Oral hygiene practices of school going children during Covid-19 pandemic in Kasur

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Abstract

Objectives: To assess the oral hygiene practices of the school going children during the Covid-19 pandemic in district Kasur.

Methods: It is a cross-sectional study conducted in 02 RHCs, Phool Nagar and Mustafa Abad of district Kasur. A total of three hundred eighty three school going children were asked about their oral hygiene practices, a pre-validated caries risk assessment checklist (Annexure 1) and Dental Caries detection form (Annexure 3), Results were collected and analyzed using appropriate descriptive statistics.

Results: Approximately 383 participants were part of the study. Majority of the respondents reported i.e. 60.3% didn't pay any visit to the dentist in the past 12 months. Majority of the respondents i.e. 79.6% said pain or trouble was the main reason for the visit to the dentist where as 10.4% said for a routine dental checkup and 300 (78.3%) were females with a median age range of 13 years (23.2%) and 12 years (17.5%).

Conclusion: Spreading awareness is a major aspect to control the transmission of the SARS-COV-2, as it's a highly contagious virus. The results of this study highlighted specific groups to be targeted for educational programs regarding oral hygiene practices during the pandemics like COVID-19 and this can provide initial basic data to the government to work on such programs.

KeyWords: Oral hygiene practice, School going children, Covid-19 Pandemic, Awareness,

Introduction:

complete dental care includes dietary modifications, oral health education, regular visits to a dentist and use of fluorides.^{1,2}The attitude and practices of maintaining good oral health are directly related to the disease knowledge of patients with periodontitis and dental caries.^{3,4} Oral cavity is a hub to several diseases and is directly or indirectly linked with many health problems which may contribute to poor quality of life.^{5,6,7} Good oral health of a child plays a pivotal role in maintaining good quality of life which contributes to better curriculum and extra curriculum performance.^{8,9} Dental decay at an early age has a negative impact in the child's life ^{10,11} and also impairs growth and development of the child.¹²

Prevention is one of the key components in maintaining good health.¹³ Regular cleaning of all the five visible surface of the teeth and adding the medications and dentifrices which strengthen the tooth enamel maintains the oral health thus

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Received:August 18, 2020 Accepted November 20, 2020 DOI: https://doi.org/10.52442/jrcd.v1i1.19 preventing the diseases.^{14,15} Pakistan spends the 0.5% of the total GDP on health sector, with scare budget it is difficult to manage the financial constraints for the general population especially who live on the poverty line. So there is an immense need to develop a policy which is economical and beneficial for the population at all level.

Oral health education is one of the non-invasive and economical mean to deliver awareness regarding the importance of oral health and suggesting preventive measure at an early level. Hence establishing an oral health education intervention in Rural Health Centers in District Kasur by decreasing the risk factors for dental caries might help preventing the oral disease in the rural population, saving time and cost to the patients as well as to the government. Children have been selected because the oral hygiene is neglected in this age and unhealthy dietary habits including high sugar intake.

We need to pay more emphasis on the preventive dentistry as well as making dental services available for the general population at an affordable cost. In order to prevent dental caries, brushing our teeth twice daily is of great importance. I 6 Frequency and duration of brushing and flossing, should also be put under consideration to comprehend deeply the concept of oral hygiene in different age groups and also in as different parts of the world. ¹⁷ There are many factors that contribute to oral hygiene practices. Likewise, even for initial plaque formation on the teeth of children, factors such as poor diet, improper brushing, and no flossing contributed actively.¹⁸

Prevention programs by the department of dental public health and various other government authorities are difficult to implement, due to the scarcity of data in the region. Therefore, the objective is to conduct a study on the oral hygiene practices among the school going children during the covid-19 pandemic in district kasur.

Methods:

A cross- sectional study was done in the month of July 2021 to September 2021 in 02 RHCs, Phool Nagar and Mustafa Abad, they were chosen by lottery method. Inclusion criteria for the study was Children from 08-16 years visiting rural health centers for treatment of Dental and other diseases, males and females i.e. both genders were included in the study. Ethical approval was taken prior to the start of the study.

Children of the 02 RHCs with an age range of 8-16 years fulfilling the inclusion criteria were examined with the examination tools on the dental unit office in the RHC for caries risk using a pre-validated caries risk assessment checklist (Annexure I) an informed consent from their guardians/ parent was taken. Results were collected and analyzed using appropriate descriptive statistics.

Results:

Total number of participants in this study were three hundred and eighty three amongst them 83 (21.7%) were male and 300 (78.3%) were females with a median age range of 13 years (23.2%) and 12 years (17.5%). The included 38.9% of primary/mixed dentition where as 61.1% of the respondents had permanent dentition. The respondents of age 7 and over with active and smooth surface caries 383 (100%). The respondents having new caries lesion in last 12 months were 383 (100%). The respondents having hypo-mineralized molars were 383 (100%).

The DMFT status for respondents with age 7-10 (dmft>3 or DMFT>0) is 26.4%, age 11-13 (dmft>2 is 53.5%, age 14-15 with dmft>4 is 18.8%. The respondents with deep pits and fissure in permanent teeth were 70.8% whereas 29.2% didn't have deep pits and fissure sealants.

The respondents consuming sweet or drink between meals were 55.9% where as 44.1 % didn't consume between meals. Among the participants 383 (100%) didn't experience fissure sealants. The respondents brushing twice daily were 48% whereas not brushing twice daily were 52%. The respondents using tooth paste with fluoride were 34.2% where as 65.8% didn't use tooth paste with fluoride.

Majority of respondents (383) 100% didn't have access to fluoridated water supply.All of the respondents reported high risk of caries. Only 23.5% of the respondents have literate parent's majority of them (76.5%) have illiterate parents.In relation to frequency of sugary food or drink, 55.9% of the respondents were high risk to caries where as 44% were low risk. In term of caries exposure of the mother, sibling 55.9% were high risk to caries where as 44% were at low risk. In comparison, of the risk associated with cavitated or non-cavitated carious lesion, the respondents at high risk were 55.6% whereas at moderate risk were 44% and at low risk were 0.3%.

In comparison of risk associated with teeth missing due to caries in past 36 months, the respondents at low risk were 63.2%, High risk were 25.3% and moderate risk were 11 5%. Patients with moderate risk of caries showed 56.9% of visible plaque when examined. Whereas 43% of them showed visible plaque in low risk patients. Majority of the respondents i.e. 92% showed no unusual tooth morphology whereas 7.8% showed unusual tooth morphology.

Majority of the respondents showed no interproximal restoration i.e. 73.9% where as 26.1% showed interproximal restoration non examination. All the participants did not express exposed root surfaces. Majority of the respondents i.e. 71.3% showed no restoration with overhangs whereas 28.7% showed overhangs on examination.

Majority of the respondents reported i.e. 60.3% didn't pay any visit to the dentist in the past 12 months where as 29.8% said they had one visit to the dentist in the past 12 months. Majority of the respondents i.e. 79.6% said pain or trouble was the main reason for the visit to the dentist where as 10.4% said for a routine dental checkup.

Table: I Frequency of oral hygiene practices among the school going children of district Kasur, before the intervention.

Oral Hygiene Practices among the children Pre-intervention		Frequency	Percent
Children having Sweet or drink between meals	Yes	169	44.1
	No 🗌	214	55.9
Brushing twice a day	Yes	199	52.0
	No 🗌	184	48.0

Table 2: Frequency of Oral Hygiene practices amongst the children of district Kasur after the intervention.

Oral Hygiene practices amongst the children of district Kasur		Frequency	Percent
Brushing twice a day	Yes	169	44.1
	No		
Frequency of sugary food or drink	Low risk		
	High risk		
In the past 12 months, how often did you go the dentist?	No visit	169	44.1
	Once]	
	Don't know		
What was the reason for your last visit?	Pain or Trouble	 	
	Don't Remember		

Oral Hygiene practices amongst the children of district Kasur			Frequency	Percent
How often do you clean your teeth?	Never		169	44.1
	Once a week			
	2-3 times a day			
To clean your teeth, do you use toothpaste?	Yes			
	No			
How frequently you eat or drink sweet foods in small quantities like biscuits and cakes?	Several times a day		169	44.1
	Everyday			
Frequency of Cola drinks	Everyday			
	Once a week			
Frequency of Candy/sweet	Several times a da	у	169	44.1
	Everyday			
	Once a week			

Discussion:

Oral disease, as estimated by the Global Burden of Disease affected half of the world's population (3.58 billion people) in which dental caries (tooth decay) was found to be the most prevalent.¹⁹ Oral health is considered pivotal for general health as it prevents many problems leading to certain diseases. It is the basis of genera good health and quality of life.²⁰

Children are more likely to have problems and diseases. They have high risks of getting caries. The participants have shown significant results as about 48% and 44% children became risk free from caries using tooth brush with paste and oral hygiene instruction respectively. This was similar in study conducted in Libya where it was reported to be 87%.²⁰

In the present study, the 100% of examined population shows active caries. Whereas a caries rate calculation The DMFT status for respondents was highest in the age group of 11-13 years i.e. (dmft>2 is 53.5%). The respondents brushing twice daily were 48% which was similar to the study done in Egypt which showed the brushing rate of 47.5%. 21 Almost around 32.4% of the population used tooth paste with fluoride which differs significantly from the study done in Libya i.e.65.7%.²⁰

Almost about half of the examined population i.e. 55.9%, dietary regimen included consumption of sweets between meals which was similar to the reported literature in Libya.20 Majority of the population under study i.e. 55.9% didn't use toothpaste while brushing.

Cleaning is the hallmark of our daily practices. Prevention and care are far better than medication where observation, instruction and reflection play critical role in dealing routine matters. It is a saying, prevention is better than cure, with an extension, an ounce of prevention is better than a pound of cure. The participants were asked about their routine of cleaning teeth.

The responses have exhibited practice of never, once a week and 2-3 times a day by 2%, 5% and 8% who never cleaned their teeth earlier, about 3 and 41 per cent in once a week and about 40% in 2-3 times a day which different significantly in the study conducted on dental graduates they reported 87%. $^{\rm 22}$

Further analysis showed the population understudy was consuming high amounts of fermentable carbohydrates, i.e. cola drinks 87.5% consumed it daily, whereas 55.9% of the population consumed high amount of sweets in daily diet. Studies that were conducted in Libya and Jordan had somewhat similar results.^{20,23}

The risk of enamel caries particularly at the root surface is increased with the frequent consumption of fermentable carbohydrates that have low oral clearance rate.

The study was conducted with limited resources and was selffunded. In future, the study should be conducted with a bigger sample size to improve the reliability of conclusions drawn and the study topic under discussion.

Conclusion:

On 12th March 2020, COVID-19 was declared as the worldwide pandemic. Since it's a highly contagious virus, it important that general public is awarded with the guidelines and this the transmission can be prevented.

Only a specific groups of educational programs were identified and approached for this study for oral hygiene practices during the pandemics like COVID-19. This survey could provide baseline data to the government for preventive measures in case of future outbreaks.

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Author Contributions

- I. Faisal Izhar- Conceptualization and Study Design
- 2. MahaTanvir- Paper Writing and Critical Analysis
- 3. Azizullah- Data collection
- 4. Shafia Hassan- Data Analysis