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Research Article

**ASSOCIATION OF DENTAL CARRIES AND AWARENESS OF
PARENTS ABOUT ORAL HYGIENE AND DENTAL DECAY**¹Dr Umair Altaf, ²Dr Rosheena Khan¹Rural Health Centre Rangpur Muzaffargarh, ²DHQ Hospital Khanewal.**Article Received:** August 2019**Accepted:** September 2019**Published:** October 2019**Abstract:**

Objective: The aim of this research work is to assess the relationship between the parent's knowledge about the oral health and their children's dental caries.

Methodology: This transverse research work carried out in Muzaffargarh. The oral examination of 100 children getting education in the private schools, performed to evaluate the status of their dental caries. We used a questionnaire to check the parent's awareness about the oral health.

Results: There were 47.0% male & 49.0% females in this research work. The occurrence of the dental caries was about 68.0% with an average score of DMFT as 1.38 was much high in female in comparison with the male boys. There was an increase in the dental caries with the increase of the age from 12 to 15 years. Parents were present with the knowledge that regular checkups by dentist are good for the prevention of the dental caries but most of the patients were visiting the doctors when there was severe pain in the teeth.

Conclusion: Current research work discovered that there was high prevalence of the dental caries among girls as compared to the boys. The awareness of the parents about the oral health of the children can impact the oral health of their children. There should be an arrangement of the programs to increase the awareness of oral health for the increase in knowledge of parents and their children.

Keywords: Dentist, Relationship, Prevalence, Occurrence, Programs, Prevention, Caries.

Corresponding author:**Dr. Umair Altaf,**

Rural Health Centre Rangpur Muzaffargarh.

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INTRODUCTION:

The spread of the dental caries has altered intensely in last thirty years transferring its base for the countries which are developed to the countries which are under development. The treatment of the dental diseases is very costly and it is on 4th rank in the countries which have developed. The dental if not treated well can have impact on the life quality of the children which can lead to uneasiness, dental sepsis & severe pain and result loss in the school going children. The high proportion of the dental caries in the countries which are under development are because of the urbanization, social & economic features. Better oral health is very important factor for the hindrance of dental caries. The school going children of the developing countries have very less awareness regarding oral hygiene.

Currently, there are reports that status of the dental health in the children has influence of the dietary habits of children, education level of mother and social & economic class of family. AL-Hosani stated the prevalence of the low dental caries among children whose parents were available with the high level of education as well as high social & economic class. A report from USA discovered that there was much difference in the oral health of the children in the high and low income group. Different factors as the education level of the parents, joblessness and less income have association with the adverse health and different chronic diseases. Tickle in his research work reported that the children of the poor background face more dental caries and very infrequently visit dentists. There is very less amount of the data on the knowledge of the parents about oral health and its relationship with the oral hygiene of their children.

METHODOLOGY:

This transverse research work carried out for the evaluation of the dental caries among children having age from 12 to 15 years in Muzaffargarh. The calculated size of samples was 100 on the basis of the past study conducted by A.A khan in the same city of Muzaffargarh and same formula was in use for the selection of the sample size. We used a standard error of 3.0%, a level of CI as 93.0% and a proposed

occurrence of 53.0% was in use. We used the random sampling method for the selection of the students. The size of sample increased to 100 because to get prevention from the drop outs. We took the consent of all the principles of the selected school to ensure their participation in the research work. Almost people from every social and economic class were present in those areas. For the clinical examination of the teeth, specification prescribed by the WHO were in use at this age group. We used a questionnaire containing close ended questions. We also translated the questionnaire into Urdu for easy understanding of the participants. Urdu is most common as well as national language of the country Pakistan and most of the people in the country can easily understand this language. We handed over the questionnaire to the children for their parents, parent filled the questionnaire and we collected the questionnaire at next day from schools.

Mouth mirror, dental lamp and CPI probes were in use for the examination of the dental caries. A single operator examined all the dental caries as well as filled or missing teeth. We presented the averages and standard deviations for the continuous variables. Differences of the average for the categorical variables detected with the help of the T-test. Logistic regression was in use for the examination of the awareness of the parents about the dental caries. STATA V. 11 was in use for data entry as well as statistical analysis of the collected information.

RESULTS:

The rate of response by the parents was 36.0% therefore there is very limited awareness of the parents about the oral hygiene of their children. Among these 100 students, 47.0% (n: 43) were male & 49% (n: 57) were females. The rate of occurrence of the age distribution was 8.0% (n: 10) in twelve-year age, 22.0% (n: 26) in 13 years of age, 24.0% (n: 25) in 14 years of age, 38.0% (n: 39) in 15 years of age. Overall average score of DMFT was 1.38 (.8), scores of D-T, M-T & F-T were 1.168 (.088), .048 (.018) and .148 (.028) respectively. The scores of DMFT increases with the increase in the age of the children as presented in Table-1.

Table 1: Mean DMFT (SD), D-T, M-T, and F-T and Frequencies of DMFT by Age and Sex

Variables		DMFT	% DMFT	D-T	% DT	M-T	% MT	F-T	% FT
Gender	Boy (n: 43)	1.158	62.00	0.868	50.00	0.038	2.00	0.148	13.00
	Girls(n=57)	1.518	75.00	1.258	68.00	0.058	4.48	0.148	7.00
Age	12 (n=11)	1.228	58.00	1.128	51.00	0.000	0.00	0.198	18.00
	13 (n=26)	1.228	59.00	1.158	56.00	0.000	0.00	0.158	12.00
	14 (n=25)	1.308	75.00	1.148	62.00	0.068	5.68	0.168	11.00
	15 (n=39)	1.348	73.00	1.198	62.00	0.078	6.28	0.108	6.00
	Total (n=100)	1.300	68.68	1.168	59.00	0.048	3.00	0.148	10.00

The distribution of the children according to the education of the father categorized into lower than ten-year education consists 20.0% students, intermediate level education for 47.0% and education level of greater than 12 years in 27.0%. The distribution of the students on the basis of the mother education was 37.0%, 47.0% and 10.0% in lower, middle and higher categories respectively. We categorized the family income lower than fifteen thousand or greater than fifteen thousand and there were 29.0% and 67.0% students in these categories respectively.

The average and standard deviation of the children present with the dental caries with association to the knowledge of the oral health in parents is available in Table-2.

Table 2: Mean (SD), Proportion Of Children With Dental Caries In Relation To Oral Knowledge Of Parents.

Questions		N=150		Mean(SD)	Percentage (%)	p-value
		No	%	DMFT		
Brushing teeth protects dental caries.	Yes	110.0	74.00	1.38 (1.28)	52.500	
	No	27.0	18.68	1.18 (1.08)	11.100	0.3000
	I don't know	1.0	1.28	1.18 (1.08)	2.500	
Guide your children how to brush teeth.	Yes	94.0	63.28	1.38 (1.28)	44.000	
	No	48.0	32.68	1.38 (1.28)	22.500	0.6000
Tool your children use for cleaning.	Brush and toothpaste	135.0	90.68	1.38 (1.28)	63.100	0.1000
	Muswak	7.0	5.28	1.78 (1.48)	3.100	
The cause of dental caries is.	Sugar	18.0	12.68	1.78 (1.58)	8.500	
	Sweets Soft drinks	33.0	22.78	1.38 (1.18)	16.000	
	Snacks Bacteria *	5.0	4.00	1.18 (1.8)	1.100	0.4000
	I don't know	20.0	13.28	1.8 (1.18)	7.100	
		34.0	23.28	1.38 (1.18)	17.100	

		17.0	12.0 0	1.38 (1.28)	8.000	
		76.0	49.2 6	1.38 (1.18)	36.000	0.060 0
What is dental plaque?	Food remaining on teeth*	45.0	28.6 6	1.18 (1.18)	19.100	
	Stains	17.0	10.0 0	2.0 (1.418)	9.100	
	I don't know	29.0	18.0 0	1.28 (12.0)	12.000	
What does plaque do to your teeth?	Change the color of the teeth	58.0	37.2 6	1.28 (1.28)	26.400	
	Dental cavity*	36.0	22.6 6	1.48 (1.28)	18.000	0.600 0
	Bleeding gums I don't know	11.0	6.00	1.48 (1.28)	6.000	

We observed that 90.58% parents utilized the tooth brush with toothpaste as device for the cleaning of the teeth of their children while 5.28% used Miswak as a cleaning tool for their children. Total 63.0% were using the fluoride toothpaste and remaining were not

using fluoridated toothpaste. The information about the T test for the variables regarding the awareness of the fluoride and average DMFT among children is available in Table-3.

Table 3 : Parental Knowledge Of Fluoride With Mean DMFT Of Their Children

Questions		No	Percent	Mean DMFT	P value
Do you know what fluoride is?	Yes	94.0	62.00	1.173	0.5328
	No	52.0	34.00	1.222	
Do you use fluoride toothpaste for your child?	Yes	95.0	62.00	1.248	0.0275
	No	51.0	34.00	1.478	
Does fluoride helps preventing teeth from dental caries?	Yes	87.0	57.00	1.148	0.3318
	No	59.0	39.00	1.468	
Can fluoride reverse the dental cavity?	Yes	103.0	68.00	1.328	0.0328
	No	43.0	28.00	1.088	
What is the function of the fluoride	Whitening of teeth	24.0	25.00	1.378	
	Cleaning of teeth	44.0	29.00	0.728	0.0218
	Make teeth hard	30.0	19.00	1.300	
	Protect the teeth from bacteria	19.0	12.00	2.000	
	don't know	23.0	15.00	1.238	

The Table-4 presents the univariate & multivariable logistic regression with calculation or the effects of the characteristics of the children on the dental caries. Male were available as more protective from the prevalence of the dental caries as compared to the female students.

Table 4: Univariate And Multivariable Logistic Regression Model To Calculate OR For Children's Characteristics Effect On Dental Caries (N=100).

Variable		Univariate		P-Value	Multivariable		P-Value
		Odds Ratio	95% CI		Odds Ratio	95% CI	
Gender	Boys	0.33	0.25 - 1.10	0.1	0.2	0.9 - 0.82	0.025
	Girls	1			1		
Age (years)	12	1					NS
	13	1.02	0.28 - 1.56	0.92			
	14	2.20	60 - 5.7				
	15	2	0.59 - 4.33				
Father Education	Under Matric	1			1		
	Intermediate	1.96	0.82 - 2.5	0.10	1.6		NS
	More than 12	2.41	0.88 - 4.51		1.32	1.88 - 5.87	0.026
Mother Education	Under Matric	1					NS
	Intermediate	1.57	0.72 - 31.38	0.20			
	More than 12	0.92	0.28 - 2.89				
Father Income (Rs)	< 15000	1					NS
	>15000	1.17	0.54 - 2.50	0.62			
Rinsing the mouth after meal (Qs from children)	Sometimes	1		0.1			
	Always	0.220	0.19- 0.88				
Fluoride toothpaste usage	Yes	1			1		
	No	1.29	1.38 - 5.80	0.004	1.95	1.37 - 5.7	0.007
Fluoride prevents caries	Yes	1			1		
	No	2.1	1.04 - 2.90	0.032	1.80	1.03 - 3.02	0.026

DISCUSSION:

Average index score of DMFT was 1.38 and it was much smaller as compared to the surveys conducted in past in our country Pakistan. The occurrence of the dental caries was 68.0% which is same with the research work conducted in Kenya but higher than the survey conducted in 2004. The habits of eating between the meals and after the meal was similar in male and females & the findings showed that this was much with study conducted in U.A.E. There were differences about the awareness regarding oral hygiene in males and females and the findings were consistent with the research conducted in Japan. A survey in Hungary discovered the gender disparity in the experience of the dental caries and an increase in the incidence with the increase of the age. The past research works stated the same DMFT among various groups of education.

The low social and economic status was not the reason for the high occurrence of the dental diseases but it as the high income which can lead to the disease and dental clinics. These findings were opposite from the research work conducted in United States of America. About 44.0% parents were present with the view that fluoride has better impact on teeth, and it support in the whitening of the teeth. Same wrong ideas were available in another research work conducted in Saudi Arabia. Although the size of the samples was much low but this research work has the ability to open the ways for many other research works.

CONCLUSION:

The occurrence of DMFT was very high in the female students in comparison with the male students and there was significant result about this element. The

status of the DMFT of the samples increases with the increase of the age. Parents were available with moderate proportion of knowledge about the fluoride and their knowledge was affecting the oral health of their children.

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