RESULTS

The results of the present study are divided to the following parts:

Part(I): Socio-demographic characteristics of the studied children and their families (Tables1-**7),** figure (1-8)

Part (II): Children's teeth condition and their knowledge about factors affecting their dental health (Tables 8 -16), figure (9)

Part (III): Children's knowledge about teeth & its related problems and treatment (Tables 17-23).

Part (IV): Children's attitude towards their dental health (Tables 24-25).

Part (V): Relation between variables of the study (Table 26-32), figure (10-13).

PART (I): Socio-demographic characteristics of the studied children and their families

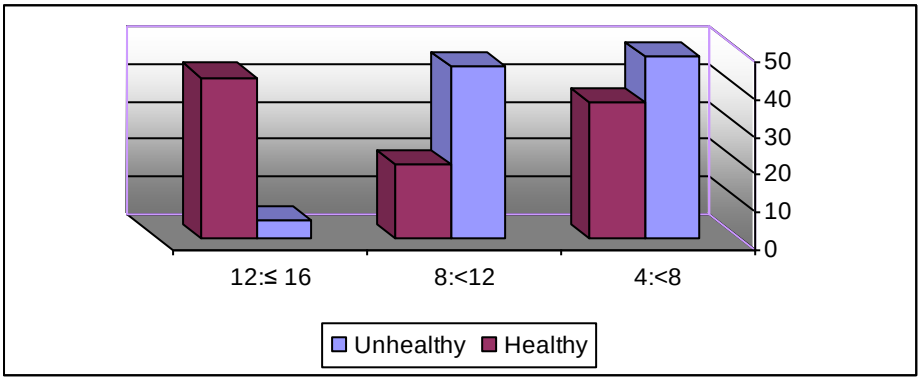
Table (1): Distribution of the children according to their socio-demographic data

Characteristics	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Age in years				
4:<8	49	49	11	36.6
8:<12	46	46	6	20
12:≤ 16	5	5	13	43.3
Mean 9.1Years, S.D.= ±2.08				
Gender				
-Female	59	59	18	60
-Male	41	41	12	40
School stage				
-Primary	93	93	18	60
-Preparatory	7	7	12	40
Child ranking				
-First	36	36	11	36.6
-Middle	41	41	12	40
-Last child	23	23	7	23.3

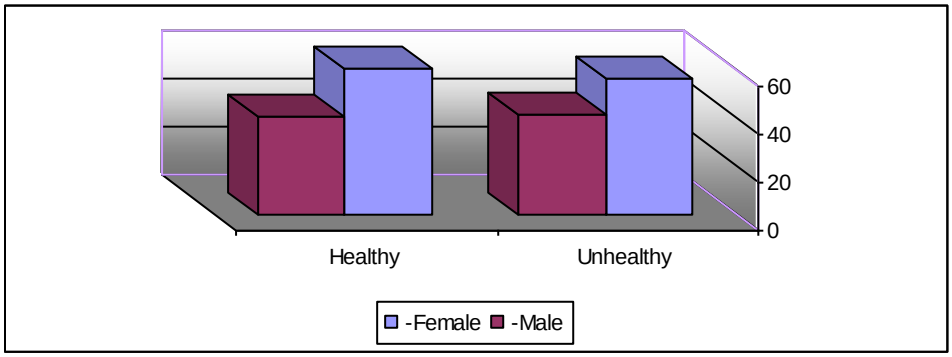
As regards socio-demographic characteristics of the studied children it is clear from this table that; almost half (49%) of unhealthy children were in the age group of 4:<8 compared with more than one third (43.3%) of healthy children were in the age group 12:≤16 years respectively. In relation to their gender it was found that, more than half of unhealthy children (59%) and healthy children (60%) were females and the rest of them were males. The great majority (93%) of unhealthy children were in primary education compared with (60%) of healthy children. Regarding child ranking it was

found that, more than one third (36%) & (40%) of unhealthy and healthy children were ranked first & middle in their family respectively.

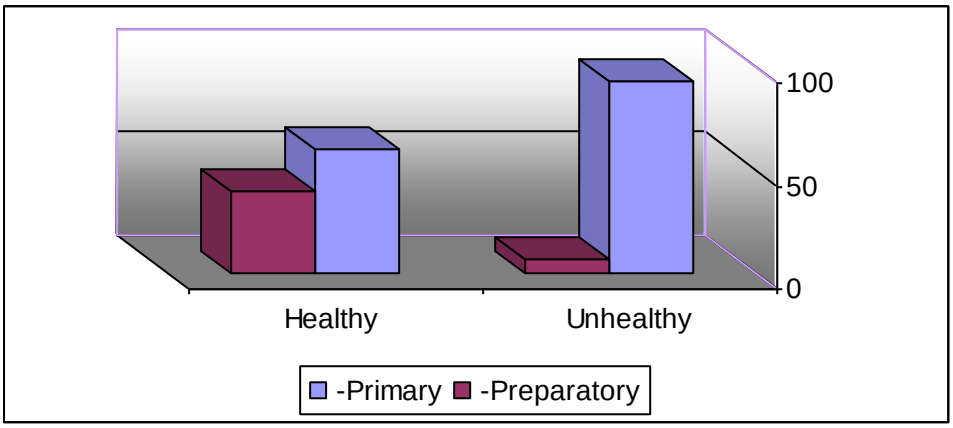
Fig(1): Percentage distribution of the children according to their age in years



Fig(2): Percentage distribution of the children according to their gender



Fig(3): Percentage distribution of the children according to school stage



Fig(4): Percentage distribution of the children according to ranking in their families

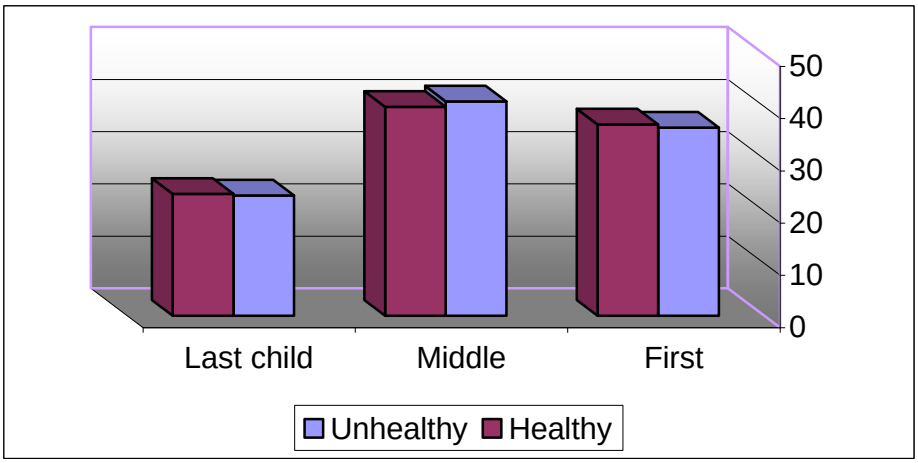
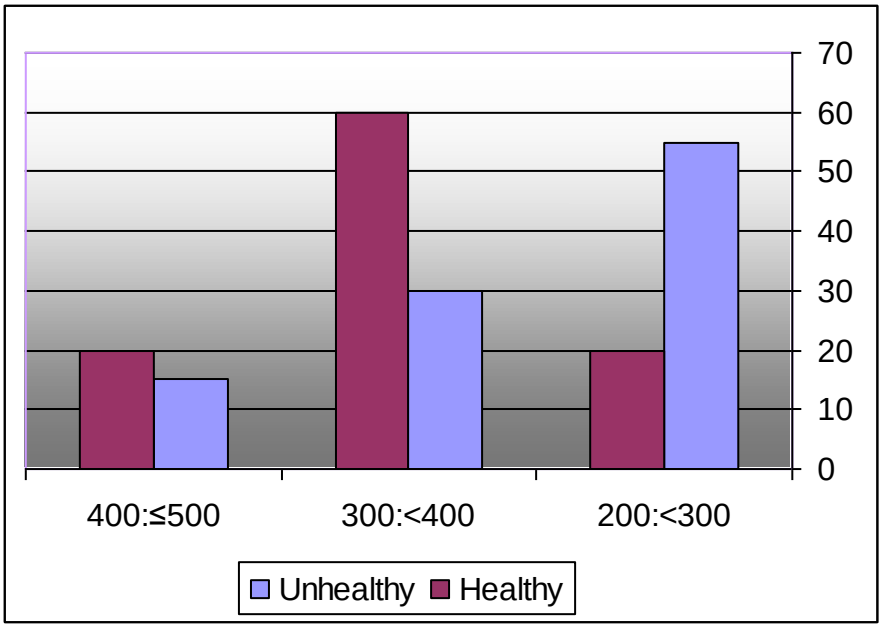


Table (2): Distribution of the children according to their family size and monthly income

Characteristics	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Family size				
<5	26	26	5	16.6
5:< 7	68	68	25	83.3
7:≤ 9	6	6	0	0
Family monthly income(LE)				
200:<300	55	55	6	20
300:<400	30	30	18	60
400:≤500	15	15	6	20
Mean 308 L.E, S.D.= ±82.91				

As regards family size of the studied children it is clear from this table that; (68%) & (83.3%) of unhealthy and healthy children were living in family size that ranged from 5 to 7members. In relation to family monthly income it was found that, more than half (55%) of unhealthy children and (60%) of healthy were having 200:<300L.E/month & 300:<400 L.E/month respectively.

Fig(5): Percentage distribution of the children according to their family monthly income



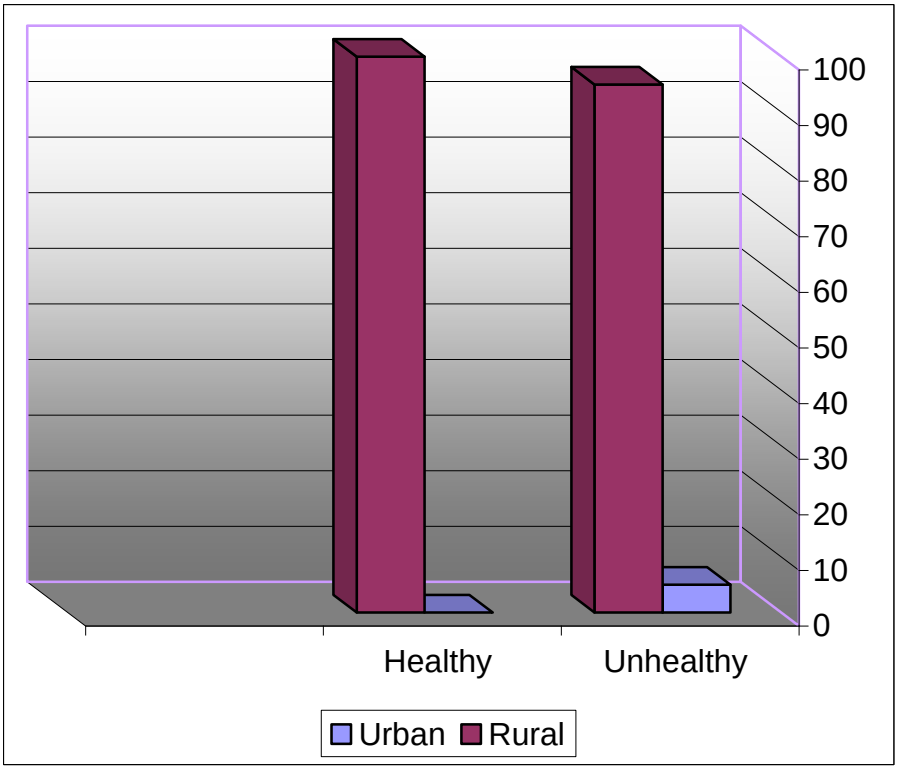
Table(3): Distribution of the children according to their residence, house, presence of bathroom

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Residence				
-Rural	95	95	30*	100
-Urban	5	5	0	0
X^2 =110.76, P< 0.001				
House				
- Dependent	72	72	24	80
- Independent	28	28	6	20
X^2=29.56, P<0.001				
Presence of bathroom				
-Dependent	72	72	24	80
-Independent	28	28	6	20
X^2=29.56, P<0.001				

As regards residence of the studied children it is clear from this table that; the great majority (95%) & (100%) of unhealthy and healthy children were lived in rural residence respectively. In relation to house it was found that (72%) & (80%) of unhealthy and healthy children were lived at dependent house respectively. As regards presence of bathroom it was found that, (72%) & (80%) of unhealthy and healthy children were having dependent bathroom respectively. As regards safe water supply in the house it was found that, all the

studied (100%) of unhealthy and healthy children were having taps as source of safe water supply.

Fig(6): Percentage distribution of the children according their residence



Table(4): Distribution of the children according to their body weight and height compared with their peers

Characteristics	Unhealthy children		Healthy children	
	Normal		Normal	
	(100)	(%)	(30)	(%)
Child's weight/kg				
20:<30	79	79	15	50
30:<40	21	21	9	30
40:≤50	0	0	6	20
Mean and S.D=1.3± 0.5				
Child's height/cm				
100:<120	38	38	11	36.6
120:<130	45	45	4	13.3
130:<140	12	12	4	13.3
140:≤150	5	5	11	36.6
Mean and S.D=1.9±0.9				

Weight and height of all the studied children were normal compared with their peers.

Table (5): Distribution of the children according to type of their teeth

Type of teeth	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
-Milk teeth (deciduous teeth)	95	95	17	56.6
-Permanent teeth	5	5	13	43.3
X^2 =67.96, P<0.001				

As regards type of teeth of the studied children it is clear from this table that; 95% & 56.6% of unhealthy and healthy children were having deciduous teeth respectively.

Fig(7): Percentage distribution of the children according to type of their teeth

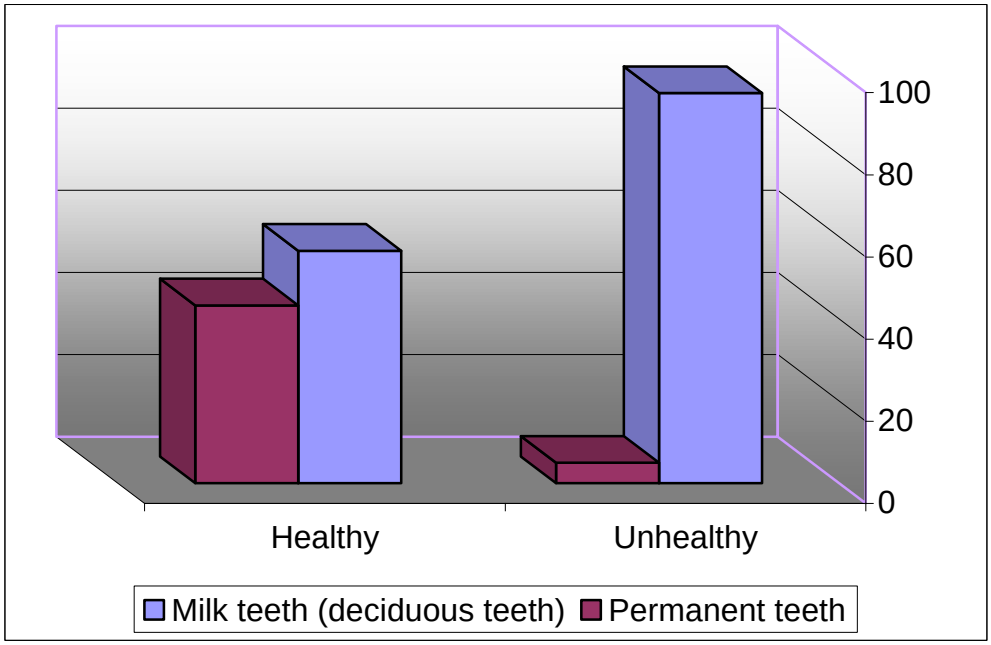


Table (6): Distribution of the children according to presence of dental problems

Dental problems	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Dental caries				
-Yes	99	99	0	0
-No	1	1	0	0
X^2=35.56, P<0.001				
Dental fractures				
-Yes	1	1	0	0
-No	99	99	0	0
X^2=126.03, P<0.001				
Extracted(missing) teeth				
-Yes	98	98	0	0
-No	2	2	0	0
X^2=33.50, P<0.001				
Stained teeth				
-Yes	8	8	0	0
-No	92	92	0	0
X^2=99.96, P<0.001				

A statistically significant difference was observed between children of the study where, 99%, 1%, 98% and 8% of them were having dental caries, dental fractures, extracted teeth and stained teeth respectively. While all the healthy children didn't have any of such problems.

Fig(8): Percentage distribution of the children according to their dental problems

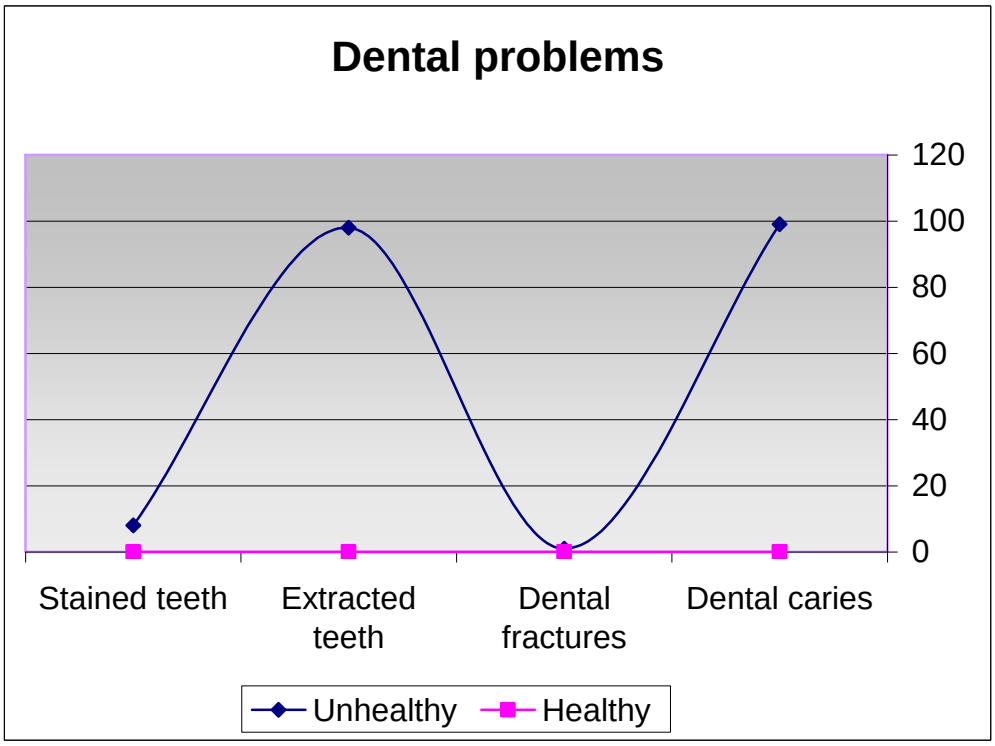


Table (7): Distribution of parents of the studied children according to their characteristics

Characteristics	Unhealthy children				Healthy children			
	Mother		Father		Mother		Father	
	(100)	(%)	(100)	(%)	(30)	(%)	(30)	(%)
Age in years								
20-	1	1	0	0	0	0	0	0
25-	20	20	1	1	9	30	0	0
30-	32	32	14	14	12	40	7	23.3
35-	43	43	40	40	9	30	12	40
40-	4	4	45	45	0	0	11	36.6
Education								
-Illiterate	9	9	6	6	1	3.3	1	3.3
-Read and write	5	5	0	0	7	23.3	2	6.6
-Primary	5	5	0	0	2	6.6	0	0
-Preparatory	40	40	26	26	5	16.6	0	0
-Secondary	25	25	30	30	3	10	9	30
-University	16	16	38	38	12	40	18	60
Employment								
-Not employed	81	81	0	0	24	80	0	0
-Employed	19	19	100	100	6	20	30	100

As regards age of parents of the studied children it is clear from this table that; more than one third (43%) & (40%) of mothers and fathers of unhealthy and healthy children were in age group of 30:<35, 35:<40 years respectively. In relation to education of parents of studied children it was found that more than one third (40%) of mothers of unhealthy children had received preparatory education compared with (40%) of mothers of healthy children had received university education. While (38%) & (60%) fathers of unhealthy and healthy children had received university education respectively.

As regards parents employment it was found that, the great majority (81%) & (80%) of mothers of unhealthy and healthy children were not employed. While (100%) of fathers of unhealthy and healthy children were employed respectively.

Part (II): Children's teeth condition and their knowledge about factors affecting their dental health

Table (8): Distribution of the studied children according to their physical health problems and that received medication

Type of health problems & type of medication	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
-Anemia	5	5	0	0
-Bronchial asthma	13	13	1	3.3
-Allergy	1	1	0	0
-No	81	81	29	96.6
X^2=62.30, P<0.001				
(N=19)				
-Antibiotic	11	11	1	3.3
-Antipyretic	2	2	1	3.3
-Anti- tussive	13	13	1	3.3
-Bronchodilator	12	12	1	3.3
- Antihistamine	2	2	0	0
-Iron	5	5	0	0
X^2=246. 98, P<0.001				

As regards health problems and type of medication of the studied children it is clear from this table that; the great majority (81%) & (96.6%) of unhealthy and healthy children don't have health problems or receive

medications respectively. A very high statistical significant difference was observed between unhealthy and healthy children.

Table (9): Distribution of the studied children according to type of nutrition in their first year of life

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Type of feeding				
-Exclusive breast feeding	64	64	26	86.6
-Exclusive bottle feeding	24	24	0	0
-Both feeding	12	12	4	13.3
Causes of non exclusive breast feeding (N=36)				
-Insufficient breast milk	34	34	4	13.3
-Maternal employment	8	8	1	3.3
-Maternal and or child disease	2	2	0	0
Total number not exclusive	X^2=80.96, P<0.001			
Use of pacifier				
-Yes	77	77	8	26.6
-No	23	23	22	73.3
X^2=12.30, P<0.001				

As regards type of feeding of the studied children it is clear from this table that; (64%) & (86.6%) of unhealthy and healthy children were having exclusive breast feeding respectively. As regard causes of non exclusive breast

feeding it was found that (34%) & (13.3%) of unhealthy and healthy children reported, insufficient breast milk respectively. In relation to use of pacifier it was found that, more than three quarters (77%) of unhealthy children use pacifier while more than three quarters (73.3%) of healthy children don't use pacifier. A very high statistical significant difference was found between unhealthy and healthy children.

Table (11): Distribution of the studied children according to their monthly consumption of food elements

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Protein				
-Average	0	0	17	56.6
-Minimal	100	100	13	43.3
X^2=235.60, P<0.001				
Carbohydrates				
-Excessive	100	100	21	70
-High	0	0	1	3.3
-Average	0	0	6	20
-Minimal	0	0	2	6.6
X^2=321.75, P<0.001				
Sugar				
-Excessive	72	72	4	13.3
-High	1	1	0	0
-Average	25	25	7	23.3
-Minimal	2	2	19	63.3
X^2=92.83, P<0.001				
Calcium				
-Excessive	0	0	12	40
-High	0	0	0	0
-Average	9	9	12	40
-Minimal	91	91	6	20
X^2=100.63, P<0.001				
Vegetables & fruit and fruit juice				
-Excessive	0	0	5	16.6
-High	0	0	0	0
-Average	0	0	22	73.3
-Minimal	100	100	3	10
X^2=113.59, P<0.001				

Minimal(0 to 100), average(100 to 175), high (175to 200), excessive(200 to 250)

As regards consumption of food elements it is clear from this table that; minimal in their consumption of food elements such as (protein, calcium, vegetables) was reported by (100% & 91% & 100%) of unhealthy children. While healthy children average in their consumption of food elements such as (protein, calcium, vegetables) was reported by (56.6% & 40% & 73.3%) respectively. In relation to carbohydrates consumption it was found that; (100 %) & (70%) of unhealthy and healthy children were having excessive in their consumption of carbohydrates respectively. In relation to sugar consumption it was found that; (72%) of unhealthy children reported, excessive in their consumption of sugar compared with (63.3%) of healthy children were having minimal in their consumption of sugar respectively.

Table (12): Distribution of the studied children according to personal habits affecting the dental health

personnel habits	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Mouth breathing				
-Yes	43	43	2	6.6
-No	57	57	28	93.3
Thumb sucking				
-Yes	57	57	0	0
-No	43	43	30*	100
Biting nails				
-Yes	75	75	2	6.6
-No	25	25	28	93.3
Teeth grinding				
-Yes	6	6	0	0
-No	94	94	30*	100
Cheek biting				
-Yes	1	1	0	0
-No	99	99	30*	100
X^2=52.523, P<0.001				

As regards personal habits affecting the dental health of the studied children it is clear from this table that; more than half (57%) & (75%) of unhealthy children were having problems namely thumb sucking and biting nails, while healthy children didn't have any of such problems respectively.

Fig(9): Percentage distribution of the studied children according to personal habits affecting the dental health

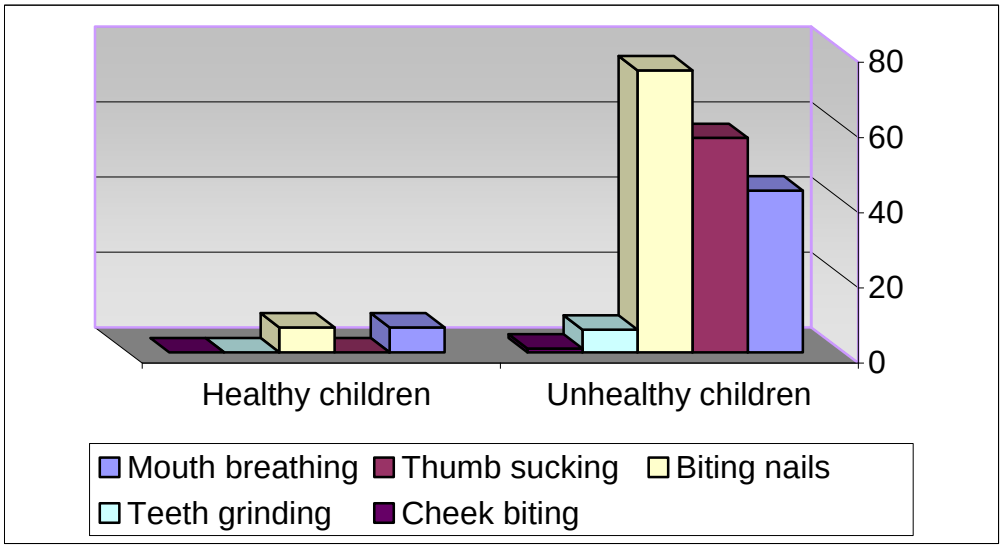


Table (13): Distribution of the studied children according to their knowledge about importance of teeth brush and methods of brushing teeth

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Importance of teeth brush				
-Remove oral debris accumulated on the tooth	82	82	30	100
-Remove harmful plaque from teeth	12	12	14	46.6
-Diminish bacteria in the mouth	13	13	15	50
-All of the above	11	11	14	46.6
-Don't known	18	18	0	0
X^2=111.66, P<0.001				
Methods of brushing teeth				
-Mouth wash	100	100	19	63.3
-Tooth brush	72	72	29	96.6
-Toothpick	60	60	10	33.3
-Siwak	6	6	4	13.3
-Tooth flossing	1	1	0	0
X^2= 49.01, P<0.001				

As regards the importance of teeth brush it is clear from this table that; the great majority (82%) & (100%) of unhealthy and healthy children reported, remove oral debris accumulated on the tooth. In relation to methods of teeth brushing it was found that, the great majority (100%) of unhealthy children reported, mouth wash by water was used compared with (96.6%) of healthy children who reported tooth brush as an important objective.

Table (14): Distribution of the studied children and their family members according to their practices of teeth brushing

Items	Father				Mother				Studied child				Sibling			
	Unhealthy children		Healthy children		Unhealthy children		Healthy children		Unhealthy children		Healthy children		Unhealthy children		Healthy children	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Method of brushing teeth -Tooth brush	21	21	24	80	25	25	24	80	45	45	29	96.6	35	35	27	90
-Siwak	2	2	1	3.3	1	1	1	3.3	0	0	0	0	0	0	0	0
-Mouth wash	99	99	19	63.3	99	99	19	63.3	78	78	15	50	62	62	15	50
-Toothpick	59	59	9	30	59	59	7	23.3	4	4	0	0	3	3	1	3.3
X^2=65.04, P<0.001					X^2=73.21, P<0.001				X^2=17.72, P<0.001				X^2=105.75, P<0.001			
Reason for not brushing teeth by toothbrush -Don't interested tooth brush	24	24	4	13.3	15	15	4	13.3	37	37	1	3.3	15	15	2	6.6
-Not have money to buy	53	53	2	6.6	60	60	2	6.6	45	45	1	3.3	20	20	1	3.3
-Don't like tooth brush	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
X^2=132.98, P<0.001					X^2=73.123, P<0.001				X^2=37.35, P<0.001				X^2=119, P<0.001			
Frequency of teeth brush -Regular most of the time	45	45	24	80	30	30	22	73.3	12	12	21	70	40	40	20	66.6
-Sometimes	55	55	6	20	70	70	8	26.6	88	88	9	30	60	60	10	33.3
Time of teeth brushing -Morning	21	21	24	80	25	25	24	80	45	45	29	96.6	35	35	27	90
-After meals	99	99	20	66.6	99	99	20	66.6	78	78	15	50	64	64	15	50
-Before sleep	45	45	24	80	30	30	22	73.3	0	0	0	0	1	1	0	0
X^2=29.56, P<0.001					X^2=22.43, P<0.001				X^2=24.123, P<0.001				X^2=48.20, P<0.001			

As regards methods of brushing teeth it is clear from this table that; the great majority (99%) of all family members of unhealthy children were washing their mouth by water only compared with all family members of healthy children were washing their mouth by toothbrush and water. In relation to reason for not brushing teeth by tooth brush it was found that, all family members of unhealthy children didn't have money to buy tooth brush. As regards frequency of teeth brush it is clear from this table that; all family members of unhealthy children were sometimes brushing teeth. While all family members of healthy children were brushing teeth most of time respectively.

Table (15): Distribution of the studied children according to their knowledge about how to maintain dental health

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Methods of maintaining of dental health				
-Decrease intake of food high in sugar	89	89	29	96.6
-Brushing teeth daily	43	43	22	73.3
-Regular dental examination	14	14	13	43.3
-All the above	13	13	13	43.3
-Don't known	11	11	1	3.3
X^2=31.04, P<0.001				

As regards method of maintaining of dental health it is clear from this table that; the great majority (89%) & (96.6%) of unhealthy and healthy children reported, decreased intake of food high in sugar respectively with very high statistical significant difference was observed between unhealthy and healthy children.

Table (16): Distribution of the studied children according to actual practice to maintain their dental health

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
dental care at				
-Private dentist clinic	0	0	5	16.6
-Insurance	36	36	25	83.3
-Outpatient clinic	64	64	0	0
Periodic visit to dentist				
- Sometimes	0	0	8	26.6
-No	100*	100	22	73.3
X^2= 99.96, P<0.001				
Take benefits from health insurance				
-Yes	36	36	25	83.3
-No	64	64	5	16.6
X^2= 49, P>0.001				

As regards dental care it is clear from this table that; (64%) & (83.3%) of unhealthy and healthy children were admitted in outpatient clinic & insurance respectively. In relation to periodic dentist visit it was found that; (100%) & (73.3%) of unhealthy and healthy children reported, didn't periodically visit the dentist respectively. In relation to benefit from insurance it was found that, more than two thirds (64%) of unhealthy children weren't under the benefits of health insurance compared with (83.3%) of healthy children were under the benefits of health insurance respectively.

Part (III): Children's knowledge about teeth & its related Problems and treatment

Table (17): Distribution of the studied children according to their knowledge about importance of teeth, type and number of teeth

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Importance of teeth in the mouth				
-Help in good chewing foods	98	98	30	100
-Good appearance of face and mouth	17	17	14	46.6
-Help to pronounce correct words	3	3	11	36.6
-All of the above	2	2	11	36.6
-Don't known	2	2	0	0
X^2=170.00, P<0.001				
Type of teeth				
-Don't known	87	87	21	70
-Milk teeth (deciduous)	13	13	8	26.6
-Permanent teeth	13	13	9	30
-All of the above	12	12	8	26.6
X^2=241.26, P<0.001				
Number of teeth Milk teeth				
-Unknown	92	92	28	93.3
-Known	8	8	2	6.6
X^2=93.07, P<0.001				
Permanent teeth				
-Unknown	95	95	28	93.3
-Known	5	5	2	6.6
X^2=103.50, P<0.001				

As regards importance of teeth in the mouth it is clear from this table that; the great majority (98%) & (100%) of unhealthy and healthy children reported, good chewing food respectively. In relation to type of teeth it was found that, the great majority (87%) & (70%) of unhealthy and healthy children didn't know the type of teeth respectively. In relation to number of teeth it was found that, the great majority (92%) & (93.3%) of unhealthy and healthy children didn't know the number of milk teeth and (95%) & (93.3%) of unhealthy and healthy children didn't know the number of permanent teeth.

Table (18): Distribution of the studied children according to their knowledge about meaning of saliva and it's importance

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Meaning of saliva				
-Liquid continuously secreted in mouth	45	45	17	56.6
-Liquid secreted in mouth in time of eating	2	2	11	36.6
-Liquid content of certain mineral such as calcium, phosphates	2	2	9	30
-All of the above	2	2	9	30
-Don't known	55	55	12	40
X^2=91.90, P<0.001				
Importance of saliva				
-Digestion of starch food that start in mouth	5	5	12	40
-Passages of food in pharynx during eating	45	45	18	60
-Secretion of saliva in the mouth cleaning teeth	3	3	11	36.6
-All of the above	3	3	11	36.6
-Don't known	55	55	12	40
X^2= 82.24, P<0.001				

As regards definition of saliva it is clear from this table that; more than half (55%) of unhealthy children didn't know the definition of saliva compared with (56.6%) of healthy children. In relation to importance of saliva it was found that, more than half (55%) of unhealthy children didn't know the importance of saliva compared with (60%) of healthy children. All the unhealthy and healthy children didn't know the meaning and benefits of fluoride. A very high statistical significant difference was found between unhealthy and healthy children.

Table (19): Distribution of the studied children according to their knowledge about definition of dental caries and it's causes

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (100)	Percentage (%)
Definition of dental caries				
-Disease caused by presence of micro organism in mouth for long time	48	48	16	53.3
-Dental caries common disease in childhood	5	5	13	43.3
-Due to missing teeth	14	14	14	46.6
-All of the above	5	5	13	43.3
-Don't known	51	51	14	46.6
X^2= 56.95, P<0.001				
Causes of dental caries				
-Eating foods high sugar intake	95	95	30*	100
-Drinking soft drink	18	18	16	53.3
-Neglecting dental care	43	43	20	66.6
-All of the above	18	18	16	53.3
-Don't known	4	4	-	-
X^2=50.49, P<0.001				

As regards definition of dental caries it is clear from this table that; (48%) & (53.3%) of unhealthy children and healthy children reported, disease caused by presence of micro organism in mouth for long time. In relation to causes of dental caries it was found that; the great majority (95%) & (100%) of unhealthy and healthy children reported, eating foods high sugar intake. A very high statistical significant difference was found between unhealthy and healthy children.

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Table (20): Distribution of the studied children according to their knowledge about child complaint, onset/frequency of dental pain

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (100)	Percentage (%)
Child's complaint (N=99)				
-Dental pain in eating / drinking	99*	99	30*	100
• Sweetly food	83	83	19	63.3
• Hot food	60	60	20	66.6
• Cold food	63	63	24	80
• Acidic food	49	49	8	26.6
• All foods	47	47	8	26.6
-Change in color of teeth	44	44	2	6.6
-Hyperthermia	0	0	1	3.3
-Inability in eating food	58	58	12	40
-All of the above	0	0	1	3.3
X^2=95.23, P<0.001				
Onset/frequency (N=99)				
Frequently	59	59	21	70
Intermittent	40	40	9	30
X^2=126.03, P<0.001				

N.B. Numbers are not mutually exclusive*

As regards child complaint of dental caries it was clear from this table that; the great majority (99%) & (100%) of unhealthy children and healthy children had dental pain. In relation to child complaint of dental pain it was found that; (83%) & (63.3%) of unhealthy children and healthy children had dental pain on eating sweet food respectively. In relation to onset of child's pain it was found that; (59%) & (70%) of unhealthy and healthy children had frequent dental pain. A very high statistical significant difference was found between unhealthy and healthy children.

Table (21): Distribution of the studied children according to their knowledge about causes of extracted teeth.

Item	Unhealthy children		Healthy children	
	Number (100)	Percentage (%)	Number (30)	Percentage (%)
Causes of extracted teeth				
-Dental caries	98	98	30*	100

N.B. Numbers are not mutually exclusive

As regards causes of extracted teeth it was found that; the great majority of unhealthy and healthy reported that, dental caries was the main cause of extracted teeth among children as reported by (98%) & (100%) of them respectively.

Table (22): Distribution of the studied children according to their knowledge about causes of stained teeth and it's prevention

Item	Unhealthy children	
	Number (8)	Percentage (%)
Causes of stained teeth		
- Food contain of artificial color and flavor	8	8
-Neglecting dental care	3	3
-Dental caries	7	7
-All of the above	3	3
X^2=328.76, P<0.001		
Prevention from stained teeth		
-Using tooth brush and paste	8	8
X^2=99.96, P<0.001		

N.B. Numbers are not mutually exclusive

As regards causes of stained teeth it is clear from this table that; (8%) of unhealthy children were eating food containing artificial color and flavor. In relation to prevention of stained teeth it was found that, (8%) of unhealthy children were used tooth brush and paste. A very high statistical significant difference was observed between unhealthy and healthy children.

Table (23): Distribution of the studied children according to their knowledge about treatment of dental problems

Items	Unhealthy children				Healthy children			
	Yes		No		Yes		No	
	(100)	(%)	(100)	(%)	(30)	(%)	(30)	(%)
Going to dentist for								
-Treatment	5	5	95	95	0	-	30	100
- Extraction	97	97	3	3	30	100	-	-
X^2=122.12, P<0.001								
Use of mouth wash								
- Hot water with salt	69	69	31	31	17	56.6	13	43.3
X^2=13.56, P<0.001								
Use of traditional methods								
- Clove oil	75	75	25	25	19	63.3	11	36.6
- Cigarette Paper	20	20	80	80	1	3.3	29	96.6
X^2 =68.60, P<0.001								
Use of analgesic								
- Aspirin	62	62	38	38	5	16.6	25	83.3
- Ketofan	5	5	95	95	4	13.3	26	86.6
X^2 =58.26, P<0.001								

N.B. Numbers are not mutually exclusive

As regards reason of going to the dentist it is clear from this table that; the great majority (97%) & (100%) of unhealthy and healthy children had extracted teeth. In relation of use of mouth wash it was found that, more than two thirds (69%) & (56.6%) of unhealthy and healthy children used hot water with salt. As regards use of traditional methods of pain relief it was found that, three quarters (75%) & (63.3%) of unhealthy and healthy children used clove oil. In relation to using analgesics it was found that, (62%) of unhealthy children used aspirin compared with (83.3%) of healthy children who didn't use aspirin respectively.

Part (IV): Children's attitude about dental health

Table (24): Distribution of children according to their attitude towards dental health

Item	Unhealthy		Healthy		X^2	P
	(N)	(%)	(N)	(%)		
Positive 28-42	45	45	19	63.3	41.21	<0.001
Indifferent 14-28	55	55	11	36.6		
Negative <14	0	0	0	0		

There is a statistical significant difference between unhealthy and healthy children in relation to their attitude towards dental health, where more than half (55%) of unhealthy children showed indifferent attitude compared with more than two thirds (63.3 %) of healthy children who showed positive attitude.

Table(25): Mean and standard deviation of the studied children according to their attitude towards dental health

Item	$\overline{X}$±SD	X^2	P
I think that having sweets and chocolates between meal hurt your teeth	1.97± 0.92	20.60	<0.001
I think that teeth brushing keep your teeth healthy	3.00 ±0.00	0	0
Do you think you should brush your teeth before sleeping keep your teeth	2.96±0.21	242.32	<0.001
I think that buying things outside school is correct	1.00±0.00	0	0
I think that school play role to guide children to keep teeth healthy	1.04±0.30	118.27	<0.001
I think that having milk, cheese, eggs, fruits, vegetables help to keep your teeth healthy	3.00 ± 0.00	0	0
I think that having nuts much hurt teeth	1. 83±0.94	44.04	<0.001
I think that having juice and ice cream hurt your teeth	1.98±0.95	34.03	<0.001
I think that necessary go to dentist regularly to examine your teeth	1.77±0.90	33.70	<0.001
I think that socio economic status affect on teeth care	1.59±0.66	34.44	<0.001
I think that having meals outside home hurt your teeth	2.04±0.54	82.40	<0.001
I think that brushing teeth keep your teeth healthy	2.99±0.87	126.03	<0.001
I think that brush teeth after sweets and chocolates necessary to keep your teeth healthy	2.68±0.61	108.66	<0.001
I think that change tooth brush every three months necessary	1.03±0.21	242.32	<0.001

A statistical significant difference(P<0.001)

N.B. the total score for each question equal 3

Part V: Relation between variables of the study

Table(26): **Relation between age and children's def (decayed, extracted and filled teeth) of primary teeth in mixed dentition**

Relation	Healthy children	Unhealthy children								Total
	00	1	2	3	4	5	6	7	8	
Age in years 4:<8	11	1	8	12	8	13	4	2	1	49
8:<12	6		5	21	15	2	1	0	2	46
12≤16	13		1	1	2	1	0	0	0	5
Total	30	1	14	34	25	16	5	2	3	100
X^2 =50.27, P<0.001										

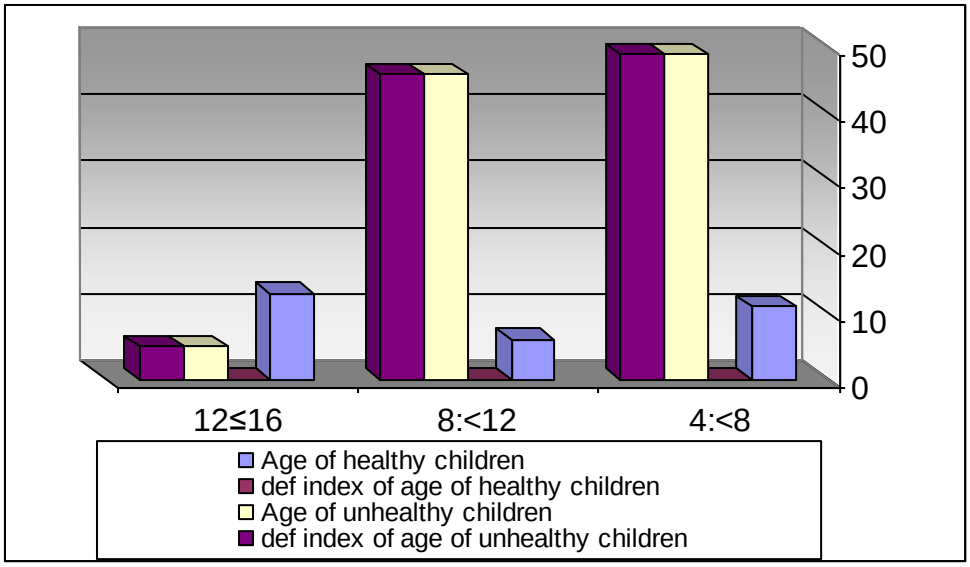
Total number of { (•)decayed, (*)extracted teeth }

(00)=(No decayed, extracted, filled teeth) { • (1) •* (2) •* (3) •* (4)

•* (5) •* (6)•*(7) •* (8)} number of decayed and extracted teeth

There is a statistical significant difference between unhealthy and healthy children in relation to age and children's def where, almost half (49%) of unhealthy children had dental caries, extracted teeth and no filled teeth in age group 4:<8 years, while the great majority (100%) of healthy children didn't have any of these problems.

Fig(10): Relation between age and children's def (decayed, extracted, filled) of primary teeth in mixed dentition



Table(27): **Relation between family income and children's def (decayed, extracted and filled) of primary teeth in mixed dentition**

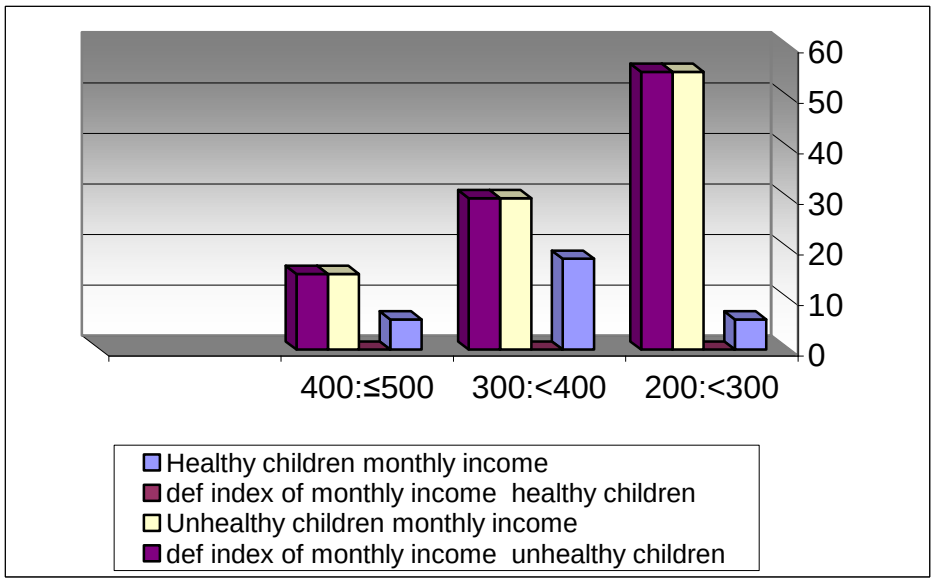
Relation	Healthy children	Unhealthy children								Total
	00	1	2	3	4	5	6	7	8	
200:<300	6	1	7	21	14	7	3	1	1	55
300:<400	18		3	9	7	6	2	1	2	30
400:≤500	6		4	4	4	3	0	0	0	15
Total	30	1	14	34	25	16	5	2	3	100
X^2 =19.47, P<0.001										

Total number of { (•)decayed, (*)extracted teeth }

(00)=(No decayed, extracted, filled teeth) { • (1) •* (2) •* (3) •* (4) •* (5) •* (6)•*(7) •* (8)} number of decayed and extracted teeth

There is a statistical significant difference between unhealthy and healthy children in relation to family monthly income and children's def where, more than half (55%) of unhealthy children had dental caries, extracted teeth and no filled teeth were reporting monthly income that ranged from 200:<300 L.E/month.

Fig(11): Relation between family monthly income and children's def (decayed, extracted, filled) of primary teeth in mixed dentition



Table(28): Relation between gender and children's def (decayed, extracted and filled teeth) of primary teeth in mixed dentition

Relation	Healthy children	Unhealthy children								Total
	00	1	2	3	4	5	6	7	8	
Male	12	0	7	17	7	7	2	1	0	41
Female	18	1	7	17	18	9	3	1	3	59
Total	30	1	14	34	25	16	5	2	3	100
X^2=6.27, P<0.01										

Total number of { (•)decayed, (*)extracted teeth }

(00)=(No decayed, extracted, filled teeth) { • (1) •* (2) •* (3) •* (4) •* (5) •* (6)•*(7) •* (8)} number of decayed and extracted teeth

In relation to children's gender and children's def it was found that; more than half of unhealthy children (59%) were females and the rest of them were males. A very high statistical significance differences was observed between unhealthy and healthy children.

Fig(12): Relation between gender and children's def (decayed, extracted and filled) of primary teeth in mixed dentition

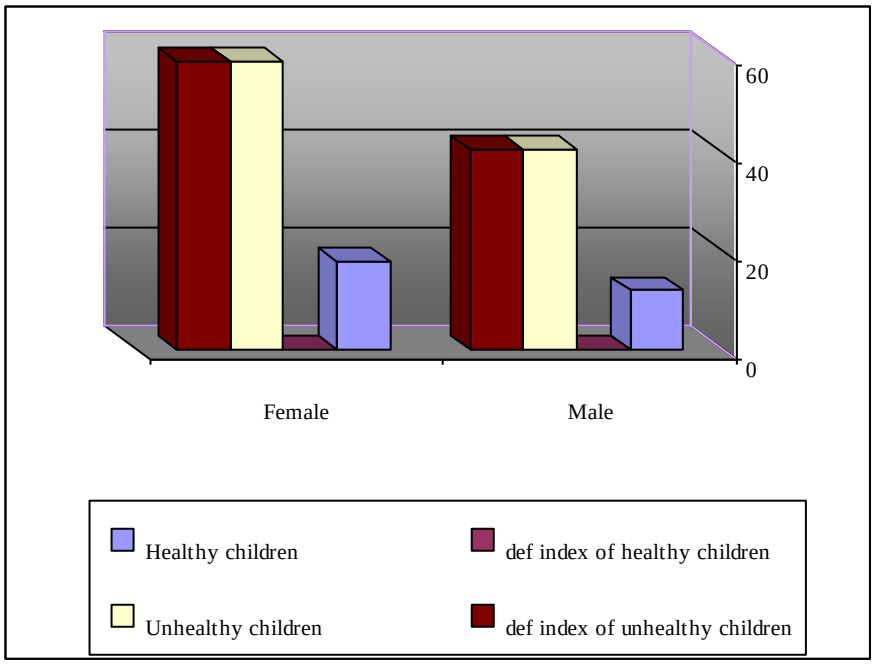
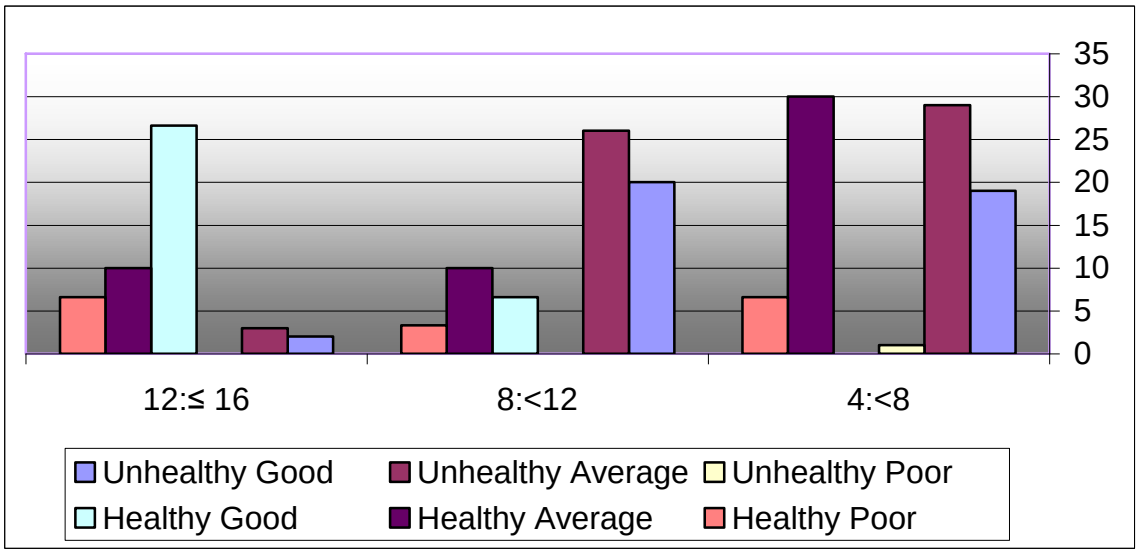


Table (29):Relation between children's age and their total knowledge about predisposing factors of dental problems

Age in years / Level of knowledge	Unhealthy(100)			Healthy(30)			X^2	P
	Good	Average	Poor	Good	Average	Poor		
	(%)	(%)	(%)	(%)	(%)	(%)		
4:<8	19	29	1	0	30	6.6	6.926	P<0.01
8:<12	20	26	0	6.6	10	3.3		
12:≤ 16	2	3	0	26.6	10	6.6		
Total	41	58	1	33.2	50	16.5		

It is evident from this table that there was statistical significance difference between age of studied children and their total knowledge about predisposing factors of dental problems.

Fig(13): Relation between children's age and their total knowledge about predisposing factor of dental problems



Table(30):Relation between children's residence and their total knowledge about predisposing factors of dental problems

Residence / Level of knowledge	Unhealthy children(100)			Healthy children(30)			X^2	P
	Good	Average	Poor	Good	Average	Poor		
	%	%	%	%	%	%		
-Rural	37	57	1	33.3	50	16.6	3.65	P<0.05
-Urban	4	1	0	0	0	0		
Total	41	58	1	33.3	50	16.6		

It is evident from this table that there was no statistical significance difference between residence of studied children and their total knowledge about predisposing factors of dental problems.

Table (31):Relation between children's gender and their total knowledge about predisposing factors of dental problems

Gender / Level of knowledge	Unhealthy children (100)			Healthy children (30)			X^2	P
	Good (%)	Average (%)	Poor (%)	Good (%)	Average (%)	Poor (%)		
-Male	16	25	0	16.6	13.3	10	2.48	P>0.05
-Female	25	33	1	16.6	36.6	6.6		
Total	41	58	1	33.2	49.9	16.6		

It is evident from this table that there was no statistical significance difference between gender of studied children and their total knowledge about predisposing factors of dental problems.

Table(32):Relation between children attitude and their total knowledge about predisposing factors of dental problems

Child's attitude / Level of knowledge	Unhealthy children(100)			Healthy children (30)			X^2	P
	Good	Average	Poor	Good	Average	Poor		
	(%)	(%)	(%)	(%)	(%)	(%)		
-Positive	22	23	0	33.3	20	10	6.36	P<0.01
-Indifference	19	35	1	0	30	6.6		
Total	41	58	1	33.3	50	16.6		

It is evident from this table that there was statistical significance difference between children's attitude and their total knowledge about predisposing factors of dental problems.