

Prevalence of Dental Caries Among Young Adult in OPD of A Private Dental College in Dhaka City

Nargis NN^{1*}, Rahman T², Islam AAS³, Kader MA⁴, Jahan BHA⁵, Laila Y⁶, Nahar L⁷, Shanta KN⁸, Jubayer S⁹

Abstract

Background: Information concerning the oral health status and prevalence of caries in Bangladeshi young adult is very limited and has been studied to a narrow extent.

Method: The aim of the study to assess the prevalence of caries and DMFT/DMFS among young adult. For the purpose of this cross-sectional study 162 patients who attended to the outpatient department (OPD) in private dental college, at University Dental College and Hospital were selected. Data were collected through face-to-face interview and analyzed by SPSS version 21.

Results: From this current study result I found that maximum (40%) of the respondents were in the group of 18-22 years with the mean age \pm SD was 25.950 \pm 5.666 and majorities (58.6%) were male where almost all (92.0%) were Muslim. Regarding maintenance of oral hygiene, maximum (56.8%) was never visited to the dental surgeon, all (100%) of them were brush their teeth and majorities (59.3%) were practice twice in a day where almost all (90.1%) rinse their mouth after eating sweetened food/ each meal. Almost all (95.7%) were used brush and paste as combined materials for teeth brushing and (58.6%) were brush their teeth by up and down stroke method. Maximum (43.2%) of the respondents liked fibrous food in their diet. After conducting intraoral examination, I had found that, maximum (45.7%) had mild dental plaque and All (100%) the respondents had calculus in their mouth. Majorities had no filling (56.2%), missing teeth (69.1%) and no caries (56.2%) among them maximum (56.3%) had suffered mostly by pit and fissure caries in oral cavity. So, the prevalence of caries in this study was 43.8%. In case of decayed surface, maximum (53.7%) had no decayed surface. Finally, after the calculation the total DMFT and DMFS of 162 respondents were 1.185 and 1.209 was found as 1.209 which was >1 in both indices.

Conclusion: Although the overall dental caries epidemiological picture among young adults in Dhaka was favorable since prevalence and severity was considered low when compared to the goals recommended by the Oral Health Organization and the studies which contrasted.

Key words: Prevalence, Caries, Young adult, Oral hygiene maintenance, diet, DMFT, DMFs

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1. **Nurun Nahar Nargis**, Lecturer, Dept. of Conservative Dentistry and Endodontics, University Dental College
2. **Tasnova Rahman**, Associate Professor, Dental Public Health, Mandy Dental Collage
3. **Prof. Abu Ahammad Shahidul Islam**, Professor & Head Dept. of Oral and Maxillofacial Surgery, University Dental College

*Corresponding Author

Nurun Nahar Nargis, Lecturer, Dept. of Conservative Dentistry and Endodontics, University Dental College

Email: nnargish27@gmail.com

4. **Md. Abdul Kader**, Assistant professor, Dept. of Orthodontics and Dentofacial Orthopedics, University Dental College
5. **Bil Hasna Arefin Jahan**, Lecturer, Dept. of Orthodontics and Dentofacial Orthopedics, University Dental College
6. **Yasmin Laila**, Lecturer, Dept. of Oral and Maxillofacial Surgery, University Dental College
7. **Lutfun Nahar**, Associate Professor, Orthodontics and Dentofacial Orthopedics, University Dental College
8. **Kamrun Nahar Shanta**, Associate Professor, Dept. of Conservative Dentistry and Endodontics, University Dental College
9. **Shamim Jubayer**, Senior Research Fellow, National Heart Foundation and Research Institute

Introduction

Oral cleanliness alludes to the person's propensities and proficient strategies of keeping your mouth and free of illnesses and keeping up a sound state of your mouth¹ (Oral Health Foundation, 2017). Oral wellbeing may be a principal portion of common wellbeing. No one can keep up their constitution without oral health. Many common illnesses may present, to begin with

within the mouth and the mouth is the unmistakable door to the rest of the body that reflects what is happening interior the body² (Mughal, 2011)

Despite great achievements in oral health of populations globally, problems still remain in many communities all over the world - particularly among under-privileged groups in developed and developing countries. Dental caries and periodontal diseases have historically been considered the most important global oral health burdens. These have been considered important mainly because almost everybody in the more 'visible' affluent parts of the world, were affected by one or other of these conditions. Dental caries is a very common and important health problem for young adults. Caries is five times as common as asthma and, thus, the most common chronic disease of Childhood. Even in low caries risk populations, caries is still a very common childhood disease. The three essential factors for caries development are dental plaque (which can contain harmful bacteria), fermentable carbohydrate from the diet and susceptible tooth. Approaches to prevent dental caries include reducing dental plaque levels, changing the bacterial composition of plaque, and changing dietary intake patterns and frequency. With regard to dental caries global weighted mean DMFT value for

12-year-old age group was 1.61 in 2004. In India, data from the National Oral Health Survey (2002-2003) states that in children aged 12 years, the caries prevalence was 53.8% and the mean DMFT was 1.84. According to the available literature, during the formation of teeth the physical and chemical properties of enamel could be altered in the direction of increased dental caries susceptibility. There may be a greater prevalence of dental caries because the excessive consumption of sugary foods. Studies are sparse in this region of the country on prevalence and risk factors of dental caries. Hence the present study was undertaken to assess the prevalence and risk factors of dental caries among young adults of Dhaka, Bangladesh.

General objective

To assess the prevalence of Dental Caries and associated factor among young adult in OPD (outpatient department) of University Dental College and Hospital.

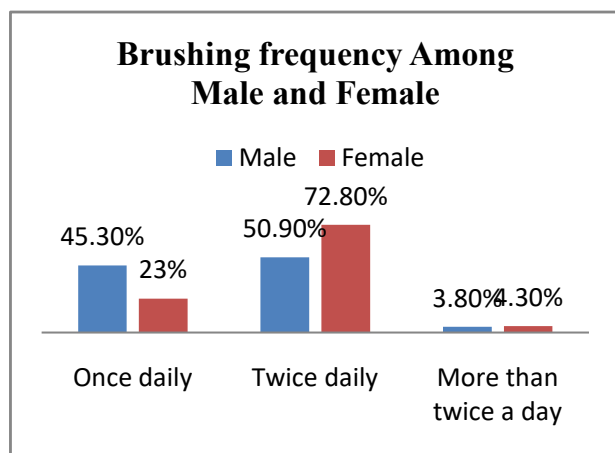
Materials and Methods

To know the answers to these aspects, this study pursues a quantitative approach. To comprehend the aspect a descriptive type of cross-sectional study was conducted among Patients attended in Dental OPD (Outpatient Department) at University Dental College and Hospital. A total of 162 patients from 162 patients who attended to the outpatient department (OPD) in private dental college were selected. Data were collected by using a semi structured questionnaire through face-to-face interview. According to the objectives and variables of the study data were analyzed by using SPSS software.

Results and Discussion

In this study, among all respondents, 11% of people use toothbrushes and toothpaste containing fluoride 25.06%, and 16.62% use non-fluoride toothpaste to clean their teeth. Besides, 38.95% of patient use toothpaste for reducing sensitivity and 19.35% want to whiten their teeth by using toothpaste. 51% of patient brush their teeth twice a day whereas 45% students follow once daily mostly in the morning before breakfast whereas only 4% brush their teeth more than twice. Moreover, the majority of the respondents 58.6% brush their teeth for 1-2 minutes, whereas the minority people which is 20.59% people brush their teeth for less than 2 minutes, and 34.98% people brush for less than 1 minute. Usage of dental floss practiced by 56.82% 43.17% people is non-user a habit of gargle owned by 13.39% people and 86.61% people do not have the habit. Here the majority of people 64.76% sometimes use toothpick where 4.5% are non-user and 30.76% people use toothpick daily after meals. Additionally, 11% of people use tongue scraper for cleaning the tongue. Similar findings for irregular oral hygiene habits have been reported for a school-going population from the Middle East³ (Al-Omiri et al., 2006, p. 186).

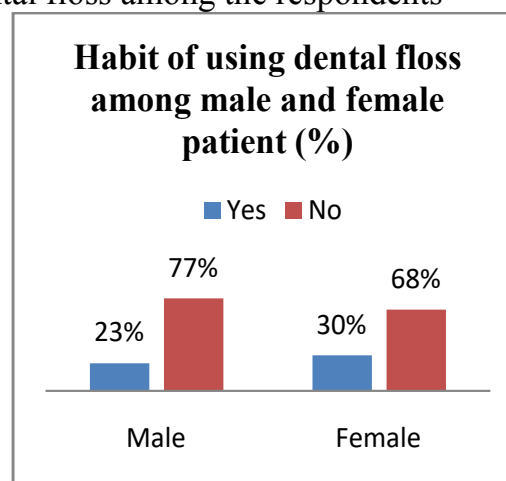
Figure 1: Distribution of the frequency of teeth brushing among male and female patient



Bleeding gums can be a sign merely have or may create gum infection. Continuous gum dying may be due to plaque builds up on the teeth. It can moreover be a sign of a genuine therapeutic condition. The most cause of dying gums is the construction up of plaque at the gum line. This will lead to a condition called gingivitis, or kindled gums⁴. In this study 31.51% of total patient suffering from gingival bleeding which is similar to the study (Begum A, 1993-94) which was 37.7%. The awful breath may be a common issue that can cause

noteworthy mental trouble. There are several potential causes and medications accessible. Anybody can endure from terrible breath. It is evaluated that 1 in 4 individuals have awful breath on a customary premise. Halitosis is the third most common reason that individuals look for dental care, after tooth rot and gum illness⁵. The survey revealed that 71.72% of students had bad breath which was higher than the study of Fakir MM and Alam KMU⁶ (2009), where 63.09% of respondents suffered from halitosis. Tobacco products, as well as smoking habit, cause their types of mouth odor. Additionally, they increase the chances of gum disease which can also cause bad breath⁵. In this study, it is observed that 67.49% of respondents are with smoking habits which is higher than the study of Farzan MSA, 2013⁷ where 61.58% of the respondents were smokers. Besides, here the majority of respondents which is 46.40% sometimes use mouthwash but 32% are non-users among them 13.39% people use mouthwash once a week, and the minority 8.1% use mouthwash daily. This study shows that 73.69% visit dental chamber only if there are any necessities whereas 6.20% are not interested at all and 20.09% people visit dental chamber six months interval. Among all the respondents 76.18% have complete dentition and 23.82% have a loss of a tooth.

Figure 2: Comparing of the Habit of using dental floss among the respondents



Conclusion & Recommendation

At long last, it is caught on that all the oral hygiene strategies and propensities like brushing twice a day, after breakfast and before going to bed regularly with the toothbrush and toothpaste significantly the female students with the duration of brushing time 1-2 minutes, using mouthwash, tongue cleaning agents, dental floss yet again predominantly by the females, whereas dodging smoking propensity have been taken

after by most of the male patient. Furthermore, the female patient are more altogether customary than the male patient. Respondents from all the departments are well educated approximately all the strategy to preserve the oral hygiene instruction while are the slightest interested to take care of the instructions due to habituation and lethargy; for instance, most of the patient visit the dental chamber only in need whereas it is a must to visit a dentist in a six-month interval. Analyzing all the data collected from the study, here is a certain number of recommendations to take care of.

The sitting arrangement of outpatient department should be improved. They should arrange more chairs for the patient because patients have to wait one to two hours for their treatment.

1. In this manner, children ought to be taught or counseled from an early age and done with the guardians as well.
2. take a few activities within the private college premises through the government body UGC to set up an obligatory run the show for all the private college to have a dental station for all the understudies in a slightest fetched supported by the institution and dental check-up in six-month interims ought to be must for the understudies as a run the show all through the full course.
3. Giving dental wellbeing administrations on college campuses serves to progress availability to such administrations and empowers college understudies to visit the dental practitioner when they require emerges or for a yearly check-up.

References

1. Oral Health Foundation. 2021. *Word of Mouth: November 2017*. [online] Available at: <<https://www.dentalhealth.org/november-2017>> [Accessed 22 March 2021]
2. Mughal, M., 2011. یدحوالو نأرقلا خیش (Shaykh Al-Qur'Anwal-Hadith Mufti Dr. Ghulam Sarwar Qadiri [1939-2010]). *SSRN Electronic Journal*. Mughal, M., 2011. یدحوالو نأرقلا خیش (Shaykh Al-Qur'Anwal-Hadith Mufti Dr. Ghulam Sarwar Qadiri [1939-2010]). *SSRN Electronic Journal*.
3. Omiri, M. K., Al-Wahadni, A. M., & Saeed, K. N. (2006). Oral Health Attitudes, Knowledge, and Behavior Among School Children in North Jordan. *Journal of Dental Education*, 70(2), 179–187. <https://doi.org/10.1002/j.0022-0337.2006.70.2.tb04074.x>
4. Bleeding gums. (2021, February 26). U.S National Library of Medicine. <https://medlineplus.gov/ency/article/003062.htm>
5. Newman, T. (2018, January 10). *NEWSLETTER*. Medical News Today. <https://www.medicalnewstoday.com/articles/166636>
6. Fakir, M. M., Ul Alam, K. M., Al-Mamun, F., & Sarker, N. (2012). A Survey on Oral Health Condition in Primary School Children. *Medicine Today*, 22(2), 70–72. <https://doi.org/10.3329/medtoday.v22i2.12436>
7. Farzan MSA, Aayeed MA, Debnath S, Zerin I, Afrin S, (2013). Oral health condition among selected school children in Dhaka city.