Original Article

Life Style of Male Adolescent in A Selected High School of Bangladesh.

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Abstract

Background: The descriptive cross-sectional study was conducted to find out the lifestyle of male adolescent in a selected high school Laksam, Cumilla. Sample size was 255 and data was collected by face to face interview using semi-structured questionnaire to collect information about the lifestyle of male adolescent. Objective: To determine the lifestyle of male adolescent of high school student. **Methods:** The study was a descriptive type of cross-sectional study. Study place was Joytipal Mohathero Orphanage High School, Laksam, Cumilla. Study populations were adolescent boys of school students at Joytipal Mohathero Orphanage High School. The duration of the study will be 1 (One) year from 1st January 2021 to 31st December, 2021. Initially data was collected then checked for completeness and correctness in order to exclude missing or inconsistent data. Then data was entered into the computer using Statistical Package for Social Sciences (SPSS, version-25). Then were presented using frequency table, graph and chart. Result: Out of 255 male adolescent, 136 (53.3%) were within the age group 15-17 years, among rest 66 (25.9%) respondents were within the age limit of 11-14 years, 53(20.8%) were within the age group 18-19 years respectively (Mean $\pm SD = 1.95 \pm 0.683$). Most of 172 (67.3%) of male adolescent do not have any history of illness and rest of the respondents 83 (32.5%) have history of illness in last 6 month. Most of 165 (64.7%) of male adolescent exercise every day and rest of the respondents 90 (35.3%) don't exercise every day. Almost half 140 (54.9%) of respondents 7-8 hours' sleep per night, 73 (28.6%) of respondents 5-6 hours' sleep per night and 42 (16.5%) 9-10 hours' sleep per night. Out of 255 respondents 164 (64.3%) used internet every day, 41 (16.1%) used internet more than a month, 24 (9.4%) used thrice a day, 14 (5.5%) used twice a day, 6 (2.4%) once a week and 6 (2.4%) once a month. Most 68 (26.7%) of respondents playing games on mobile, 59 (23.1%) of respondents watch you tube and other video watching site, 38 (14.9%) of respondents use social site (Facebook, twitter etc.), 31 (12.2%) listening music in the internet, 30 (11.8%) used messenger (like Facebook messenger, imo, WhatsApp etc.), 29 (11.4%) of respondents used as a web browsing. This study informed that there is healthy life style practicing among the adolescent boys. Conclusion: According to the study a vast number of adolescent were away from physical activities and in bedded into internet and were suffering from lack of sleep and others problems. Health education, making facilities available and further research is needed for the betterment of those adolescent.

Key Words: Life Style, Adolescent, High School.

Introduction: The World Health Organization (WHO) defines "adolescent" as an individual whose age is between 10 to 19 years. Adolescence phase transitional period in human growth and development between childhood and adulthood¹. There are more adolescents in the world than ever before: 1.2 billion, totaling one sixth of the global population. This number is expected to rise through 2050, particularly in lowand middle-income countries where close to 90% of 10- to 19-year-olds live. An estimated 1.

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1million adolescents die each year. The leading causes are road traffic injuries, suicide and interpersonal violence. Millions of adolescents also experience illness and injury. Causes of mortality and morbidity among adolescents differ by sex and age, and also by geographic region. For 10-14-year-olds, the leading risks for health are related to water, hygiene and sanitation. Risks for 15-19-year-olds are more often related to behaviors, such as alcohol use and unsafe sex. Poor diet and low physical activity are additional challenges which begin in childhood and adolescence, as does sexual abuse. Older adolescent girls are disproportionately affected by intimate partner violence. Pregnancy complications and unsafe abortions are the leading causes of death among 15-19-year-old girls. Most adolescent mortality and morbidity is preventable or treatable, but adolescents face specific barriers in accessing health information and services². Skipping breakfast, eating quickly, excessive eating, physical inactivity, and long hours of TV watching were positively and significantly associated with overweight in both sexes³. Restrictive laws and policies, parental or partner control, limited knowledge, distance, cost, lack of confidentiality, and provider bias can all restrict adolescents from getting the care they need to grow and develop in good health. Adolescence is a critical age group as this is a period to develop specific expertise and hone individual skills to enter the mainstream workforce and contribute to the economic productivity⁴. Adolescence is a very vital period that will determine how a person will view and interact with the world as an adult. There are issues of general wellness, social wellness, and sexual wellness, all of which are linked. For teenagers, it's important to have the resources, mentorship, and knowledge to make the right choices⁵. Adolescence represents a critical period for rapid physical, social, cognitive, and emotional changes, with important implications for health and wellbeing in later life. Better healthcare and nutrition, extended education, and a widespread use of new technologies, offer the possibility of this being the healthiest generation of adolescents ever6. According to UNICEF there are more than 32 million adolescents in Bangladesh. which is about 21% of the total population⁷. Adolescents not only form a unique group, rapidly developing both physically and mentally but also are

often dependent on their parents or guardians for their health matters. Adolescents are particularly vulnerable to many health issues. It is also a time when critical behaviors are shaped which may affect health in the future. For example, tobacco use, sexually transmitted infections including HIV, poor eating and exercise habits may lead to illness or premature death later in life. Adolescents in Bangladesh are often devoid of health care facilities and therefore there is a need to assess the concept of health and awareness of health-related issues in all over the country. Adolescence is a developmental period well-known for its physical growth and its brain maturation but is also a period often characterized by the prevalence of unhealthy behaviors. Among these unhealthy behaviors often reported are physical inactivity, screen time overuse, skipping breakfast and insufficient Adolescents face challenges in voicing their concerns and are often given limited decision making power⁹. It's also important to always keep the focus on the teen and encourage them to speak for themselves¹⁰. Age was the most significant factor in the adoption of unhealthy behaviors; (e.g. Smoking)11. As well as health enhancing behaviors (e.g., physical exercise) are adopted in adolescence and they often persist into adulthood. Physical activity is one of the main factors in the prevention of health affecting the quality of life. Insufficient of physical activity leads to a decrease in physical capacity, becomes a overweight obesity, cardiovascular disorders and osteoarticular disorders¹². Therefore, helping adolescents establish healthy lifestyles and avoid developing health risk behaviors is crucial and should be started before these behaviors are firmly established.

Methodology: It was a descriptive type of cross-sectional study. Study place was Joytipal Mohathero Orphanage High School, Laksam, Cumilla. Study popuation were adolescent boys of school students at JoytipalMohathero Orphanage High School. The duration of the study will be 1 (One) year from 1st January 2021 to 31st December, 2021. An interviewer administered semi-structured questionnaire will be developed to collect information related to life style of adolescent male students of the school. Initially data was checked for

completeness and correctness in order to exclude missing or inconsistent data. Then data was entered into the computer using Statistical Package for Social Sciences (SPSS, version-25). Descriptive data was analyzed by simple frequency distribution (mean, standard deviation, percentage). Then were presented using frequency table, graph and chart. Recommendations were added according to the resuts.

Resuts:

Table 1: Types of family of the respondents (n=255)

Age of respondent	Frequency	Percent
11-14	66	25.9
15-17	136	53.3
18-19	53	20.8
Total	255	100.0

Out of 255 male adolescent, 136 (53.3%) were within the age group 15-17 years, Among rest 66 (25.9%) respondents were within the age limit of 11-14 years, 53(20.8%) were within the age group 18-19 years respectively.

Table 2: Distribution of adolescent boys according to age (n=255)

Types of family	Frequency	Percent
Nuclear	207	81.2
Joint	46	18.0
Three generation family	2	.8
Total	255	100.0

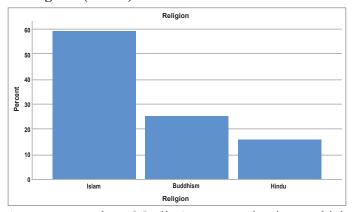
According to family type majority 207 (81.2%) were nuclear family, 46 (18%) were joint family and 2 (0.8%) were three generation family.

Table 3: Number of family member of the respondents (n=255)

Member of family	Frequency	Percent
2	1	.4
3-4	80	31.4
5-6	121	47.5
7-12	53	20.8
Total	255	100.0

According to family member majority 121(47.5%) number were 5-6, 80 (31.4%) were 3-4, 53 (20.8%) were 7-12 and rest 1 only (0.4 percent).

Figure 1: Bar chart showing respondents according to religions (n=255)



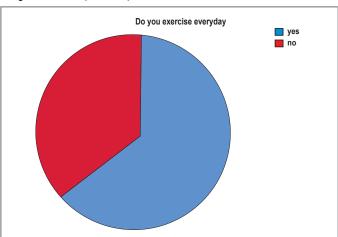
Among respondents Muslim's were predominant which is 151 (59.2%), Buddhist were 64 (25.1%) and rest 40 (15.7%) were Hindu

Table 4: History of past illness of the respondents in last 6 month.

History of past illness	Frequency	Percent
Yes	83	32.5
No	172	67.5
Total	255	100.0

Most of 172 (67.3%) of male adolescent do not have any history of illness and rest of the respondents 83 (32.5%) have history of illness (fever, cough) in last 6 month.

Figure 2: Pie chart showing exercise of the respondents (n=255).



Most of 165 (64.7) of male adolescent exercise every day and rest of the respondents 90 (35.3%) don't exercise every day.

Table 5: Sleeping hours per night of the respondents (n=255).

Hours of sleep per night	Frequency	Percent
5-6	73	28.6
7-8	140	54.9
9-10	42	16.5
Total	255	100.0

Among 140 (54.9%) of respondents 7-8 hours' sleep per night, 73 (28.6%) of respondents 5-6 hours' sleep per night and 42 (16.5%) 9-10 hours' sleep per night.

Table 6: Hours of television watch daily (n=255)

Hours of television watch daily	Frequency	Percent
not at all	110	43.1
1 hours	100	39.2
2-3 hours	38	14.9
more than 4 hours	7	2.7
Total	255	100.0

Among 255 respondents 110 (43.1%) do not watch televisiondaily, 100 (39.2%) daily watch television only hours, 38 (14.9%) watch television 2-3 hours daily and only7(2.7%) respondents watch television more than 4 hours.

Table 7: Time spend on Facebook in a week (n=255)

Spend on Facebook in a week	Frequency	Percent
no use	117	45.9
1 hours	84	32.9
2-3 hours	30	11.8
4 -6 hours	10	3.9
more than 6 hours	14	5.5
Total	255	100.0

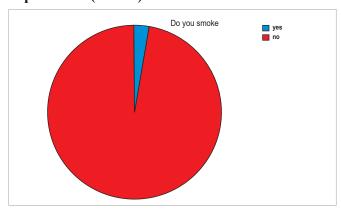
Out of 255 respondents, most 117 (45.9%) of the respondents do not use Facebook, 84 (32.9%) use 1 hours, 30 (11.8%) use 2-3 hours ,10 (3.9%) use 4-6 hours and 14 (5.5%) use more than 6 hours of Facebook.

Table 8: Hours of free time given a day (n=255).

Hours of free time	Frequency	Percent
1 hours or less	81	31.8
1-2 hours	61	23.9
2-3 hours	66	25.9
4-5 hours	25	9.8
more than 5 hours	22	8.6
Total	255	100.0

Out of 255 respondents 81(31.8%) free time has a 1 hour or less, 61 (23.9%) has 1-2 free time, 66 (25.9%) has 2-3 hours free time, 25 (9.8%) has 4-5 hours free time, 22 (8.6%) has more than 5 hours free time.

Figure 3: Pie chart show smoking habit of the respondents (n=255)



Out of 255 respondents majority 249 (97.6%) is nonsmoker and rest of the respondents 6 (2.4%) is smoker.

Table 9: Internet user of the respondents (n=255)

Internet use	Frequency	Percent
Everyday	164	64.3
twice in a day	14	5.5
thrice in a day	24	9.4
once in a week	6	2.4
once in a month	6	2.4
more than a month	41	16.1
Total	255	100.0

Out of 255 respondents 164 (64.3%) used internet everyday, 41 (16.1%) used internet more than a month, 24 (9.4%) used thrice a day, 14 (5.5%) used twice a day, 6 (2.4%) once a week and 6 (2.4%) once a month.

Table 10: What do on internet of the respondents (n=255).

What do on the internet	Frequency	Percent
Music	31	12.2
Messenger	30	11.8
Gaming	68	26.7
Socialsite	38	14.9
web browsing	29	11.4
Video watching	59	23.1
Total	255	100.0

Received date: 21 October 2023 Accepted reviewed version date: 09 April 2024 Most 68 (26.7%) of respondents playing games on mobile, 59 (23.1%) of respondents watch you tube and other video watching site, 38 (14.9%) of respondents use social site (Facebook, twitter etc.), 31 (12.2%) listening music in the internet, 30 (11.8%) used messenger (like Facebook messenger, IMO, WhatsApp etc), 29 (11.4%) of respondents used as a web browsing.

Discussion

Adolescence is the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 years. It is a period of dynamic brain development. During this period, adolescents learn from the social behavior and environmental surroundings of their community. The present study was done with a view to find out the life style and health status of male adolescent in a selected high of Laksam, Cumilla from January 2021 to December 2021. It was a descriptive cross-sectional study and total out of 255 male adolescents were selected conveniently. Semi structured pre-tested questionnaire were used to collect data. In present study it was found that 53.3% (136) of the respondents were from age group of 15-17 year. Among others 25.9% (66) and 20.8% (53) of the respondents respectively age group of 11-14 years and 18-19 years. A study conducted by Bo Larsson, JomagneIngul, Thomas Jozfiak, Einar Leikanger, Anna Meri Sund where the percentage of 10-12 year age group was 13%, 13-15 yeas age group was 72.4% and 16-19 year was 14% in Norway¹³. In present study 81.2% (207) of the respondents were nuclear family, 18% (46) were joint family and 0.8% (2) were three generation family. This study findings similar with findings conducted by Muhammad Samad in Bangladesh¹⁴. In present study according to family member majority 47.5 % (121) number were 5-6 of family member, 31.4% (80) were 3-4 family member, 20.8% (53) were 7-12 family member and rest only 0.4% (1) of family member. A study conducted by Muhammad Samad in Bangladesh¹⁴ where it is similar to my present study. In present study Muslim's were predominant which is 59.2% (151), Buddhist were 25.1% (64) and rest 15.7% (40) were Hindu. But Present census shown in Bangladesh Muslim is 91.04%, Hindu 7.95%, Buddhist 0.61%, and Christian 0.30%¹⁵. In present study the monthly family income of the respondents

were 49% (125) between 5000-15000 taka, 42% (107) were 16000-30000, 6.3% (16) were 31000-50000 and 2.7% (7) were income more than 50000 thousand takas. These findings more or less similar study with findings conducted by Susmita Ghos, Md abdulkarim Masud, Mimma Tababasum. This was quite high per capita in Bangladesh¹⁶. In present study 67.3% (172) of male adolescent do not have any history of illness and rest of the respondents 32.5% (83) have history of illness (fever, cough) in last 6 month. These findings is less similar study S.Ramdass, Sanjeev Kumar Gupta, Baridalne Nongkynrih¹⁷. Present study show 64.7% (165) of male adolescent exercise every day and rest of the respondents 35.3% (90) don't exercise every day. A study conducted by Varshil Mehta and Anusha Bhat where 93.72% were aware of exercise. Another study showed that only 52% of adolescent perform physical exercise regularly. That is less similar with present study that conducted by Waris Qidwai, Sidra Ishaque, Sabeen Shah, Maheen Rahim¹⁸. In present study among respondents 65.1% (166) take 3 time meals, 28.6% (73) take 2 time meals, 5.9% (15) take 4 time meals and only 0.4% (1) respondents take 1 time meals. A study with findings conducted by Varshil Mehta, Anusha Bhat¹⁹ where 76.5% taking meals 3 times. In present study among 54.9% (140) of respondents 7-8 hours' sleep per night, 28.6% (73) of respondents 5-6 hours' sleep per night and 16.5% (42) 9-10 hours' sleep per night. These findings less similar than study with findings conducted by Ellen S Bruce, Laura Lunt and Janet E McDonagh²⁰. In present study among 43.1% (110) of respondents do not watch television daily, 39.2% (100) daily watch television only hours, 14.9% (38) watch television 2-3 hours daily and only 2.7% (7) respondents watch television more than 4 hours. These findings similar to study with findings conducted by Mekam Maheshwar, Prof. Karnam Narender, N. Balakrishna , and D. Raghunatha Rao²¹. In present study 45.9% (117) of respondents do not use Facebook, 32.9% (84) use 1 hours, 11.8% (30) use 2-3 hours ,3.9% (10) use 4-6 hours and 5.5% (14) use more than 6 hours of Facebook. This study less similar to study with findings conducted by AriKusyanti, Dita Rahma Puspitasari, Harin Puspa Ayu Catherina, Yustiyana April Lia Sari in Indonesia²². In present study 31.8% (81) free time has a 1 hour or less, 23.9% (61) has 1-2 free time, 25.9% (66) has 2-3 hours free time, 9.8%

(25) has 4-5 hours free time, 8.6% (22) has more than 5 hours free time. This study similar to study with findings conducted by Iuliia Pavlova, Bogdan Vynogradskyi, EtianaKurchaba, Dmytro Ikrach in Lviv, Ukraine²³. In present study respondents majority 97.6% (249) is nonsmoker and rest of the respondents 2.4% (6) is smoker. This study is almost similar than study with findings conducted by Varshil Mehta, Anusha Bhat. This study show 4.9% respondents was smoker. Another study in Dhaka city show there is 29% of adolescent is smoker²⁴. This study conducted by H Ahsan, P Underwood, D Atakinson. In present study respondents majority 98.0% (250) brush their teeth every day and rest of the respondents 2% (5) do not brush their teeth every day. This study is similar to study with findings conducted by Zdenka Eidenhardt , Alexander Ritsert, Sadhvi Shankar Subramanian, Stefanie Ebel , Jutta Margraf Stiksrud and Renate Deinzein Germany²⁵. In present study 64.3% (164) of used internet everyday, 16.1% (41) used internet more than a month, 9.4% (24) used thrice a day, 5.5% (14) used twice a day, 2.4% (6) once a week and 2.4% once a month. This study is more or less similar study findings conducted by Rubaiya Matin Chandrimaa, Kagan Kircaburunb, HumyonKabirc, Baizid Khoorshid Riaze, Daria J. Kuss, Mark D. Griffiths, Mohammed A Mamun in Bangladesh²⁶. Another study in USA showed there is 93% of internet user among adolescent. This study conducted by Megan A moreno, Laren jalenchick, Elizabeth Cox, Henry Young and DimithA Christakis in USA²⁷. In present study 26.7% (68) of respondents playing games on mobile 23.1% (59) of respondents watch you tube and other video watching site, 14.9% (38) of respondents use social site (Facebook, twitter etc.), 12.2% (31) listening music in the internet, 11.8% (30) used messenger (like facebook messenger, imo, WhatsApp etc), 11.4% (29) of respondents used as a web browsing. This study is similar to study with findings in such studies²⁸. In present study 74.9% (191) of respondents used internet at home, 13.7% (35) used internet at own mobile phone 9.4% (24) used internet at school and 2%(5) used internet at café. A study conducted by Heidi Ullmann and Vivian Milosavljevic in Latin America and the Caribbean. Their study show 49% internet uses at home and 46% internet uses at school²⁹.

Conclusion & Recommendations:

To achieve adolescent health and well-being, planning of policies in health and allied field should be multidimensional. A comprehensive strategy to meet the overall health needs of adolescents, where multifaceted factors. It will challenge the capacities of the existing health system. The challenges of adolescent's face during this transitory phase are due to a variety of factors including structural poverty, lack of access information and services, negative social norms, inadequate education and social discrimination.

References:

- Mihalyi Csikszentmihalyi. Adolescent. Britannica. 2022 may 1[cited 2022 Sep 22]. Available from: https:// www. britannica. com/science/adolescence
- 2. World Health Organization. Adolescent health. 2022 Mar [cited 2022 April]. Available from: https://www.who. int/health-topics/ adolescent-health#tab=tab 2
- 3. Yingchun S, Michikazu S, Sadanobu K. Lifestyle and Overweight Among Japanese Adolescents: The Toyama Birth Cohort Study. National Library of Medicine. 2009 Sep; 19(6):303-310.
- 4. Rehana AS, Jai KD, Zohra SL, and Zulfiqar AB. Adolescent Health and Well-Being: Background and Methodology for Review of Potential Interventions. National Library of Medicine. 2016 Oct;59 (4 Suppl): S4-S10.
- 5. Ginny Ryan. University of Iowa Hospitals & Clinics.2017 July [cited 2022 Jun 22]. Available from: health- topics/ adolescence- important-time- change.
- Yolande P, Leonardo Z, Anastasia Z, Athos A, Marco, Sabrina F, Mirella R and Marco C. Adolescent Lifestyle Behaviors, Coping Strategies and Subjective Wellbeing during the COVID-19 Pandemic.2020 Dec; (4): 472.

- 7. United Nation Children Fund. Adolescent in development.2022 Mar 2 [cited 2022 may 5]. Available from: https://www.unicef.org/bangladesh/en/adolescents-development
- 8. Marie-Maude D, Mylène A-L and Antony D.K. Lifestyle Habits Predict Academic Performance in High School Students: The Adolescent Student Academic Performance Longitudinal Study (ASAP). National Library of Medicine. 2020 Dec 29; 17(1)243.
- 9. Bangladesh national adolescent strategy. Oxford policy Management. 15 December 2020 Dec 15 [cited 2022 may 12]. Available form: http://mowca.portal.gov.bd.
- 10. Michael Dobbs. What are the common health problem of a teenager today. 2021 Sep 6 [cited 2022 April 10]. Available from: https://blog.valleywisehealth.org/what-are-common-heal th-problems-of-a-teenager-today/
- 11. Christina T, Konstantinos T, Fotini V, Petros P, Georgios D, Athanasios C etc. Health risk behaviors among high school and university adolescent students. experimental and therapeutic medicine. National Library of Medicine. 2018 Oct; 16(4): 3433-3438.
- 12. Anna B, Markus S, Fabian SG, Roman L. Selected components of the lifestyle of adolescent girls with idiopathic scoliosis an observational study.2021 Apr 11 [cited 2022 may 10]. Available form: http://www.researchsquare.article/rs-406286/v1
- 13. Bo Larsson, JomagneIngul, Thomas J, Einar L, Anna MS. Prevalence stability, 1 year incidence and predictor of depression symptoms among Norwegians adolescent in the general populations as measured by the short mood and feeling questionnaire. Nordic Journal of Psychiatry. 27 Jan 2016;70(4):290-6.
- 14. Muhammad Samad. Marriage in Changing Family Pattern of Bangladesh: The Present Trends. International Journal of Social Work and Human service Practices. 2015 Oct: 3(4):155-161.

- 15. Religions in Bangladesh. 2022 Aug 8 [cited 2022 Aug 22]. Available form: https:// en.wikipedia.org/wiki/Religion in Bangladesh
- 16. Susmita G, Md Abdul KM, Mimma T. Effect of Dietary Intake and Socio-Economic Factor on Nutritional Status of Primary School Going Children: a Cross-Sectional Study in old Dhaka City, Bangladesh. International Journal of Research and Rebein. 2018 Mar; 5(3): 93-100.
- 17. Ramadass S, Gupta SK, Nongkynrih B. Adolescent health in urban India. J Family Med Prim Care. 2017 Jul-Sep; 6(3):468-476.
- 18. Waris Q, Sidra Ishaque, Sabeen S, Maheen R. Adolescent Lifestyle and Behaviour: A Survey from a Developing Country. National Library of Medicine. 2010 Sep; 5(9): e12914.
- 19. Varshil M, Anusha B.Health awareness and behavior among adolescent students in a rural school: a cross sectional observational study. International Journal of Research in Medical Sciences. 2015 Dec; 3(12): 3499-502.
- 20. Ellen SB, A Laura LB and Janet EM. Sleep in adolescents and young adults. National Library of Medicine. 2017 Oct; 17(5): 424-428.
- 21. Mekam M, Prof. Karnam N, N. Balakrishna, and D. Raghunatha Rao. Media Viewing Habits of Teenagers. International Journal of Research in Management, Economices and Commerce. 2017 Feb 2; 7(2); 1-9.
- 22. Kusyanti A, Dita RP, Harin P, A Catherina, Yustiyana ALS. Information Privacy Concerns on Teens as Facebook Users in Indonesia. Procedia Computer Science. 2017 Feb 17; 124(C): 632-638.
- 23. Iuliia P, Bogdan V, Etiana K, Dmytro Influence of leisure-time physical activity on quality of life of Ukrainian students. Journal of physical education and sports.2017.2017 Sep 30; 17(3): 1037-1042.

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- 24. Ahsan H, Underwood P, Atakinson D. Smoking among male teenager in Dhaka, Bangladesh. National Library of Medicine. 1998 Jan-Feb; 27(1): 70-6.
- 25. Zdenka E, Alexander R, Sadhvi SS, Stefanie E, Jutta MS and Renate D. Tooth brushing performance in adolescents as compared to the best-practice demonstrated in group prophylaxis programs: an observational study. BMC Oral Health. 2021 july 20; 21(359).
- 26. Rubaiya MC, Kagan K, Humyon K, Baizid R, Daria J. Kuss, Mark D. Griffiths, Mohammed A in Bangladesh. Adolescent Problematic internet use and parental mediation in Bangladesh. Addictive behaviors reports. 2020 Dec; 12;100288.

- 27. Megan AM, Laren J, Elizabeth C, Henry and Dimith A. Problematic internet use among US youth: A systemic Review. National Library of Medicine, September, 2011 Sep; 165(9): 797-804.
- 28. Lakshmana G, Kasi S, Rehmatulla M. Internet use among adolescents: Risk-taking behavior, parental supervision, and implications for safety. Indian Journal of Social Psychiatry. 2017; 33(4); 297-304.
- 29. Heidi U and Vivian M. Time use in adolescence. Social Panorama of Latin America, 2020 Jan 12 [cited 2022 April 23]. Available form: http://www.cepal.org/boletin-desafios.