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Research Article

Dental Behavior and Knowledge of Dental Assistant Students First and Second Stage (A Comparative Study)

Faraed D Salman*

Assistant Professor, Department of Dental Assistant, Medical Dental Institute, Hawler Erbil Polytechnic University, Iraq

***Corresponding Author:** Faraed D Salman, Assistant Professor, Department of Dental Assistant, Medical Dental Institute, Hawler Erbil Polytechnic University, Iraq.

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Abstract

Background: Dental student's knowledge and behavior toward prevention are important since they have exceptionally important roles in influencing their patient's ability to take care of their teeth. Thus, this study aimed to compare dental knowledge, behavior of first and second dental students in Medical Dental Institute in Hawler.

Materials and Method: A cross -sectional study was conducted among dental students in Medical Institute. A total (124 students, 73 first stage, 51 second stage) were individually asked to complete a pretested questionnaire, the questionnaire requested information as students gender, knowledge and behavior (brushing teeth, siwak, use of dental floss and combination, frequency of teeth brushing, regular dental checkup, smoking, causes of dental caries and gingivitis, suffering any systemic disease).

Results: Second stage showed highest score of frequency of toothbrushing (76.5%) at (p value = 0.001) level, high knowledge about causes of dental caries (64.7%) more than first stage (16.4%) with significant difference at (p value = 0.004) level, also for gingivitis (35.5%) combination method with significant level at (p value = 0.004) level, for regular dental check up higher score for total group (61.6%) more than irregular (38.4%) with significant difference (p value = 0.056) level, also for smoking total non smoking comprises higher percentage (91.1%) more than smoking (8.9%), for suffering diseases, higher percentage was for non suffering (95.2%) than suffering diseases (4.8%) in total sample.

Conclusion: The finding of this study had shown that participants of second stage had conductive oral health behavior, sufficient knowledge, positive beliefs regarding prevention and dental treatment.

Keywords: Oral Health; Behavior; Prevention

Introduction

In fact, oral diseases (dental caries and periodontal diseases) can be prevented by adopting proper oral health [1-3]. Proper oral health behavior such as toothbrushing, use of dental floss and receiving regular dental check ups prevents periodontal disease [4,5].

Furthermore, oral health behavior is also associated with various factors including dental knowledge [6-8], attitude [7-9], lifestyle [10-12], stress [13,14], education level [15], socioeconomic status [16,17], sense of coherence [18], and self- efficacy [4].

University dental students are able to obtain dental knowledge through various means. For example, a television campaign as a source of dental knowledge demonstrated a significant impact on knowledge of periodontal health and disease in adults [19-21]. Another study also suggested that school is meaningful for oral health education of children as a source of dental knowledge [22].

Furthermore, dental knowledge from dental clinics may be effective at modifying oral health behavior [23-25].

However, few studies have reported the influence of various sources of dental knowledge on oral health behavior.

The aim of this study was to compare dental knowledge with its different sources (school, television, dental clinics, and social media in stage I and II dental students in preventive department in medical institute for the academic year 2017-2018.

Methodology

Study population in January 2018, first stage students (n=73) and second stage students (n=51) completed a questionnaire, no body showed incomplete response in the questionnaire, data from dental students (total no.124, male=51, female=73) were subjected to analysis. Informed consent was obtained verbally from each participant. The protocol of this study was approved by the supervisor and dental students.

- **Questionnaire:** A self-administered questionnaire was delivered to each participant including gender, causes of dental caries (eating sugar, not brushing teeth, hereditary, don't know), causes of gingivitis (not brushing, hereditary, don't know) suffering from any systemic disease and which type of systemic drug they apply answers were given in a "Yes, No" formal. participants were asked about the following:
- **Oral health behavior**: Whether they could brush their teeth by toothbrush, siwak, dental floss (wooden) (yes, no), dental thread, daily frequency of tooth brushing > twice, < once time) and receiving regular dental checkups during the past period) [4,5].
- **Source of dental knowledge:** Participants were able to indicate different sources of knowledge whether they are dental clinic, school, television, family, internet, acquaintance and publication.

Statistical analysis

Data management and statistical analysis: Data will be reordered on a specially designed questionnaire, collected and entered in the computer and then analyzed using appropriate data system which is called statistical package for social science (SPSS) version 25 and the result will be compared between students with different variables with statistical significance level of < 0.05, the result will be presented as rates, ratios, frequencies percentages in tables figures and analyzed using chi-square test.

Results

- **Table l:** indicates that majority of both first and second stage students were brushing their teeth there was no significant difference between both stages regarding the first question. P- Value was 0.08
- **Table II**: shows that vast majority of first stage participants 95.9% were using tooth brush as a mean for teeth cleaning in comparison to only 64.7% second stage students, for siwak and combination method second stage students show better results 2 and 29.4% compared to the first stage 0 and 4% respectively, this difference was significant at P 0.001 level as it is shown in table II
- **Table III:** reveals that there was a significant difference regarding frequency of tooth brushing, second stage shows higher score for twice times 76.5% more than first stage 45.2% in revers more than half of first stage students were brushing
- their teeth once daily only 54.8% more than second stage 19.6% at P 0.001 level but it doesn't matter for those who don't brush their teeth at all
- **Table IV:** sows that there was no difference between first or second class students regarding there visit to a dentist, more than half of both group 53.5%, 64.7% answered (yes) to this question, while there patterns of visits were statistically different at P 0.04. Most of first class students were performing regular visits 71.8% in contrast approximately half of second stage students did the visits on irregular basis 51.5% as it is shown in table V
- **Table VI:** shows that there was no difference between first or second stage students concerning their habits of smoking more than 90% of both groups answers were (no) 91.8%, 90.2%, P values were more than 0.05 in both conditions
- **Table VII:** the data shows different views among both groups in determining the causes of dental caries, second stage students selected (combination) of factors (64.7%) more than first stage students (16.4%) then followed by (not brushing teeth) (17.6%) then (eating sugar) (13.7%), while first stage students had different perspective for dental caries, (not brushing teeth) (43.8%) showed highest score then (eating sugar) (26%), then (combination of factors) (16.4%)
- **Table VIII:** shows results for causes of gingivitis second stage showed higher score for (combination) (35.3%), (not brushing) (31.4%), (don't know) (21.6%), while for first stage students highest score was around 40% of them did not know the exact cause of gingivitis.
- **Table IX:** most of both participants (first and second stage students (95.2%) do not suffer from any systemic disease).

Variable	Categories	Stage		P
		First stage	Second stage	
Table I Do you brush your teeth?	Number	73	49	0.08
	%	100%	96.1%	
Table II What do you use for brushing?	Tooth brush	70	33	0.001
		95.9%	64.7%	
	Siwak	0	1	
		0.0%	2.0%	
	Combination	3	15	
		4.1%	29.4%	
Table III How many times do you brush your teeth?	Once	40	10	0.001
		54.8%	19.6%	
	Twice	33	39	
		45.2%	76.5%	
Table IV Do you visit a dentist?	**Yes**	39	33	
		53.4%	64.7%	
Table V If yes, how often?	Regular	28	16	0.04
		71.8%	48.5%	
	Irregular	11	17	
		28.2%	51.5%	
Table VI Do you smoke?	Yes	6	5	0.78
		8.2%	9.8%	
	No	91.8%	90.2%	
		67	46	
Table VII Causes of dental caries?	Eating sugar	19	7	0.001
		26.0%	13.7%	
	Not brushing teeth	32	9	
		43.8%	17.6%	
	Hereditary	4	0	
		5.5%	0.0%	
	Don't know	6	2	
		8.2%	3.9%	
	Combination of factors	12	33	
		16.4%	64.7%	
Table VIII Causes of gingivitis?	Not brushing teeth	19	16	0.004
		26.0%	31.4%	
	Hereditary	8	1	
		11.0%	2.0%	
	Drugs	9	5	
		12.3%	9.8%	
	Don't know	29	11	
		39.7%	21.6%	
	Combination of factors	8	18	
		11.0%	35.3%	
Table IX Do you suffer from any systemic disease?	Yes	3	3	0.65
		4.1%	5.9%	
	No	70	48	
		95.9%	94.1%	
		Mean= 95.2%	Mean= 95.2%	1

Table

Gender of all 124 participants

Gender of participants	Frequency	Percent
Male	51	41.1
Female	73	58.9
Total	124	100

Table 1

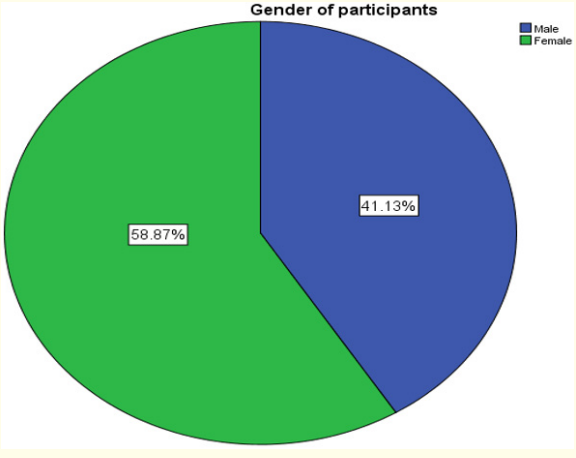

Figure 1

Gender of first stage participants

Gender	Frequency	Percent
Male	18	35.3
Female	33	64.7
Total	51	100

Table 2

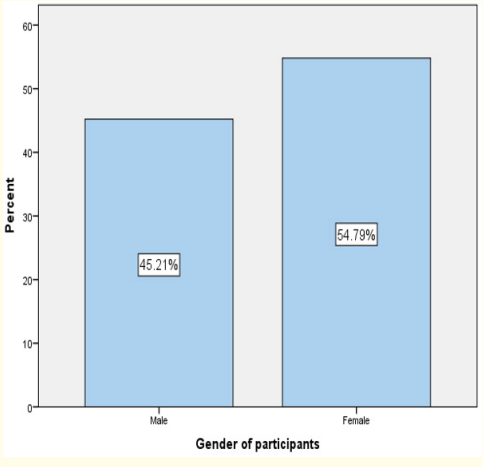

Figure 2

Gender of second stage participants:

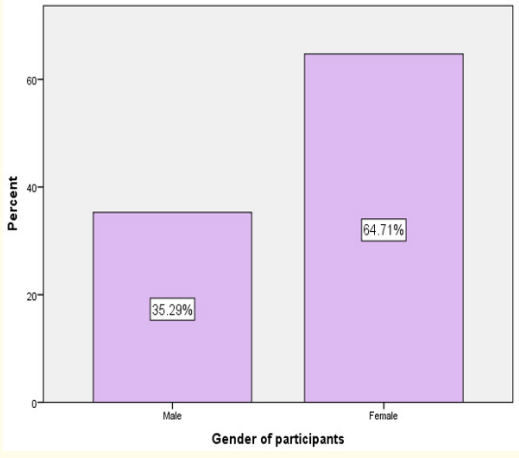

Figure 3

- **Pie graph:** Showed higher participation of female 58.9% compared to male 41.5% of all participants (female green color, male blue color).
- **Bar graph:** Shows participation of first stage students female, shows higher percentage 54.8% compared to 45.2% (blue color histogram).
- **Histogram II:** Shows participation of second stage students also female showed higher percentage 64.7% compared to male 35.3%, this figure was represented by purple colour.

Discussion

This study focused on the dental knowledge of dental students acquired from different sources whether they are dental clinic, school, television, family, internet, acquaintance and publication, our result is in accordance with a previous study which found that dental knowledge was effective in group of Sweden dental students which confirms our results [23-25], since dentists are important sources of dental knowledge of oral disease prevention for the general public, dental clinics could be the most effective location for university students to improve oral health behavior specially for second stage students who exhibited better type in pattern of teeth cleaning, causes of dental caries and gingivitis more than first stage students. For primary and secondary school could improve dental knowledge [27-33], on the other hand, other studies in school-based education programs found no improvement [34,35]. A mass media health, education campaign on television could not demonstrate a significant impact on knowledge [36,37]. Furthermore, dental knowledge without repetition could transiently improve oral health behavior, but could not sustain improved oral health

behavior in the long-term, this coincide for first grade students in this study which is in accordance with other study which confirmed our results for first grade students [38]. Thus, oral health education knowledge (experimental and traditional) should be repeated with either method to keep its positive results which confirmed our results for second stage students, these results are in accordance with other studies [35,38,39]. The outcome of dental knowledge In our study is depend on teachers instruction or motivation for second stage students, this is in accordance with other studies done in china and Zimbabwe [40-42], this study demonstrated that dental school was one of the major sources of dental knowledge. In this study parentage of dental students visit dental clinic (58%) for total sample, is in accordance with other studies [26,43]. The rate of regular dental checkups has been increasing globally [44], thus, the source of dental knowledge may increase. In our study, siwak, combination method (dental floss and thread), smoking, causes of dental caries and gingivitis, second stage showed significant results (2.15%) compared to the first stage (0.3%) and showed in table II, this result is in accordance with other study [45]. Concerning gender, females showed higher percentage in first and second stage than male because they always care for their appearance, this is in accordance with other studies [9,10].

Conclusion

As the relation between knowledge and behavior can be complex, further studies are needed. Therefore, more effective intervention to promote better oral health behavior among students should be introduced in curriculum of first stage students. The source of dental knowledge in second stage is better than first stage which is related to definite yearly course preventive program. Oral health preventive knowledge and attitude was high among second stage as studying prevention would predispose dental students to receive dental health related information routinely, and this aid in adopting positive attitude and oral health behavior. The findings of this study have shown that participants had conducive oral health behavior, sufficient dental knowledge and positive beliefs regarding dental treatment.

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