



RESEARCH ARTICLE

KNOWLEDGE AND EXTENT OF AWARENESS REGARDING ORAL AND SYSTEMIC HEALTH AMONG NURSING PROFESSIONALS OF A. J. INSTITUTE OF DENTAL SCIENCES, MANGALORE

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ABSTRACT

Background: General health cannot be attained or maintained without oral health. The mouth is regarded as the mirror of the body and the gateway to good health. The services of nurses are also required in promoting the oral health knowledge among the general public

Objective: The study was carried out to assess awareness regarding oral and systemic health amongst nursing professional of A.J Medical College, Mangalore.

Materials and Method: A cross sectional study was conducted among the nursing professionals of A.J Institute of Medical science, Mangalore. A self constructed questionnaire was distributed to 250 nursing staff. The survey questionnaire consisted of questions that were categorized broadly to two parts. The first part evaluated oral hygiene practices including the knowledge. The second part of the questionnaire consisted of evaluating their knowledge regarding the relationship between oral health and systemic health.

Results: The result of this study shows an lack of oral hygiene awareness and limited knowledge regarding the relationship between systemic health and oral health.

Conclusion: Nurses and associated health care providers are focused on educating patients regarding diet, exercise, medications with the goal of reducing long term complications but oral health is not emphasized. In this regard, effort should be made to increase the awareness among the nursing professionals regarding oral health.

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INTRODUCTION

Oral diseases in general and periodontal diseases in particular are multifactorial diseases associated with several risk factors by three ways

- Shared risk factors
- Sub gingival bio films acting as reservoirs of gram negative bacteria
- Periodontium acting as a reservoir of inflammatory mediators (Page, 1998)

Periodontal diseases as a major oral infection may affect the host susceptibility to increase the burden of systemic inflammation. Oral infection models have emerged as useful tool to study the hypothesis that infection is a risk factor for various systemic conditions (Marsh, 5th edition). Health care providers which include doctors, nursing professionals play a important role in educating people about the importance of good oral health and to identify and assess signs and symptoms

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of oral diseases. In the hospital set up nursing staff play a vital role in identifying patients oral hygiene practices and preventive information dissemination thereby contributing to health promotion. Therefore it is imperative that their oral health behaviour confirms expectation to the community people. Therefore the present study was conducted to assess the oral hygiene awareness and practices amongst nursing professionals of A.J Medical College, Manglore.

MATERIALS AND METHODS

A cross sectional study was conducted among the nursing staff of A.J Institute of medical science, Mangalore. A questionnaire containing 20 questions in English was distributed to 250 nursing staff. They were approached personally in the department and the purpose of the study was explained and they were asked to anonymously fill out a structured questionnaire that included the knowledge, attitude, and practice of oral hygiene. It was also mentioned that responses would remain confidential. The survey questionnaire consisted of questions that were categorized broadly to two parts. The first part evaluated oral hygiene practices including the knowledge (importance of brushing, type of brush used,

correct brushing technique), attitude (need to visit dentist) and practices (frequency of tooth brushing, frequency of changing the tooth brush). The second part of the questionnaire consisted of evaluating their knowledge regarding the relationship between oral health and systemic health.

Questionnaire

Personal details

NAME :
AGE :
SEX :
ADDRESS

Part - 1 Oral Hygiene Practices

1. How many times do you brush your teeth?
a. Once daily b. Twice daily
2. Which method do you use to brush your teeth?
a. Horizontal b. Vertical c. Circular
3. What type of brush do you use to brush your method?
a. Soft bristle b. Hard bristle c. Medium bristle
4. Do you use any interdental aids?
a. Yes b. No
5. Do you know the importance of night brushing?
a. Yes b. No
6. How often you change your tooth brush?
a. Once in 3 months b. Once in 6 months c. Once in a year
7. Do you think regular visit to dentist is necessary?
a. Yes b. No

Part 2: Oral hygiene awareness and relation to systemic Health

8. Are you aware of all the dental specialities?
a. Yes b. No
9. Do you think it is important to examine patient's mouth on admission?
a. Yes b. No
10. Do you think poor oral hygiene may increase the risk for cardiovascular disease?
a. Yes b. No c. I dont know
11. Do you think oral hygiene has a role in systemic health?
a. Yes b. No c. I dont know
12. Do you think maintaining oral hygiene is as important as general health?
a. Yes b. No c. I dont know
13. Are you aware that diabetic patients are at increased risk for oral infection?
a. Yes b. No c. I dont know
14. Are you aware that smoking, alcohol and tobacco chewing are risk factors for oral cancer?
a. Yes b. No c. I dont know
15. Are you aware of periodontal disease and its relation to diabetes mellitus?
a. Yes b. No c. I dont know
16. Are you aware of drugs which cause gingival enlargement ?
a. Yes b. No
17. if so, which drugs
a. Anti epileptic drugs
b. Calcium channel blockers
c. Immunosuppressants
d. Others

18. Are you aware of the nosocomial infections in hospital patients?
a. Yes b. No
19. Are you aware of gum bleeding on patients with anticoagulants?
a. Yes b. No
20. Do you refer patients to dental OPD regarding their oral health?
a. Yes b. No

Statistical Analysis

After the completion of the study the questionnaire were analyzed statistically to obtain the results in terms of percentage. Data was entered into Microsoft excel and analyzed using SPSS version 19.0. The completed questionnaires which consisted descriptive statistics like oral hygiene practices including the demographic information were calculated for response items in terms of percentages

RESULTS

A total of 250 participants with the age group of 25- 50 yrs were included in the study.

Awareness regarding oral hygiene practices

- Majority of the participants about 97 % of them knew the importance of maintaining oral hygiene whereas only 3% were not aware of it .
- 88.0 % of the participants brushed twice daily where as 12 % brushed their teeth once daily. (Figure - 1)
- Regarding the method of brushing, about 40% of them used vertical method, 39% used horizontal method and 21% used circular method of brushing technique. (Figure - 2)
- 52.5 % of the participants were not aware of the importance of night brushing whereas 42.5% brush their teeth at night regularly.
- About 63% of the participants did not use any interdental aids along with tooth brushing whereas 37 % used interdental aids.
- Among all the participants about 20 % used hard bristle tooth brush, 37% used medium bristle whereas 43 % used soft bristle. (Figure -3)
- In response to the question 'how often you change your brush' it was observed that about 32% participants changed their brush Once in 3 months, 36% changed their brush once in 6 months. (Figure - 4)

Participants knowledge regarding importance of oral health

- Among all the participants, 38.5% knew the different dental specialities whereas 61.5 % were not aware of all the specialities
- In response to the question "is it important to examine patients mouth on admission" all the participants agreed to it .
- Majority of the participants, about 98.5 % suggested patients to dental OPD regarding their oral health whereas only 3 % did not.

Participants knowledge about systemic and oral health

- Among all participants only 49.5 % were aware of the relationship between diabetes mellitus and periodontal disease, 28.5 % reported that no relationship exists, 22.5% were not aware of it. (Figure 6)
- Regarding poor oral hygiene and the increase of cardiovascular disease among 78 % of the participants were aware of it whereas 22% were not aware of it (Figure 5)
- All the participants (100 %) were aware of the increased gum bleeding on patients with anti coagulants

Participants Knowledge Regarding Nosocomial Infections

- All the participants (100%) were aware of the nosocomial infections in hospitalised patients.

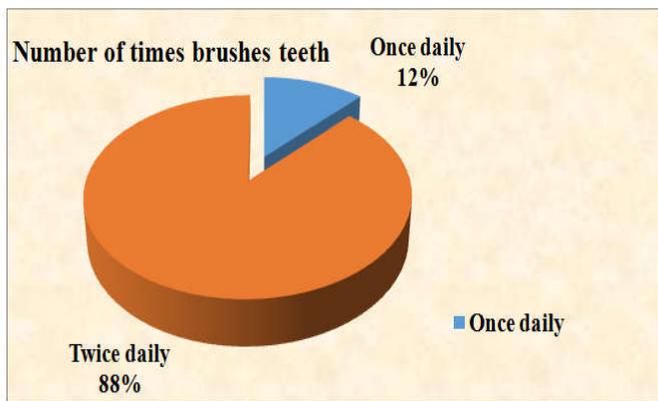


Fig. 1. Frequency of Tooth Brushing

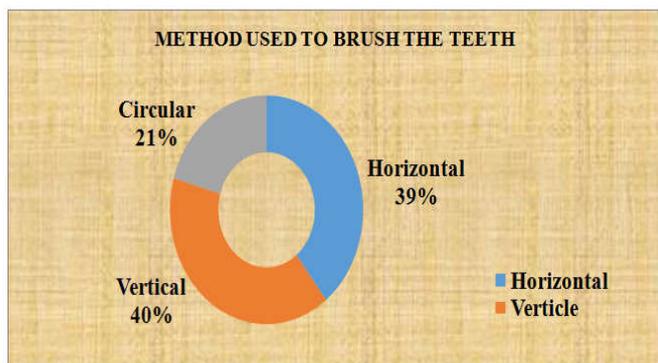


Fig. 2. Method of Brushing

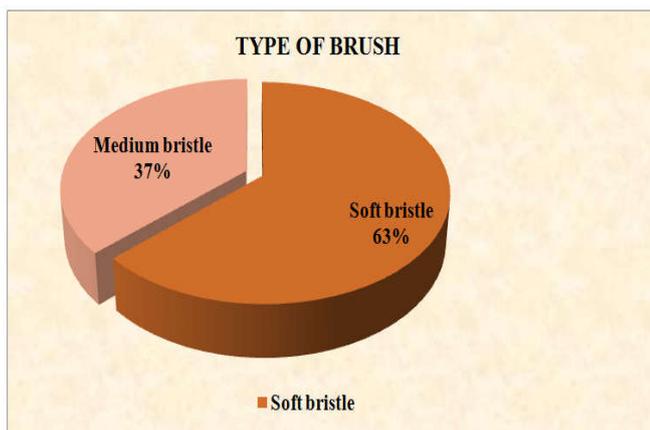


Fig. 3. Type of Brush



Fig. 4. Frequency of changing tooth brush

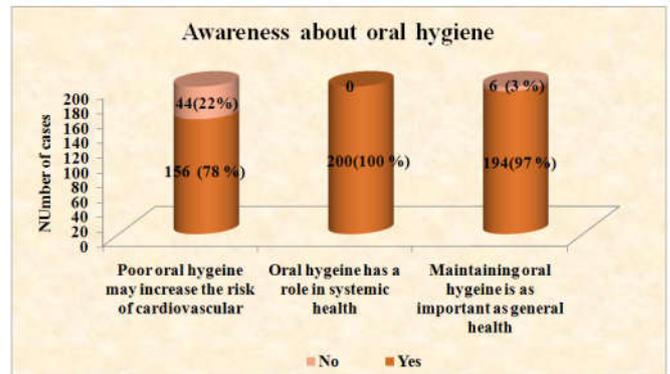


Fig. 5. Relationship Between Systemic Health And Oral Health

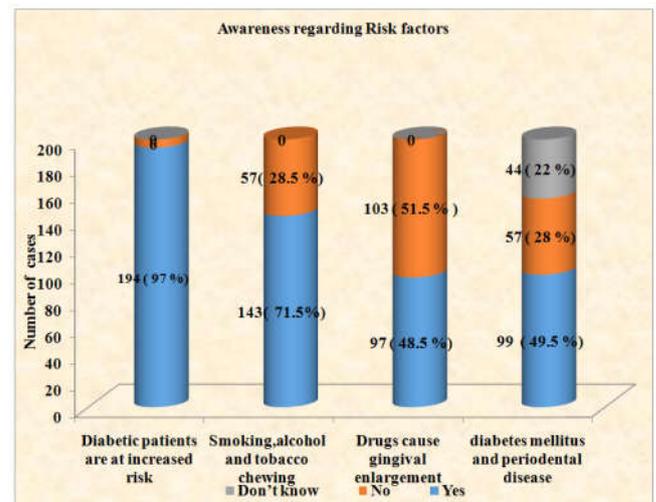


Fig. 6. Relation between Systemic Health and Oral health

DISCUSSION

Efficient health care delivery is a product of cooperation between every member of the health team. One of the main challenges toward this integration is the lack of interest, knowledge and education for non-dental health care providers (physicians, pharmacists, nurses) for oral and dental health. To improve health care providers' knowledge and attitudes, collaboration between regular health care and oral health care has to be included in health care education (Relf *et al.*, 2009; Naidoo *et al.*, 2007). A formal training of attending nurse students in the recognition prevention and safe management of oral diseases is required (Wårdh *et al* 2000, 2008). Hence the present study, designed to determine dental awareness, knowledge and attitude among nursing staff becomes relevant as findings from this study is expected to throw more light into

the importance of maintaining close inter-relationship between medical and dental team. Majority of the participants in the study brushed their teeth twice daily which is in contrast to the study conducted by Safaa *et al* (Safaa, 2013) in which almost half of the respondents brushed their teeth once daily in the morning, and only a very low percentage of them used to brush their teeth more than twice daily. Similarly Almost all the participants were not aware of the type of tooth brush to be used, this finding is similar to the finding of Al Beiruti⁹ who reported that most of the nurses were not aware about the type of toothbrush. Contraary to this the study conducted by In the present study most of the participants were not aware of the importance of night brushing. This missing and very basic method of maintaining oral hygiene is a clear indication of lack of awareness. The results are contrary to the study conducted by Navya *et al* (Muttineni, 2014), Baseer *et al* (Baseer, 2012), Al-Omari *et al* (2005), in which all almost half of the participants used to brush their teeth before going to bed at night. 32.5% participants suggested that every individual should change their toothbrush once in 3 months; these findings are in accordance with the study conducted by Saha *et al* (2000), Asif *et al* (2014), Deogade *et al* (2017), in which they reported that the majority of the nurses changed their toothbrush every 3 months. Almost, In the present study, majority of participants have accepted that there is a relation between oral health and general health and is in accordance with study conducted by Andersson *et al* (2007) who reported that nurses were aware of impact of oral health in elderly patients. In contrast, Heinrichs and Famili *et al* (2011) reported that most nurses and physicians in their university/health science center, geographic location, and in general were not knowledgeable about oral health and its relationship to systemic disease Only few participants were aware of the relationship between diabetes mellitus and periodontal disease and also the risk factors associated with poor oral hygiene which is similar to the study conducted by Elijah *et al*. (2016). This shows the lack of basic dental knowledge among medical health workers. Collaboration between oral health care professionals and general health care professionals could raise awareness of the importance of oral health for the general health. The future of oral health care will require that dental schools work in conjunction with other health care team members to promote periodontal health and teach medical professionals about the relationship between periodontal health and systemic health.

Limitations of the Study

This study was a cross sectional study done in one of the medical colleges in the city. Since it is a self reported data, oral health practices and awareness may be biased through over and under reporting due to social desirability. To get accurate information on the population level, a large scale survey may be required which gives a representative picture about the oral hygiene practices amongst the nursing professional.

Conclusion

Nurses and associated health care providers are focused on educating patients regarding diet, exercise, medications with the goal of reducing long term complications but oral health is not emphasized. In this regard, effort should be made to increase the awareness among the nursing professionals regarding oral health.

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