Business Research*. 2017;7(2):57-73.
34. Topcu Y, Turhan B, Uzundumlu A. Analysis of factors affecting Turkish sunflower oil consumer behavior: the case of Erzurum province. *Italian Journal of Food Science*. 2010;22(2):239-247.
35. Abiodun AO. The impact of advertising on sales volume of a product. A Case Study of Starcomms Plc, Nigeria Valkeakoski Degree Programme in International Business Global Market, HAMK University. 2011.
36. Kalaiselvi DK, Muruganandam DD. An analysis on purchase behaviour towards selected white goods. *Asia Pacific Journal of Research*. 2015;1:80-90.
37. Sunderaraj R. Impact OF Advertisement on Buying Behaviour of Consumers in Sivaksi. *ICTACT Journal on Management Studies*. 2018;4(3):800-808.
38. Keller KL. Understanding brands, branding and brand equity. *Interactive Marketing*. 2003;5(1):7-20.
39. Micha R, Khatibzadeh S, Shi P, Fahimi S, Lim S, Andrews KG, et al. Global, regional, and national consumption levels of dietary fats and oils in 1990 and 2010: a systematic analysis including 266 country-specific nutrition surveys. *BMJ*. 2014;348:22-72.
40. Iran Central Bank. Results of Household Budget Survey in Urban Areas of Iran Central Bank of the Islamic Republic of Iran. 2017.
41. Boulos R, Vikre EK, Oppenheimer S, Chang H, Kanarek RB. ObesiTV: how television is influencing the obesity epidemic. *Physiology & Behavior*. 2012;107(1):146-53.
42. Rai N. Impact of advertising on consumer behaviour and attitude with reference to consumer durables. *International Journal of Management Research and Business Strategy*. 2013;2(2):2-8.
43. Grimes M. Global Consumers' Trust in 'Earned' Advertising Grows in Importance. 2012.
44. Tasteofscience. Social Media Strategy For Your Food Business 2019 [July 30].



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Manuscript](#)

DOI:10.31579/2637-8914/034

Ready to submit your research? Choose Auctores and benefit from:

- ❖ fast, convenient online submission
- ❖ rigorous peer review by experienced research in your field
- ❖ rapid publication on acceptance
- ❖ authors retain copyrights
- ❖ unique DOI for all articles
- ❖ immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more <https://www.auctoresonline.org/journals/nutrition-and-food-processing>