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KNOWLEDGE, ATTITUDE AND AWARENESS TOWARDS HERBAL MOUTHWASH AMONG DENTAL STUDENTS

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ABSTRACT:

Mouth washes are widely used as adjuvants to oral hygiene and in the delivery of active agents to the teeth and gums. The ability of these mouthwashes are to inhibit the influence of plaque formations and to reduce the course of gingival inflammations. Herbal mouthwashes have pharmacological properties such as antimicrobial, anti-inflammatory and cytostatic effects that help in maintaining oral health. So the main aim of this study is to assess the knowledge, attitude and awareness towards herbal mouthwash among dental students. This is a cross sectional study conducted among dental students through a questionnaire. The questionnaire consisted of 10 questions and was circulated among the dental students with the help of an online survey link. The sample size of the study was 100 and the results were tabulated accordingly. 43.7% of the dental students use mouthwash and 69.9% of the dental students prefer herbal mouthwash over commercial mouthwash. From this study it is evident that the dental students are much aware and prefer herbal mouthwashes than chemical mouthwashes. Even though the dental students are aware about the benefits when they use herbal mouthwashes, its commercial availability is limited which has to be increased.

INTRODUCTION

Oral health is considered as one of the most important factors which are responsible for normal health and well being. Good oral health helps an individual to masticate, speak and socialize without any active discomfort (or) embarrassment [1]. Lack of oral health leads to the formation of dental plaque which further leads to gingival inflammation and destruction of periodontium[2]. The most common population that gets affected due to these oral problems are the elderly population, they are the ones who need constant care [3]. The most common diseases that can be seen in elderly population are xerostomia and dental caries [4]. In order to maintain their oral health many empowerment programs should be conducted in old age homes and they have to be taught to produce their own herbal mouthwash which helps them to keep their oral cavity in good shape [5]. The most common problems that are faced by youngsters is halitosis (or) bad breath [6]. The effect of halitosis can be reduced by using herbal mouthwash made up of salt, alum and vinegar [7]. Chlorhexidine mouthwash can also be used for halitosis but it has many side effects like staining and taste alterations, which limits its long term use therefore different herbs are being widely explored to discover alternatives to synthetic antibacterial agents [8]. There are various advantages of using chlorhexidine mouthwash, it helps the oral cavity by reducing bad breath while keeping the microbes in check. The disadvantages include being dangerous for children when ingested, damages some parts of the mouth and darkens the teeth.

Herbal mouthwash is both promotive in its approach and has a lot of beneficial effects. Natural herbs such as triphala, tulsi patra, jyeshtamadh, neem, clove oil, pudina, ajwain and many more are used as a whole single herb or in various combinations to produce herbal mouthwash. All these ingredients are scientifically proven to be safe and considered to be effective against different oral health problems such as bleeding gum, mouth ulcers and preventing tooth decay. The major advantage of using natural herbs in mouthwash is that their use has not been reported with any side effects till date[9], [10]. There are various advantages of using herbal mouthwash which promotes oral health and good hygiene, also helps in post surgical treatment and helps to heal canker sores. The disadvantages include increase in blood pressure and can become an addictive process both of which occurs over usage of herbal mouthwash.

Many studies have proven that chlorhexidine mouthwash is more effective than herbal mouthwash against harmful microorganisms [11],[12],[13]. Even then dentists prefer herbal mouthwash over chlorhexidine because they have fewer side effects. Frequent usage of herbal mouthwash may lead to the increase of blood pressure. So the main aim of this study is to assess the knowledge, attitude and awareness towards herbal mouthwash among dental students .

MATERIALS AND METHODS:

This is a cross sectional survey based study and a set of questionnaires was prepared based on awareness about using herbal mouthwash. It was circulated among dental students through survey planet software. The sample size chosen for this study was 100. Before the start of the survey, a detailed

explanation of the study was shared to the participants. Once the participants completed filling the survey, all the data were compiled for statistical analysis.

RESULT AND DISCUSSION:

Survey population was sufficient enough to reach a conclusion regarding the knowledge of dental students about using herbal mouthwash. The results were given as 43.7% of the dental students use mouthwash, this shows that only few of the dental students prefer using mouthwash [figure 1]. 69.9% of the dental students prefer herbal mouthwash because it is suitable for oral prophylaxis. As it contains herbs and its extracts, that can maintain good oral hygiene without causing any toxic effects to our body. For daily use, herbal mouthwashes are more preferable than chlorhexidine mouthwash considering its side effects on long term use [figure 2]. 68% of the dental students believe that herbal mouthwash has some positive effects on the body's metabolism. Herbal mouthwash has a major role in destroying bacterias which are capable of causing the formation of cholesterol plaques (atherosclerosis) in the blood vessels supplying the myocardium (heart muscles) which leads to the causation of myocardial infarction (heart attack) [figure 3]. 58.3% of the dental students know that using herbal mouthwash can reduce the risk of getting oral cancer. Since herbal mouthwashes have less content of alcohol it is considered to be safe for human use [figure 4]. 61.2% of the dental students know that herbal mouthwash contains a natural ingredient called photochemical which helps in reducing inflammations and microbial activity [figure 5]. 56.4% of the dental students know that using herbal mouthwash helps in reducing toothache. Herbal mouthwash made up of clove oil and salt is proved to be very effective against tooth related problems. Clove has been used to treat toothache throughout history, because the oil can effectively numb pain and reduce inflammation. It also contains eugenol, which is a natural antiseptic [figure 6]. 33.3% of the dental students know that using herbal mouthwash in higher dosage can lead to an increase in blood pressure [figure 7]. 28.2% of the dental students think that using mouthwash can become an addictive process [figure 8]. 32% of the dental students prefer using herbal mouthwash before going to bed, 31.1% of the dental students prefer using herbal mouthwash after brushing their teeth, 20.4% of the dental students prefer using herbal mouthwash after having food and the remaining 16.5% of the dental students prefer using herbal mouthwash before having food. The best time to begin using mouthwash occurs when your teeth become overly sensitive or prone to abrasion after having a meal [figure 9]. 52% of the dental students find this survey useful [figure 10].

In a study done by Yao K, 49.7% of the participants use mouthwash whereas in our study 43.7% of the participants use mouthwash in order to maintain their oral cavity in proper shape [14]. In a study done by Gopikrishna V, 4.6% of the Bengaluru college students use mouthwash and 43.7% of the dental students in Chennai use mouthwash [15]. In a study done by Rukhsana Sheik, 47.5% of the population use mouthwash at morning, 31.25% use mouthwash before going to bed, 8.75% use mouthwash after having lunch and the remaining 12.50% of the population use mouthwash at other times whereas in our study 32% of the dental students prefer using herbal mouthwash before going to bed, 31.1% of the dental students prefer using herbal mouthwash after

brushing their teeth, 20.4% of the dental students prefer using herbal mouthwash after having food and the remaining 16.5% of the dental students prefer using herbal mouthwash before having food [16].

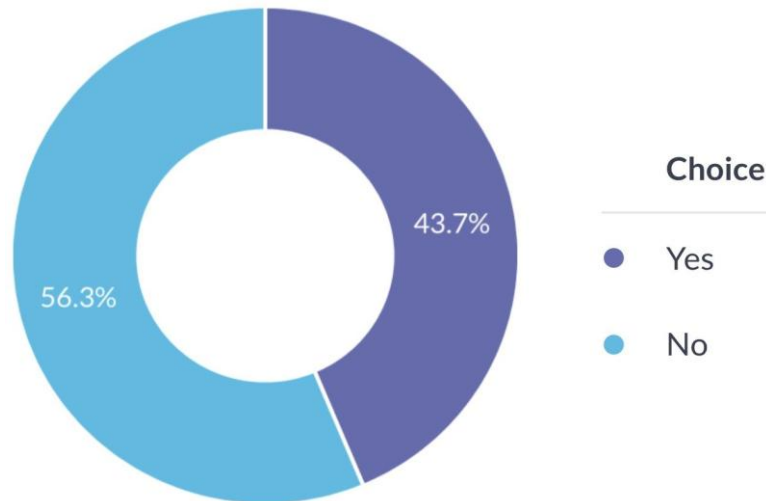


Figure 1: The pie chart shows distribution of study participants based on using mouthwash. It shows responses to the question “ using mouthwash”, positive responses (43.7%) are in dark blue colour, negative responses (56.3%) are in sky blue colour.

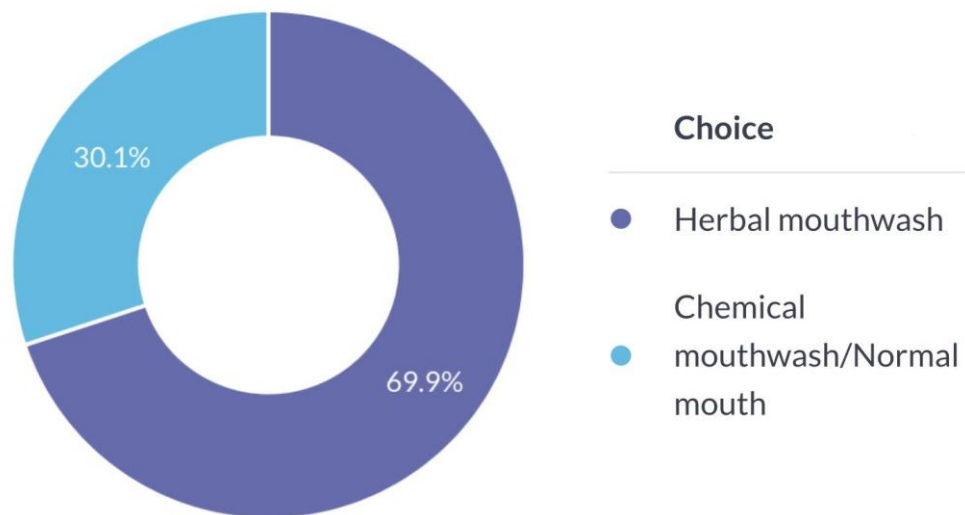


Figure 2: The pie chart shows distribution of study participants who prefer herbal mouthwash. It shows responses to the question “ mouthwash preferred”, Herbal mouthwash was preferred by 69.9% of the participants (dark blue colour) and the remaining 30.1% of the participants prefer chemical mouthwash (sky blue).

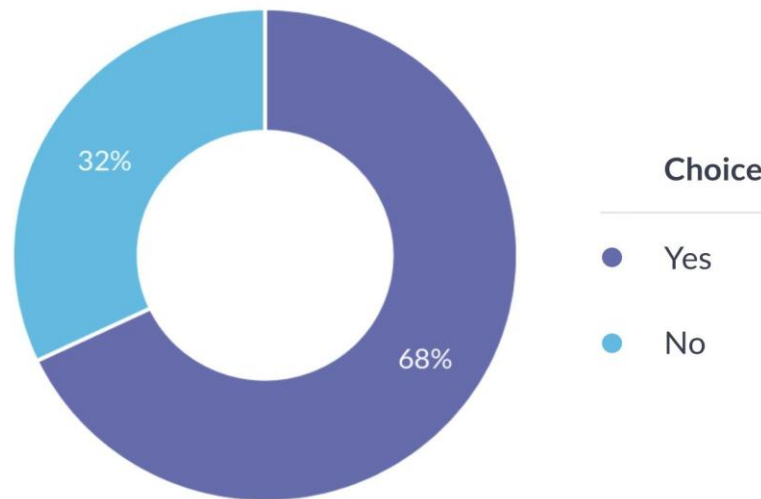


Figure 3:The pie chart shows knowledge among study participants regarding that herbal mouthwash has a positive effect on the body's metabolism. It shows responses to the questions “ mouthwash provides a positive effect on the body's metabolism”, positive responses (68%) are in dark blue colour, negative responses (32%) are in sky blue colour.

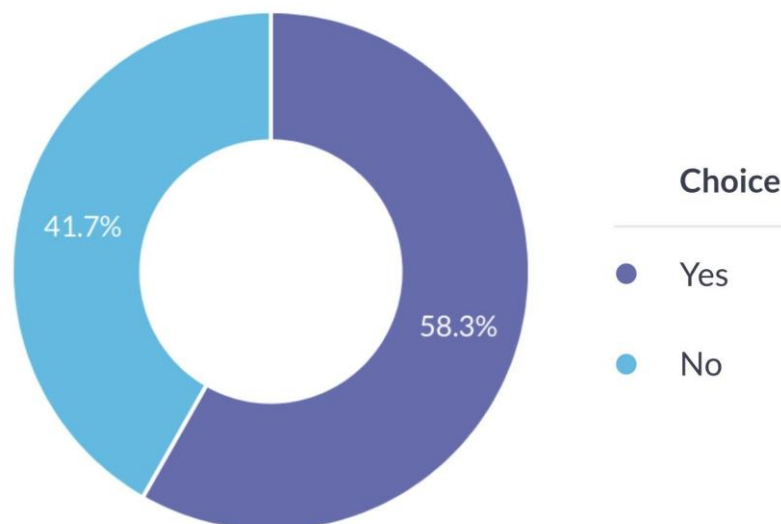


Figure 4:The pie chart shows the knowledge among study participants regarding the usage of herbal mouthwash to reduce the probability of getting oral cancer. It shows responses to the question “ mouthwash reduce the risk of getting oral cancer”, positive responses (58.3%) are in dark blue colour, negative responses (41.7%) are in sky blue colour.

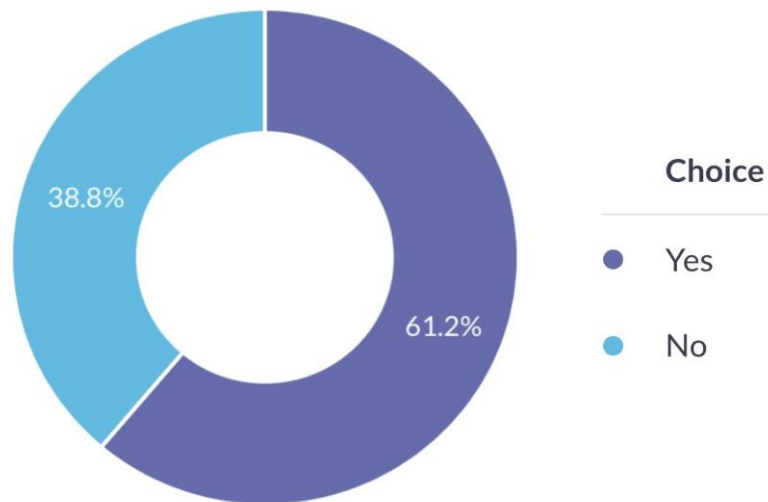


Figure 5: The pie chart shows the knowledge among study participants regarding that herbal mouthwash contains a natural ingredient known as photochemical which helps in reducing microbial activity. It shows responses to the question “herbal mouthwash containing a natural ingredient known as photochemical”, positive responses (61.2%) are in dark blue colour, negative responses (38.8%) are in sky blue colour.

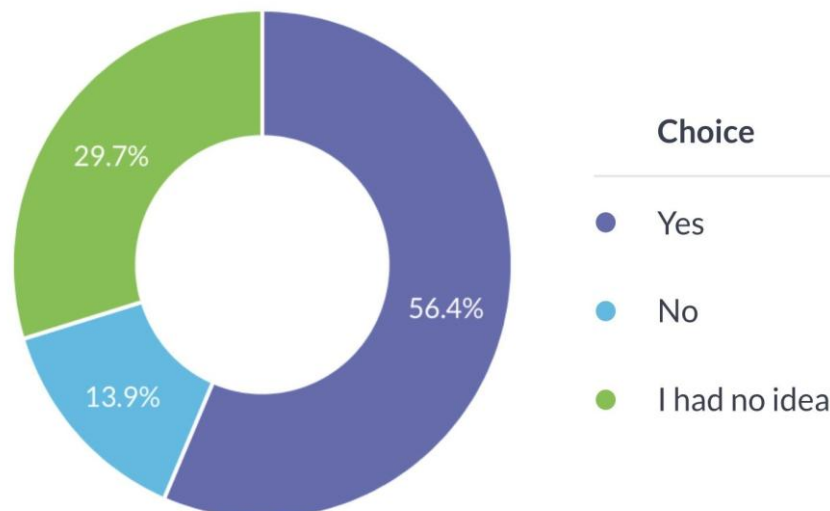


Figure 6: The pie chart shows the knowledge among the study participants regarding that herbal mouthwash helps in reducing toothache. It shows responses to the question “herbal mouthwash reduces the probability of getting toothache”, positive responses (56.4%) are in dark blue, negative responses (13.9%) are in sky blue and the remaining 29.7% of the participants did not have any idea about it (green).

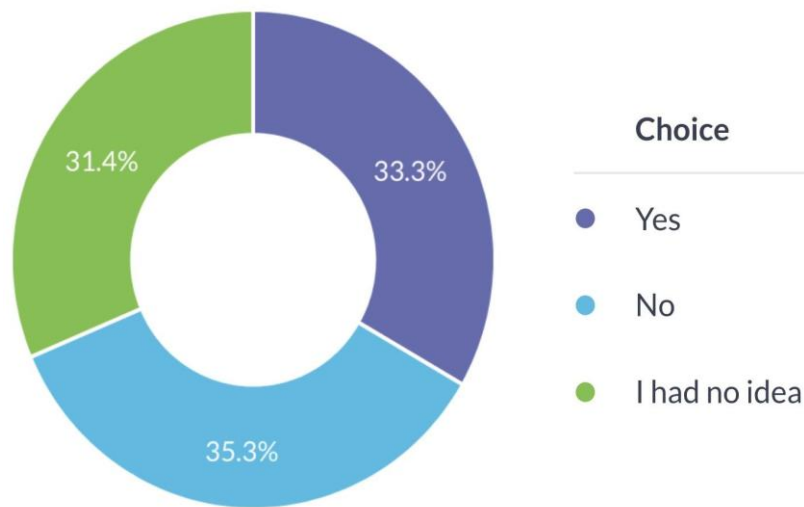


Figure 7: The pie chart shows the knowledge among the study participants regarding that using high dosage of herbal mouthwash increases blood pressure. It shows responses to the question “ high dosage of herbal mouthwash increases blood pressure”, positive responses (33.3%) are in dark blue colour, negative responses (35.3%) are in sky blue colour and the remaining 31.4% of the participants did not have any idea about it (green).

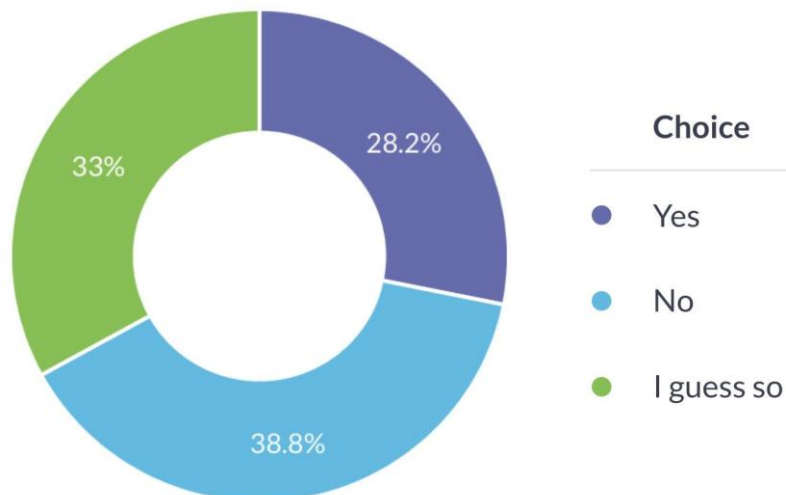


Figure 8: The pie chart shows the knowledge among the study participants that using mouthwash can turn into an addictive process. It shows responses to the question “ using mouthwash can become an addictive process”, positive responses (28.2%) are in dark blue colour, negative responses (38.8%) are in sky blue colour and the remaining 33% of the participants think that the above statement is proved to be true (green).

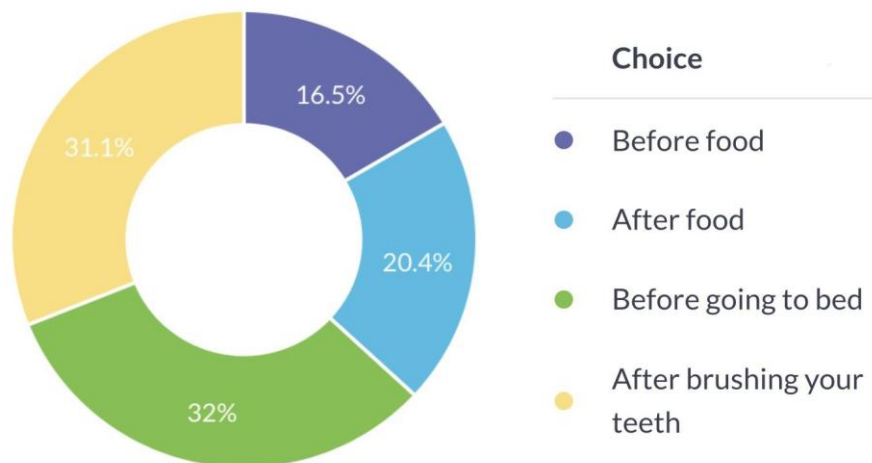


Figure 9: The pie chart shows the knowledge among the study participants regarding the best time to use herbal mouthwash. It shows responses to the question “ best time to use herbal mouthwash”. 32% of the participants use herbal mouthwash before going to bed (green), 31.1% of the participants use herbal mouthwash after brushing teeth (yellow), 20.4% of the participants use herbal mouthwash after having food and the remaining 16.5% of the participants use herbal mouthwash before having food.

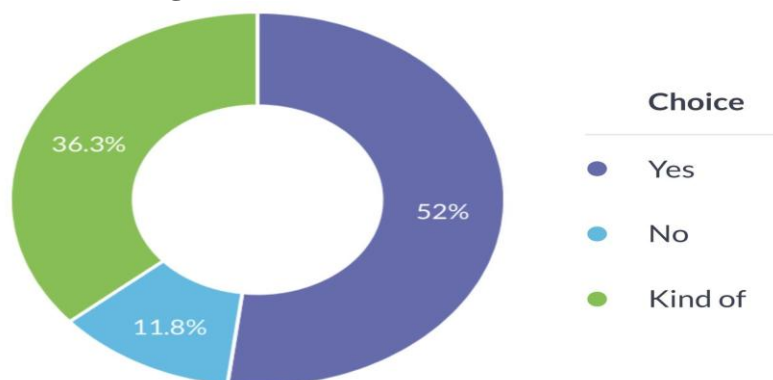


Figure 10: The pie chart shows the knowledge among the study participants about survey being useful. It shows responses to the question “survey being useful”, positive responses (52%) are in dark blue colour, negative responses (11.8%) are in sky blue colour and the remaining 36.3% of the participants partially agree with the above statement (green).

CONCLUSION:

From this study it is so evident that the dental students are much aware and prefer herbal mouthwashes than chemical mouthwashes. With the increasing toxicity in the chemical drugs it is better to opt for herbal mouthwashes because herbal mouthwashes are less toxic , have fewer side effects and are affordable too. Even though the dental students are aware about the benefits when they use herbal mouthwashes, its commercial availability is limited, which has to be increased.

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CONFLICT OF INTEREST:

The author declares that there is no conflict of interest in the present study.

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