Causes of visiting mixed dentition children dental clinic (a retrospective study)

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Background and objective: Pediatric dentistry provides primary and comprehensive therapeutic and preventive oral health care for infants, children through adolescence including special health care and encompasses skills for treating conditions and diseases specific to growing individuals apply to the altering stages of dental, physical and psychological development. The patient's initial comments to the dentists and/or other oral health care staff members help in establishing a differential diagnosis. Recording and identification of chief complaints are also considered the cornerstone for formulating a logical treatment plan. The objective of this study to explore the common chief complaints of mixed dentition patients seeking treatment in the pediatric teaching polyclinic in college of dentistry in Hawler medical university.

Materials and method: Two hundred and sixty five records were considered, four domains: age, sex, chief complaint and the treatment delivered were noted. The sample was divided into two age groups (6-8 and 9-11 respectively). The reasons for their visit were divided into the following five groups: general checkup, esthetic reasons, pain, missing/multiple teeth and emergency visit. While the type of the treatment delivered was divided into: Preventive treatment, conservative treatment, pulp therapy and surgical treatment. The statitical analysis was drawn by using statistical software SPSS (Statistical package for the social science) version 23 program was used to perform the statistical analysis.

Results: relating the chief complaint to the sex, the P value is less than 0.05 so there is a significant association between them and there was statistically significant association exist between the chief complaint and the age of the patients. Beside that a Significant result proven (P value<0.05), that shows that there is association between the chief complaint and the type of treatment delivered.

Conclusion: Mixed dentition patient mostly seek dental treatment only when acute disturbing symptoms is evident.

Keywords: Chief Complain, Treatment, Prevention.

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Introduction

Pediatric dentistry provides primary and comprehensive therapeutic and preventive oral health care for infants, children through adolescence including special health care and encompasses skills for treating conditions and diseases specific to growing individuals apply to the altering stages of dental, physical and psychological development.[1,2] As there is deficiency in the outcomes of oral health programs and infeasibility of access to dental care by low socioeconomic patients in which are most commonly affected by the disease. An important question must be asked to know if the educational system is improving or at least

trying to create a good dental public health system. If that can be guaranteed then the education should not only teaches dentists how to treat patients' chief complaint but also to make sure that they guide the patients toward preventing the occurrence of the disease.[3] To improve access to dental care among people it is important to change their dental psychological model and help them reduce dental anxiety.[4]

A change in perceptive, from considering only the curative aspect of dental care to appreciating its preventive and educational value, will eventually improve the compliance of parents with dental health programs and will in turn improve the oral health status of the child. In addition, the child is exposed to the environment of dental clinic in an early age and eventually this will help the child to adapt and cooperate with dental treatment in the future.[5] The chief complaint is generally recorded in the patient's own word. Multiple complaints are recorded in a chronological order to reflect the patients perception of problem accurately.[6] The severity of chief complain reflects the urgency of the patient to seek dental care. In dental practice, pain is the main frequent complaint for which patients seek treatment.[7] Patients who have severe pain that can't be controlled by over-the-counter medications.[8] Previous studies found that most children seek dental treatment as a result of pain and/or dental decay.[9, 10, 11]

Dental caries is a serious health problem in children and its penalty include pain, reduced quality of life.[12] Mixed dentition period, is the time period when the child have both primary and permanent teeth and normally from 6 to 11 years. Early loss of deciduous teeth in this age group may lead to malocclusion in adulthood, because primary teeth act are responsible for guiding permanent teeth to erupt in a correct position. Premature loss of primary teeth may cause drifting of the remaining primary and permanent teeth, and the unerupted permanent teeth will erupt in an incorrect position.[13] Dental caries is a major dental problem in the community; furthermore, caries in the mixed dentition period is an early sign of caries in the permanent dentition, [14] which makes it essential to study this age group and to deliver the necessary treatment. Limited studies are available in the mixed dentition period. Therefore, this study was conducted in which the aim of it is to analyze the causes and the treatment needs for visiting the pediatric teaching Polyclinic in college of dentistry in Hawler Medical University.

Subjects and method

A total of 265 patients were considered for the present study. From the 265 records, four domains: age, sex, chief complaint and the treatment delivered were noted in a data sheet. The sample was divided into two age groups (6-8 and 9-11 respectively). Frequency distribution and percentage were calculated. The reasons for their visit were divided into the following five groups:

- General checkup.
- Esthetic reasons.
- Pain
- Missing teeth or Multiple teeth
- Emergency visit including: swelling and trauma.

Meanwhile the type of the treatment delivered was divided into:

- Preventive treatment: scaling, polishing and flouride application, pit and fissure sealants, and space maintainer.
- Conservative treatment: filling and stainless steel crown
- Pulp therapy: pulpotomy, pulpectomy, root canal treatment and apexification
- Surgical treatment: extraction and surgical incision.

The statitical analysis was drawn by using statistical software SPSS V24 and both discription statistics as well as inferential statistics have been cosidered. Chi-Sqaure test was implemented to detect the association between the categrical variables. Moreover, Cramer's V was also used to find the relationship between categorical

variable where chi-square test was no longer valid.

Results

Out of the 265 subjects evaluated, 55% were in the age group of 6-9 and 49% were aged between 9-11 years old. The sample consisted of 49% male and 51% female. The most common chief complaint in general was pain 58%. The second and third most common reasons for dental visit were dental check up and esthetic reasons, recording 27% and 10% respectively. Least common chief complaint was dental emergencies 2%, trauma to the teeth and supported tissue recorded only 3%. As far as treatment provided is considered, the most common treatment provided was conservative treatment 42% followed by surgical treatment 28%. Pulp therapy and preventive treatment showed 24% and 7% respectively as shown in (Table 1).

Overall, the most common chief complaint 58.5% of the patients was pain. The second most common CC was dental check up 27.2% followed by esthetic reason, multiple/missing teeth and then emergency visits (10.19%, 2.64%, and 1.51% respectively) as shown in (Figure 1). When gender is considered the percentage of male and female attended for dental pain were very close recording 29.4% and 29.1% respectively. This was not the case for gender distribution of dental check-up. More female 17.0% attended for dental check up compare to only 10.2% of male patients. The third most common chief complaint according to sex was esthetic, higher proportion of male needed aesthetic compared to female (6.8% versus 3.4%). Regarding missing or multiple teeth, 1.9% of males and 0.8% of females were affected. The figures for emergency treatment need is 1.1% male and 0.4% female affected and sought treatment. Since the P value is less than 0.05, there is a significant association between sex and causes of patients seeking dental treatment as illustrated in (Table 2).

The most common chief complaint in both age group was pain. Younger age group of 6-9 years reported more pain, 34.7% compare to 9-11 age group which recorded 23.8%. Moving on to the second predominant chief complain of check-up a greater proportion of 6-9 age group 15.8% as compared to 11.3% of 9-11 age group visited the dental clinic for check-up. In contrast, when esthetic is more frequent with older age group 9-11 who recorded 6.8% as opposed to 3.4% of 6-9 age group. Older age group had had more missing teeth than the younger patients (1.9% versus 0.8%). The figure is similar to that of those who sought emergency treatment 0.4% and 1.1% of 6-9 and 9-11 age groups respectively as shown in (Table 3). A statistically significant association exists between age and reasons for visiting the dental clinic.

Relating the chief complaint to the type of treatment delivered in this study as shown in (Table 4), majority of those who had pain received conservative treatment (23%) while pulp therapy was performed for 20.8% of the subjects. When pain and surgical treatment is related 14.7% undergone surgical treatment, meanwhile no patient with pain received preventive treatment. Regarding dental check up most of the patient received conservative treatment, followed by preventive treatment, surgical treatment and finally pulp therapy (14.7%, 4.5% and 2.6% respectively). While surgical intervention was the most common treatment provided for patients with esthetic concerns, meanwhile no one needed pulp therapy. Most of patients who had emergency complaints received conservative treatment 0.8%, similar proportion received preventive and pulp therapy and none of them needed surgery. Finally missing or multiple teeth only underwent surgical treatment. P value<0.05 so Significant result proven, which means there is association between the type of treatment and the chief complain.

Table 1: percentage distribution of all variables.

Indicators	N	Classes	Number	Percent
Age	265	6 – 9	146	55%
		9 – 11	119	49%
Gender	265	Male	131	49%
		Female	134	51%
Chief Complaint	265	Check up	72	27%
		Esthetic reasons	27	10%
		Pain	155	58%
		Missing or Multiple teeth	7	3%
		Emergency	4	2%
Treatment	265	Preventive	19	7%
		Conservative	110	42%
		Pupl therapy	63	24%
		Surgical	73	28%

Figure 1: Causes of visiting dental clinic.

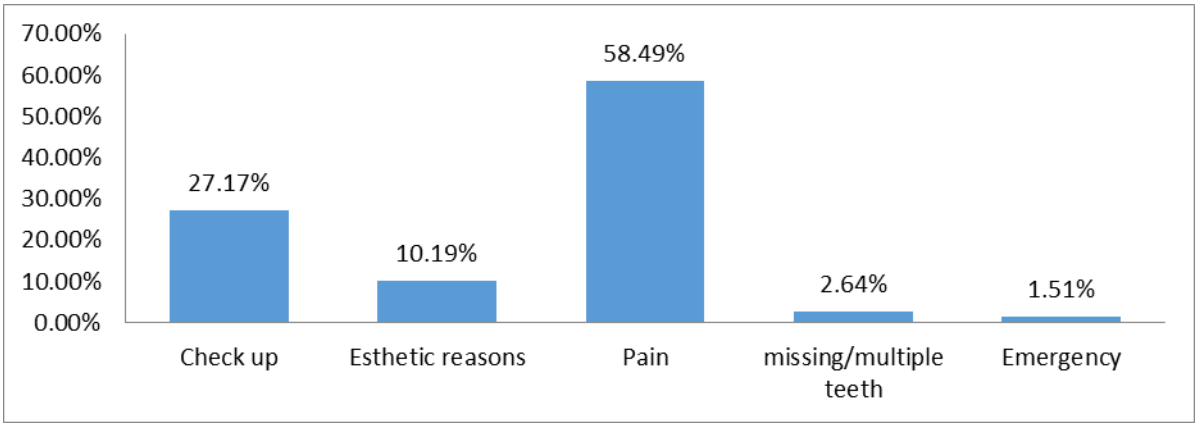

Table 2: Distribution of chief complaint according to gender.

			Gender		Total
			Male	Female	
Chief Complaint	Check up	Count	27	45	72
		% of Total	10.2%	17.0%	27.2%
	Esthetic reasons	Count	18	9	27
		% of Total	6.8%	3.4%	10.2%
	Pain	Count	78	77	155
		% of Total	29.4%	29.1%	58.5%
	Missing or Multiple teeth	Count	5	2	7
		% of Total	1.9%	0.8%	2.6%
	Emergency	Count	3	1	4
		% of Total	1.1%	0.4%	1.5%
	Total	Count	131	134	265
		% of Total	49.4%	50.6%	100.0%
Cramer's V – Value	0.192				
P-value	0.045				

Table3: Distribution of chief complaint according to gender.

			Age		Total
			6 - 9	9 – 11	
Chief Complaint	Check up	Count	42	30	72
		% of Total	15.8%	11.3%	27.2%
	Esthetic	Count	9	18	27
		% of Total	3.4%	6.8%	10.2%
	Pain	Count	92	63	155
		% of Total	34.7%	23.8%	58.5%
	Missing or Multiple teeth	Count	2	5	7
		% of Total	0.8%	1.9%	2.6%
	Emergency	Count	1	3	4
		% of Total	0.4%	1.1%	1.5%
	Total	Count	146	119	265
		% of Total	55.1%	44.9%	100.0%
Cramer's V – Value	0.195				
P-value	0.039				

Table3: Distribution of chief complaint according to gender.

			Chief_Complaint					
			Check up	Es-thetic rea-sons	Pain	Missing or Multiple teeth	Emer-gency	Total
Treat-ment	Preventive	Count	14	4	0	0	1	19
		% of Total	5.3%	1.5%	0.0%	0.0%	0.4%	7.2%
	Conserva-tive	Count	39	8	61	0	2	110
		% of Total	14.7%	3.0%	23.0%	0.0%	0.8%	41.5%
	Pupl ther-apy	Count	7	0	55	0	1	63
		% of Total	2.6%	0.0%	20.8%	0.0%	0.4%	23.8%
	Surgical	Count	12	15	39	7	0	73
		% of Total	4.5%	5.7%	14.7%	2.6%	0.0%	27.5%
Total		Count	72	27	155	7	4	265
		% of Total	27.2%	10.2%	58.5%	2.6%	1.5%	100.0%
Cramer's V - Value	0.329							
P-value	0.000							

Discussion

It is important to realize that for the most important part of the case is the chief complaint of the patient. Chief complaint can be defined as "the patients reason for seeking care or attention, expressed in terms as close as possible to those used by the patient or responsible informant".[15] This is very important as it encourages communication between the doctor and the patient in addition, it forms a framework around which the doctor builds a diagnosis.[16] Dental and oral health is inseparable part of general health and it would affect the quality of life as well as eating ability, appearance and speech. Although problems affecting oral health does not always considered for treatment.[17] The American Dental Association (ADA) recognizes the patient's chief complaint as an essential component for the delivery of competent and quality oral health care. It serves as a source of information for both the care provider and the patient.[18] Patients generally visit dental clinics when they feel ill, to determine the cause of their illness and get access to treatment.[19] Subsequently, clinical examinations are generally tailored according to the chief complaint.[20]

In this survey, the most common chief complaint was pain among large majority of the children and this goes parallel with many previous studies conducted in different countries. A survey from Nairobi revealed that the main chief complaint for the majority of patients attending Nairobi dental hospital was pain 31.5 % and orthodontic treatment need 25.4 % respectively. Very few children were presented for dental check up only 3.9%. Treatment provided mainly were dental extraction 21.8% oral prophylaxis and dental health education 20.5% and restorative treatment 20%.[21] Another study conducted in Pelotas, Brazil recorded that the most common chief complaint of pediatric patients attending a dental hospital was pain from dental caries eventually they underwent pulp therapy treatment.[22] A study showed that pain was more common among 4-6 and 7-9 years old. While other chief complains including malocclusion and esthetic needs were more common among older age group. It was found that pain was the main chief complaint among first visitors also.[23] A survey from India showed that the mean age of the study group was 28.1 years with age ranging 1-80 years. "Toothache" is found to be most common CC reported by 33% of the patients. "Decayed tooth" is reported as the CC by 19% of the patients.[24] Another study among a set of dental patients at the Faculty of Dentistry in Umm Al-Qura University, Makkah city, descriptive cross sectional study, 3566 patients expressed their chief complaints revealed The most common chief complaint reported by patients was dental pain (35.4%) and the patients visit dental clinics for curative treatment .[25] A survey from the urban population of Malaysia, the attendance behaviour of the women is more preventively oriented than man.[26] This is in line with our study where more females sought dental check up than males (45 female versus 27 males). For younger children their barriers to dental care will be affected by parental attitude and anxieties. Poor knowledge of regular dental check up and attendance for treatment only is a frequently cited concern in other developing countries.[27] In this study 27% reported "dental check up " as the main reason for the dental visit. This indicated the awareness of people in Erbil city of the importance of regular dental check up. A study performed at the University of Mosul, showed that dental emergencies presenting to this university-based clinic were predominantly related to caries and trauma. The service was more frequently utilized by children in the mixed dentition stage 9-11 age group (1.1% versus 0.45) in the age group of 6-9 years old.[28] Children from lower socioeconomic groups and those living in the local area. The frequency of caries-related problems indicates the need for more community-based preventive strategies, including encouraging greater attendance for routine dental care and dental health education. Strategies for oral health promotion should also be devel-

oped to prevent dental trauma. The proportion of patients who sought emergency treatment in this study was 0.4% of 6-9 age group and 1.1% of 9-11 age group subjects.[29] Knowing the main reasons for dental attendances and treatments provided in a community is useful for health care planner to recognize resources needed for providing dental services including curative and preventive services to tackle dental health problems. As oral disease adversely affects school attendances and restricted school activities, planning robust health promotion programmes in schools as early as mixed dentition stage is fundamental.[12]

Conclusion

The study finds that most people seem to seek dental treatment only when acute

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