



Assessment of Periodontal Health Awareness among Law Students

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ABSTRACT:

Aim- To assess the awareness of periodontal health among law students, examining their knowledge, attitudes, and practices regarding oral hygiene, the prevention of periodontal diseases, and the importance of maintaining oral health

Material and methods- The questionnaire design process was informed by insights from a pilot study with a focus on specific questions regarding periodontal disease knowledge. The questionnaire was structured in two distinct sections. A pilot study involving 150 students was conducted to determine the sample size, revealing a significant awareness rate among participants. The study involved students from 2 Medical colleges and 2 Law colleges. From the total population of 300 students, 60 students were randomly selected using the lottery method, with 30 students each from medical and law colleges, ensuring no age or gender bias. Data analysis was done by SPSS software.

Results- Our study included 30 participants, with 13 male and 17 female medical students (mean age 21.4 years) and 10 male and 20 female law students (mean age 22.1 years). The results revealed no significant differences between the two groups in most oral hygiene practices. Both medical (42%) and law students (48%) reported brushing twice daily ($P < 0.2$). Similarly, 59% of medical students and 56% of law students were aware of changing toothbrushes every three months ($P < 0.2$). Medical students showed a higher knowledge of correct brushing technique (57%) compared to law students (42%), with a significant difference ($P < 0.1$). Medical students also had greater awareness of dental floss usage (50%) than law students (31%), but the difference was not significant ($P < 0.4$). In terms of mouthwash usage, 58% of medical students and 45% of law students reported using it, though the difference was not significant ($P < 0.2$). Regarding dental visits, 72% of medical students and 64% of law students had visited a dentist in the last six months, with no significant difference ($P < 0.2$). Awareness of periodontal disease also showed some differences: 39% of medical students and 29% of law students were aware of bleeding gums ($P < 0.2$), while 71% of medical students and 78% of law students knew the cause of bad breath, but the difference was not significant ($P < 0.2$).

Conclusion- Our research revealed only minor significant differences in oral hygiene practices between medical and law students, with medical students demonstrating marginally superior knowledge in



specific aspects. Nevertheless, both groups displayed comparable levels of participation in fundamental oral health practices, highlighting the necessity for improved oral health education.

Introduction

Oral health is crucial for overall well-being, with good dental hygiene practices playing a vital role in preventing diseases that affect the oral cavity and surrounding structures. Poor oral health is linked to various systemic conditions like cardiovascular disorders, diabetes, and stroke, and is a significant cause of tooth loss globally.¹ Despite improvements in oral health measures, challenges persist, with lifestyle factors such as high sugar intake and limited access to fluoridated water contributing to oral diseases.^{2,3}

Periodontal diseases affect a significant portion of the global population, with advanced cases impacting 10-15% of adults. The prevalence is higher among men and in low- and middle-income countries, where oral hygiene is generally poorer.⁴ Socioeconomic factors significantly influence periodontal health, with lower income and less educated groups showing worse outcomes, as well as ethnic disparities, such as African-Americans having more periodontal disease than Whites in the US.⁵ A consistent social gradient exists, with periodontal outcomes being worse across the entire social hierarchy. While oral hygiene has improved in high- and middle-income countries, leading to a decline in gingivitis, concerns remain about the impact of an aging population, as more individuals retain their teeth for life, potentially reversing these positive trends.⁶ Traditional clinical treatments and preventive approaches are often ineffective, unaffordable, and unsuitable for the majority of the population, highlighting the need for a shift towards a public health model to address periodontal health on a larger scale and reduce social inequalities.⁷

Periodontal health is crucial for sustaining overall wellness, as inadequate oral hygiene can result in numerous oral diseases, including periodontal disorders. These conditions, which are primarily preventable, can have a considerable impact on both oral and general health if not addressed. Although the significance of proper oral hygiene is well recognized, awareness regarding periodontal health differs among various demographic groups. In particular, students in rigorous academic disciplines such as law may not consistently

prioritize the understanding and maintenance of their oral health. Consequently, it is important to assess the awareness and practices concerning periodontal health among law students to encourage improved oral hygiene habits and avert potential dental complications. Hence the study aimed to assess the awareness of periodontal health among law students, examining their knowledge, attitudes, and practices regarding oral hygiene, the prevention of periodontal diseases, and the importance of maintaining oral health.

Material and methods

The questionnaire design process was informed by insights from a pilot study with a focus on specific questions regarding periodontal disease knowledge. The questionnaire was structured in two distinct sections. A pilot study involving 150 students was conducted to determine the sample size, revealing a significant awareness rate among participants.

The study involved students from 2 Medical colleges and 2 Law colleges. From the total population of 300 students, 60 students were randomly selected using the lottery method, with 30 students each from medical and law colleges, ensuring no age or gender bias. Data analysis was done by SPSS software.

Results

Table 1: Demographic Distribution of Participants

Category	Medical Students	Law students
Total participants	30	30
Gender		
Male	13	10
Female	17	20
Mean Age (years)	21.4	22.1

The study included a total of 30 participants from both medical and law student groups. Among the medical students, 13 were male and 17 were female, with a mean



age of 21.4 years. In the law student group, there were 10 male and 20 female participants, with a slightly higher mean age of 22.1 years.

Table 2: Percentage of students having knowledge about oral hygiene measures

Question about oral hygiene measures	Medical students	Law students	Significance (P)
Frequency of brushing twice daily	42%	48%	<0.2
Frequency of changing toothbrush in 3 months	59%	56%	<0.2
Correct brushing technique	57%	42%	<0.1
Knowledge about dental floss	50%	31%	<0.4
Current usage of mouthwash	58%	45%	<0.2
Frequency of visiting the dentist in 6 months	72%	64%	<0.2

The table outlines the percentage of medical and law students with knowledge about various oral hygiene practices. Regarding brushing twice daily, 42% of medical students and 48% of law students reported doing so, with no significant difference ($P < 0.2$). For changing toothbrushes every three months, 59% of medical students and 56% of law students were aware, showing no significant difference ($P < 0.2$). In terms of correct brushing technique, 57% of medical students were knowledgeable compared to 42% of law students, with a statistically significant difference ($P < 0.1$). Knowledge about dental floss was higher among medical students

(50%) than law students (31%), though the difference was not statistically significant ($P < 0.4$). Medical students also had higher mouthwash usage (58%) compared to law students (45%), but this was not significant either ($P < 0.2$). Lastly, 72% of medical students and 64% of law students reported visiting the dentist in the last six months, with no significant difference ($P < 0.2$).

Table 3: Percentage of students having awareness about periodontal diseases

Questions about awareness of periodontal disease	Medical students	Law students	Significance (P)
Students having knowledge about bleeding gums	39%	29%	<0.2
Students having knowledge about cause of bad breath	71%	78%	<0.2

The table presents the percentage of medical and law students with awareness of periodontal disease. Regarding knowledge about bleeding gums, 39% of medical students and 29% of law students were aware, with no significant difference between the two groups ($P < 0.2$). In terms of the cause of bad breath, 71% of medical students and 78% of law students demonstrated awareness, but the difference was not statistically significant ($P < 0.2$).

Discussion

The assessment of periodontal health awareness among law students aims to evaluate their knowledge regarding key aspects of oral health, particularly periodontal disease. This study focuses on understanding their awareness of common periodontal conditions, such as



bleeding gums and the causes of bad breath, which are critical indicators of periodontal health. By comparing the awareness levels of law students to those of other student groups, the research seeks to highlight potential gaps in knowledge and areas where educational interventions might be necessary to promote better oral health practices. The findings from this study are important for shaping targeted health education programs that can improve periodontal health awareness among university students.

Our study included 30 participants, with 13 male and 17 female medical students (mean age 21.4 years) and 10 male and 20 female law students (mean age 22.1 years). The results revealed no significant differences between the two groups in most oral hygiene practices. Both medical (42%) and law students (48%) reported brushing twice daily ($P < 0.2$). Similarly, 59% of medical students and 56% of law students were aware of changing toothbrushes every three months ($P < 0.2$). Medical students showed a higher knowledge of correct brushing technique (57%) compared to law students (42%), with a significant difference ($P < 0.1$). Medical students also had greater awareness of dental floss usage (50%) than law students (31%), but the difference was not significant ($P < 0.4$). In terms of mouthwash usage, 58% of medical students and 45% of law students reported using it, though the difference was not significant ($P < 0.2$). Regarding dental visits, 72% of medical students and 64% of law students had visited a dentist in the last six months, with no significant difference ($P < 0.2$). Awareness of periodontal disease also showed some differences: 39% of medical students and 29% of law students were aware of bleeding gums ($P < 0.2$), while 71% of medical students and 78% of law students knew the cause of bad breath, but the difference was not significant ($P < 0.2$).

The study by Kandasamy G et al.⁸ aimed to assess the knowledge, attitudes, and behaviors (KAB) of health and non-health-related university students concerning oral health. Conducted as a cross-sectional study over three months in 2023 at King Khalid University, it utilized a self-administered, anonymous web-based survey with simple random sampling. The questionnaire included 26 questions across four sections. Of the 845 respondents, 43.78% were health-related students, and 56.21% were non-health-related. The results revealed significant differences between the groups, with health-related

students demonstrating better oral health knowledge, such as awareness of bacteria causing gingival problems (60.81% vs. 36%), the negative effects of fizzy drinks (67.83% vs. 40%), and the importance of brushing twice daily (81.62% vs. 42.52%). Non-health-related students had lower KAB scores across various indicators, although health-related students also provided some incorrect information. The study concluded that both student groups need enhanced oral health education and promotion programs to improve their knowledge and emphasize the importance of proper oral hygiene.

Wu Z et al.⁹ aimed to evaluate the feasibility of extending an e-learning course on periodontal health education (OHE-PH) by comparing its effects on dental and non-dental students, as well as the differences between traditional and e-learning courses for non-dental students at Sichuan University. This quasi-experimental study used pre- and post-test questionnaires to assess periodontal health knowledge, attitudes, and behaviors. A total of 217 dental students and 134 non-dental students participated in a traditional course, while 69 non-dental students took the e-learning course. The results showed that both groups exhibited improvements in knowledge about periodontal diseases and self-reported behaviors concerning gingival bleeding and oral care. Notably, non-dental students' knowledge reached or exceeded that of dental students before the course. Additionally, non-dental students who took the e-learning course performed better in some areas compared to those who took the traditional course. The study concluded that OHE-PH was effective for both dental and non-dental students, with the e-learning course proving particularly effective in enhancing knowledge and behaviors, suggesting that e-learning could be a valuable method for promoting periodontal health among undergraduates.

Another study by Pradhan D et al.¹⁰ aimed to assess the oral hygiene knowledge, attitudes, and practices among dental and medical students in Kanpur City. This cross-sectional descriptive survey involved 400 students from dental and medical colleges, selected using convenience sampling. A pre-tested, self-structured, close-ended questionnaire with 15 questions was used to gather data on oral hygiene knowledge, attitudes, and practices. The results revealed that 80% of dental students and 67% of medical students recognized oral health as part of overall health. While 100% of dental students brushed their teeth



twice daily, only 51% of medical students did the same. Additionally, 100% of dental students reported visiting the dentist every six months, compared to just 35% of medical students. The study concluded that while the knowledge and behaviors regarding oral hygiene were satisfactory among both groups, there is a need for more preventive oral health programs to further enhance students' knowledge, attitudes, and practices.

Our study, alongside those by Kandasamy G et al., Wu Z et al., and Pradhan D et al., explores various aspects of oral hygiene knowledge, attitudes, and practices among different student groups. Similar to Kandasamy G et al., our study compares medical and law students, finding differences in knowledge about oral hygiene practices, such as brushing techniques and mouthwash usage. Both studies highlight the need for improved oral health education among university students. Wu Z et al.'s study on the effectiveness of e-learning in periodontal health education complements our findings by emphasizing how tailored educational methods, such as online courses, can enhance students' knowledge and behaviors. Our study shares a focus on the differences in awareness of periodontal disease with Pradhan D et al.'s work, which also identifies gaps in knowledge between dental and non-dental students. However, while Pradhan D et al. found significant gaps between dental and medical students, our study did not show as many significant differences between medical and law students. All these studies underline the importance of continuous oral health education and preventive programs to address the knowledge gaps observed across various student groups.

A notable limitation of our study is the small sample size, which limits the ability to generalize the findings. Further research with larger and more diverse samples is required to gain more comprehensive insights into oral health practices and to validate these results across different populations.

Conclusion

Our research revealed only minor significant differences in oral hygiene practices between medical and law students, with medical students demonstrating marginally superior knowledge in specific aspects. Nevertheless, both groups displayed comparable levels of participation in fundamental oral health practices, highlighting the necessity for improved oral health education.

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