

Awareness and knowledge of the usage of e-cigarettes and risk in oral cavity among smokers – A survey

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ABSTRACT

Introduction: An electronic cigarette or e-cigarette is a handheld electronic device that simulates the feeling of smoking. It works by heating a liquid to generate an aerosol, commonly called a “vapor” that the user inhales. Commercially available e-cigarettes are marketed with different levels of nicotine, and the distribution of inhaled levels remains unclear. These data demonstrate that the vapor generated from e-cigarettes contains potentially harmful compounds, although in levels much lower than observed in smoke from conventional cigarettes. **Aim:** This study aims to create the awareness and knowledge of the usage of e-cigarettes and risk in oral cavity. **Materials and Methods:** It is the questionnaire-based online survey using the link created in SurveyPlanet. This survey was taken by 100 participants. The participants with poor preventive practices are significant. The information collected through the survey is analyzed the presented statistically. **Conclusion:** E-cigarette aerosol generally contains fewer toxic than the deadly mix of 7000 chemicals in smoke of regular cigarettes. However, e-cigarette aerosol is not harmful. Yet, only 16% of the population uses e-cigarettes compared to the normal cigarettes. Thus, proper awareness should be created among youngsters about e-cigarettes.

KEY WORDS: e-cigarettes, Normal cigarettes, Oral cancer, Smoking, Vape

INTRODUCTION

The 1964 landmark report by the Advisory Committee to the U.S. Surgeon General was one of the first to identify the adverse effects of cigarette smoking on health.^[1] Although advances have been made in diagnosis and treatment of smoking-related diseases, cigarette smoking continues to cause a massive burden of avoidable disease and premature mortality even into the 21st century.^[2] Although the tobacco epidemic is well entrenched in the United States and Europe, many countries are just starting to experience the toll from their own rocketing prevalence of tobacco use.^[3,4] Smoking is a risk factor for six of the eight leading causes of death worldwide, including ischemic heart disease, cerebrovascular disease, lower respiratory infections, chronic obstructive pulmonary disease, tuberculosis, and lung cancer.^[5] There is continued evidence that successful treatment of nicotine addiction

improves mortality, regardless of age at cessation.^[6] Data also suggest that in smokers unwilling or unable to quit, smoking reduction can improve some health outcomes and may ultimately lead to cessation.^[7-9] Over the past 50 years, comprehensive tobacco control programs and evidence-based treatment of tobacco dependence have demonstrated considerable, though insufficient, success at decreasing initiation of cigarette use in non-smokers and in achieving cessation in others. Several nicotine replacement therapies with the U.S. Food and Drug Administration (FDA) approval and regulation have been shown to enhance smoking reduction and cessation.^[10-13] These include nicotine-containing transdermal patches, nasal spray, gum, lozenges, and cigarette-shaped inhalers. Non-nicotine pharmacotherapies and psychosocial interventions are also available to improve reduction and cessation rates.^[4] The electronic cigarette (e-cigarette) is a new class of electronic nicotine delivery system, introduced in 2004.^[14-16] Distinctly different from FDA-approved nicotine inhalers, which deliver non-combusted aerosolized nicotine, absorbed in the oropharyngeal mucosa, the e-cigarette consists of a power source,

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electronic heating element, and liquid nicotine cartridge. The cartridge contains a stabilizing compound (e.g., propylene glycol or vegetable glycerin), varying amounts of nicotine and flavoring additives. When activated by the user, the heating element atomizes the liquid resulting in aerosolized nicotine vapor and a visible plume. This vapor is inhaled into the lungs, termed “vaping,” where nicotine is absorbed.^[17,18] It is essential to understand the components of inhaled vapor produced by the e-cigarette atomization process, including nicotine and potential toxicants. Commercially available e-cigarettes are marketed with different levels of nicotine, and the distribution of inhaled levels remains unclear. These data demonstrate that the vapor generated from e-cigarettes contains potentially harmful compounds, although in levels much lower than observed in smoke from conventional cigarettes. Moreover, the use of e-cigarettes in indoor environments may expose non-users to increased levels of nicotine and aerosol particles.^[19] Although these data suggest that e-cigarettes may be a safer alternative to conventional cigarettes, there are no data regarding the long-term cancer risk associated with low-level exposure to the detected carcinogens.

MATERIALS AND METHODS

It is the questionnaire-based online survey using the link created in SurveyPlanet. This survey was taken by 100 participants. The participants with poor preventive practices are significant. The information collected through the survey is analyzed the presented statistically.

RESULTS

The results obtained from the survey were statistically analyzed and represented in Figures 1-4 and discussed below.

DISCUSSION

The discussion includes various aspects of e-cigarettes usage and measurable controls. Of 100 participants, 98% of them were smokers [Figure 1]. Most of them were chain smokers, 57% of them smoke two packets of cigarettes weekly [Figure 2] which is eventually harmful to health. About 72% of smokers prefer normal cigarettes compared to e-cigarettes [Figure 3].

About 87% of smokers feel stressed when they stop to smoke, smoking causes anxiety and depression to the smokers which eventually makes them stressful.^[20] About 89% of the smokers accept that there is change in their behavioral pattern and often results in mood swinging. About 95% of the smokers are aware of e-cigarettes [Figure 4], smokers of new generation are very much aware of e-cigarettes.

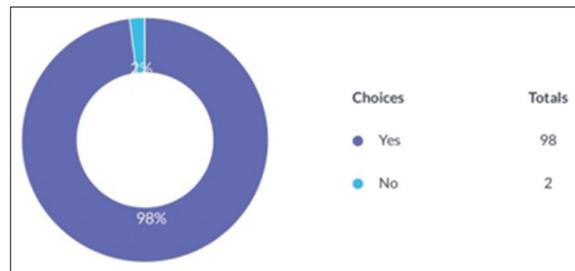


Figure 1: Are you a smoker

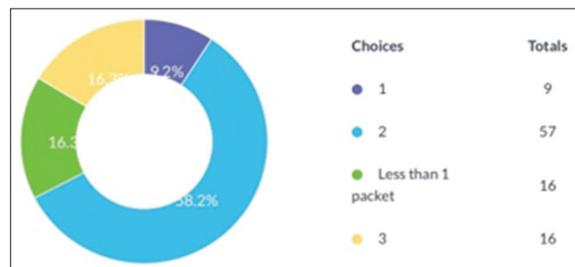


Figure 2: How many packets of cigarette you smoke a week?

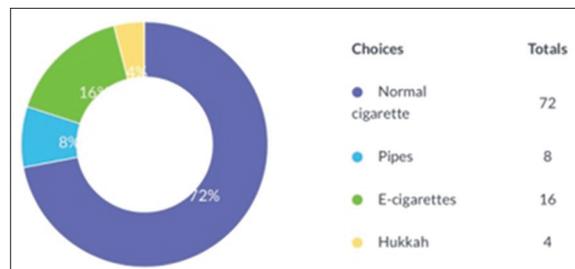


Figure 3: Which kind of cigarettes do you prefer?

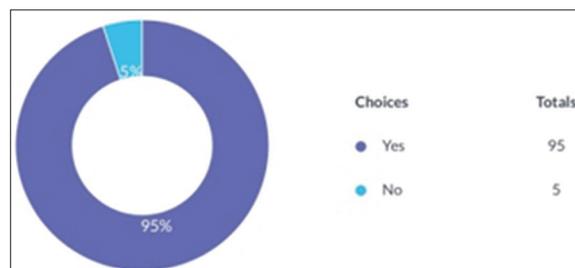


Figure 4: Are you aware of e-cigarette?

About 83% of the smokers assume that e-cigarettes are less harmful than the normal cigarettes [Figure 5], which is not true both e-cigarettes and normal cigarettes are equally harmful and cause various side effects.^[20] Smokers are very much aware of the risks of oral cancer due to smoking, 89% of them are aware of oral cancer [Figure 6], but they continue to smoke.

About 90% of them thinks that there should be more rehabilitation centers, but only 38% of them wish to go to rehabilitation center. Quitting smoke is the primary step taken by the individual which should

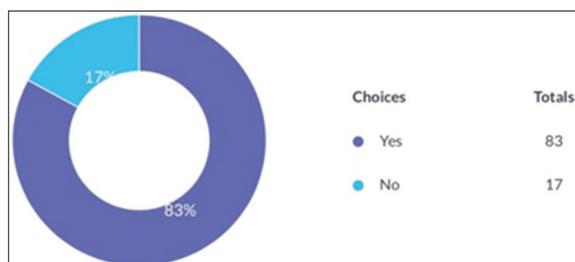


Figure 5: Do you think e-cigarettes are less harmful than the normal cigarette?

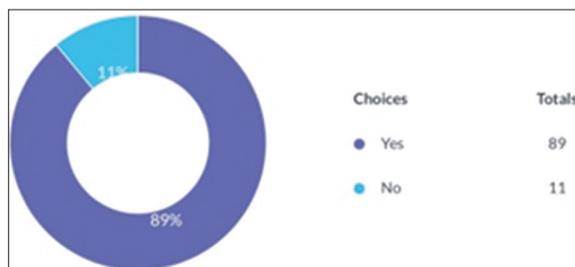


Figure 6: Are you aware of risk factors of oral cancer due to smoking?

be successful achieved with the help of rehabilitation centers.

CONCLUSION

We conclude that 95% of the population are aware of e-cigarettes. About 89% of the population are also aware of the risk factors such as oral cancer but still prefer smoking. About 16% of the population only prefer e-cigarettes compared to normal cigarettes. About 83% of the population assume that e-cigarettes are less harmful than the normal cigarettes. Thus, proper awareness should be created among the youngsters.

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