

Oral hygiene status among Dental Students of School of Dentistry at University of Sulaimani

¹Dr. Didar Sadiq Hama gharib, ²Dr. Harem Jaafar Hama Rashed

¹BDS, MSc Conservative Dep. School of Dentistry, Faculty of Medical Sciences, University of Sulaimani.

²BDS, MSc Periodontology Dep. School of Dentistry, Faculty of Medical Sciences, University of Sulaimani.

Abstract:

Objectives: To evaluate oral health attitudes and behavior among a group of dental students in Sulaimani, Iraq and to compare the oral health attitudes of students of different years of dental school.

Methods: A self-administered questionnaire based on a modified version of the Hiroshima University Dental Behavior Inventory (HU-DBI) was administered to 150 dental students.

Results: No significant differences were observed by year of study for having brushing their teeth twice per day (Q1), My gums tend to bleed when I brush my teeth (Q5), worry about having bad breath (Q6), had been to a dentist office before (Q7) put off going to the dentist until I have toothache (Q8). Strongly significant differences ($P < .001$) were observed between by year of study for worrying about change my tooth brush every 3 months (Q2), using tooth floss on regular basis (Q3) and do use mouthwash on regular basis (Q4).

Conclusions: Among dental students, overall understanding of oral health behaviors was good, despite the fact that there was shortage in their insight in a few areas. The oral health attitudes and behavior of dental students enhanced with increasing level of education

Key words: Oral health; Dental students; Questions; Oral attitudes; Oral health behavior.

I. Introduction

The prevention of oral disease the most accepted and efficient method for ensuring oral health. ^[1] Oral health is now recognized to be equally important in relation to general health. ^[2]

Dental students, the future leaders in oral health care, have an important role in educating and promoting public oral health ^[1-3]. Dental students in general have been found to have a positive attitude towards oral health ^[4, 5]. Oral health behavior of dental students must be improved if they are to serve as positive models for their patients, families and friends ^[6-9]. There were several studies about oral health attitudes and behavior of dental students ^[10-25]. Most of these researches were carried out using the Hiroshima University Dental Behavioural Inventory (HU-DBI) questionnaire developed by Kawamura ^[10-20]. HU-DBI has first been administered in Japan and demonstrated to be a useful instrument in understanding the perceptions of patients and oral health behavior. Then, it has been used for evaluating the differences in oral health behaviors between dental students from different countries due to the curriculum dissimilarities of dental students and variety between the cultures ^[26]. Some participants in the survey were from all academic years ^[10-17], and others were from only final years of university ^[20-22]. Peker et al. ^[15] and Yildiz et al. ^[16] compared the oral health attitudes and behavior of preclinical students to clinical students. Tseveenjav et al. ^[24] evaluated cross-sectional and longitudinal comparison among clinical dental students. Rong et al. ^[25] administered HU-DBI questionnaire to medical and dental students when they were in years 1 to 5 of their Dental school. The purpose of this study was to evaluate the self-reported oral health attitudes and behavior among a group of dental students in Sulaimani, Iraq and to compare oral health attitudes among students in different years of study in dental school.

II. Materials and Methods

This study was carried out at the School of Dentistry University of Sulaimani, Sulaimani, Kurdistan region, Iraq during the academic year 2014-2015. One hundred and fifty students, with 30 students each from the 1st, 2nd, 3rd, 4th and 5th years of school participated in this study (Table 2). Participation was voluntary. A modified English version of the HU DBI survey (Table1), which consists of eight dichotomous responses (yes-no) was used in this study.

The questionnaires were collected immediately after completion. The data were tabulated and analyzed. SPSS v.15.0 was used for analysis of the data. The oral health attitudes and behavior of dental students in the different years of study compared by using Chi-square tests.

Analyses of variance were used to compare the mean levels of realization in subjects from each school year. A P-value less than 0.05 were considered statistically significant, and a P-value less than 0.001 was considered strongly significant.

III. Results

A total of 150 dental students from the 1st, 2nd, 3rd, 4th and 5th years participated in the study. Sample description by year of study is given in Table 2. The percentages of “yes” answers related to years of study are shown in Table 3. Out of 8 questions, 3 questions revealed significant differences by year.

No significant differences were observed by year of study for having brushing their teeth twice per day (Q1), My gums tend to bleed when I brush my teeth (Q5), worry about having bad breath (Q6), had been to a dentist office before (Q7) put off going to the dentist until I have toothache (Q8).

Strongly significant differences ($P < .001$) were observed between by year of study for worrying about change my tooth brush every 3 months (Q2), using tooth floss on regular basis (Q3) and do use mouthwash on regular basis (Q4).

IV. Discussion

Dental students should be a fine example of positive oral health behavior and attitudes to their families, patients and friends. In general, they have been observed to be motivated about maintaining a good oral health. Self reported oral hygiene practices among dental students of University of Sulaimani and differences by year of study were evaluated.^[27]

In accordance with other studies, 74% of students brushed their teeth twice daily.^[28] The percentage in this sample is higher than that reported from Kuwait and Jordan where only one- third and two- thirds of the students brushed their teeth twice a day respectively.^[29]

In this study 30% of the students had visited a dentist previously. This proportion was much lower than the 86% among Jordanian students. About 68% of dental students put off going to the dentist until they had a toothache. Similar frequencies were seen among dental students in Japan (56%), Hong Kong (67%), Korea (65%), and China (64%). The Asian ways of dealing with health and disease are different from traditional western concepts in that most of the health beliefs and practices are learnt and practiced in the home, and professional help is sought only when home remedies fail. The strong reliance on self-care may on the one hand undermine the effectiveness of organized oral health care by delaying dental visits or on the other hand make this unnecessary.^[30]

Highly significant differences ($P < .001$) were seen by year of study for changing tooth brushes, using dental floss on regular basis and using mouth rinse on a regular basis. In accordance with several studies the results of this study confirmed that oral health attitudes and behavior improved with increasing levels of education.^[31] This improvement in personal oral health among dental students has been shown to be engaged to their dental education experience.^[4] Oral health attitudes and behavior seem to rise significantly in the fourth and fifth years of dental School. Additionally, the responses of the students in the fourth and fifth years were very similar.^[32]

V. Conclusions

This study revealed that the overall understanding of oral health behaviors among the dental students was good, despite the fact that there were shortages in their insight in a few areas. The oral health attitudes and behavior of dental students enhanced with increasing level of education

References

- [1]. Khami MR, Virtanen JI, Jafarian M, Murtooma H. Prevention-oriented practice of Iranian senior dental students. *Eur J Dent Educ.* 2007; 11: 48-53.
- [2]. Gallagher EB, Moody PM. Dentists and the oral health behavior of patients: a sociological perspective. *J Behav Med.* 1981; 4: 283-295.
- [3]. Frazier PJ. Public health education and promotion for caries prevention: the role of dental schools. *J Public Health Dent.* 1983; 43: 28-42.
- [4]. Cortes FJ, Nevot C, Ramon JM, Cuenca E. The evolution of dental health in dental students at the University of Barcelona. *J Dent Educ.* 2002; 66: 1203-1208.
- [5]. Brusokaite J, Januleviciute I, Kukleris A, Zekonis G. Evaluation of dental health of dental students at Kaunas University of Medicine. *Stomatologija, Baltic Dent Maxillofac J.* 2003; 5: 133-136.
- [6]. Umsan S, Bhat SS, Sargod SS. Oral health knowledge and behaviour of clinical medical, dental and paramedical students in Mangalore. *J Oral Health Comm Dent.* 2007; 1: 46-48.
- [7]. Al-Omari QD, Hamasha AA. Gender specific oral health attitudes and behaviour among dental students in Jordan. *J Contemp Dent Pract.* 2005; 6: 107-114.
- [8]. Dagli RJ, Tadakamadla S, Dhanni C, Duraiswamy P, Kulkarni S. Self-reported dental health attitude and behaviour of dental students in India. *J Oral Sci.* 2008; 50: 267-272.
- [9]. Freeman R. The psychology of dental patient care:5. The determinants of dental health attitudes and behaviours. *Br Dent J.* 1999; 187: 15-18.

- [10]. Al-Omiri MK, Barghout NH, Shaweesh AI, Malkawi Z. Level of education and gender-specific self-reported oral health behavior among dental students. *Oral Health Prev Dent.* 2012; 10: 29-35.
- [11]. Neeraja R, Kayalvizhi G, Sangeetha P. Oral health attitudes and behavior among a group of dental students in Bangalore, India. *Eur J Dent.* 2011; 5: 163-167.
- [12]. Polychronopoulou A, Kawamura M. Oral self-care behaviors: comparing Greek and Japanese dental students. *Eur J Dent Educ.* 2005; 9: 164-170.
- [13]. Kombayashi T, Kwan SYL, Hu DY, Kajiwaru K, Sasahara H, et al. A comparative study of oral health attitudes and behavior using the Hiroshima University-dental behavioural inventory (HU-DBI) between dental students in Britain and China. *J Oral Sci.* 2005; 47: 1-7.
- [14]. Doğan B. Differences in Oral Health Behavior and Attitudes Between Dental and Nursing Students. *MÜSBED* 2013; 3: 34-40.
- [15]. Peker K, Uysal O, Bermek G. Dental training and changes in oral health attitudes and behaviors in Istanbul dental students. *J Dent Educ.* 201; 74: 1017-1023.
- [16]. Yildiz S, Dogan B. Self Reported Dental Health Attitudes and Behaviour of Dental Students in Turkey. *Eur J Dent.* 2011; 5: 253-259.
- [17]. Peker I, Alkurt MT. Oral health attitudes and behavior among a group of Turkish dental students. *Eur J Dent.* 2009; 3: 24-31.
- [18]. Al-Wahadni AM, Al-Omiri MK, Kawamura M. Differences in self-reported oral health behavior between dental students and dental technology/dental hygiene students in Jordan. *J Oral Sci.* 2004; 46: 191-197.
- [19]. Rahman B, Al Kawas S. The relationship between dental health behavior, oral hygiene and gingival status of dental students in the United Arab Emirates. *Eur J Dent.* 2013; 7: 22-27.
- [20]. Komobayashi T, Kawamura M, Kim KJ, Wright FA, Declerck D, et al. The hierarchical cluster analysis of oral health attitudes and behavior using the Hiroshima University-dental behavioural inventory (HU-DBI) among final year dental students in 17 countries. *Int Dent J.* 2006; 56: 310-316.
- [21]. Messer LB, Calache H. Oral health attitudes and behaviors of final-year dental students. *Eur J Dent Educ.* 2012; 6: 144-155.
- [22]. Khami MR, Virtanen JI, Jafarian M, Murtomaa H. Oral health behavior and its determinants amongst Iranian dental students. *Eur J Dent Educ.* 2007; 11: 42-47.
- [23]. Sharda AJ, Shetty S. A comparative study of oral health knowledge, attitude and behavior of first and final year dental students of Udaipur city, Rajasthan, India. *Int Dent Hygiene.* 2008; 6: 347-353.
- [24]. Tseveenjav B, Vehkalathi M, Murtomaa H. Time and cohort changes in preventive practice among Mongolian dental students. *Eur J Dent Educ.* 2003; 7: 177-181.
- [25]. Rong WS, Wang WJ, Yip HK. Attitudes of dental and medical students in their first and final years of undergraduate study to oral health behavior. *Eur J Dent Educ.* 2006; 10: 178-184.
- [26]. Kawamura M, Sasahara H, Kawabata K, Iwamoto Y, Konishi K, et al. Relationship between CPITN and oral health behaviour in Japanese adults. *Aust Dent J.* 1993; 38: 381-388.
- [27]. Neeraja, R., G. Kayalvizhi, and P. Sangeetha. "Oral health attitudes and behavior among a group of dental students in Bangalore, India." *European journal of dentistry* 5.2 (2011): 163.
- [28]. Ganss C, Schlueter N, Preiss S, Klimek J. Tooth brushing habits in uninstructed adult-frequence, technique, duration and force. *Clin Oral Invest* 2009;13:203-208.
- [29]. Al- Omari QD, Hamasha AA. Gender- specific oral health attitudes and behavior among dental students in Jordan. *J Contemp Dent Pract* 2005;6:107-114.
- [30]. Kawamura M, Wright FA, Declerck D, et al. An exploratory study on cultural variations in oral health attitudes, behavior and values of freshman dental students. *Int Dent J* 2005;55:205-211.
- [31]. Kawamura M, Spadafora A, Kim KJ, Komabayashi T. Comparison of United States and Korean dental hygiene students using Hiroshima University-Dental Behavioral Inventory (HU-DBI). *Int Dent J* 2002;52:156-162.
- [32]. Polychronopoulou A, Kawamura M, Athanasouli T. Oral self-care behavior in Japanese and Finish dental students. *Int Dent J* 2000;50:46-50.

Tables:

Table 1. A modified English version of HU-DBI survey used in our study.

| Items |
|---|
| Q1. I brushes my teeth twice daily. |
| Q2. I changes my tooth brush every 3 months. |
| Q3. I do use tooth floss on regular basis. |
| Q4. I do use mouthwash on regular basis. |
| Q5. My gums tend to bleed when I brush my |
| Q6. teeth. I worry about having bad breath. |
| Q7. I had been to a dentist office before. |
| Q8. I put off going to the dentist until I have toothache. |

Table 2. Sample description by year of study.

| CLASS | NUMBER OF SAMPLE | PERCENTAGE OF SAMPLE |
|----------------------|------------------|----------------------|
| 1 st year | 30 | 20% |
| 2 nd year | 30 | 20% |
| 3 rd year | 30 | 20% |
| 4 th year | 30 | 20% |
| 5 th year | 30 | 20% |

Table 3. Percentages and analysis of yes- no responses according to years of study.

| Question | Correct response | Total (n=150) | 1st year (n=30) | 2nd year (n=30) | 3rd year (n=30) | 4th year (n=30) | 5th year (n=30) | P value |
|----------|------------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------|
| Q1 | NO | 57(38%) | 16(53%) | 13(43%) | 9 (30%) | 11(37%) | 8 (27%) | 0.2122* |
| | YES | 93(62%) | 14(47%) | 17(57%) | 21(70%) | 19(63%) | 22(73%) | |
| Q2 | NO | 69(46%) | 21(70%) | 18(60%) | 15(50%) | 10(33%) | 5(17%) | 0.0002** |
| | YES | 81(54%) | 9 (30%) | 12(40%) | 15(50%) | 20(67%) | 25(83%) | |
| Q3 | NO | 84(56%) | 25(83%) | 20(67%) | 15(50%) | 12(40%) | 12(40%) | 0.0018** |
| | YES | 66(44%) | 5 (17%) | 10(33%) | 15(50%) | 18(60%) | 18(60%) | |
| Q4 | NO | 79(53%) | 23(77%) | 25(83%) | 16(53%) | 7 (23%) | 8 (27%) | 0.0001** |
| | YES | 71(47%) | 7 (23%) | 5 (17%) | 14(47%) | 23(77%) | 22(73%) | |
| Q5 | NO | 125(83%) | 26(87%) | 25(83%) | 26(87%) | 21(70%) | 27(90%) | 0.2598* |
| | YES | 25(17%) | 4 (13%) | 5 (17%) | 4 (13%) | 9 (30%) | 3 (10%) | |
| Q6 | NO | 82(57%) | 19(63%) | 17(57%) | 15(50%) | 15(50%) | 16(53%) | 0.8249* |
| | YES | 68(43%) | 11(37%) | 13(43%) | 15(50%) | 15(50%) | 14(47%) | |
| Q7 | NO | 105(70%) | 24(80%) | 20(67%) | 21(70%) | 22(73%) | 18(60%) | 0.5298* |
| | YES | 45(30%) | 6 (20%) | 10(33%) | 9 (30%) | 8 (27%) | 12(40%) | |
| Q8 | NO | 62(41%) | 12(40%) | 16(53%) | 11(37%) | 13(43%) | 10(33%) | 0.573* |
| | YES | 88(59%) | 18(60%) | 14(47%) | 19(63%) | 17(57%) | 20(67%) | |

* Non- significant

** Highly (Strongly) Significant