



Awareness on Smoking and Alcohol Use and Its Association With Increased Levels of Dental Fear and Anxiety - A Survey Among Dental College Students

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Article History:

Received on: 22 Jul 2020
Revised on: 18 Oct 2020
Accepted on: 15 Dec 2020

Keywords:

dental anxiety,
dental fear,
poor oral health,
smoking and alcohol use

ABSTRACT

Lifestyle modifications, work pressure, stress may lead to adverse habits like smoking, drinking and tobacco chewing. These habits may lead to poor oral health. Not only poor oral health may also lead to dental fear and dental anxiety. Self-administered questionnaires were designed based on knowledge, attitude and practice. The questionnaire was distributed through an online platform. The study population included people belonging to the age group of 18-24 age groups. The participants were explained about the purpose of the study in detail. The questions were carefully studied and the participants marked the corresponding answers. The data were collected and statistically analysed using SPSS software. Results were collected as an ordinal data and reported that smoking and alcohol causes increased dental fear which leads to poor oral health and some anxiety management techniques should be employed by dental practitioners to make the procedures in a simple way. For a satisfactory dental treatment and good oral health status, the state of mind of the patient is very important and it is influenced by many factors, including smoking and alcohol use. The aim of the study is to evaluate whether students are aware that the increased level of dental fear and anxiety is associated with smoking and alcohol use.



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ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v11iSPL4.4004>

Production and Hosted by

IJRPS | www.ijrps.com

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INTRODUCTION

Individuals may face dental fear which leads them to mood disorders, anxiety disorders and alcohol dependence. Dental fear and phobia are most common with the people who are addicted to smoking and drinking. Dental fear is associated with alcohol use, smoking and tobacco chewing. Dental fear, alcohol use and smoking are related to psychological problems also. Patients having dental fear skip their dental treatments until it becomes severe when compared to the patients having low dental fear (Pohjola *et al.*, 2014).

Those who smoke regularly were observed to have higher dental fear than those who smoke occasionally (Yüzügüllü *et al.*, 2014). Dental anxiety may also

lead to depression and psychological related disorders. Fear of Dental anxiety leads to complete avoidance of dental care which leads to poor oral health. The patients having dental fear are said to have an inferiority complex (Carlsson et al., 2015). Dental anxiety, dental fear and dental phobia are different from each other though they appear to have the same meaning. Dental phobia may be defined as the avoidance of dental treatment due to threat. Dental fear and anxiety may be defined as the response to a feared object as a psychological or physiological and non-pathological condition (Bhola and Malhotra, 2014).

Most of the studies have not mentioned about creating awareness and present study is done in the Southern Indian population among dental college students. The main purpose of this study is to create awareness. Most of the studies are done in a random sampling manner where the current study is done in conventional sampling methods.

The aim of the study is to create awareness about the increase in the level of dental fear and anxiety associated with smoking and alcohol use among dental college students.

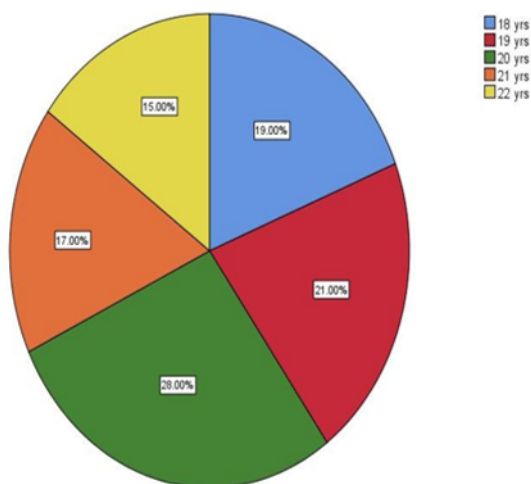


Figure 1: Distribution of percentage of age group

MATERIALS AND METHODS

Self administered questionnaires were designed based on knowledge, attitude, perception and practice. The questions were circulated to the age group of 18 to 25 years and it was circulated to 100 undergraduate dental students. Before circulating the questions, the pilot testing was done in 25 respondents and analyzed the dataset; reviewed the responses and final questionnaire was prepared. It was circulated using a software Google forms and list of output variables were also included.

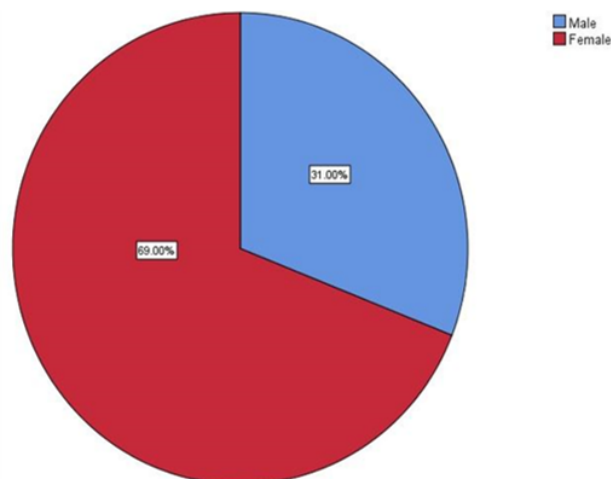


Figure 2: Distribution of percentage of Male and Female respondents

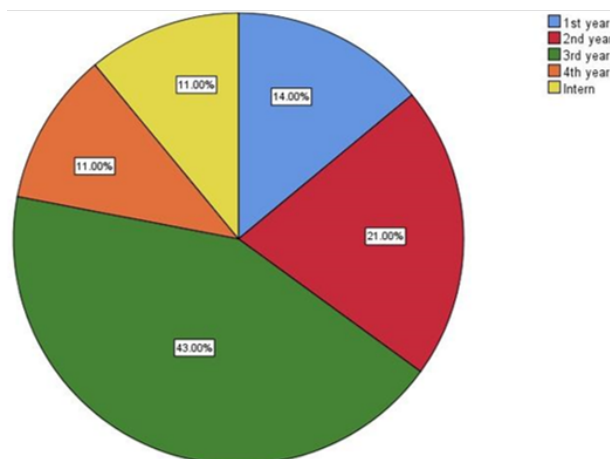


Figure 3: Distribution of percentage of year of studying

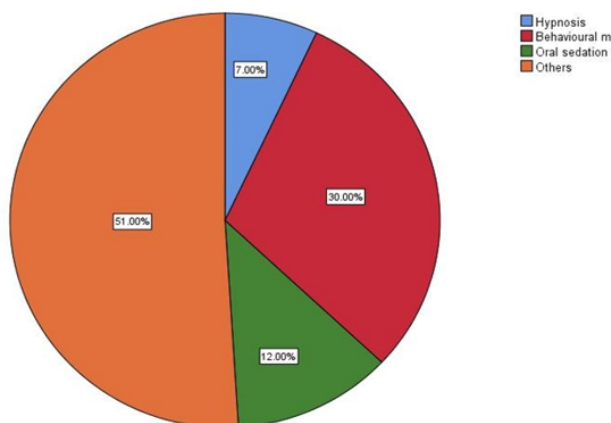


Figure 4: Distribution of percentage of anxiety management techniques

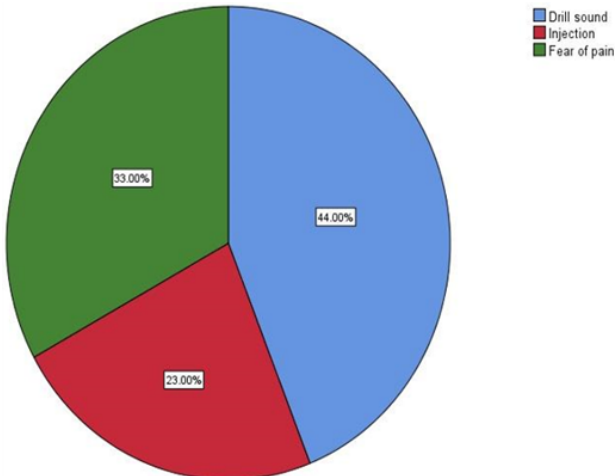


Figure 5: Distribution of percentage of main reason for the fear of dental treatment

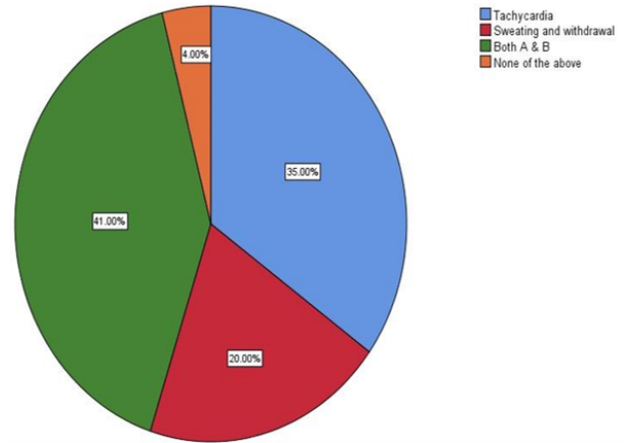


Figure 8: Distribution of percentage of symptoms of dental anxiety

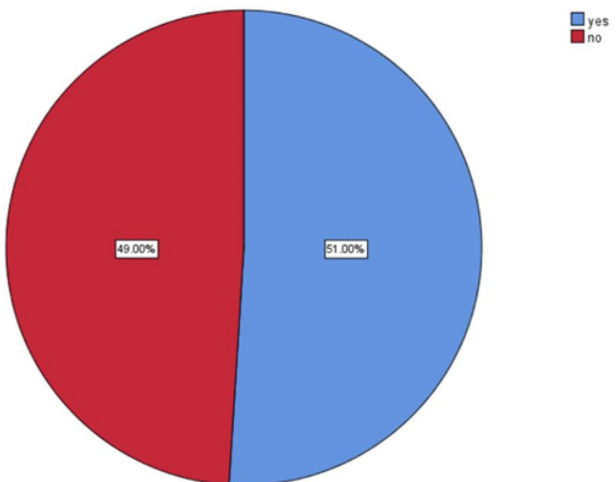


Figure 6: Distribution of percentage of dental fear leads to poor oral health

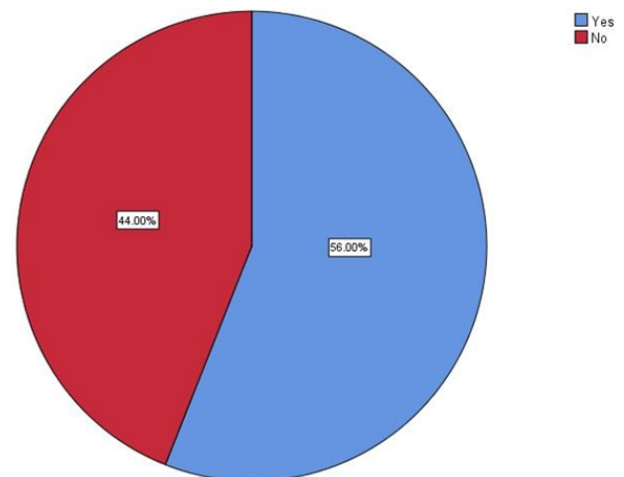


Figure 9: Distribution of percentage of dental phobia is more serious than dental fear

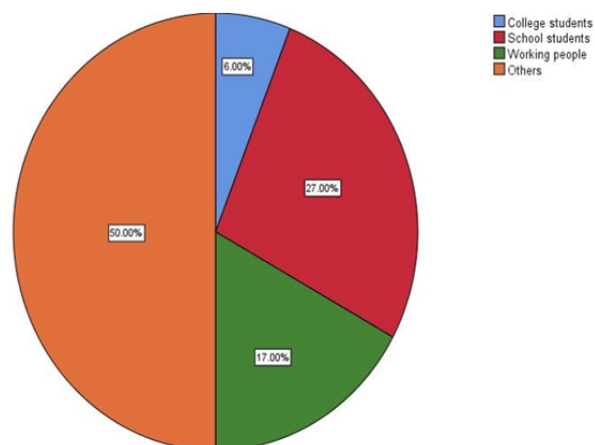


Figure 7: Distribution of percentage of population involved in frequent smoking habits

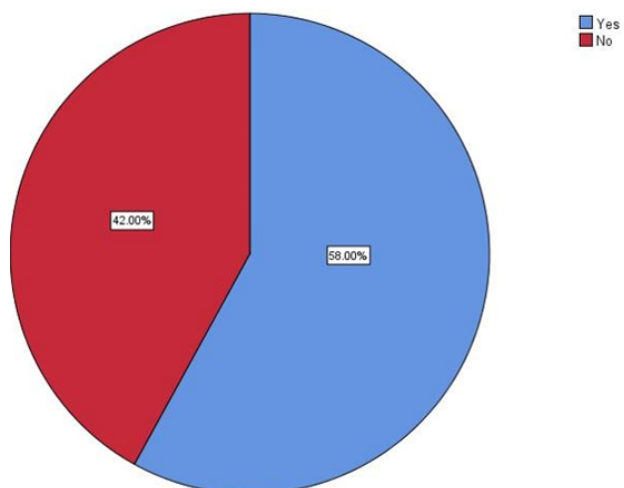


Figure 10: Distribution of percentage preference on oral anxiolytics

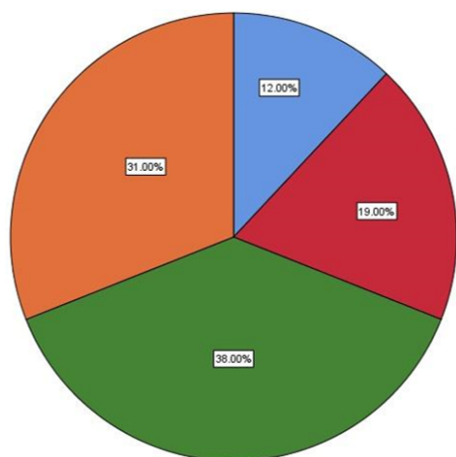


Figure 11: Distribution in percentage of techniques that helps to overcome dental fear

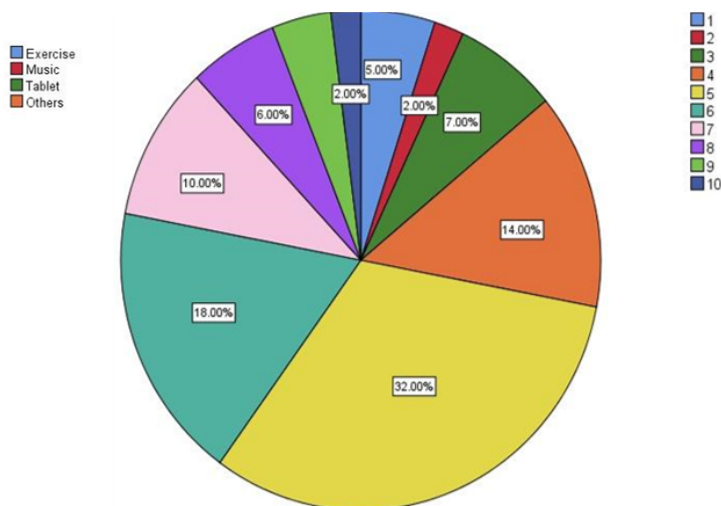


Figure 14: Distribution of percentage of difficulty in treating dental phobic patients

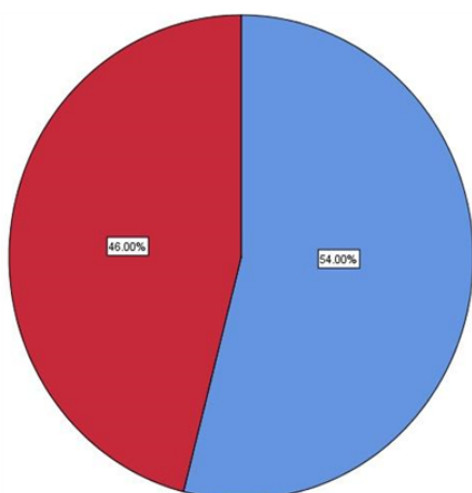


Figure 12: Distribution of percentage tell show do method as a best strategy

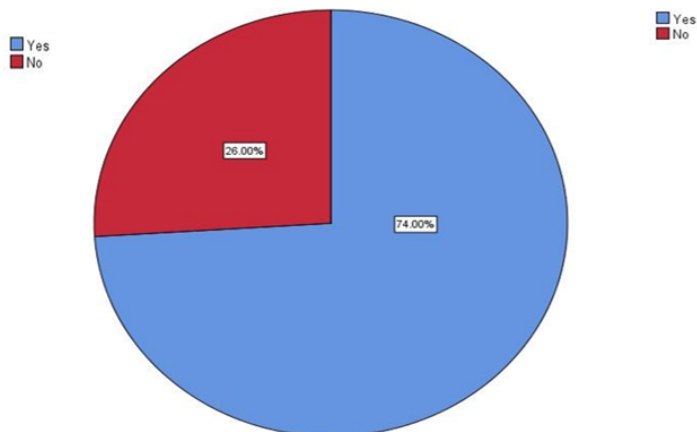


Figure 15: Distribution of percentage of encountered dental phobic patients

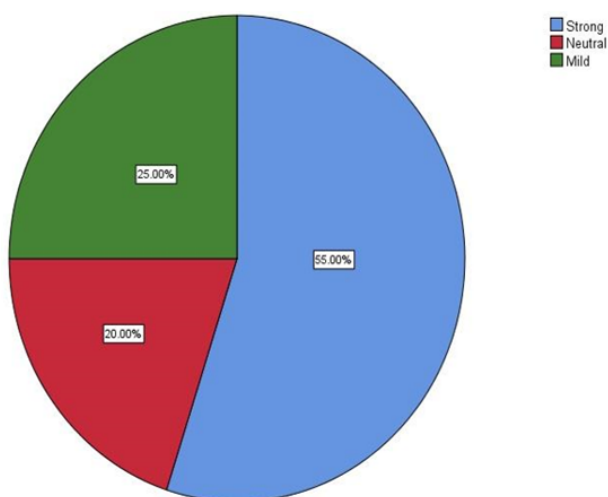


Figure 13: Distribution of percentage of level of fear experienced with dental drills

Descriptive variables like age, year of study, gender and explanatory variables like personality traits, knowledge, attitude, perception, practice were also included. Each output variable was collected as ordinal data and the data represented as pie charts. Statistical test is done. Statistical software used was SPSS and Chi Square analysis was done.

RESULTS AND DISCUSSION

The current study is done in the age group of 18 to 22 years (Figure 1). The main aim of this study is to create awareness about smoking and alcohol consumption leading to dental fear. In this study, 31 % male and 69 % female participated (Figure 2). It was mainly done among dental college undergraduates, 14 % of first-year students, 21% of second year students, 43% of third year students, 11% of final year students and 11 % of interns (Figure 3). When the participants were asked about the anxiety management techniques, 30% implied that

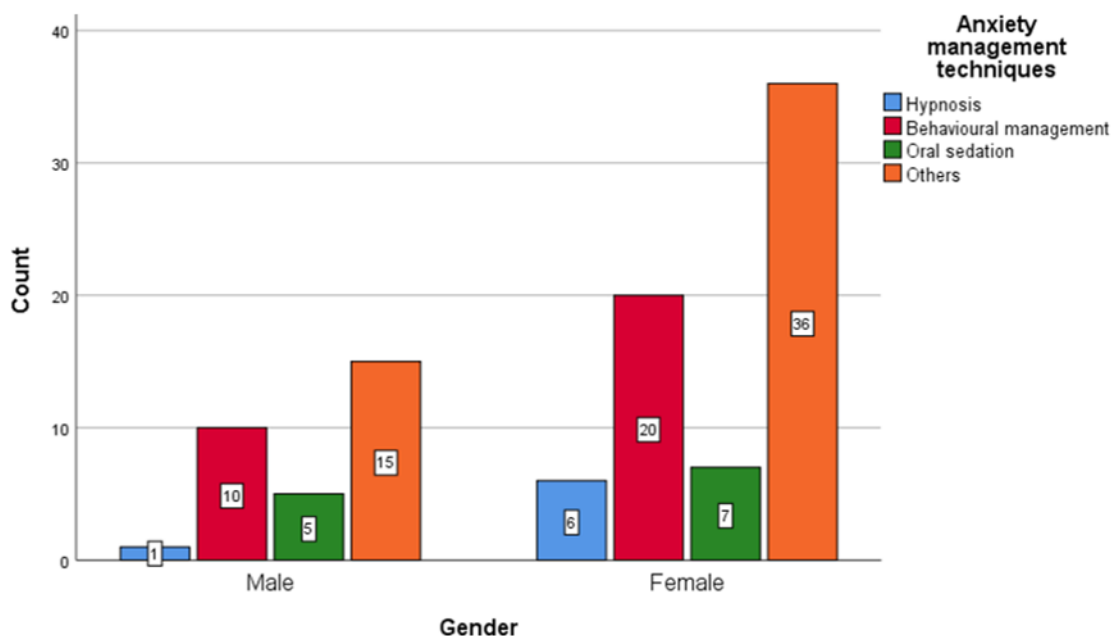


Figure 16: Association between anxiety management techniques in between two genders

behavioural management was an important technique (Figure 4). 44% implied that drill sound is the main fear of dental treatment (Figure 5). 51 % have suggested that individuals with dental fear may have poor oral health (Figure 6).

When the participants were asked about which population has frequent smoking habit giving options like college students, school students and working people, 27 % of the population told that school students have frequent smoking habits (Figure 7). 41 % of the population said that tachycardia, sweating and withdrawal are the main symptoms of dental anxiety (Figure 8). 56 % have employed dental phobia is more serious than dental fear (Figure 9). When the participants were asked, do you suggest oral anxiolytics for dental phobic patients 58% of the population told that they would suggest (Figure 10). 38 % of them suggested that tablets are the best way to come out of dental fear (Figure 11). 54 % of them employed that tell-show-do method as the best method for relieving anxious states in dental anxious patients (Figure 12). 55 % of the population responded that they have a strong level of dental fear (Figure 13). When the participants were asked to rate the difficulty of treating dental anxious patients on a scale of 1 to 10, 32 % have marked the difficulty level 5 and 5 % of them marked 1 and 2 % of them marked 10 on the scale of 1 to 10 (Figure 14). When the participants were asked whether they have encountered dental phobic patients, 74 % of them reported that they had encountered dental phobic patients (Figure 15).

In a study done by Rahul, Bhola reported that 80%

of the dental anxious patients have a high dental fear even for routine checkups, it is reported that Dental fear is seen in patients for procedures like filling (Bhola and Malhotra, 2014). In the study done by E. Heidari has concluded that 57 % of the population have poor oral health. In the current study, it is reported that 51% of the dental anxious patients and dental phobic patients have poor oral health (Heidari *et al.*, 2015). He also concluded that 89.3 % of the dental phobic patients prefer oral sedation for their dental procedures. Chi square test was analysed and $P = 0.639$ and was found to be not statistically significant (Figure 16).

In the current study, 12% of the population only prefer oral sedation for dental procedures (Heidari *et al.*, 2015). In a study done by R. Constance Weiner gave a result that only 40.9% of the population have poor or fair oral health due to smoking, whereas in the current study it is concluded that 51% of the population have poor oral health due to smoking (Wiener, 2019). An assessment done by Abrahamsson has assessed that 29 % of the population have more fear of drill sound, whereas, in the current study, 44% of them have a fear of drill sound. He also reported that 20 % of them have a fear of injections, whereas, in the current study, 23 % of them have a fear of injection (Abrahamsson, 2012). Y.M. Daily reported that 96.4% of the population employed that behavioural management is the best technique that can be perceived for anxiety management similarly in the current study, 30 % of them told behavioral management is the best technique that can be used.

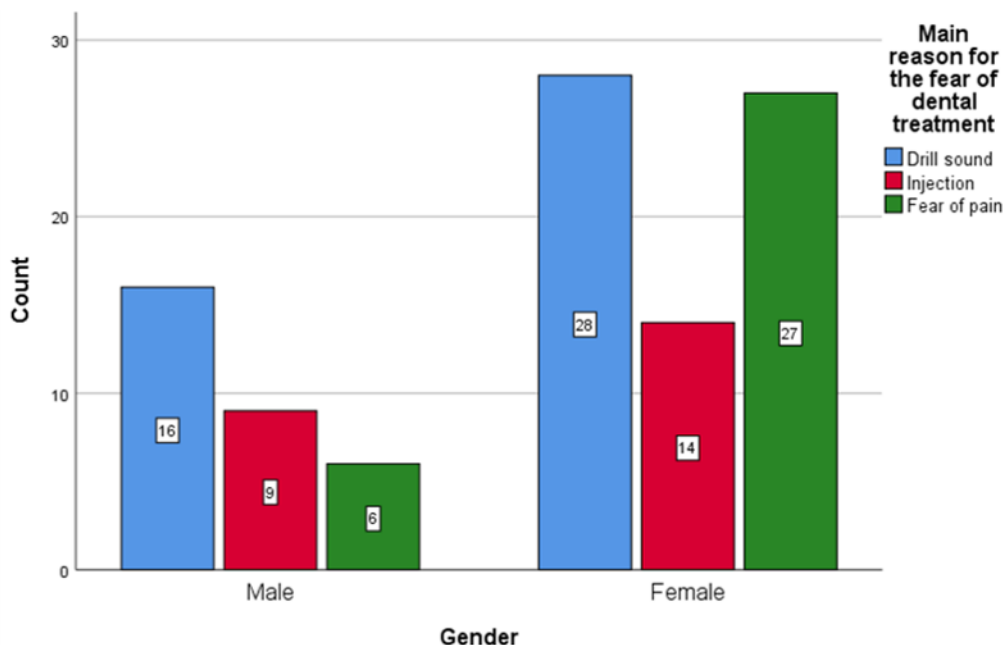


Figure 17: Association between the causative factors that induce fear of dental treatment and genders

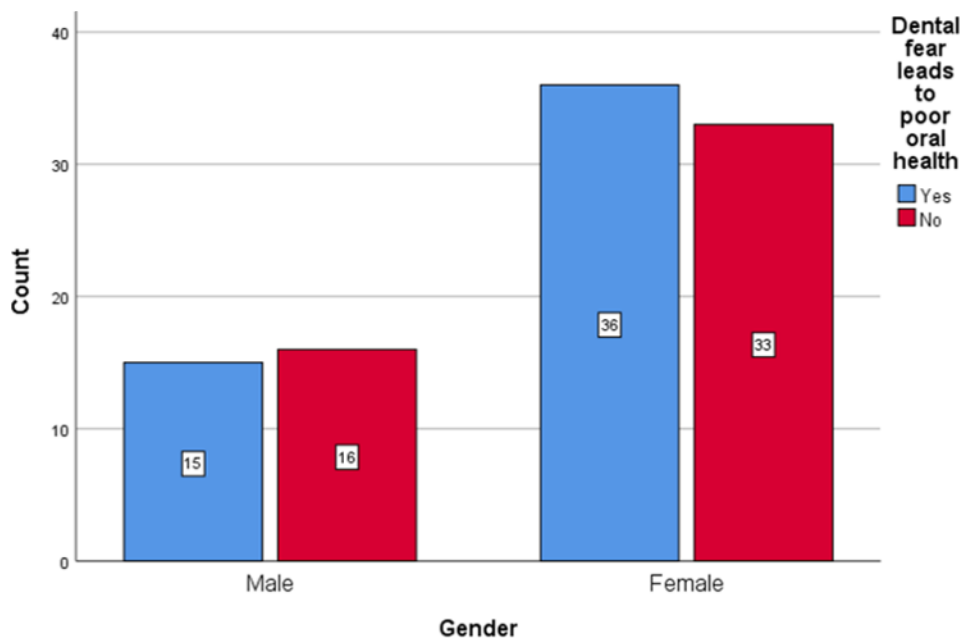


Figure 18: Association between gender and their response to dental fear leads to poor oral health

In the present study, it is employed that 7 % of the population prefer hypnosis as the anxiety management technique but in the study done by YM. Dailey has concluded that 24.5% of the population prefer hypnosis as an anxiety management technique (Dailey et al., 2001). Nadeem Jeddy, in his study, reported that 72.6 % of the population have a view that extraction is the anxiety evoking procedure. Whereas in the current study, 55 % of them reported that the filling is the anxiety evoking procedure (Nithya et al., 2018). Steven Moylen

reported that smoking leads to anxiety and anxiety related disorders. Even the present study states that smoking leads to fear and anxiety and related problems (Moylan, 2013). Chi square test was analysed and the P value was 0.147 and it was found to be statistically insignificant (Figure 17).

Some studies suggested that oral health among the Indian population is poor and most of them are suffering from dental caries and periodontal diseases in young age itself (Ariga et al., 2018; Selvan and Ganapathy, 2016).

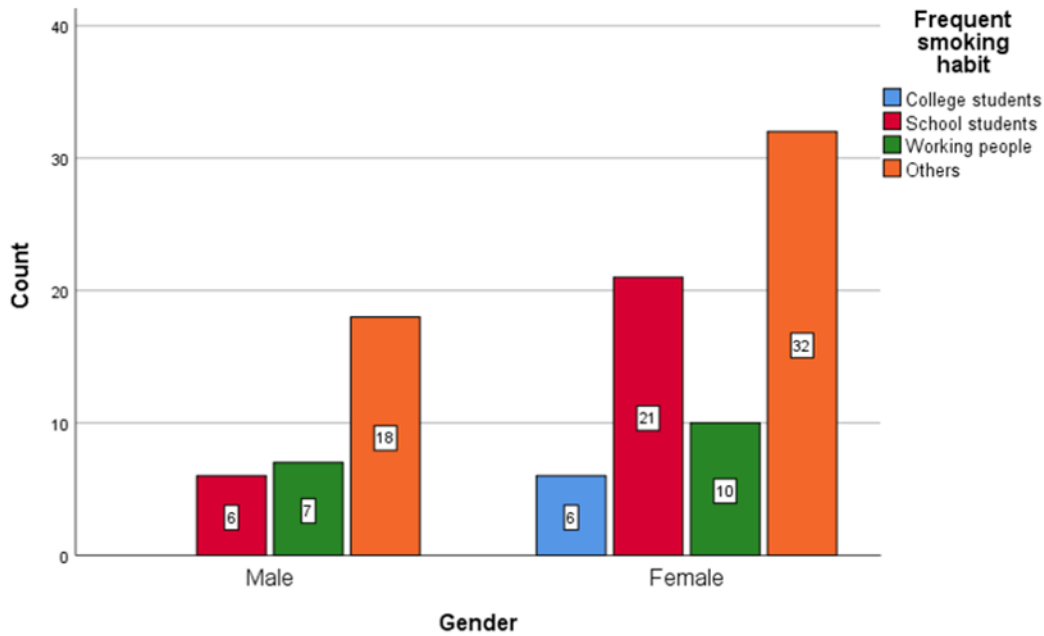


Figure 19: Association between gender and frequent smoking habits as a causative factor for increased anxiety

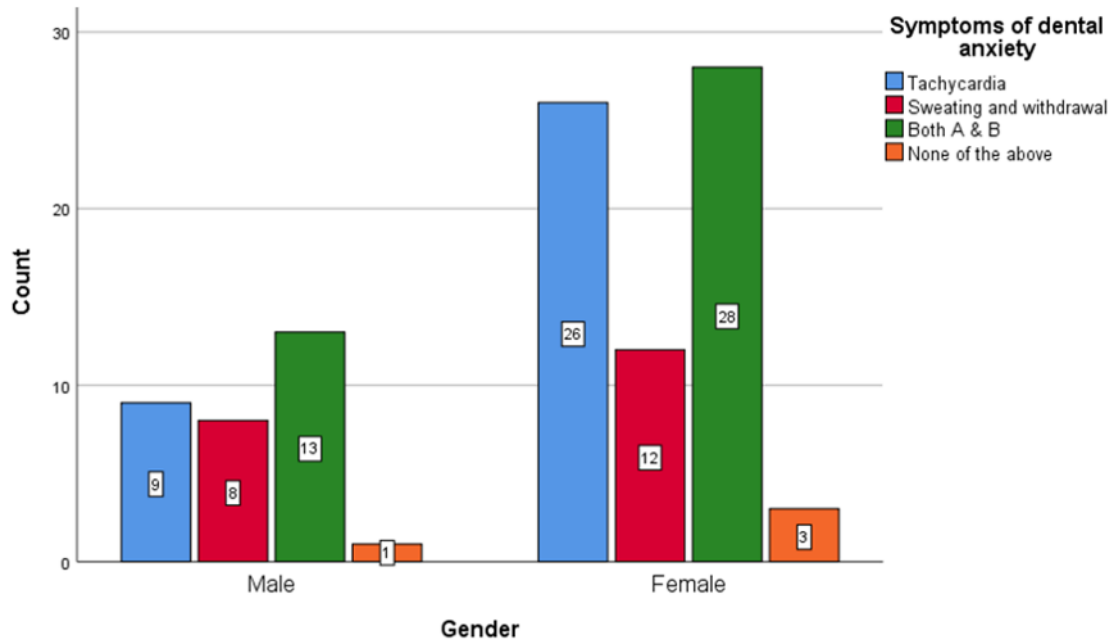


Figure 20: Association between gender and knowledge about symptoms of dental anxiety

It is a lifelong commitment to maintain good oral health. Poor oral health may lead to many oral disorders. Poor oral health may also affect an individual psychologically and creates low self-esteem in an individual. Poor oral health leads to severe disorders which may require complicated oral surgeries and procedures to be done in future (Ganapathy, 2016; Duraisamy, 2019). In the present study, it is reported that oral health differs for different age groups and it may differ based upon their occupation. In the present study, it is reported that working people are more likely to smoke frequently and have

poor oral health (Jyothi et al., 2017; Ganapathy et al., 2017). Alcohol consumption causes dental fear and leads to poor oral health. Chi square test was analysed and the P value was 0.726 and it was found to be not statistically significant (Figure 18). This poor oral health can naturally be treated with natural products like Aloe Vera (Subasree et al., 2016). There are some medical management techniques like hypnosis, tell show do the method, behavioral management to treat dental anxiety and dental phobic patients (Vijayalakshmi and Ganapathy, 2016; Ashok, 2014). Literacy in dental health is poor

in rural areas, they don't have any awareness or knowledge about dental health, which may lead to avoidance of dental care. They are not aware about the consequences faced due to alcohol consumption and cigarette smoking and tobacco chewing on oral health which may lead to severe oral and dental problems (Ashok and Suvitha, 2016; Venugopalan et al., 2014). Significant increase in a dental phobia is seen during the first trimester of pregnancy in an alcoholic mother (Basha et al., 2018; Kannan and Venugopalan, 2018).

In the present study, though it has strong values, there are some limitations (Ajay et al., 2017; Jain et al., 2017). The population selected in this study is homogeneous, the data were collected in a short duration of time and the sample size chosen was small. Chi square test was analysed and the P value was 0.166 and it was found to be statistically insignificant (Figure 19).

Exclusion criteria of the study were participants not willing to participate in the study, medically compromised participants. Some of the inclusion criteria were patience above 18 years of age, dental college students and participants who can understand and fill the questionnaire. Chi square test was analysed and the P value was 0.731 and it was not statistically significant (Figure 20).

Dental anxiety is a serious condition which has an impact on cognition, health, social factors, Physiology and behavior. So the main causes of dental anxiety are tobacco use, smoking and alcohol consumption. The dental anxiety may lead to aggression, fear, tension, avoidance behaviour, relationship problems, affecting sleep, emotional instability and work pressure. So creating awareness of dental fear and anxiety associated with alcohol use and smoking helps to get rid of causative factors and related disorders.

CONCLUSIONS

This study supports the facts and results made by previous studies that patients who have habits like smoking and alcohol consumption are said to have higher dental fear than those who don't smoke and consume alcohol. The patients with dental fear are said to have poor oral health due to avoidance of dental checkups. Dental practitioners and teams are advised to inspire and motivate dental phobic patients about the importance of maintaining good oral health and the consequences faced due to poor oral health. For a good oral health status and a satisfactory dental treatment, the state of mind of the patients is very important.

Funding Support

The authors declare that they have no funding support for this study.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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