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Dental Caries severity between students in AL-Mustansiria University / College of Dentistry

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Abstract

The aim of this study is to estimate the severity of dental caries among dental school students.

Dental caries severity was conducted among 19-23 years old students in all classes in Al- Mustansiria University / college of dentistry. The total sample composed of 150 students 30 students from each class (75 males total and 75 females total).

Dental caries diagnosis was according to criteria of WHO⁽¹⁾.

Results of the this study showed that none of the examined students were caries free; in another word, caries percentage was found to be 100%, DMFS values decrease with advancing class level with on significant difference between all classes and increase in Fs values with a significant difference between females in all classes this is attributed to the higher awareness regarding prevention of dental diseases among finish dental students.

Key words: DMF, decay missed filled, S surfaces, WHO world health organization.

Introduction

Dental caries, in particular, is considered “the single most common chronic childhood disease”; without intervention, the prevalence and severity of caries increase into adulthood, it was understood to be a progressive continuous disease that eventually destroyed the tooth unless the dentist intervened^(2,3).

Today, our understanding of dental caries has changed markedly and expanded this simplistic view of the disease, its consequences, and the methods of action of many preventive agents⁽⁴⁾. We need to seek the assessment of knowledge, attitudes, and intended behaviors of dental students and to examine the extent to which these findings were influenced

by the years of instruction that students received on these topics by measuring the severity of dental caries among dental school students⁽⁵⁾.

Materials and Methods

This study was conducted among dental students from all levels in Al-Mustansiria University / college of dentistry. Examination started at the 5th of October 2009 till the 10th of December 2009. The distribution of the sample according to class level and gender is shown in (Table 1). The examined number was 150 students from 390 students which is the total number of students in the college. Equal number of males and females

were examined from each level (15 male, 15 females).

Clinical examinations were conducted using plan mouth mirror and an explorer (No.00); dental caries diagnosis were according to criteria of WHO⁽¹⁾. A systemic approach of the examination for dental caries was performed starting from upper right second molar to proceeding in an orderly manner one tooth or space to the adjacent tooth or tooth space reach upper left second molar passing to the lower left second molar and then to the lower right second molar⁽¹⁾.

The data analysis was carried using statistical package for social science (SPSS version 12.0). The analysis of data included:

1. Classification of data and calculation of frequencies.
2. Calculation of statistical parameter (mean and standard deviation of the mean).

Statistical tests that were used in this study:

1. One way ANOVA.
2. LSD (least significant difference).
3. The significant level was accepted at 5%.

Results

Results of the present study showed that none of the examined students were caries free; in another word, caries percentage was found to be 100%.

Values of the mean and standard deviation of DS, MS, FS and DMFS for all classes and for both males and females are shown in (Table 2 and 3) respectively. For the total sample the decayed component (DS) contributes the major part of DMFS values in all classes for both males and females, followed by filling component (FS), while the missing component (MS) was recorded to be the less value.

Results showed that DMFS values decrease with advancing class level

which was statistically non-significant between all classes ($f= 0.119$, $df= 4$, $P> 0.05$), by using ANOVA test. Concerning gender (males and females) a non-significant difference were found between all classes for both males and females respectively.

Results concerning DS component show a higher rate of dental caries in the 1st class (DS= 9.0), which decreases gradually with advancing class level, (DS for 5th class equals 4.9) this was true also for both males and females. ANOVA test shows a non-significant difference between all classes ($P> 0.05$). Further investigations using least significant difference (LSD) show a non-significant difference between all classes except between 1st class and 5th class, the difference was significant ($t= 0.031$, $P< 0.05$). This result was true for both males and females ($f=1.369$, $f= 0.477$, $df= 4$), a non-significant difference was shown also respectively. Further investigations using least significant difference (LSD) show a non-significant difference between all classes except only between males in 1st class and 5th class, a significant difference is shown ($t= 0.049$, $P< 0.05$), DS=10.0 for males in the 1st class while for males in the 5th class DS decreases to 4.4. MS component shows a non-significant difference in all classes ($P> 0.05$), further investigations using least significant difference (LSD) show a non-significant difference between all classes. Statistical analysis shows a non-significant difference for both males and females between all classes ($P> 0.05$) respectively. Further investigations using least significant difference (LSD) show a non-significant difference between males and between females in all classes.

Finally result concerning FS component shows a non-significant difference between all classes (0.05),

further investigations using least significant difference (LSD) show a significant difference only between 1st class and 5th class ($t= 0.042$, $P< 0.05$) and a non-significant difference between all other classes. According to gender, the statistical analysis shows a non-significant difference between males ($P> 0.05$) while it shows a significant difference between females in all classes ($f= 3.17$, $df= 4$, $p= 0.036$, $P< 0.05$). Further investigations using least significant difference (LSD) show a high significant difference between females in the 1st class and females in the 5th class ($t=0.005$, $P< 0.01$) and a significant difference between females in the 2nd class and females in the 5th class ($t= 0.02$, $P< 0.05$), and for females in the 3rd class and females in the 5th class ($t= 0.011$, $P< 0.05$), and for females in the 4th class and females in the 5th class ($t= 0.016$, $P< 0.05$) and there is no significant difference between all other classes for both males and females.

Discussion

This study have shown that caries percentage was found to be 100% ,DMFS values decrease with advancing class level, this is due to the fact that dental school students possess a higher standard of awareness about their dental health and reflect the wide availability of dental services among them ⁽⁶⁾.

DS component shows a higher rate of dental caries in the 1st class (DS= 9.0), which decreases gradually with advancing class level, (DS for 5th class equals 4.9) even there was a non significant difference between them but gives another indication on the wide availability of dental services on one hand and the high level of awareness among the students on the other hand ⁽⁷⁾.

MS component shows a non-significant difference between all classes for both males and females, this is due to the regular dental attendance which is attributed to the motivation regarding the importance of tooth prevention; this is in agreement with many other researchers ^(8,9).

Concerning FS component, the statistical analysis shows a non-significant difference between all classes but further investigations show a significant difference only between 1st class and 5th class, this is attributed to the higher awareness regarding prevention of dental diseases among finish dental students ⁽¹⁰⁾. According to gender, the study shows a non-significant difference between males in Fs components which is due to apathy which was the most common answer among them while shows a significant difference between females in all classes, these findings are due to the fact that the females are generally more interested in their appearance and dental anxiety is the most important factor for them, additionally, they are in general more willing to follow preventive health rules and practices than males ⁽⁶⁾.

Conclusion

This study have shown that caries percentage was found to be 100%, also shows that females are more interested in their dental health than males with advancing class level this is due to that females are more interested in their appearance and dental anxiety is the most important factor for them, additionally, they are in general more willing to follow preventive health rules and practices than males.

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Table 1: Distribution of examined Students according to Classes level and gender

Classes level	Male		Female		Total	
	No.	%	No.	%	No.	%
Class I	15	10.0	15	10.0	30	20.0
Class II	15	10.0	15	10.0	30	20.0
Class III	15	10.0	15	10.0	30	20.0
Class IV	15	10.0	15	10.0	30	20.0
Class V	15	10.0	15	10.0	30	20.0
Total	75	50.0	75	50.0	150	100.0

Table 2: Mean and S.D. of DS,MS,FS, and DMFS according to Classes level

Classes level	DS		MS		FS		DMFS	
	X	S.D.	X	S.D.	X	S.D.	X	S.D.
Class I	9.0	4.422	3.0	4.216	3.4	2.716	15.4	9.477
Class II	8.9	4.483	2.5	4.249	3.8	2.898	15.2	9.259
Class III	8.3	4.900	3.0	5.375	3.2	3.521	14.5	9.958
Class IV	7.2	3.010	2.0	4.830	3.9	3.414	13.4	7.640
Class V	4.9	3.470	2.0	3.496	6.5	3.866	13.4	7.043

Table 3: Mean and standard divisions of DS, MS, FS and DMFS according to Classes level and Gender

Classes level	Gender	DS		MS		FS		DMFS	
		X	S.D.	X	S.D.	X	S.D.	X	S.D.
Class I	Males	10.0	3.937	3.0	4.472	4.8	2.775	17.8	9.418
	Females	8.0	5.090	3.0	4.470	2.0	2.000	13.00	9.950
Class II	Males	8.8	5.167	1.0	2.236	4.4	3.362	14.2	9.450
	Females	9.0	4.301	4.0	5.477	3.2	2.588	16.2	10.620
Class III	Males	8.4	5.170	2.0	4.472	3.8	3.030	14.2	11.600
	Females	8.2	5.215	4.0	6.519	2.6	4.219	14.8	9.360
Class IV	Males	6.4	2.966	3.0	6.708	4.8	4.324	14.2	10.370
	Females	8.0	3.162	1.0	2.236	3.0	2.345	12.6	4.720
Class V	Males	4.4	3.362	2.0	2.739	4.6	2.408	11.0	4.630
	Females	5.4	3.912	2.0	4.472	8.4	4.336	15.8	8.701