AWARENESS ON HAZARDS OF PASSIVE SMOKING

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Abstract: Introduction: Passive smoking is the inhalation of smoke, called secondhand smoke (SHS), or environmental tobacco smoke (ETS), by persons other than the intended "active" smoker. It occurs when tobacco smoke enters an environment, causing its inhalation by people within that environment, this study is conducted to identify knowledge and awareness of the passive among the selected population. **Aim:** To find the knowledge and awareness of hazards of passive smoking. **Materials & Method:** A survey was conducted among 100 randomly selected populations via google forms and it tabulated and correlated using the SPSS version 23. **Result:** Passive smoking is one of the most deadly and horrible causes of frequent death and breathing problems in the childrens and adult population. From the current study, we have identified that according to statistical analysis, males have better awareness and knowledge on passive smoking and secondhand smoking compared to the female population. **Conclusion:** From the current survey based study we can assume that the randomly selected population have a considerably sufficient amount of knowledge and awareness based on the occupation, age and gender. 62% of the responded population are aware of hazards of passive smoking, (p)=0.415>0.05 statistically not significant. Also a future study needed in a larger population as a census criteria worldwide.

Keywords: Carcinogens, Green synthesis, Eco friendly, Environmental tobacco smoke, Innovative technology, Nicotine, Passive smoking, Second hand smoke.

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INTRODUCTION

Passive smoking diminishes the blood's capacity to convey oxygen to the myocardium. The carbon monoxide in ETS dislodges and contends with oxygen for locales on red platelets(1). Offspring of smoking guardians have raised degrees of 2,3-diphosphoglycerate, a chemical that builds the dissociation of oxygen from hemoglobin in red platelets with an end goal to make up for persistent oxygen hardship(2). While the decrease in oxygen-conveying limit of blood brought about by expanded carboxyhemoglobin is little contrasted with smokers, it can have significant physiological ramifications in light of the fact that the body ordinarily separates over 90% of the oxygen from the blood during exercise(3). Individuals with existing coronary illness show expanding electrocardiograph proof ischemic and experience more arrhythmias as carboxyhemoglobin increases, even at low levels(4).

There is presently solid proof of an independ-ent causal relationship between cigarette smok-ing and ischaemic stroke and hemorrhagic stroke. Not many examinations have analyzed the relationship of openness to natural tobacco smoke (ETS, uninvolved smoking) and the subse-quent danger of stroke albeit a new meta-investigations of more than 20 epidemiological examinations has discovered an unfavorable effect of inactive smoking on the ensuing danger of coronary illness(5),(6).

The particular impacts of recycled smoke on nonsmokers keeps on being examined; notwithstanding, there is considerable arrangement that ongoing openness to uninvolved smoke can cause cellular breakdown in the lungs in solid grown-ups, adversely affects the strength of kids, is an aggravation to the faculties, can cause respiratory impedance, and may prompt cardiovascular illness. The impact of second- hand smoke on the nonsmoker can best be perceived by inspecting the wellbeing impacts of aloof smoking on youngsters, grown-ups with prior wellbeing conditions, and, at last, solid grown-ups(7),(8).

Natural tobacco smoke (ETS) is the term utilized in the 1986 Surgeon General and National Research Council reports to describe the tobacco ignition substances breathed in by

nonsmokers nearby consuming tobacco(9),(10). As a component of its report on ETS, the National Research Council was approached to survey the compound and actual qualities of ETS, including a toxicological profile. As indicated by this National Research Council report, more than 3800 mixtures have been distinguished in tobacco smoke, a large number of which are known cancer-causing agents(11),(12).

ETS comprises sidestream smoke transmitted from the consuming tip of the cigarette and standard smoke, which is breathed in, separated, and breathed out by the smoker. By far most of ETS is made out of sidestream smoke, which is quantitatively and subjectively unique in relation to standard smoke(13). Ordinarily, a nonsmoker is presented to less tobacco smoke than a functioning smoker. In any case, the sidestream smoke is subjectively more risky than standard smoke in light of the greater temperature of ignition at the time it is framed and on the grounds that sidestream smoke remains unfiltered, either by the cigarette or by the smoker's lungs. Sidestream smoke contains higher groupings of alkali, benzene, nicotine, carbon monoxide, and numerous(14).

cancer-causing agents. A significant number of these particles are of the size that makes them effortlessly brought profound into the lung. In view of numerical demonstrating and test information audited in the 1986 Surgeon General's Report, it is assessed that 10 to 20 percent of the particulates in sidestream smoke could be stored in respiratory aviation routes. Both the Surgeon General's Report and the National Research Council call for more exploration to more readily comprehend the connection among standard and sidestream smoke and techniques to gauge levels of openness and wellbeing impacts(15). Our team has extensive knowledge and research experience that has translated into high quality publications(16–35). Basically this survey was conducted to find and calculate the knowledge and awareness of passive smoking among the study population of different age groups and gender.

MATERIALS AND METHODS

Study design: A cross sectional study was conducted through an online survey from February to April 2021 among dental practitioners and specialist

Study subjects: A simple random sampling was used to select the study participants.

Inclusion criteria: All the dental students who were willing to participate were included.

Ethical considerations: Returning the filled questionnaire was considered as implicit consent as a part of the survey. Ethical approval for the study was obtained from the Institutional Review Board (IRB), Saveetha Dental College.

Study methods: Self-administered questionnaire of close-ended questions was prepared and it was distributed among dental students from February to April 2021 through the online survey “google forms”. The collected data were checked regularly for clarity, competence, consistency, accuracy and validity. Demographic details were also included in the questionnaire.

Statistical analysis: Data was analysed with the SPSS version (23.0). Descriptive statistics as percent were calculated to summarise qualitative data. Chi square test was used to analyze and The confidence level was 95% and of statistical significance $P < 0.05$. Finally, the result was presented by using bar charts, pie charts and percentage tables.

RESULTS

In the study, 57.2% of the responded study population are male, and 42.7% are female.[Figure:1]. From the responded 110 population 12.7% of the population are of age 30 years and for the least age group ranges from 36 to 40 years in the 0.91%.

64.5% of the study population have responded- Yes for harmful to be in the vicinity of someone who smokes (p)=0.892>0.05 statistically not significant.[Figure:2].

51.8% of the study population have responded- Yes for smoking has a direct impact on systemic health (p)=0.093>0.05 statistically not significant.[Figure:3].

59% of the study population have responded- Yes to advise someone not to smoke if he/she is a known smoker (p)=0.762>0.05 statistically not significant.[Figure:4].

54.5% of the study population have responded- No for smoking is addictive (p)=0.00<0.05 statistically significant.[Figure:5].

62.7% of the study population have responded- Yes for materials that make smoking addictive (p)=0.842>0.05 statistically not significant.[Figure:6].

67.2% of the study population have responded- Yes for being aware of nicotine (p)=0.875>0.05 statistically not significant.[Figure:7].

56.3% of the study population have responded- Yes for knowing inhalation of smoke causes damage to your lungs (p)=0.562>0.05 statistically not significant.[Figure:8].

61.8% of the study population have responded- Yes for having awareness on passive smoking (p)=0.415>0.05 statistically not significant.[Figure:9].

50/9% of the study population have responded- Yes for having awareness on second hand smoking (p)=0.721>0.05 statistically not significant.[Figure:10].

55.4% of the study population have responded- Yes for having awareness of chronic obstructive pulmonary disease (p)=0.680>0.05 statistically not significant.[Figure:11].

51.8% of the study population have responded- Yes for asthmatic patients are more prone to respiratory disease if exposed to tobacco smoke (p)=0.526>0.05 statistically not significant.[Figure:12].

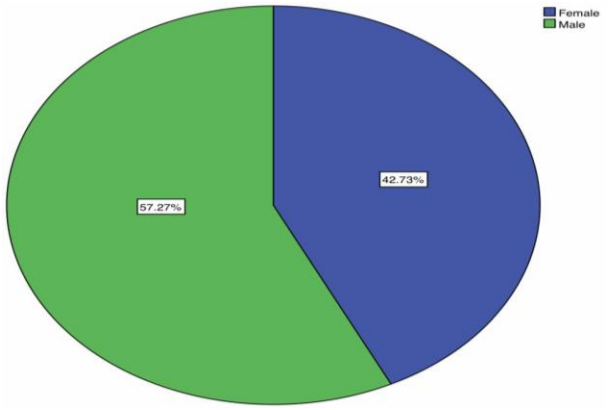

Figure 1: This pie chart represents the percentage distribution of gender, Green colour represents Male(57.2%) and Blue colour represents Female(42.7%).

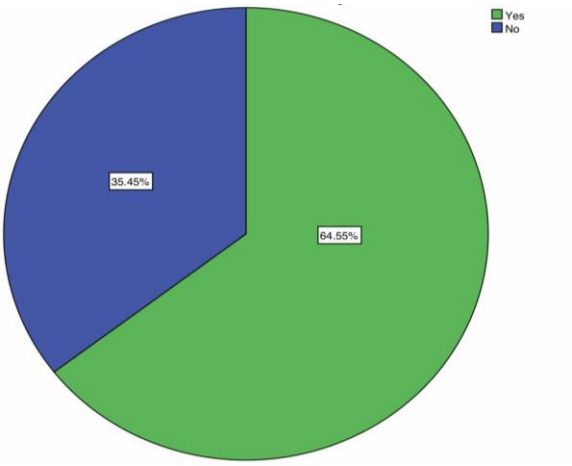

Figure 2: This pie chart represents the percentage distribution of harmfulness to be in the vicinity of smoking, Green colour represents Yes and Blue colour represents Blue. And the majority (64.5%) population have responded Yes.

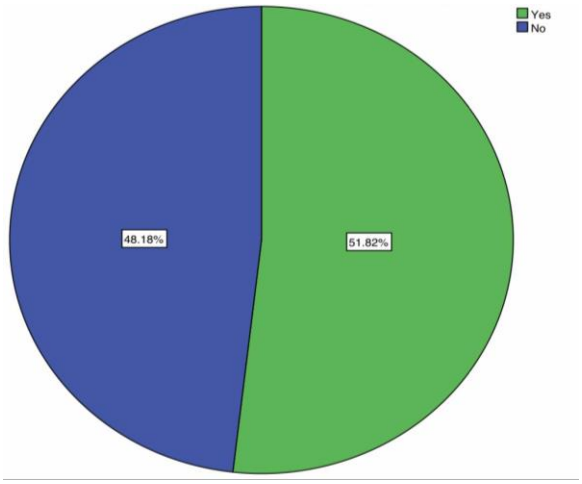

Figure 3: This pie chart represents the percentage distribution of awareness on the direct impact of smoking in systemic health, Green colour represents Yes and Blue colour represents Blue. Majority(51.8%) of the responding population are aware.

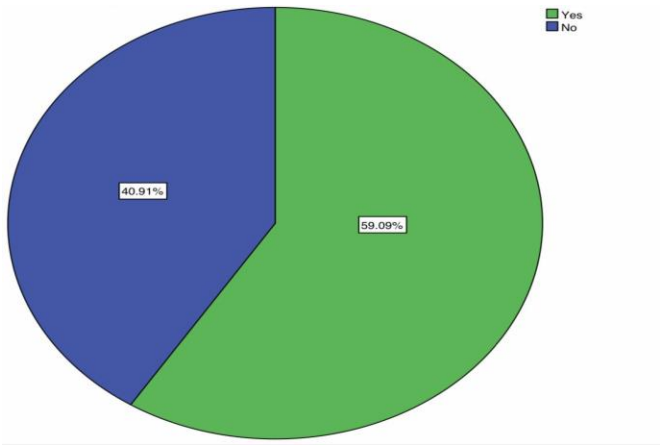

Figure 4: This pie chart represents the percentage distribution of advising someone not to smoke, Green colour represents Yes and Blue colour represents Blue. Majority (59.09%) of the responding population have answered Yes.

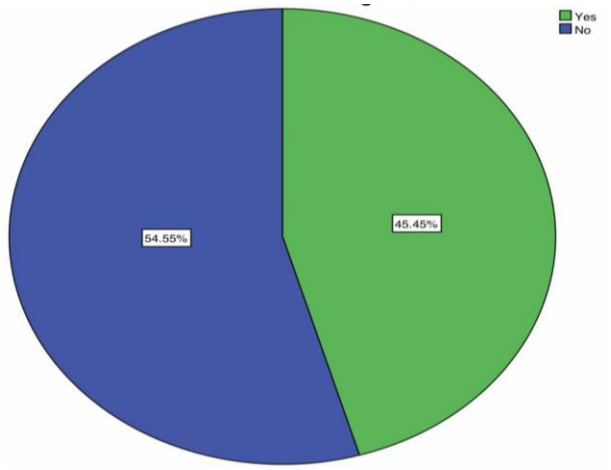

Figure 5: This pie chart represents the percentage distribution of addiction towards smoking, Green colour represents Yes and Blue colour represents Blue. Majority(54.5%) of the population have responded that it is not addictive.

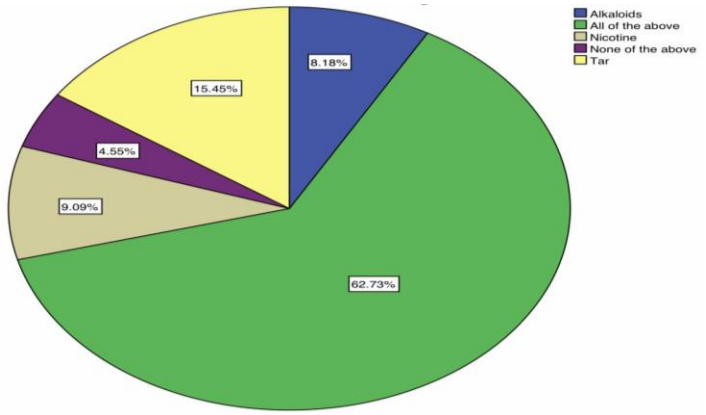

Figure 6: This pie chart represents the percentage distribution of materials that make smoking addictive, green represents all of the above, yellow represents tar, beage represents nicotine, blue represents alkaloids and purple represents none of the above. Majority(62.7%) of the responded population have answered that all of the above mentioned as causative factors for addiction to smoking.

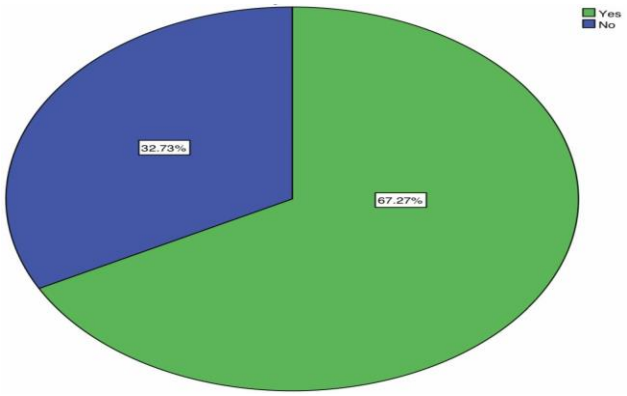

Figure 7: This pie chart represents the percentage distribution of knowledge on nicotine, Green colour represents Yes and Blue colour represents Blue. Majority(67.2%) of the responded population have knowledge on nicotine.

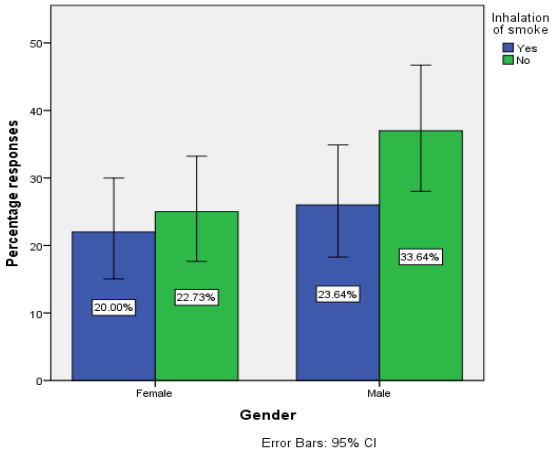

Figure 8: This bar graph represents the percentage distribution of inhalation smoke that causes damage to lungs. X axis represents gender, Y axis represents the number of responses, Green colour represents Yes and Blue colour represents Blue. For inhalation of smoke causes damage to your lungs 43.64% of the study population have responded yes. (p)=0.562>0.05 statistically not significant. Both the genders have significant knowledge on the inhalation of smoke but the majority of males are not aware.

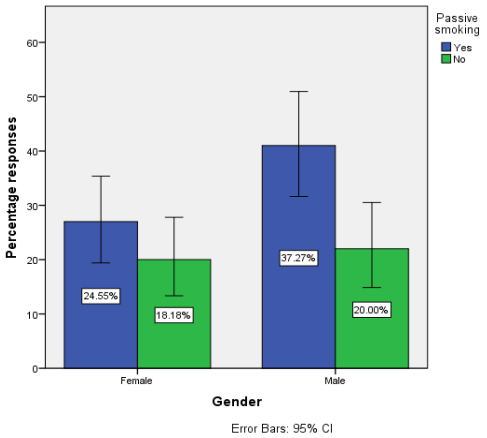

Figure 9: This bar graph represents the percentage distribution of knowledge on passive smoking, X axis represents gender, Y axis represents the number of responses, Green colour represents Yes and Blue colour represents Blue. For the question do you know passive smoking 62% of the population have responded yes. (p)=0.415>0.05 statistically not significant. Both genders have significant knowledge on passive smoking.

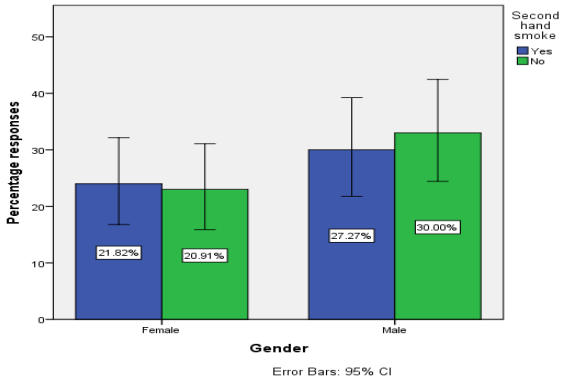

Figure 10: This bar graph represents the percentage distribution of knowledge on second hand smoking, X axis represents gender, Y axis represents the number of responses, Green colour represents Yes and Blue colour represents Blue. For the question, do you know what second hand smoking 50% of the population responded yes. (p)=0.721>0.05 statistically not significant. Both the genders have significant knowledge on second hand smoke but in order to males, 30% of the males are not aware of second hand smoke.

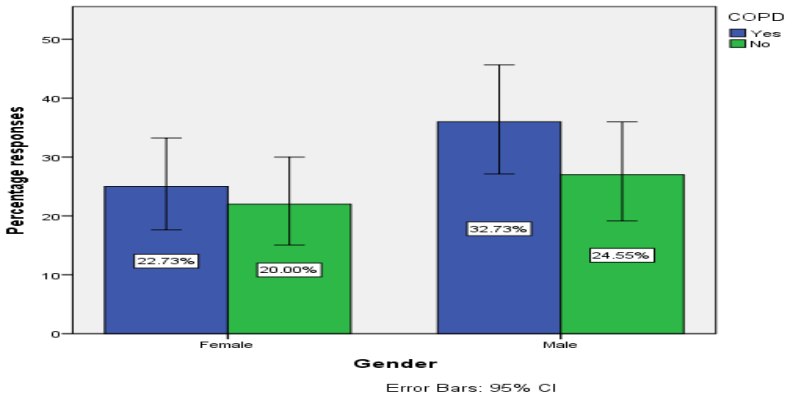

Figure 11: This bar graph represents the percentage distribution of knowledge on COPD , X axis represents gender, Y axis represents the number of responses, Green colour represents Yes and Blue colour represents Blue. For the question of chronic obstructive pulmonary disease 55.5% of the population responded yes. (p)=0.680>0.05 statistically not significant. Respondents in order to gender have significant knowledge on Chronic obstructive pulmonary disease.

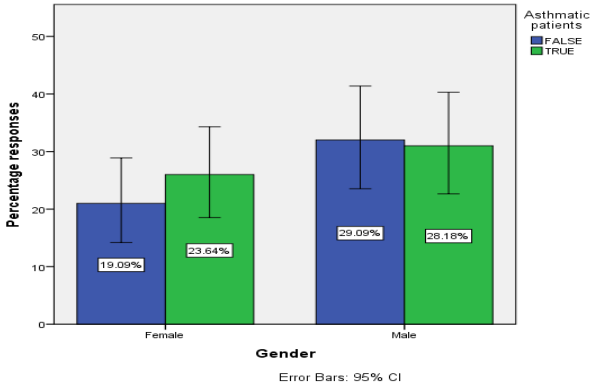

Figure 12: This bar graph represents the percentage distribution of awareness on conditions of asthmatic patients more prone to respiratory diseases, X axis represents gender, Y axis represents the number of responses, Green colour represents Yes and Blue colour represents Blue. For the question, do asthmatic patients are more prone to respiratory disease if exposed to passive tobacco smoke 51.9% of the population responded true. (p)=0.526>0.05 statistically not significant. Respondents in order to gender are aware that asthmatic patients will have significant damage towards smoke.

DISCUSSION

"Environmental tobacco smoke" (ETS) is the term used to characterize tobacco combustion products inhaled by nonsmokers in the proximity of burning tobacco also known as passive smoking. Over 3800 compounds are in tobacco smoke, many of which are known carcinogens. Most ETS exposure is from sidestream smoke emitted from the burning tip of the cigarette. Sidestream smoke is hazardous because it contains high concentrations of ammonia, benzene, nicotine, carbon monoxide, and many carcinogens. Nonsmokers chronically exposed to ETS are believed to assume health risks similar to those of a light smoker.

Passive smoking is one of the most deadly and horrible causes of frequent death and breathing problems in the childrens and adult population. From the current study, we have identified that according to the statistical analysis, 64.5% of the responded population are aware that it is harmful to be in the vicinity of smoking. Also there was a 59% positive response that the study population will advise the smokers to quit their habit of smoking, (p)=0.762>0.05 therefore not statistically significant. There are also similar studies determining the hazards of passive smoking and their results have been 95% confidence interval = 1.1-1.5(36),(37).

Limitation: The following study was conducted among a selected regional people and the study population was limited to 100 therefore in future studies we would like to add more number of study population as well as different ethnicities.

Future scope: This current study can educate the children and adults on awareness and knowledge about smoking and passive smoking also their health causing diseases.

CONCLUSION

From the current survey based study we can assume that the randomly selected population have a considerably sufficient amount of knowledge and awareness based on the occupation, age and gender. Also a future study needed in a larger population as a census criteria worldwide.

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Author contribution: Mohamed Noufal Z carried out the literature search, data collection, data analysis and manuscript writing. Dr Vinay has conceived the study, participated in its design and coordinated and provided guidance to draft the manuscript. All the authors have equally contributed in the validation and development of the manuscript.

Conflict of interest: The authors declare that there was no conflict of interest.

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