ASSESSMENT OF KNOWLEDGE, ATTITUDE AND ORAL HEALTH PRACTICES AMONG AYUSH DOCTORS- A QUESTIONNAIRE BASED STUDY

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ABSTRACT

AIM: The study attempted to evaluate the knowledge, attitude, and oral health practices of AYUSH doctors and instil dental treatment in their practice.

BACKGROUND: Oral health is an integral aspect of overall health, Yet it remains one that is frequently overlooked in the practice of various forms of healthcare, including that by AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy) doctors. Even with increased integration of AYUSH in the mainstream health sector, information regarding AYUSH doctors' competence in oral disease management remains very limited. This can bring out areas of lacuna and can be targeted with education interventions. The current study will ascertain the KAP on oral disease management among AYUSH professionals to understand how prepared they are and what areas need improvement.

OBJECTIVES: To determine the level of awareness AYUSH doctors

possess regarding oral disease management. To find out the attitudes of AYUSH doctors towards the significance of oral health. Comparing the practices adopted by AYUSH doctors in oral disease management. To determine areas of deficiency in knowledge and practice that could be addressed through focused training programs. MATERIALS AND METHODS: A cross-sectional questionnaire survey was carried out among AYUSH physicians from different regions. Practitioners of Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy disciplines were included in the study population. 640 AYUSH physicians were targeted as the sample size using stratified random sampling to provide coverage from all the disciplines. Inclusion was made up of certified practitioners registered in any one of the AYUSH disciplines: Ayurveda, Yoga & Naturopathy, Unani, Siddha, or Homoeopathy. A structured, validated questionnaire had three sections: knowledge (oral disease aetiology, diagnosis, and treatment questions), attitude (questions about perceived oral health importance and integration into practice), and practice (questions about actual clinical practices on managing oral disease).

CONCLUSION: The results of this study gave an overall description

of the existing status of management of oral diseases among AYUSH physicians. It was through the process of identifying knowledge and practice gaps that educational programs with a specific focus were created, eventually enhancing the inclusion of oral health in AYUSH practices. Increased training and consciousness can lead to oral health improvements in populations treated by AYUSH professionals.

KEYWORDS:

AYUSH practitioners, knowledge of oral health, cross-sectional study, dental education.

INTRODUCTION:

Oral health is an essential part of general health and well-being that affects the quality of life, productivity, and general health status of an individual. The World Health Organisation (WHO) defines oral diseases as a significant public health problem throughout the world and indeed a major health burden for the populations of low- and middle-income countries such as India.[1] AYUSH—an acronym for Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy—accounts for a distinct system of healthcare in India that serves a considerable section of the population, particularly in rural and

disadvantaged sectors. Still, the knowledge, attitude, and practices (KAP) of theirs concerning oral health are still not adequately studied. An understanding of oral health is mandatory before engaging in health-related behaviour. The initial step toward habit formation lies in making patients aware of prevention against oral health and providing them with related information. [2] Oral health professionals should themselves serve as role models in oral health behaviour and develop correct awareness in other health professionals. It has been claimed that oral health professionals' attitudes and conduct regarding their own oral well-being are reflective of the seriousness with which they perceive the significance of preventive dental care and sustenance of oral well-being among their target group.[3] The objective of the present study was to analyse and determine the knowledge, attitude, and practice of oral health among educated strata, constituting the backbone of society, comprising professionals of Ayurveda, yoga and naturopathy, Unani, Siddha, and homoeopathy [4] pertaining to oral health in tandem with oral diseases, and to assess if the Ayurvedic practitioners are amenable to include modern dentistry for a cross-disciplinary approach in elevated patient care.[5]

MATERIALS AND METHODS:

The current study is a questionnaire-based cross-sectional survey to evaluate knowledge, attitude, and practices related to oral health among AYUSH professionals from different regions. The research population shall comprise practitioners of the Ayurveda, Yoga, and Naturopathy, Unani, Siddha, and Homoeopathy systems.

Study Design Type: A cross-sectional, descriptive, questionnaire-based survey is apt for KAP studies since it collects data from a specific population at a single point in time.

Rationale: Cross-sectional design is the main method of assessing baseline knowledge, attitude, and practice regarding oral health among AYUSH doctors and determining gaps and the need for training.

Sample Size and Sampling:

- **Population:** AYUSH doctors (Ayurveda, Yoga, Unani, Siddha, and Homoeopathy practitioners) enrolled with the respective councils or practising within a given geographical region.

Data Collection Tool:

A questionnaire was prepared using available literature and expert advice. Online Google Forms were shared, and the survey is

ongoing. The questionnaire is separated into 3 divisions:

- **Knowledge:** Items regarding oral health conditions (e.g., dental caries, periodontal disease), aetiology, and prevention.
- **Attitude:** Likert-scale items to measure attitudes toward oral health promotion and adoption into AYUSH practice.
- **Practices:** Oral hygiene practice questions, referral patterns, and patient education efforts questions.

Demographic Section: Age, gender, years of practice, AYUSH discipline, and region of practice.

Knowledge Section: 5 questions (e.g., "What is the main cause of oral diseases?") with multiple-choice answer options.

Attitude Section: 5 Likert-scale questions (e.g., "Do you agree that oral health must be included in your practice? Strongly Agree or Strongly Disagree").

Practice Section: 5 questions (e.g., "How often do you refer patients to a dentist?" with options like Never/Rarely/Often).

VALIDATION: The questionnaire is validated by four subject experts. It is assessed for relevance, simplicity, clarity, and ambiguity.

Data Collection Procedure: Obtaining clearance from an Institutional Ethical Committee IEC NO. 90/ETHICS/2024. Informed consent from

participants, ensuring confidentiality and voluntary participation, and a questionnaire distributed in the form of a Google Form.

Data Analysis: Data is analysed by using SPSS software, and Descriptive statistics are applied for summarising KAP value levels.

RESULTS:

Demographic Characteristics:

640 AYUSH physicians took part in the study and achieved a response rate of 93.7%.

Among the participants, 41.3% were male and 57.4% female. The age of respondents ranged from 20 to above 60 years, with a mean age of 38.6 ± 7.2 years. The distribution of AYUSH specializations was as follows: Ayurveda (28.1%), Yoga and Naturopathy (18.9%), Homeopathy (21.8%), Siddha (28.7%), and Unani (2.5%). The majority (62%) had more than five years of clinical experience.

Knowledge Assessment:

Fig. 01 shows that 61.47% of participants view poor oral hygiene as the primary cause of oral diseases. According to Fig. 02, 75.66% of experts strongly agree that clinical examination is the most effective method for diagnosing oral diseases. In Fig. 03, 52.11% believe herbal remedies

are commonly used for treating oral diseases. Fig. 04 indicates that 61.7% of professionals consider lumps or swellings in the mouth to be signs and symptoms of oral cancer. Finally, Fig. 05 reveals that 50% of professionals believe gastrointestinal conditions are strongly linked to oral diseases.

Attitude Assessment:

According to Fig. 06, more than 68.3% believe that oral health is crucial for an individual's overall health. Fig. 07 shows that 44.8% strongly agree that oral health should be integrated into their practice. In Fig. 08, 37% of professionals express confidence in their knowledge of oral diseases. Fig. 09 reveals that 47.6% strongly agree that AYUSH practices are effective in managing oral diseases. Finally, Fig. 10 shows that 35% of participants refer their patients to the dentist for regular check-ups.

Oral Health Practices:

In the Oral Health Practices section, Fig. 11 shows that 41% of professionals regularly educate their patients about oral hygiene. According to Fig. 12, 69% recommend brushing twice a day as the most important oral hygiene tip. Fig. 13 indicates that 58% of professionals conduct oral health screenings as part of their routine practice. Fig. 14 reveals that both lifestyle advice (50%) and herbal remedies (51%) are commonly used treatments for managing oral diseases. Finally, Fig. 15 shows that 51% of professionals stay informed about the latest oral health information through online resources.

Association between Knowledge, Attitude, and Practice:

Statistical analysis showed a moderate positive relationship between knowledge and attitude ($r = 0.49$, $p < 0.01$) and a weak but significant relationship between knowledge and practice ($r = 0.32$, $p < 0.05$). Those with higher scores in knowledge were more likely to have positive attitudes and improved oral health practices.

DISCUSSION:

This research evaluated the knowledge, attitude, and oral health behaviour of AYUSH doctors and compared the results to the Aggarwal et al. 2019 study. Oral health is an important part of overall health and is usually not given due attention in conventional systems of medicine. But as frontline health care professionals, [6] AYUSH practitioners can also contribute substantially towards oral health education and preventive treatment. In the current survey, knowledge levels pertaining to oral disease, preventive dentistry, and oral systemic health linkages were moderate among AYUSH physicians.[7] This agrees with the findings of Aggarwal et al. (2019), [8] who stated that while the majority of practitioners were familiar with prevalent oral diseases like dental caries and gingivitis, they were not deep in knowledge regarding oral cancer risk factors, the function of fluoride, and contemporary preventive measures. In both

investigations, the absence of formal dental training under undergraduate education was recognised as a contributing factor.

The perception of oral health was generally favourable in the present study and Aggarwal et al.'s result. AYUSH physicians recognized the necessity of incorporating oral health in the promotion of general health. Nevertheless, it seems that this attitude was translated into practice to a limited extent. For example, a few participants referred patients to dental specialists on a regular basis or performed oral exams regularly, which corresponds to the behavioural gap reported by Aggarwal et al.

Additionally, in personal oral hygiene habits, AYUSH practitioners also accounted for good habits, including brushing twice a day and mouthwash use as and when needed.[9] These habits were marginally superior to those observed by Aggarwal et al., indicating the possibility of an increase in oral self-care awareness over the years or differences in practice settings on a geographical level.

Notably, both studies highlighted the importance of having specific training programs, workshops, and continuing education modules to improve AYUSH doctors' proficiency in the identification of oral health issues and counselling patients. [10] Both authors strongly

recommended the inclusion of oral health modules in AYUSH curricula to fill the existing gap between knowledge and practice.[11]

To sum up, the present study reiterates Aggarwal et al.'s 2019 findings and highlights a unifying trend of moderate knowledge, favourable attitude, but poor practice among AYUSH physicians regarding oral health. There exists an urgent need for enhanced interdisciplinary interaction and embedding oral health more clearly in conventional health systems to ensure improved public health outcomes.

Our results indicate that although AYUSH physicians showed a moderate degree of knowledge about basic oral hygiene habits, their knowledge about oral diseases, i.e., periodontal disease and oral cancer was still narrow. This is consistent with the research of Baseer MA et al. (2012) [12] who evaluated oral health practice and knowledge among healthcare providers and discovered comparable gaps in knowledge, particularly regarding etiological factors of oral diseases as well as systemic repercussions of unhygienic oral conditions. In both pieces of research, subjects demonstrated positive attitudes toward oral health and recognised the significance of oral health for overall well-being.

AYUSH physicians, like the healthcare providers in Baseer et al.'s research, were keen on upgrading their knowledge and acknowledged the importance of oral health integration in overall medical practice.[13] This positive attitude, however, as also commented on by Baseer et al., did not find true expression in their clinical practices. For example, a small percentage of participants regularly conduct oral examinations or recommend patients' preventive dental care. The present study also accentuates a gap between personal oral hygiene practices and professional practice. Though most AYUSH practitioners reported twice-daily brushing and mouth rinse usage at times, their participation in community-level oral health education or referral to dental experts was scarce.

This is in line with Baseer et al. 2012, who documented that while healthcare workers had satisfactory personal oral hygiene, they did not have sufficient training and confidence to induce oral health in patients. [14,15] Another key similarity is the necessity for formal oral health education programs. Baseer et al. advocated for the implementation of regular training sessions and the incorporation of oral health modules in the medical curriculum, a suggestion that is very relevant for the AYUSH sector too.

AUGMENTING ORAL HEALTH EDUCATION IN AYUSH INSTITUTIONS

Enhancing oral health education in AYUSH institutions can close the knowledge–practice gap and increase the contribution of these practitioners towards early detection and prevention of oral diseases.

AYUSH practitioners' contribution to national oral health promotion programs must not be overlooked. Because of their availability and community trust, they can play a strong role in raising awareness of oral health, especially in areas with poor dental professional coverage. Yet capacity strengthening through ongoing education, hands-on training, and interprofessional practice is critical to enable them for this purpose.

CONCLUSION: This study highlights a pertinent but lesser-known aspect of public health—the readiness of AYUSH physicians to contribute towards oral health promotion. Though their attitude concerning oral health is positively noteworthy, the results indicate significant knowledge gaps and limited awareness translation to clinic practice. This gap represents a lost opportunity in the utilization of AYUSH doctors as allies against the increasing

epidemics of oral diseases in India. Due to their extensive presence and credibility in communities, particularly rural and underprivileged areas, AYUSH physicians can become invaluable oral health advocacy and prevention stakeholders. Integrated training, cross-professional collaboration, and curricular reform are musts to empower such practitioners by bridging the knowledge–practice gap. In an age of going holistic with healthcare, having oral health incorporated into the AYUSH system is not only preferable, it's essential. Engaging this workforce through education and participation could very well be the watershed in achieving universal access to oral health and prevention-oriented services.

CLINICAL SIGNIFICANCE: Assessment and enhancement of oral health knowledge, attitudes, and practices of AYUSH physicians are essential to improve patient outcomes, promote interdisciplinary communication, and achieve holistic healthcare delivery. [16]

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FIGURES

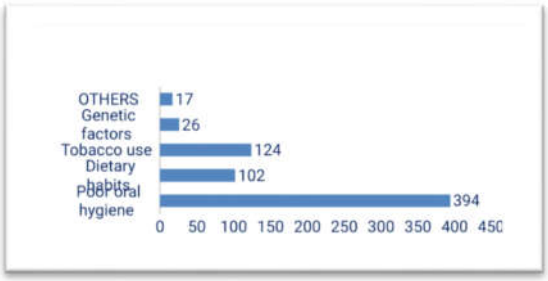

Fig 01. Common cause of disease

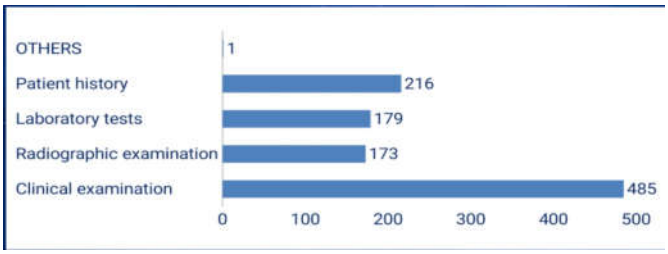

Fig 02. Diagnosis of disease

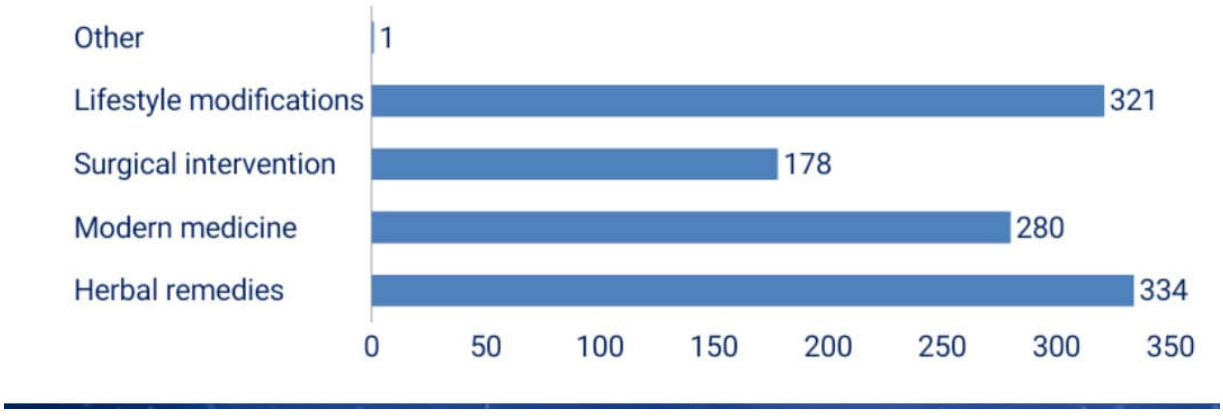

Fig 03. Treatment modalities

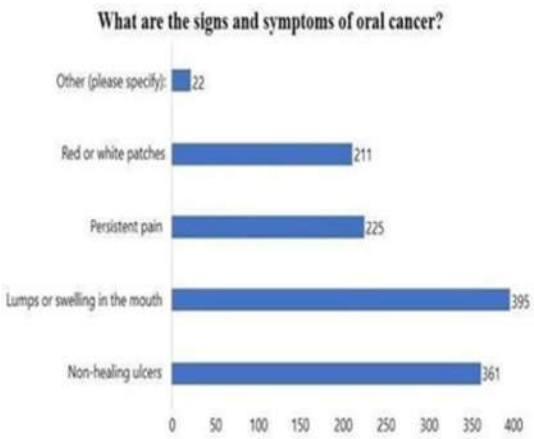

Fig 04.

Signs and symptoms

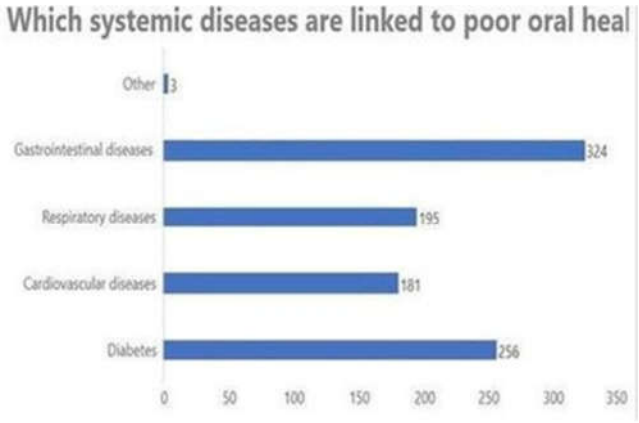

Fig 05.

Role of systemic diseases

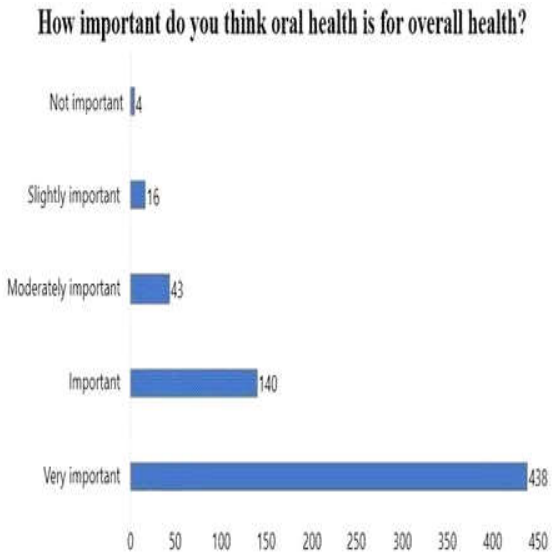

Fig 06. Importance of oral health

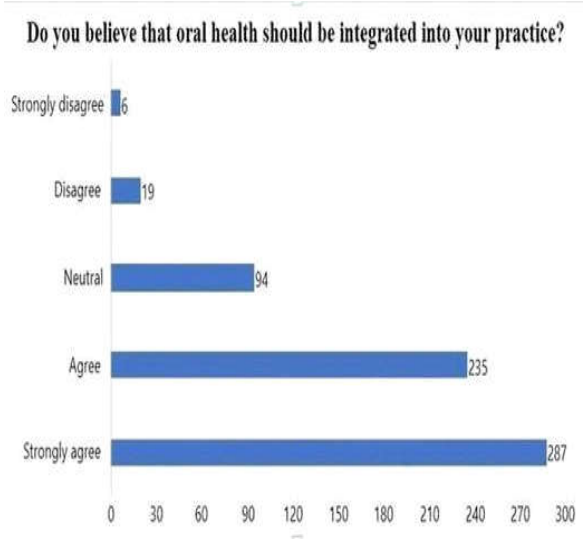

Fig07. Integration of oral health into practice

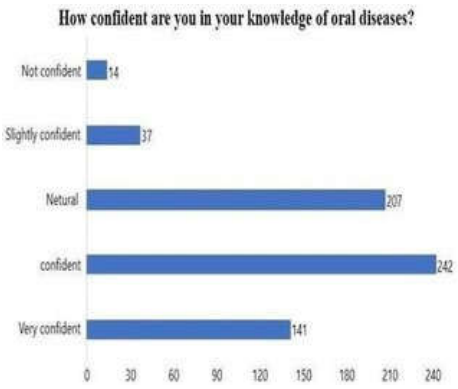

Fig 08. Self-confidence

Fig 09. Effectiveness of AYUSH practices

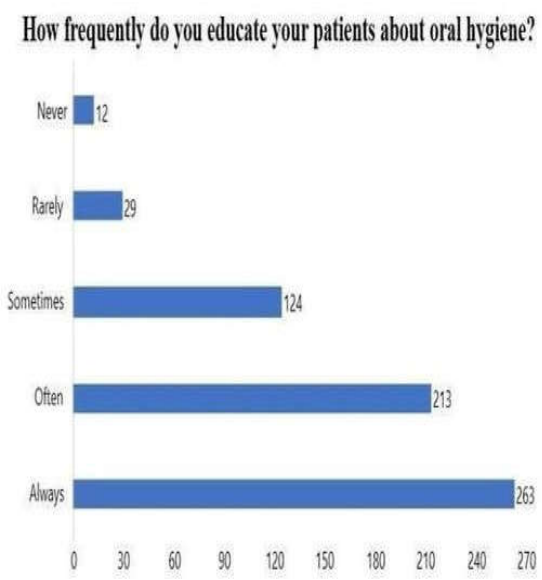

Fig.10 Educating the patients

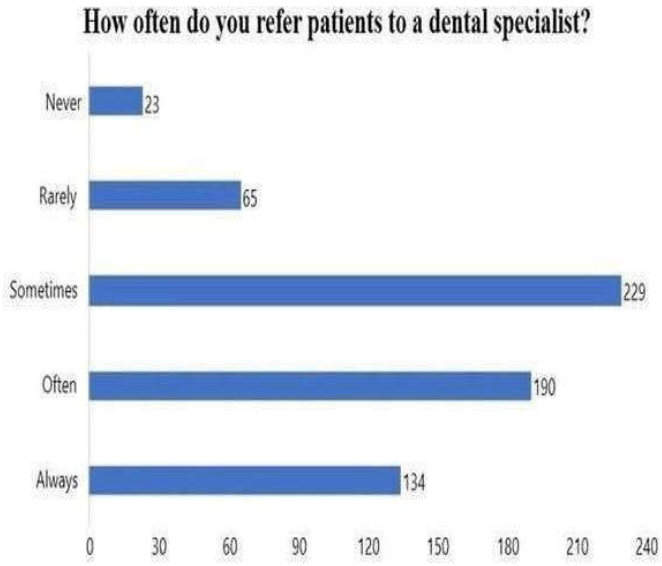

Fig .11 Referring patients to dentists

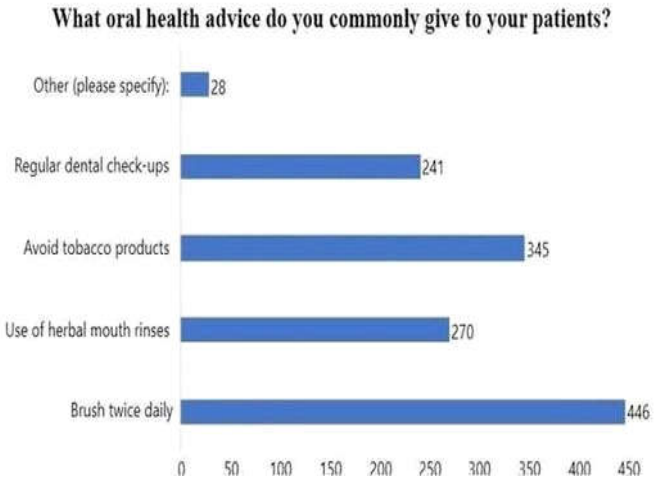

Fig 12.

Advising patients regarding oral health

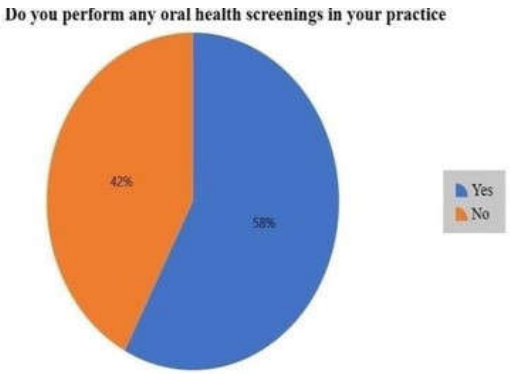

Fig 13. Oral health screening

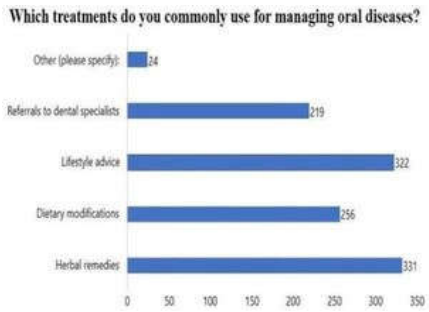

Fig 14. Type of treatment

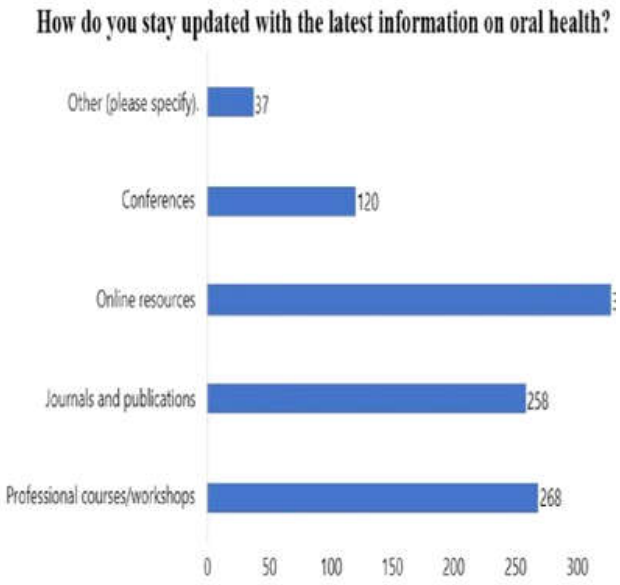

Fig 15. Means of updating

Fig 01-15 Results of the questionnaire