

Awareness of the use herbal medicine for oral problems among dental students in Saveetha dental college

RUNNING TITLE: Awareness of use of herbal medicine.

TYPE OF ARTICLE: RESEARCH(SURVEY)

Aishwaryah Ravisankar
Saveetha Dental College,
Saveetha Institute of Medical and Technical Sciences,
Chennai.

Lakshmi
Department of Pharmacology,
Saveetha Dental College,
Saveetha Institute of Medical and Technical Sciences ,
Chennai.

CORRESPONDING AUTHOR:

Lakshmi
Department of Pharmacology
Saveetha Dental College,
Saveetha Institute of Medical and Technical Sciences,
Chennai.

ABSTRACT:

AIM:

To find the Awareness of the use herbal medicine for oral problems among dental students in Saveetha dental college.

OBJECTIVE:

The study is useful to assess the knowledge of students on the use of herbal products due to its increased popularity among the Saveetha dental college students.

MATERIALS AND METHODS:

A questionnaire-based study about the knowledge of herbal medicine was conducted among the dental students using an online portal. The questionnaire was prepared with about 12 questions on the benefits of herbal medicine, with 2-4 options given to each of the students. The response by each individual was recorded. All the responses were analyzed statistically and were interpreted by graphs.

RESULTS

Around 81% of the people who participated in the study were full aware about the uses and benefits of herbal medicine were as 11% of the subjects who participated in the study had little knowledge on the uses of herbal medicine and 8 % had absolutely no knowledge on the use of herbal medicine.

CONCLUSION:

The study shows the importance of use of herbal products due to the complications of allopathic medicine. The study also shows the lack of knowledge about the adverse effects and scientific knowledge about the use of herbal products.

Keywords: Herbal medicine, oral hygiene.

INTRODUCTION:

Oral hygiene is of major importance in everyone's daily life. Oral hygiene should not be neglected, if it is neglected it will cause various issues in the future not just related with oral cavity.[1]Oral infections are one of the most recurring and common oral problem for all the people in the world.[2] One of the most common oral problems occurring al around the world are Periodontal disease and dental caries. Any imbalance in the normal oral flora may lead to development of various systemic diseases. [3] Development of Plaque and calculus has been implicated as the main etiological factors for most of the gingival, periodontal diseases and caries. Plaque and calculus serve as a reservoir for micro-organisms and thus emphasis on plaque control is very important.

Hence since historical times, the focus has been made on the prevention of these diseases. Also, it is important to remember that the effectiveness of plaque control by self-care depends on motivation, awareness, knowledge, oral hygiene instruction and manual dexterity and not only on the oral hygiene aids. For prevention of oral diseases, the entire community must be educated, motivated and aware for proper oral hygiene instruction must be given.[4]

Herbal products are considered as over the counter (OTC) drugs and thus are easily available through pharmacies in different pharmaceutical dosage forms such as tablets, capsules, syrups, extracts etc. Self medication of herbal medicines is very much prevalent among Indian populations due to the family traditions and also by various advertisements by manufacturers through different mass media. Herbal medicines are being used from ancient ages.[5] It is used in prevention and treatment of various diseases.[6] Nowadays, herbs are being used all over the world due to its minimal side effects compared to allopathic counterparts.[7] Ancient Indian Vedic texts such as Rigveda, Atharvaveda, and many more are evidences that our ancestors used herbal plants as medicines in those days.[8] Medicinal herbs and plants are very useful to humans and are an effective source of treatment of plethora of diseases. Microorganisms are greatly affected by Plant herbs as they are potentially lethal to both gram-positive and gram-negative bacterial cells. They cause destruction of the bacterial cells.[9] Herbs have anti-inflammatory, antioxidative and antimicrobial effects. Several drugs which the modern, western medicine uses have origin from herbs with medicinal properties. Several drugs in our nowadays market are derived from medicinal herbs.

With the increasing concern among patients about the adverse effects of conventional medicines' increased resistance by bacteria to antibiotics and challenges faced by the medical personnel in managing chronic disease and their symptoms, it is becoming essential for the health professionals to have a sound knowledge of complementary and alternative modalities for the treatment of these chronic ailments.[10] Many of these modalities and their therapeutic effects have been very well established globally and have been used since antiquity. Oral diseases are major health problems, with dental caries and periodontal diseases being the most important global infectious diseases which was previously mentioned [11]The association between oral diseases and the oral microbiota is well established. Oral physicians and dental health care professionals also face challenges in the management of few dental conditions as a result of resistance of oral microflora due to drug tolerance leading to persistence of symptoms and emergence of other side effects of conventional therapies.[12] Therefore, it is often necessary for the dentists to be aware of complementary and alternative modalities which are popular, safe, effective, and economical alternative treatment regimen.

The aim of the study to know the benefits of herbal medicine in oral care and the awareness among dentist and dental students.

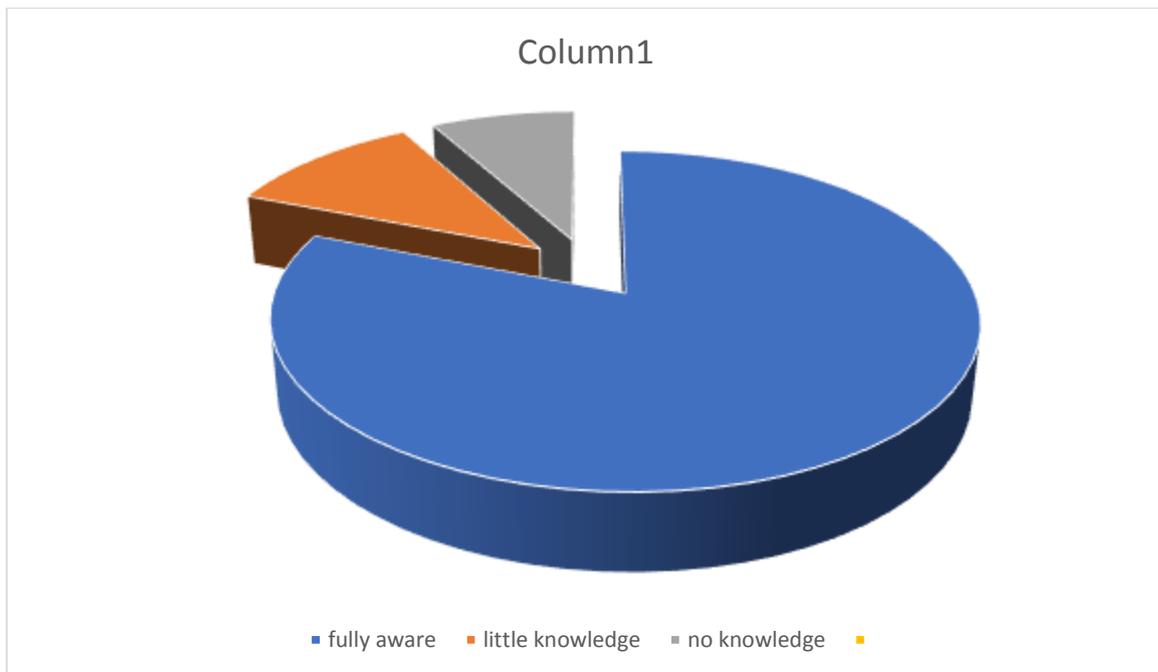
MATERIALS AND METHODS:

A questionnaire-based study about the knowledge of herbal medicine was conducted among the dental students using an online portal. The students were sent a link from which they were able to access the questionnaires. The subjects were administered with questionnaire on the benefits of herbal medicine in oral care through survey planet link. The questionnaire was prepared with about 12 questions on the benefits of herbal medicine, with 2-4 options given to each of the students. 100 participants attended the survey of which 78 were female and 22 were male. The response by each individual was recorded. All the responses were analyzed statistically and were interpreted by graphs and pie charts obtained from the survey. This survey helped in analyzing the knowledge of the dentist in benefits of herbal medicine.

RESULTS:

KNOWLEDGE ON USES AND BENEFITS OF HERBAL MEDICINE:(chart 1)



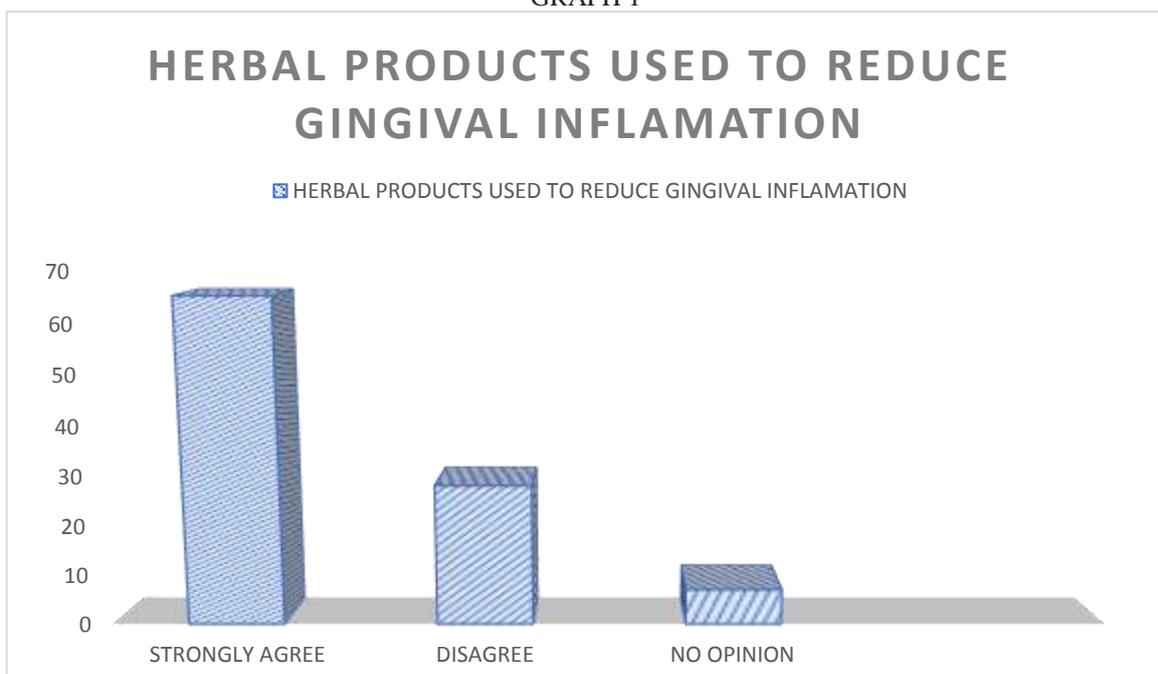


Around 81% of the people who participated in the study were full aware about the uses and benefits of herbal medicine were as 11% of the subjects who participated in the study had little knowledge on the uses of herbal medicine and 8 % had absolutely no knowledge on the use of herbal medicine. The results are mentioned in chart 1.

59 % of the subjects who participated in the study considered it is important to enquire about the use of herbal medicine while recording the case history, while 37 % of the people disagreed to the use of herbal medicine and 4% of the people had no opinion of the use of herbal medicine. The use of herbal medicine along with conventional medicine was strongly recommended by 43% of the students and disagreed by 50 % of the students and 7% of the students had no opinion.

53% of the subjects who participated in the study had previously used the herbal products and 47% of the people had not consumed herbal products previously. The treatment with the herbal products were considered effective by 48% of the people and ineffective by 52% of the people. 50% of the subjects who underwent herbal medicine treatment did not experience any side effects and 44% of the had no opinion and 6% of the subjects had side effects.

GRAPH 1



The use of herbal products in mouth rinses were considered to reduce gingival inflammation by 65% of the dental students who participated in the study and it was not considered to reduce inflammation by 28% of the subjects and 7% of the people had no

opinion. The results for the effect of herbal medicine to reduce gingival inflammation is mentioned in graph 1. 47 % of the people preferred herbal products over the use of allopathy and 53% preferred allopathy. 17% of the people used herbal medicines since they believed that herbal products are natural with no side effects, while 27% believed it helped in promoting general well being 36% used since it is a family tradition and 19% used herbal products for other reasons. 73% of the people who participated in the study were interested in further knowing about the use of herbal products and 27% of the subjects who participated in the online survey were not interested in further knowing about the herbal products.

DISCUSSION:

This survey highlights the familiarity of students with herbal products and their use as an alternative to the conventional medicine. Most common herbal product which was used was found to be turmeric used for the purpose of cough. Consistent with a study conducted by Kara, and Rivera et al reported from studies in the Turkey and USA respectively that people generally follow the trusted advice of family members and friends the present study found family to be a major source of information and recommendation concerning herbal product use.[13] A study done in US in 1000 university students, the present found family to be a major source of information and recommendation concerning herbal product use. Only those medications which have a sufficient scientific evidence to support their use should be relied upon, instead of blindly following friend or family advice.[14]

Informing the doctors about the simultaneous use of herbal medicine was uncommon among the respondents and the reasons cited for non-disclosure mirrors some of the reasons mentioned in the previous studies.[15] In another article a study was conducted in young adult patients in US, of which only 24% disclosed the use of herbal medicine to their health care professional. Similarly, very less communication between patients and health care professionals regarding herbal product use was also reported by other studies.[16] Respondents using herbal medicines without informing the treating physician may have to bear the brunt of serious clinical implications due to the possible herb-drug interactions. It has been found that herbal products interact or interfere with the normal pharmacology of some drugs with potentially fatal consequences.[17] This gives a clear message that all the physicians should routinely include questions related to the use of herbal medicines into their history taking, so as to avoid potentially serious consequences. Rather it is imperative that both physicians and consumers should be aware of the side effects and possibility of potential herb-drug interactions.

Herbal products are complex mixture of organic and inorganic chemicals, which are further modified during extraction, compounding and packaging for the market use, thereby drifting them away from their original traditional milieu. This might cause a negative impact on the patients' health. Majority of the participants preferring herbal medicine over allopathic medicine indicated their belief on the efficacy and safety of herbal products reflecting a positive attitude towards using these medications.[18]

The need of the hour is to increase awareness and knowledge about safety, potential harmful effects, herb-drug interaction and rational use of such medicines. [19] This can be achieved by organizing continuing medical education programs or incorporating relevant topics in herbal medicine in pharmacology curriculum, as majority of the students in this study also expressed their will to know more about these drugs.

CONCLUSION:

The study shows the importance of use of herbal products due to the complications of allopathic medicine. The study also shows the lack of knowledge about the adverse effects and scientific knowledge about the use of herbal products. The widespread use of these products students should be equipped with appropriate knowledge in order to keep them away from possible harms and at the same time preparing them for providing optimal care and counseling for their future patients.

The questionnaire used for the online survey consisted of the following questions and options

Awareness of the use of herbal medicine for oral problems among dentist and dental students, Saveetha dental college:

Name:

Age:

Year of Study:

1. Are you aware that natural products can be used as medicines?

A-No knowledge.
B-Little knowledge.
C-Fully aware.

2. Should the use of herbal medicine be asked about during a regular history taking?

A-Strongly agree.
B-Disagree.
C-No opinion.

3. Can the patients be encouraged for consumption of herbal medicine in conjunction with conventional medicine?

- A-Strongly agree.
- B-Disagree.
- C-No opinion.

4. Patients should inform or consult the dentist upon use of herbal medicine.

- A-Strongly agree.
- B-Disagree.
- C-No opinion.

5. Have you ever used herbal products as medicine?

- A-Yes.
- B-No.

If you have used name the herbal product name and the condition upon which it has been consumed.

Name:

Condition of usage:

6. Was the treatment?

- A-Effective.
- B-Ineffective.

7. Was any side effect observed upon usage of herbal medicine?

- A-Yes.
- B-No.

8. Are You familiar with the usage of following products?

Yes or No purpose of use

- Garlic
- Turmeric
- Aloe vera
- Clove
- Neem
- Cinnamon

9. Do you believe herbal mouth rinses reduce gingival inflammation?

- A-Strongly agree.
- B-Disagree.
- C-No opinion.

10. Preference of treatment?

- A- Herbal products.
- B- Allopathic medicine.

11. If Preference is usage of herbal products, choose the reason?

- A- Family tradition.
- B- Natural with no side effect.
- C- Promote general well being .
- D- Other reasons.

12. Do you wish to know more about herbal products?

- A- Yes.
- B- No.

REFERENCES

- [1] Baral P, Bhattarai C, Poudel PP, Banstola D, Roy S, Hada S et al. A study on oral hygiene practice among school children of pokhara municipality. *J GMC Nepal*. 2009;2:37-8.
- [2] Folayan M, Sowole A, Jebutu AK. Risk Factors for caries in children from south-western nigeria. *Int J Clin Pediatr Dent*. 2007;32: 171-75.
- [3] Goyal A, Gauba K, Chawla HS, Kaur M, Kapur A. Epidemiology of dental caries in chandigarh school children and trends over the last 25 years. *J Indian Soc Pedo Prev Dent*. 2007;25:115-8. 4.
- [4] Dhar V, Jain A, Van Dyke TE, Kohli A. Prevalence of dental caries and treatment needs in the schoolgoing children of rural areas in udaipur district. *J Indian Soc PedoPrev Dent*. 2007;25:119-21.
- [5] Anushri M, Yashoda R, Puranik MP. Herbs: A good alternatives to current treatments for oral health problems. *Int J Adv Health Sci* 2015;1:26-32.
- [6] Abu-Rabia A. Urinary diseases and ethnobotany among pastoral nomads in the Middle East. *J Ethnobiol Ethnomed* 2005;1:4.
- [7] Taheri JB, Azimi S, Rafieian N, Zanjani HA. Herbs in dentistry. *Int Dent J* 2011;61:287-96.
- [8] Kumar G, Jalaluddin M, Rout P, Mohanty R, Dileep CL. Emerging trends of herbal care in dentistry. *J Clin Diagn Res* 2013;7:1827-9.
- [9] 5. Apaliya P, Sinha S, Sinha L, Malik V. Ethno-dentistry: Tapping the potential of indigenous plants for therapeutic dentistry. *J Pharm Biomed Sci* 2015;5:31-8.
- [10] Little JW. Complementary and alternative medicine: Impact on dentistry. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2004;98:137-45
- [11] Palombo EA. Traditional medicinal plant extracts and natural products with activity against oral bacteria: Potential application in the prevention and treatment of oral diseases. *Evid Based Complement Altern Med* 2011; 2011:15. doi: 10.1093/ecam/nep067.680354
- [12] WHO, National Policy on Traditional Medicine and Regulation of Herbal Medicines - Report of a WHO Global Survey, (May 2005), at 121–122
- [13] Kara B. Herbal product use in a sample of Turkish patients undergoing haemodialysis. *J Clin Nurs* 2009;18:2197-205
- [14] Gardiner P, Kemper KJ, Legedza A, Phillips RS. Factors associated with herb and dietary supplement use by young adults in the United States. *BMC Complement Altern Med* 2007;7:39.
- [15] Vickers KA, Jolly KB, Greenfield SM. Herbal medicine: women's views, knowledge and interaction with doctors: a qualitative study. *BMC Complement Altern Med* 2006;6:40.
- [16] Crawford NW, Cincotta DR, Lim A, Powell CV. A cross-sectional survey of complementary and alternative medicine use by children and adolescents attending the University Hospital of Wales. *BMC Complement Altern Med* 2006;6:16
- [17] Barnes PM, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults: United States, 2002. *Adv Data* 2004;(343):1- 19.
- [18] Walker PS, Donovan JA. Herbal remedies: natural caveats. *Int J Dermatol* 1999;38:746-8.
- [19] Kelly JP, Kaufman DW, Kelley K, Rosenberg L, Anderson TE, Mitchell AA. Recent trends in use of herbal and other natural products. *Arch Intern Med* 2005;165:281-6