

Knowledge and Attitude about Oral Health among Health Care Workers in King Khalid Hospital Al-Kharj Kingdom of Saudi Arabia

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ABSTRACT

Introduction: Oral health is affected by oral health knowledge and behaviours. Oral health practice is dependent on oral health knowledge which can remain for life time once learned. Without good oral health knowledge and attitude, limited gain will be seen. It is important to review the knowledge, the attitude of oral health among health care workers, as they can influence many people in educating about oral health with whom they come in contact at the community levels. **Objectives:** To assess and compare Knowledge and Attitude towards oral health among Health Care professionals working at King Khalid Hospital Al-kharj. **Methodology:** A specially designed questionnaire was used consisting of 15 questions to assess the knowledge and attitude among health care workers. A total of 431 HCWs completed a structured questionnaire containing information related to knowledge and attitude towards oral health. Data analysis was done using the SPSS version 20. Chi-square test was used with 95% confidence interval. **Results:** Majority of participants were doctors (35%) followed by nurses (26%) and least were dieticians (7%). Overall knowledge score for Doctors was 83.09%, Nurses 47.29%, X-Ray Technicians 49.75%, Pharmacists (68.62%) and Dieticians 59.49% the result was statistically significant ($p < 0.05$) Overall favourable attitude exhibited by was highest among Doctors (88.78%) and least among X-Ray technicians. **Conclusions:** Among HCWs Doctors showed good knowledge in regarding oral health. For other health care, professional groups awareness programs must be conducted frequently to boost up the knowledge related to oral health.

KEYWORDS: Health Care Workers, Knowledge, attitude, Oral health, Oral Hygiene

INTRODUCTION

Health is a valuable asset not only for individual, but also for the social system. A nation may progress more rapidly when the population is healthier and lead a productive life.¹ It has been well known that optimal health cannot be attained or maintained independent of oral health², the factors affecting general health also affect oral health. Oral disease qualifies as major public health problems owing to their higher prevalence and significant social impact. Oral health knowledge is considered to be crucial for developing healthy behaviours, and it is known fact that, more the knowledge better the oral health.³

Many systemic diseases are related to oral conditions and thus general health requires efforts of health care professionals. Compared to dental professionals Health care professionals are more likely to come in contact with general population who are underserved, vulnerable and needy; in the community health care workers (HCWs) are the one who provides preventive, curative or rehabilitative services to the people or families. Health care workers can identify risk factors associated with lifestyle, culture or individuals health status. They can also find individuals oral health determinants when they do general health screening hence they can identify

easily those who require dental preventive services and can detect health problems⁴ so health care professionals can be utilized to impart oral health education at the community levels.

Obstacles to health care professional attending to oral health prevention can relate to their knowledge, work environment, and attitudes.⁵ This can be overcome by explaining about oral health, by training physicians, nurses, and other health professionals to identify risk for oral disease. Increasing awareness about oral health, in general, can increase their knowledge and skills in imparting oral health care at community levels. However before health care professionals are used as oral health educators, it is important to know their existing knowledge and attitude towards oral health.

Till today no studies were conducted in Al-kharj related to oral health knowledge and attitude among health professionals hence, the present study was undertaken to assess the oral health knowledge and attitude among the various health professionals working in King Khalid Hospital Al-kharj.

Objectives:

- To assess knowledge and attitude of Health Care

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- Workers working in King Khalid Hospital Al-kharj.
- To compare oral health knowledge among Health Care Workers working in King Khalid Hospital Al-kharj.

MATERIALS AND METHODS

The Present cross-sectional study was conducted after obtaining ethical approval from the Institutional Review Board of the college of dentistry, Prince Sattam Bin Abdulaziz University and permission from King Khalid Hospital Al-kharj. The study population included all HCWs such as doctors, nurses, technicians, pharmacists and dieticians aged 20 years and above working at King Khalid Hospital Al-kharj. Informed consent was taken from the participants prior to the study. Those participants denying giving consent were excluded.

A close ended questionnaire was designed consisting of Information related to age, gender, education, occupation. 10 questions were regarding oral health Knowledge and hygiene: brushing and dental problems. 5 questions were asked related to attitude towards oral health such as the importance of oral health, the importance of dental treatment, etc. For all the questions responses were dichotomized. The correct or incorrect answer for knowledge related questions and as favorable or non favorable attitude for attitude related questions.

Questions were explained to all the participants, confidentiality of their responses was assured and maintained. Participants were requested to fill the questionnaire individually. The survey was conducted in a scheduled manner; participants were given sufficient time to complete the questionnaire and completed questionnaire were collected immediately.

Statistical Analysis: Data analysis was done using the SPSS version 20. Chi-square test was used to check the statistical significant difference in frequency of categorical data between HCWs. Data was analyzed at 95% confidence interval with a $p < 0.05$ considered as statistically significant.

RESULTS

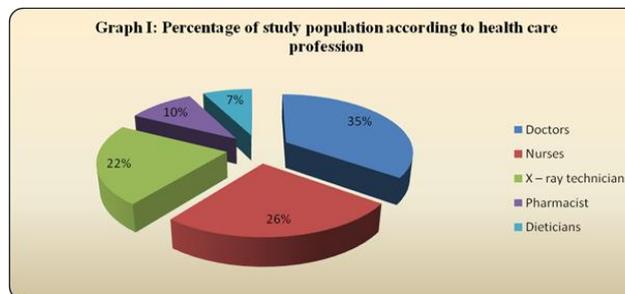
A total of 431 HCWs participated in the present study (Table I) out of which 178 were Doctor (115 Males and 63 Females), 130 Nurses (86 Males and 44 Females), 34 X – ray technicians (20 Males and 14 Females), 51 Pharmacist (30 Males and 21 Females) and 38 dieticians (24 Males and 14 Females).

Graph I shows the percentage of the study population according to their profession. Majority of participants were doctors (35%) followed by nurses (26%), and least were dieticians (7%).

Table II and III shows correct responses to questions related to knowledge by health care workers. There was a statistical significant difference observed for all questions related to knowledge according to the profession ($p < 0.05$), with doctors having more knowledge than other health care workers. Overall knowledge score for Doctors

	Males	Females	Total
Doctors	115	63	178 (41.29)
Nurses	86	44	130 (30.16)
X – ray technicians	20	14	34 (25.95)
Pharmacist	30	21	51 (11.83)
Dieticians	24	14	38 (8.8)
Total	267	164	431

Table I shows distribution of study participants according to profession



Health care workers	Purpose of tooth brushing	Interval of changing brush	Reason for gum disease	Reason for tooth decay	Inter dental aids
Doctors	122 (68.5)	105 (59.0)	150 (84.3)	161 (90.40)	140 (78.7)
Nurses	45 (34.6)	40 (30.76)	52 (40.0)	48 (36.9)	70 (53.8)
X – ray technicians	14 (41.2)	12 (35.3)	18 (52.9)	15 (44.1)	20 (58.8)
Pharmacists	31 (60.8)	30 (58.8)	40 (78.4)	38 (74.5)	41 (80.4)
Dieticians	24 (63.2)	15 (39.5)	25 (68.5)	28 (73.7)	20 (52.6)
χ^2 and p value	$\chi^2 = 39.29$ $p < 0.001$ HS	$\chi^2 = 23.64$ $p < 0.001$ HS	$\chi^2 = 71.86$ $p < 0.001$ HS	$\chi^2 = 104.04$ $p < 0.001$ HS	$\chi^2 = 30.00$ $p < 0.001$ HS

Table II: Correct responses to knowledge questions by health care workers

Health care workers	Number of times you need to brush	Reason for oral cancer	Method of preventing gum disease	Oral health is interlinked with general health	Malaligned teeth can be treated
Doctors	161 (90.4)	148 (82.6)	160 (89.9)	165 (92.7)	168 (94.4)
Nurses	65 (50.0)	62 (52.3)	72 (55.4)	85 (65.4)	70 (53.8)
X – ray technicians	16 (47.1)	14 (41.17)	20 (58.8)	22 (64.7)	18 (52.9)
Pharmacists	34 (66.7)	28 (45.1)	37 (72.5)	40 (78.40)	36 (70.6)
Dieticians	20 (52.6)	14 (63.2)	20 (52.6)	27 (71.1)	22 (57.9)
χ^2 and p value	$\chi^2 = 72.33$ $p < 0.001$ HS	$\chi^2 = 60.50$ $p < 0.001$ HS	$\chi^2 = 55.67$ $p < 0.001$ HS	$\chi^2 = 39.78$ $p < 0.001$ HS	$\chi^2 = 76.71$ $p < 0.001$ HS

Table III: Correct responses to knowledge questions by health care workers

was 83.09%, Nurses 47.29%, X-Ray Technicians 49.75%, Pharmacists (68.62%) and Dieticians 59.49%.

Table IV shows the percentage of favorable expressed by health care workers. There was a statistical significant difference observed for all questions related to attitude according to the profession ($p < 0.05$) except Treatment of oral disease which was statistically non significant

($p > 0.05$). Overall favorable attitude exhibited by health care workers was Doctors (88.78%), Nurses (66.12%), X-Ray Technicians (52.94%), Pharmacists (83.14%) and Dieticians (81.04%).

Health care workers	Do you think oral health is important	Regular visit to dentist is necessary	Replacement of missing tooth is necessary	Smoking is bad habit	Treatment of oral disease is important
Doctors	175 (98.3)	160 (89.9)	145 (81.5)	170 (95.5)	140 (78.7)
Nurses	80 (61.5)	90 (69.2)	70 (53.8)	100 (76.9)	90 (69.2)
X – ray technicians	16 (47.1)	20 (58.8)	18 (52.9)	16 (47.1)	20 (58.8)
Pharmacists	39 (76.5)	45 (88.2)	42 (82.4)	46 (90.2)	40 (78.4)
Dieticians	30 (78.9)	32 (84.2)	30 (78.9)	28 (73.7)	34 (89.5)
χ^2 and p value	$\chi^2 = 84.68$ $p < 0.001$ HS	$\chi^2 = 32.97$ $p < 0.001$ HS	$\chi^2 = 37.59$ $p < 0.001$ HS	$\chi^2 = 59.86$ $p < 0.001$ HS	$\chi^2 = 12.93$ $p = 0.012$ NS

Table IV: positive attitude of health care workers towards oral health

DISCUSSION

The major concern of oral health educators is to impact a positive oral health knowledge and behaviour in the society.⁶ This knowledge is usually obtained from information which subsequently translates into an action. Health care professional's encounters far more underserved population who needs oral care than dental care professionals.⁴ Therefore, it becomes necessary that these health care providers are trained with the various risk factors of oral diseases so that they can refer the patients or can suggest appropriate decisions.

Attitudes toward oral health determine the condition of the oral cavity. Consumption of sugary substances and an improvements in oral hygiene has resulted in decreased prevalence of dental caries and periodontal diseases.⁷ Health-related behaviour is affected by Oral health knowledge and is an essential requisite.³ According to Freeman R et al and Kay EJ et al cross sectional studies can have only a weak association between knowledge and behaviour.^{8,9}

In the present study, Oral health knowledge was calculated by evaluating the correct response of subjects to various questions in the questionnaire. The level of oral health knowledge was significantly higher among the doctors (83.09%), followed by the pharmacist (68.62%) and dieticians (59.49%) compared to nursing (47.29%) and X-Ray technicians (49.75%). The results are in accordance with the study conducted by Kaur S⁴ et al. this could be due to the fact that doctor's involvement with the dental patients will be more and they will be having dental department postings during graduation. Hence, doctors have higher oral health knowledge score as compare to other health professionals. This suggests the need for incorporating oral health into the curriculum of the nursing and technician's pharmacy and dietician's curriculum. Studies conducted by Prasad et al.¹⁰ and

Sharda and Shetty¹¹ among health care professional students yielded similar results, however, in the study of Prasad *et al*¹⁰ though the doctors had the significant higher knowledge and attitude score, the pharmacy students had significant higher behavior score.

The present study revealed more oral health knowledge among pharmacist when compared to Nursing, X-ray Technician or Dieticians. The knowledge is more compared to a study by Rajiah K et al¹² conducted among pharmacy students who found average knowledge score. The explanation could be pharmacists work in community-based pharmacies in which many people may seek oral health advice and information about oral health care products. Frequent interaction between oral health professionals and pharmacists might be the reason for increased oral health knowledge among pharmacists. Another reason can be frequent contact between medical representatives and pharmacists who explains about the oral health care products.

Reacting to certain situation in certain way, understanding events is depending on attitude of a person.¹³

Overall favourable attitude varied from 88.78% of Doctors to X-Ray 52.94% of X-ray Technicians. Pharmacists (83.14%) and Dieticians (81.04%) were having the better overall attitude than nursing professional (66.12%). The result is similar to the reported studies by Sharda and Shetty¹¹ Hoogstraten and Broer¹⁴ and Timmerman *et al*.¹⁵ This can be due to working in a medical city with the proximity of dental centre.

Further studies are needed to know management of dental emergencies by the general physicians; such studies may help to determine the need for changes in curriculum of medical education, also need of selecting topics for continuing education courses.

In the present study, 98.3% doctors told oral health is important which was in accordance with Anup et al.¹⁶ Health is the universal human need. It is known fact that optimal health cannot be attained without good oral health. Various health professionals working together constitute the health team to provide medical care for the patient and the society at large. Doctors, nurses, pharmacists, technicians, dieticians work in collaboration to provide complete medical care to the patient and society.

The prevalence of oral disease is more in the society. The reasons may be neglect, scarcity of dental manpower, illiteracy, etc. Many people consider dental treatment as their least priority. Henceforth, health care workers deal with several patients daily, much more than those dealt by the dentists.

No studies were conducted regarding the oral health-related knowledge and attitude of various health professionals in King Khalid Hospital, Al-kharj so it was necessary to know the role played by them in providing oral health care for hospital patients and also at

community level, which may affect the behavioural change. Among HCWs Doctors has good knowledge and attitude towards the oral health.

Limitation: This was a cross sectional study which included a small sample and was limited to one hospital. Causality could not be established due to the cross sectional research design, and thus a longitudinal study is needed to understand the possible determinants of oral hygiene and its oral health seeking behaviour among HCWs in different settings. The present study represented only King Khalid Hospital Al-kharj region; the results cannot be generalized to cover all HCWs in Saudi Arabia. At the same time, we have not assessed oral hygiene status and treatment needs among health care professionals. Due to lack of time and resources, we couldn't assess practices of oral health among health care workers.

CONCLUSION

Variations in oral health knowledge exist among different health professionals. Oral health education programs for various professionals are required to increase knowledge, understanding, and practices that foster improved oral health.

According to present study oral health knowledge among the HCWs working in King Khalid Hospital was average except doctors because of higher literacy levels and exposure during graduation.

There is a need for increasing the knowledge of HCWs so that it can have a positive oral health attitude and practices. Therefore, we feel that awareness programmes to be conducted among these HCWs. A "sound strategy" should be developed collectively by the oral health professionals. Oral health topics including preventive dentistry should be incorporated in the curriculum of Health Care Workers. Need to consider oral health topics in continuing medical education to improve their knowledge of oral health.

REFERENCES

- Sharda AJ, Shetty S. Relationship of periodontal status and dental caries status with oral health knowledge, attitude and behavior among professional students in India. *Int J Oral Sci.* 2009;1(4):196-206.
- Prasad AK, Shankar S, Sowmya J, Priyaa CV. Oral health knowledge attitude practice of school students of KSR Matriculation School, Thiruchengode. *J Indian Acad Dent Spec.* 2010;1:5.
- Ashley FP. *Prevention of Dental Disease.* Oxford UK: Oxford University Press; 1996. Role of dental health education in preventive dentistry. Murray JJ, editor; pp. 406-414.
- Kaur S, Kaur B, Ahluwalia SS Oral Health Knowledge, Attitude and Practices amongst Health Professionals in Ludhiana, India. *Dentistry.* 2015;5:315
- Rabiei S, Mohebbi SZ, Patja K, Virtanen JI. Physicians' knowledge of and adherence to improving oral health. *BMC Public Health.* 2012;12: 855
- Safaa Rashad Mahmoud. oral health knowledge, attitude and behavior of nursing school students in assiut city. *AAMJ.* 2013;11(3):27-50.
- Jassem Al-Ansari, Eino Honkala and Sisko Honkala. Oral health knowledge and behavior among male health sciences college students in Kuwait. *BMC Oral Health.* 2003 May7;3(1):2
- Freeman R, Maizels J, Wyllie M and Sheiham A The relationship between health related knowledge, attitudes and dental health behaviours in 14-16- year-old adolescents *Community Dent Health.* 1993;10: 397-404
- Kay EJ and Locker D. A systematic review of the effectiveness of health promotion aimed at improving oral health *Community Dent Oral Epidemiol.* 1998;26:132-144
- Prasad KV, Javali SB, Pralhad D. Oral health knowledge, attitude and behaviors of professional college students - A factor analysis. *J Indian Assoc Public Health Dent.* 2005;2005:9-13
- Sharda AJ, Shetty S. A comparative study of oral health knowledge, attitude and behaviour of non-medical, para-medical and medical students in Udaipur city, Rajasthan, India. *Int J Dent Hyg.* 2010;8:101-9
- Rajiah K, Ving CJ. An assessment of pharmacy students' knowledge, attitude, and practice toward oral health: An exploratory study. *J Int Soc Prev Community Dent.* 2014;4(Suppl 1):S56-62
- Badran IG. Knowledge, attitude and practice the three pillars of excellence and wisdom: A place in the medical education. *East Mediterr Health J.* 1995;1:8-16
- Hoogstraten J, Broers NJ. The dental attitudes questionnaire: Comparing two response formats. *Community Dent Oral Epidemiol.* 1987;15:10-3
- Timmerman EM, Hoogstraten J, Meijer K, Nauta M, Eijkman MA. On the assessment of dental health care attitudes in 1986 and 1995, using the dental attitude questionnaire. *Community Dent Health.* 1997;14:161-5.
- Anup.N, Gautam Biswas, Shravani G, Priyanka Sontakke, Himanshu Kumawat, Prateek Jain. Knowledge, Attitude and Practice of dental treatment among medical officers at PHC's of Amer and Jamwaramgarh Tehsil, Jaipur, Rajasthan – A Pilot Study. *Journal of Dental and Medical Sciences.* 2014;13(12):115-120

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