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Awareness on the Harmful Effects of Junk Food among College Students in Chennai

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ABSTRACT

Introduction: Junk food is the easiest way to gain unhealthy weight .However this not healthy weight.Junk refer to fast food which is easy to make and consume .Junk food also HFSS (high fat sugar or salt).The number of fast food restaurants chain is increasing as people around us in the world like to eat junk food . Eliminating the temptation for junk food and developing awareness for fitness can help us in maintaining a healthy body. **Material and methods** This cross sectional survey included questions regarding the harmful effects of junk foods. A cross sectional study was conducted in a sample of 100 college students by means of a questionnaire. This study was conducted in the year 2020. **Results** 70% of the college students do not check the label or quality label on junk food to maintain their health 65% of the college students are aware of the harmful effects of chemicals present in junk food. Out of 70% college students prefer junk food as an alternative for break fast while the remaining 30% prefer more healthy food for breakfast. The statistical analysis showed that males were more aware than the females. **Conclusion:** The survey showed that the awareness on the harmful effects of junk food is moderately good.

Keywords: junk food; awareness; health effects; risk factors; college students

INTRODUCTION

Junk food tastes good, but their effects on health are very determined. Junk foods have a prominent feature of the diet of youngsters and especially among the adulting society, In the developing country Junk food also called fast food as they are very easy to prepare, very cheap and also tasty (Jahan *et al.*, 2020). But all these foods have many harmful effects on health Many young adults have adopted to such changing fast food trend culture .The consumption of fast food is fostered or is in a great manner because of the quick service, good taste and inexpensive prices relative to more traditional home style restaurants, Diets which are high in sugar and fat can suppress the activity of a brain peptide called BDNF that helps in learning and memory function, Moreover, the brain contains synapses which are responsible for learning and memory [(Bhavani and Prabhavathy Devi, 2020)]. Eating too many calories can interfere with the healthy production of these synapses. One of the major problems associated with regular consumption of fast food is obesity [(Singh, Arora and Singh, 2018)]. Excess calories can cause too much fat in the body and can eventually lead to overweight or obesity. Fast foods are also high in sodium. Excessive amounts of sodium or salt in the diet increase the risk for high blood pressure, osteoporosis, heart failure, stroke, cancer of the stomach, and kidney disease [(Harrison, 2007)]. Dense sugar content can cause dental cavities and type 2 diabetes mellitus. A short-term adverse effect as a result of eating junk foods, lack of energy which occurs because junk foods don't provide essential nutrients, even though they can be very much filling, due to which one feels weakened [(Gupta *et al.*, 2019)]. Previously our team had conducted numerous researches in various fields. Numerous studies have been conducted in cancer biology, thyroid cancer cell lines [(Ma *et al.*, 2019)],

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mammary carcinogenesis [(Gan *et al.,* 2019)], biologically synthesised green gold nanoparticle [(Wu *et al.,* 2019)], Photosynthesised gold nanoparticles [(Ke*et al.,* 2019)], synthesis of zinc oxide nanoparticles [(Wang *et al.,* 2019)], effect of pineapple extract on oral cancer cell lines [(Menon, V and Gayathri, 2016)], cytotoxicity of strawberry extract [(G *et al.,* 2018)], antitumor potential of Garcinia mangostana [(Jainu, Priya and Mohan, 2018)], study on 6-shogaol constituent of ginger [(Chen *et al.,* 2019)], cytotoxic and apoptotic potential of myristica fragrans hout [(Rengasamy*et al.,* 2018)], effect of pioglitazone in experimentally induced non alcoholic steatohepatitis [(Mohan, Veeraraghavan and Jainu, 2015)], partial purification of alkaline protease from intestinal waste [(Mala and Srividya, 2010; Jaouadi*et al.,* 2019)], anti metastatic activity of eugenol [(Ma *et al.,* 2019)], antidiabetic activity of beta sitosterol [(G *et al.,* 2018; Ponnulakshmi*et al.,* 2019)] awareness on childhood obesity [(Nayak, 2016)]. Now we are focussing on epidemiological surveys. The idea of this survey stemmed from the current interest in our community. The aim and objective of the study is to create awareness on the harmful effects of junk food among college students and also made an effort to reduce the consumption of junk food among the college students. Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Ariga*et al.,* 2018; Basha, Ganapathy and Venugopalan, 2018; Hannah *et al.,* 2018; Hussainy*et al.,* 2018; Jeevanandan and Govindaraju, 2018; Kannan and Venugopalan, 2018; Kumar and Antony, 2018; Manohar and Sharma, 2018; Menon *et al.*, 2018; Nandakumar and Nasim, 2018; Nandhini, Babu and Mohanraj, 2018; Ravinthar and Jayalakshmi, 2018; Seppan*et al.*, 2018; Teja, Ramesh and Priya, 2018; Duraisamy*et al.*, 2019; Gheena and Ezhilarasan, 2019; Hema Shree *et al.*, 2019; Rajakeerthi and Ms, 2019; Rajendran *et al.*, 2019; Sekar*et al.*, 2019; Sharma *et al.*, 2019; Siddique *et al.*, 2019; Janani, Palanivelu and Sandhya, 2020; Johnson *et al.*, 2020; Jose, Ajitha and Subbaiyan, 2020).Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (Ariga*et al.,* 2018; Basha, Ganapathy and Venugopalan, 2018; Hannah *et al.,* 2018; Hussainy*et al.,* 2018; Jeevanandan and Govindaraju, 2018; Kannan and Venugopalan, 2018; Kumar and Antony, 2018; Manohar and Sharma, 2018; Menon *et al.*, 2018; Nandakumar and Nasim, 2018; Nandhini, Babu and Mohanraj, 2018; Ravinthar and Jayalakshmi, 2018; Seppan*et al.*, 2018; Teja, Ramesh and Priya, 2018; Duraisamy*et al.*, 2019; Gheena and Ezhilarasan, 2019; Hema Shree *et al.*, 2019; Rajakeerthi and Ms, 2019; Rajendran *et al.*, 2019; Sekar*et al.*, 2019; Sharma *et al.*, 2019; Siddique *et al.*, 2019; Janani, Palanivelu and Sandhya, 2020; Johnson *et al.*, 2020; Jose, Ajitha and Subbaiyan, 2020).

MATERIAL AND METHODS

A descriptive study was done among college students. The study protocol was approved by the ethics committee of the institution. The sample size of the survey was 100 and obtained all from college students. The questionnaire was distributed to each college student through an online survey planet link. The study was conducted in the year 2020. The questionnaire consisted of 10 questions with each multiple choice question which were relating to general aspects of fast food and also the health effects of fast food. The data collected from the respondents were analysed using SPSS software. The random sampling was used and socio demographic data were analysed using descriptive statistics and association between variables were also analysed using chi square test by using SPSS software.

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RESULT AND DISCUSSION

Our institution is passionate about high quality evidence based research and has excelled in various fields ((Pc, Marimuthu and Devadoss, 2018; Ramesh *et al.*, 2018; VijayashreePriyadharsini, SmilineGirija and Paramasivam, 2018; Ezhilarasan, Apoorva and Ashok Vardhan, 2019;Ramadurai*et al.*, 2019; Sridharan *et al.*, 2019;VijayashreePriyadharsini, 2019; Chandrasekar *et al.*, 2020; Mathew *et al.*, 2020; R *et al.*, 2020; Samuel, 2021)

In the study 75% of the respondents belonged to male, while 25% belonged to females (Figure 1). 50.83% were aware of the nutrition factor labelling, 35.83% were not aware and 13.33% responded as may be (Figure 2), where males were more aware of the nutrition factor labelling on junk food than females (p value is 0.013)(Figure 10). 50.83% of the respondents were aware of the chemicals present in junk food, 35.83% were not aware and 13.33% responded as maybe. (Figure 3),Pearson chi square test showed that the majority of males were more aware about the chemicals present in junk foods than females (p value is 0.001) (Figure 11). 61.67% were aware of the harmful effects of junk food, 30.83% were not aware and 7.5% responded as maybe (Figure 4). 54.17% have junk food on a daily basis, 36.67% don't have junk food on a daily basis and 9.17% responded as maybe (Figure 5). 80.1% were aware junk food leads to loss of your appetite and 19.82% were not aware (Figure 6), in which males were more aware than females (p value is 0.004) (Figure 12). 51.67% preferred junk food healthy, 40.83% didn't prefer junk food as healthy and 7.5% responded as maybe.(Figure 7) . Majority of the respondents (73.33%) were not aware of the quality of junk food and 26.67% were aware(Figure 8). Pearson chi square test showed that males were more aware than females about the quality of junk foods (p value is 0.043) (Figure 13). 53.85% prefer taking junk food as an alternative for breakfast and 46.15% don't prefer. (Figure 9) It is also appreciable that 70% compared to 30% college students have very poor knowledge on the harmful effects of junk food on their body. Various studies have shown that the general awareness of teenagers, regarding healthy eating habits is relatively average or good, but the problem lies in the fact that they do not translate this knowledge into good food behaviors [(Tiwari *et al.*, 2018)] a study was conducted on eating habits of teenagers. The results revealed that the majority of the students agreed to the fact that they are not eating right but they felt that diet is not “too big a bother” [(Nayak, 2016)]. In the study 65% respondents considered junk food as unhealthy compared to 35% who considered junk food a healthy component in life. 39% were ignorant about the nutrient factors labels,about chemicals used in junk food and their safety level information [(. and ., 2018)] 70% were aware of the chemicals and their safety levels present in junk food and their safety level information 42% of the students had specified that they had some idea about the chemicals and their harmful effects, 49% of the students said that they were not aware of the consequences [(Calderón, 2019)].

Some studies prove that teenagers have very poor knowledge regarding ill effects of junk foods. A study was conducted in 3 selected schools at District Jalandhar (2013) among 60 students regarding knowledge of teenagers regarding harmful effects of junk food.[(Wiles *et*

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al., 2009)] The result revealed that 81.67% had below average knowledge regarding harmful effects junk food followed by 18.33% adolescents who had average knowledge about the harmful effects of junk food .The present study results depicts that 35% prefer taste as the major factor for consumption of junk food while the rest 40% think that influence of advertisements is the major factor for consumption of junk food. It is consistent that with the findings conducted by health organisation India 70% of college students prefer junk food as an alternative for breakfast while 30% prefer much healthier food. It is really evident that television is one such medium for promoting many food items [(Johnson and Kenny, 2010)]. The sample size was unequal distributed and the ways to rectify the unequal distribution also not mentioned in the present study. Methods for controlling the spread are also not mentioned in the study.

CONCLUSION

Majority of the respondents are aware of the harmful effects of junk food .Commonest source of information was advertisements. Childrens and students are taking more calories in fast food and other restaurants than at home. When fast food frequently replaces nutritious food in the diet , it can lead to poor nutrition and poor health. The statistical analysis also revealed that males were more aware than the females among the college students. Hence it is necessary to improve the adolescent and students' knowledge on the health hazards of junk food inorder to save them from its ill effects.

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AUTHOR CONTRIBUTIONS

Joseph George, carried out the study, collected data and drafted the manuscript. Dr Kavitha S designed the study and supervised in preparation of the manuscript. Dr Kavitha .S, Dr Vishnu priya and Dr Gayathri have coordinated in developing and final approval of the manuscript.

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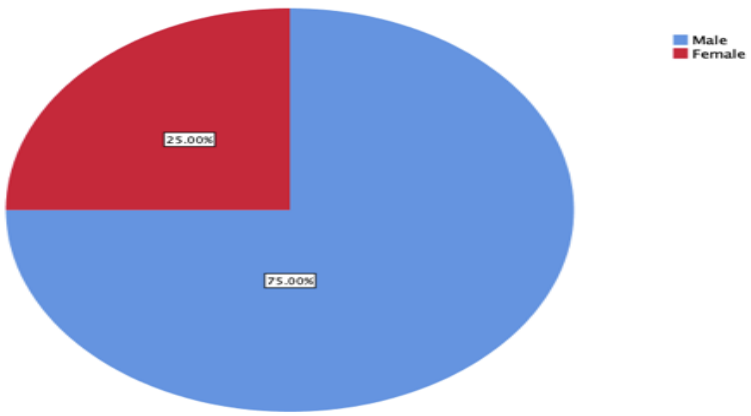
FIGURES:



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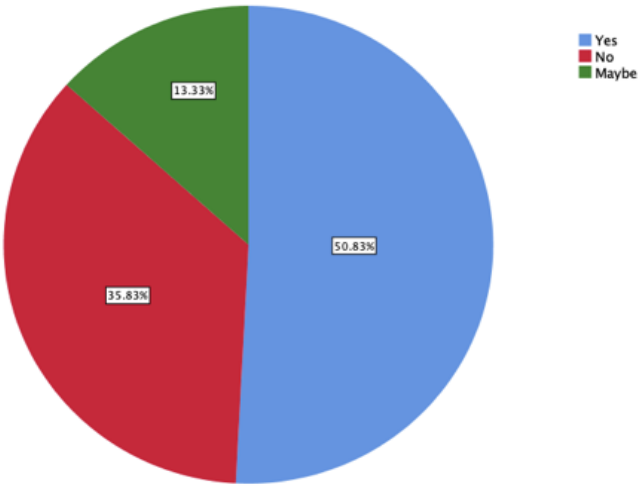

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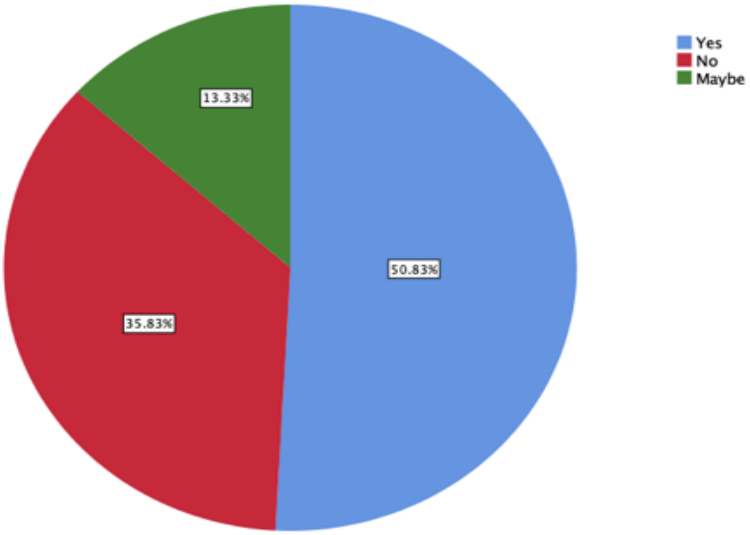

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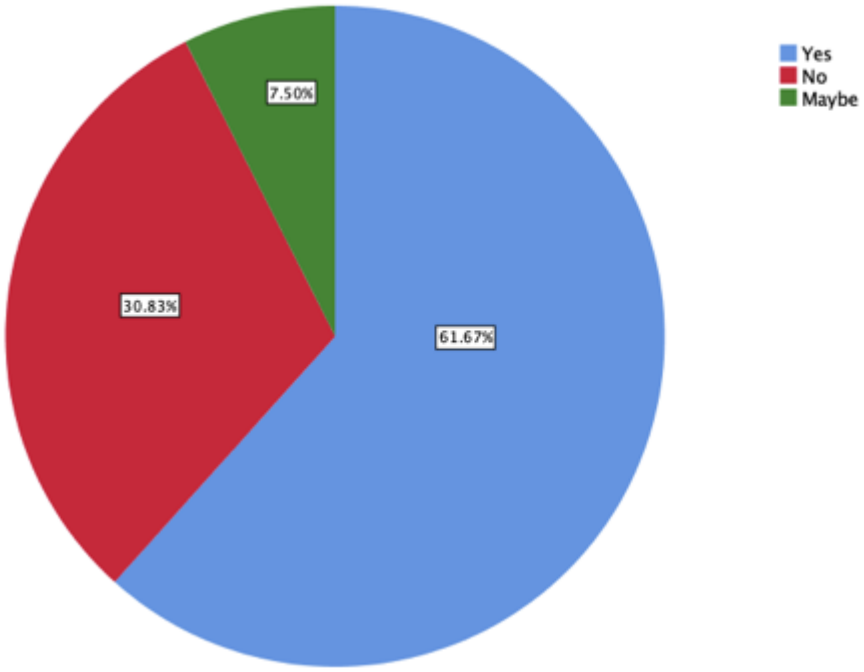

Figure 4: The Pie chart shows the percentage distribution of awareness on the harmful effects of junk food. Blue color indicates yes, red color indicates no,and green color indicates may be. Majority of the respondents (61.67%) were aware of the harmful effects of junk food, 30.83% were not aware and 7.5% responded as maybe.

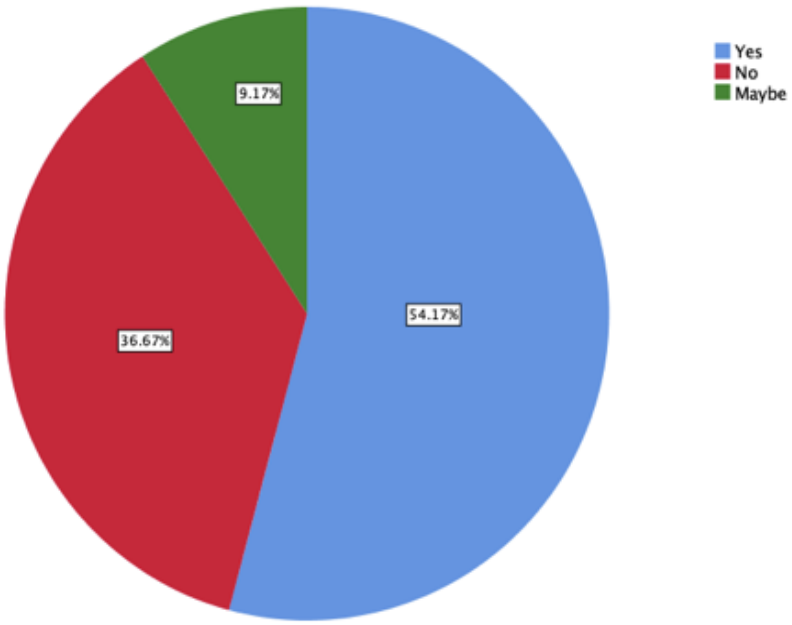

Figure 5: This Pie chart shows the percentage distribution of having junk food on a daily basis. Blue colour indicates yes, red colour indicates no and green indicates maybe. Majority of the respondents (54.17%) have junk food on a daily basis, 36.67% don't have junk food on a daily basis and 9.17% responded as maybe.

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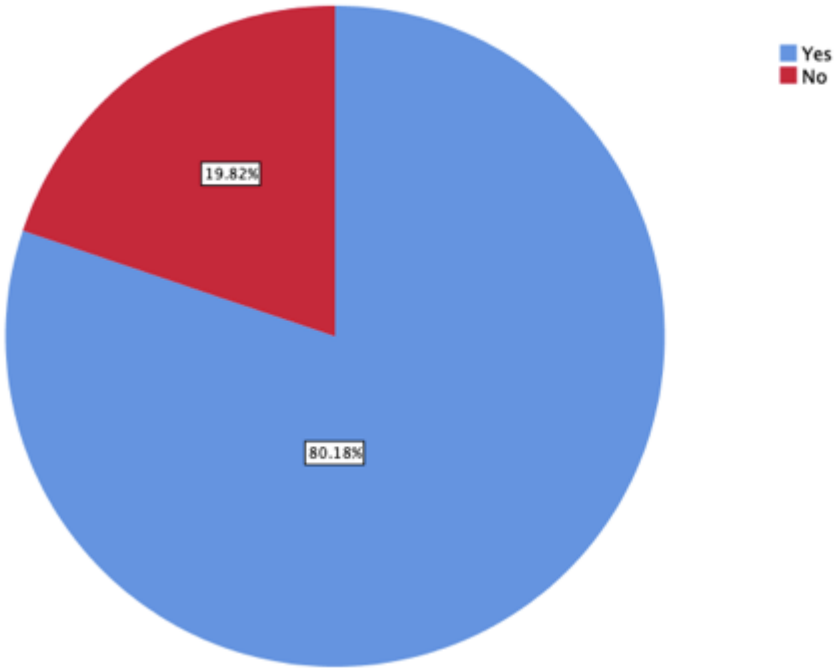
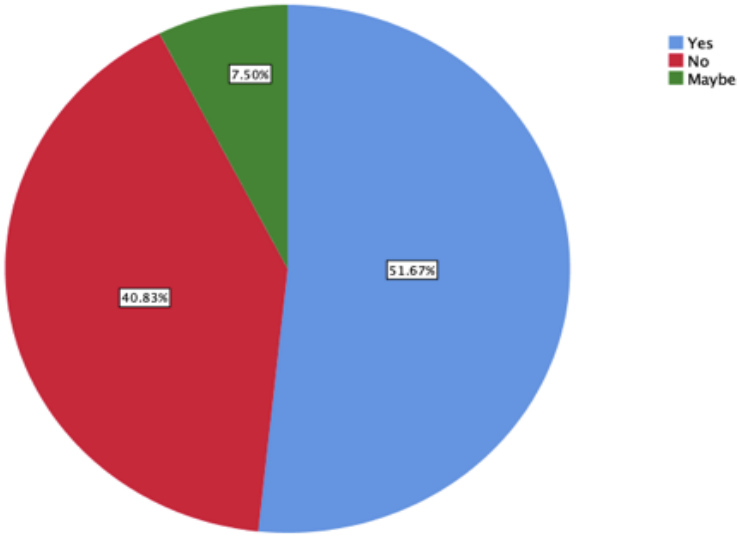


Figure 6 :This pie chart shows the percentage distribution of awareness on junk food leads to loss of appetite. Blue color indicates yes and red color indicates no. Majority of the respondents (80.1%) were aware junk food leads to loose of your appetite and 19.82% were not aware.



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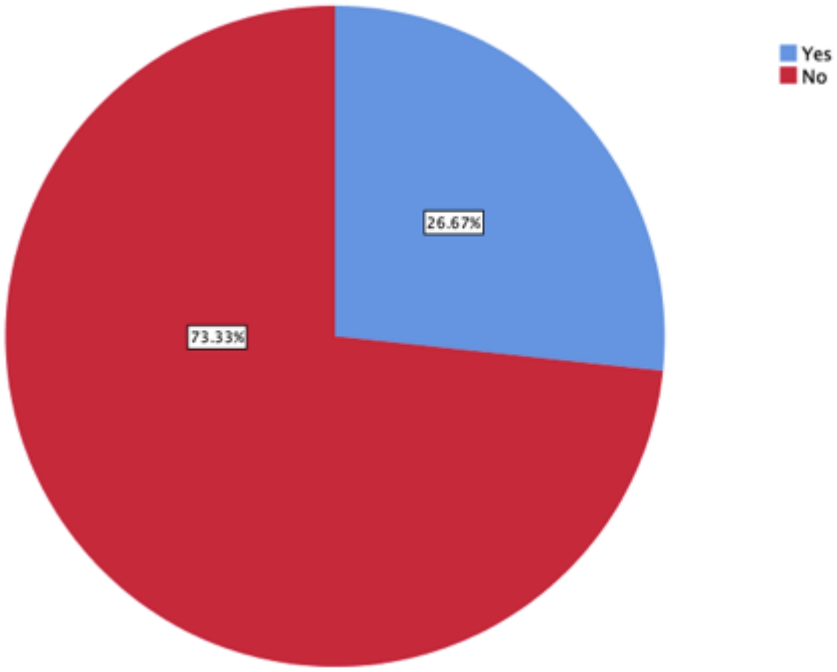
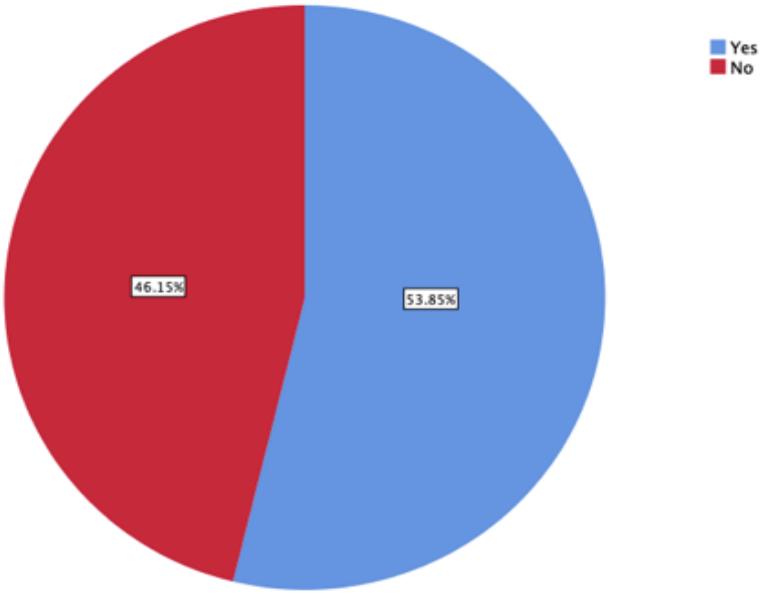


Figure 8: The pie chart shows the percentage distribution of awareness of quality of junk food. Blue color indicates yes, red color indicates no. Majority of the respondents (73.33%) were not aware of the quality of junk food and 26.67% were aware.



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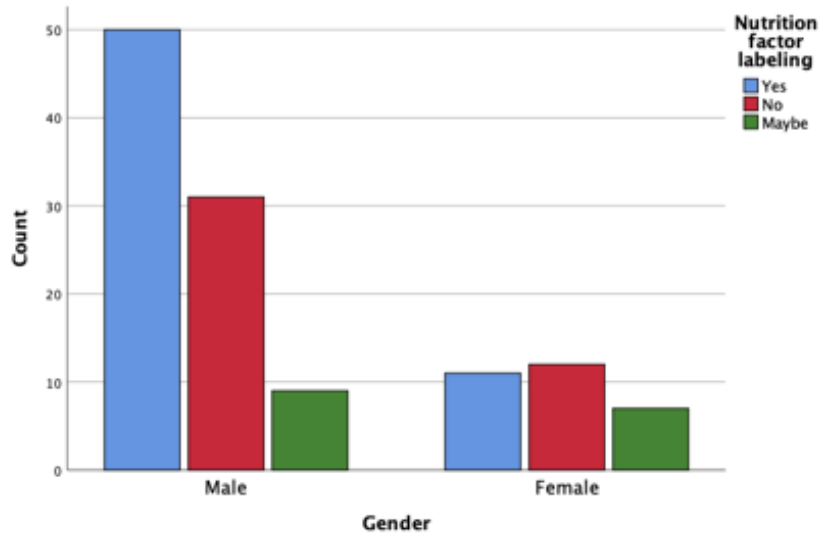
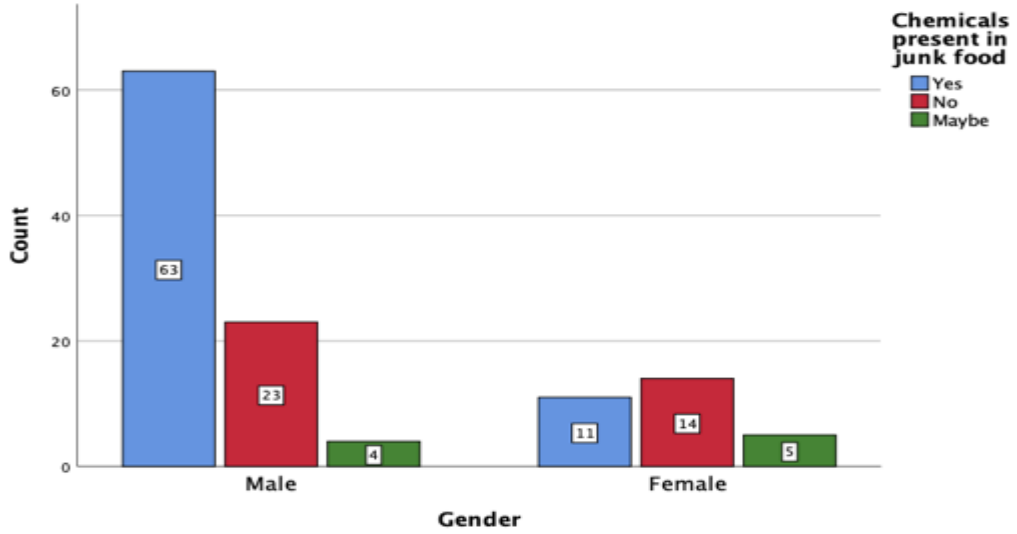


Figure 10: The bar graph represents the association between gender and knowledge of the respondents about the nutrition factor labeling on junk food. X axis represents the gender and Y axis represents the number of responses. Blue denotes yes, red denotes no and green denotes maybe they were aware. Majority of the males (57 participants) were aware about the nutrition factor labelling . Pearson chi square test shows p value is 0.002 (>0.05). Hence it is statistically significant, males are more aware than females about the nutrition factor labelling on junk food.



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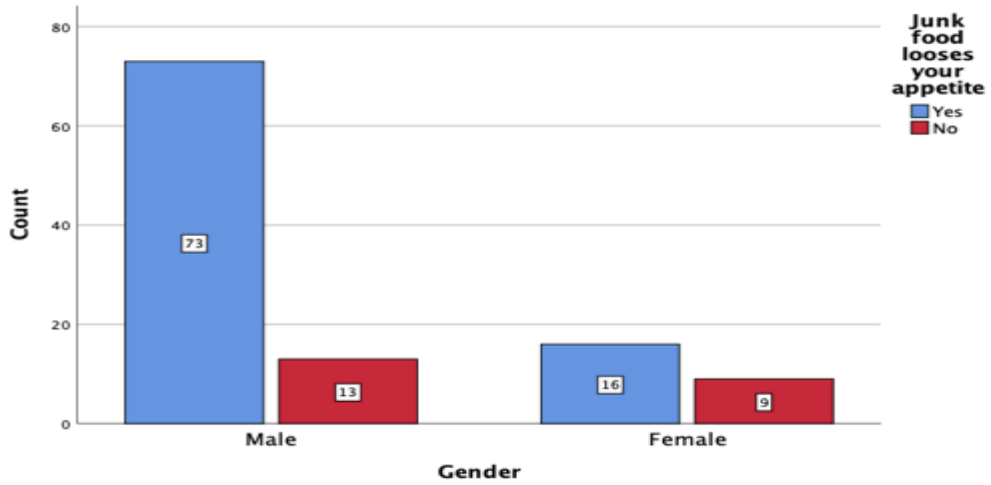

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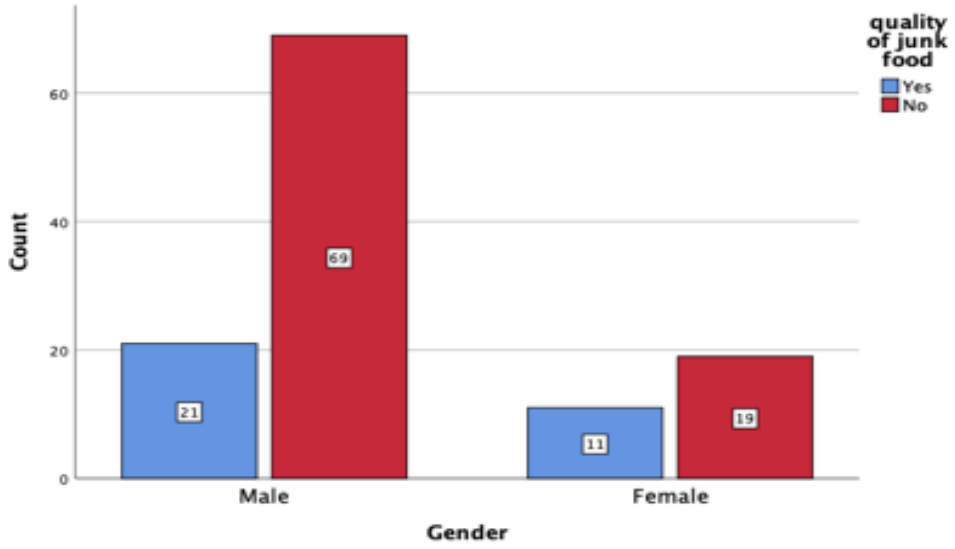

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