## Leading Article

## Adolescent Health: An Unmet Demand of Time

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WHO defines adolescents as persons between 10-19 years of age. They are large and growing segment of global population. Many countries in the world are undergoing demographic transition and therefore today's world is facing the largest generation of adolescents ever in history. In Bangladesh, about 23% of the total population is adolescent (Population Census 2001)<sup>1</sup>.

Health and wellbeing of adolescents are challenged by several environmental factors, including family, peer group, school, neighbourhood, socioecomic status, political instability, and sociocultural factors.<sup>2</sup> They frequently indulge in health related risky behavior with widespread consequences. More than 33 percent of the disease burden and almost 60 percent of premature deaths among adults stem from risky behaviour and conditions adopted during period of adolescence (WHO 2002).3 Many such risk processes that lead to chronic non-communicable diseases in later life, include tobacco, alcohol, and illicit substance misuse, unsafe sex, malnutrition, obesity, and lack of physical activity 4,5. Besides health consequence, these issues often bring familial sufferings and disharmony, social unrest and thus disrupt peace in society.

Adolescence-related risk factors are existent across the world although their magnitude varies from country to country. Health need of this young generation is poorly addressed by existing social attitude and current health programmes. The Millennium Development Goals (MDGs) have incorporated only sexual and reproductive health issue<sup>6</sup>. A growing concern of immense public health importance has emerged considering the potential impact of unhealthy behaviours practized by adolescents. Therefore diseases experienced during adolescence and risk factors with their roots in adolescence should be focused for attention.

Globally, adolescents are the most vulnerable group of acquiring sexually transmitted diseases (STD)

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including HIV/ AIDS. Of the reported cases of HIV infection half occur in people under age 25.

(UNAIDS 2003)<sup>7</sup>. This vulnerability is related to lack of knowledge regarding safe reproductive health, safe sexual behaviour <sup>8</sup> and health seeking behaviour for reproductive health (RH) illnesses<sup>9</sup>. Rapid urbanization, increased sexual behaviour and prostitution involving adolescent girls has began to fuel STD and HIV transmission in some part of the world <sup>10</sup>. Unsafe/unprotected sexual behavior also put adolescent girls at risk of unintended teen-age pregnancy, iatragenic abortion, genital tract hemorrhage and infection, contributing to high Maternal mortality ratio (MMR) and a high infant mortality rate (IMR) <sup>11</sup>.

Substance abuse among adolescents is a growing concern for the family, society and the nation. Tobacco is widely abused substance among adolescents worldwide. An estimated 15 percent of young men and 7 percent of women age 13 to 15 are currently smokers across the world <sup>12</sup>. In Bangladesh, about 29% of the adolescent students in Dhaka city and 68% of the slum dwellers in Dhaka are regular smokers <sup>13</sup>. Death has been predicted in 50% of 300 million current young smokers <sup>14</sup>.

Drug addiction is a glooming catastrophe. The number of drug addicts in Bangladesh is rising alarmingly and at present, there are millions of drug addict, adolescents hold a major share and they are from all level of the society <sup>15</sup>. Frequently abused drugs are heroin, marijuana, canabis (ganza), amphetamine, alcohol, opium, phensedyl, cocaine, YABA. In addition to health hazards like physical and psychological dependence, even death, social effect of this abuse is enormous. Approximately 70 percent of crimes including theft, robbery, kidnapping, murder are directly or indirectly related to drugs <sup>16</sup>. It also affects family works and schooling.

There is high prevalence unsatisfactory nutrition among adolescents. A large number of adolescents

in Bangladesh are malnourished; about 36% are stunted, 50% has low body mass index (BMI); <sup>17</sup> 25-27% of adolescent girls are anaemic <sup>18,19</sup>. Large share of school going adolescents are also vitamin A-deficient <sup>20,21</sup>. Availability of food of sufficient quantity and quality to this generation is affected by level of poverty, cultural traditions, family structure, gender discrimination and the allocation of food etc.<sup>22</sup> Contrary to this scenario, 17.9% of affluent adolescents in Dhaka city under 18 years of age are obese and 23.6% are overweight which are attrbuted to their poor eating habits of taking nutrition- poor snacks and fast food instead of regular home-made food <sup>23</sup>.

Adolescents<sup>,</sup> nutritional disorders exert intergenerational effect by complicating pregnancy in teen-age and giving rise to birth of growth restricted newborns having high morbidity and mortality. Chronic undernutrition also decreases the capacity to learn and to work <sup>24, 25</sup>. Obesity in adolescents on the other hand predisposes them to cardiovascular diseases <sup>26,27</sup>, reduced life expectancy <sup>28</sup> and in girls, menstrual disorders, hypertension in pregnancy and sub-fertility <sup>29</sup>.

Mental health problem in adolescence is a growing concern. Half of the lifetime diagnosable mental health disorders start by age 14; this number increases to three fourths by age 24.29 About 14.5% of children and adolescent aged 7-17 years in developed countries suffer from mental health problem with some sort of impairment <sup>30</sup>. Frequently observed conditions associated with mental health disorder are risky sexual behavior, substance abuse, and violent behavior, suicide, school drop out, delinquent behaviors and all pose a significant financial and social burden on families and societies in terms of distress, cost of treatment and disability 31,32. Common disorders include mood disorders such as depression; anxiety disorders; behavioral problems such as oppositional defiant disorder or conduct disorder; eating disorders such as anorexia nervosa and bulimia: addictive disorders.

Media has significant influence on child and adolescent health <sup>33</sup>. Children and adolescents spend more time with media than they do in any other activity except for sleeping—an average of 7 hours/day <sup>34</sup>.

Both old media (television, movies, magazines) and new media (the Internet and social networking sites, video/ computer games, cell phones) can have an impact on virtually every health concern that practitioners and parents have about young people, including aggressive behavior, risky sexual behavior, substance use, and disordered eating  $^{35}$ .

Social network site (SNS) addiction among adolescents is a new concern by adolescent's psychiatrists <sup>36</sup>. With this illnesss the adolescents complain of symptoms like separation anxiety to SNS, decreased sleep, reluctancy/inability to socialize, inability to stop playing, and obsessive internet browsing to find materials for the purpose of "status updates" or "sharing. Cyber stalking or harassment on the internet is another SNS related issue affecting mental health of adolescent population <sup>37</sup>.

Adolescent mortality statistics across the world are largely unavailable; available data indicates that traffic injury, suicide, violence and homicide <sup>38</sup>, drowning are the leading cause of premature death among adolescent males in many countries. A large number of adolescent boys are victims of armed Conflict of war in many countries worldwide <sup>39</sup> Teen-age pregnancy and its complication accounts for death of adolescent females. Compared with women in their twenties, adolescent girls are 2-5 times more likely to die from causes related to pregnancy and childbirth.

In Bangladesh, adolescents have been identified as an under-served priority target under existing health programmes. WHO has advocated measurable adolescent health indicators in the national adolescent health programs but the main focus of adolescent health programes is on sexual and reproductive health, including prevention of HIV infection. Holistic efforts encompassing areas of health, education, legislation are needed to address all important issues such as nutrition, healthy lifestyles, mental health and mental well-being, substance abuse, prevention of violence and injuries as well as sexual and reproductive health . Adolescent Friendly Health Services (AFHS) which provide a broad range of preventive, promotive and curative services under one roof can help to ensure improved availability, accessibility and utilization of health services.

Parents, members of the community, service providers, and social institutions have responsibility to both promote adolescent development and adjustment and to intervene effectively when problems arise.

Adolescents are important family, social and national asset. Health outcomes for adolescents and young

adults are grounded in their social environments and are frequently mediated by their behaviors. This phase of life if nurtured will contribute to prosperity but if neglected will have serious repercussions on the individual's health and well being as well as an adverse effect on the national economy and development. Therefore addressing adolescent health is a an unmet demand of present time.

## References:

- Bangladesh Bureau of Statistics. Population Census 2001.
- National Research Council, Panel on High-Risk Youth, Commission on Behavioral and Social Sciences and Education. Losing generations: Adolescents in high-risk settings. Washington: National Academies Press; 1993. Available from: http://www.nap.edu/openbook.php
- 3. WHO (World Health Organization) 2002. World Health Report. Geneva: WHO.
- Gore F, Bloem P & Patton GC I. Global burden of disease in young people aged 10–24 years: a systematic analysis. Lancet 2011; 377: 2093– 2102.
- Alwan A, Maclean DR & Riley LM. Monitoring and surveillance of chronic non-communicable diseases: progress and capacity in high-burden countries. Lancet 2010; 376: 1861–1868.
- 6. Beaglehole R, Bonita R. Global public health: a scorecard. Lancet 2008; 372: 1988–1996.
- UNAIDS (Joint United Nations Programme on HIV/AIDS) 2003. AIDS Epidemic Update: December 2003. Geneva: UNAIDS.
- Health Profile of Adolescents and Youth in Bangladesh. Based on the Bangladesh Demographic Health Surveys 1993/94-2007
- Barkat A, Rahman M, Majid M, Ara R, Maksud AKM, Poddar A, Akhter S. Baseline Survey on Reproductive Health, August 2002. United Nations Population Fund (UNFPA).
- Senanayake P & Ladjali M. Adolescent health: changing needs, International Journal of Gynecology and Obstetrics 1994; 46:137-143.
- Save the Children U.S.A. 2004. Children Having Children: State of the World's Mothers 2004. Westport, CT: Save the Children U.S.A.

- National Research Council and Institute of Medicine. 2005. Growing up Global: The Changing Transitions to Adulthood in Developing Countries. Washington, DC: National Academies Press.
- 13. Ahsan H, Underwood P, Atkinson D. Smoking among male teenagers in Dhaka, Bangladesh. Prev Med. 1998; 27(1):70-76.
- 14. WHO (World Health Organization) 2001. The Second Decade: Improving Adolescent Health and Development. Geneva: WHO.
- 15. Drug abuse alarmingly rising in Bangladesh. In:Bangladesh Sangbad Sangstha. Published: Wednesday, August 14, 2013.
- 16. Preetha SS. Chasing the Dragon. In: The Daily Star Weekend Magazine. Volume 11, Issue 22, June 01, 2012.
- 17. Kurz KM. Adolescent nutritional status in developing countries. Proc Nutr Soc 1996;55: 321-331.
- Ahmed T, Roy SK, Alam N, Ahmed AMS, Ara G, Bhuiya AU et al. Baseline survey 2004 of the National Nutritional Programme: report / editors: M. Shamsul Islam Khan, Tahmeed Ahmed, and S.K. Roy. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 2005. 319 p. (ICDDR, B special publication no. 124).
- Ahmed F, Khan MR, Islam M, Kabir I, Fuchs GJ. Anaemia and iron deficiency among adolescent schoolgirls in peri-urban Bangladesh. Eur J Clin Nutr 2000; 54: 678-683.
- Helen Keller International, Bangladesh. Vitamin A status throughout the lifecycle in rural Bangladesh national vitamin A survey, 1997-98. Dhaka: Helen Keller International, Bangladesh, 1999. 20 p.
- Ahmed F, Zareen M, Khan MR, Banu CP, Haq MN, Jackson AA. Dietary pattern, nutrient intake and growth of adolescent school girls in urban Bangladesh. Public Health Nutr 1998; 1:83-92.
- 22. Behrman, J.R. (1988). Intrahousehold allocation of nutrients in rural India: are boys favored Do parents exhibit inequality aversion, Oxford Economic Papers, 40(1):32-54.
- 23. Mohsin F, Tayyeb S, Baki A, Sarker S, Zabeen B, Begum T, Azad K, Nahar N: Prevalence of

- obesity among affluent school children in Dhaka. Mymensingh Med J 2010, 19(4): 549–554.
- 24. Behrman JR, Hoddinott J, MaluccioA JA, Quisumbing A, Martorell R and Stein AD. 2004. "The Impact of Experimental Nutritional Interventions on Education into Adulthood in Rural Guatemala: Preliminary Longitudinal Analysis." Paper presented to the 2004. Population Association of America Annual Meeting, Boston, April 1–3.
- Baker JL, Olsen LW, Sorensen TIA: Childhood body-mass index and the risk of coronary heart disease in adulthood. N Engl J Med 2007, 357(23):2329–2337.
- 26. Gunnell DJ, Frankel SJ, Nanchahal K, Peters TJ, Smith GD: Childhood obesity and adult cardiovascular mortality: a 57-y follow-up study based on the Boyd Orr cohort. Am J Clin Nutr 1998; 67(6):1111–1118.
- 27. St-Onge MP, Heymsfield SB: Overweight and obesity status are linked to lower life expectancy. Nutr Rev 2003; 61(9):313–316.
- 28. Lake JK, Power C, Cole TJ: Women's reproductive health: the role of body mass index in early and adult life. Int J Obes Relat Metab Disord 1997; 21(6):432–438.
- Kessler, R. C., Berglund, P., Demler, O., et al. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey replication. Archives of General Psychiatry 2005; 62: 593-602.
- Ravens-Sieberer U, Wille N, Erhart M, Bettge S, Wittchen HU, , Rothenberger A, et al. Prevalence of mental health problems among children and adolescents in Germany: results of

- the BELLA study within the National Health Interview and Examination Survey. European Child & Adolescent Psychiatry 2008; 17 (1): 22-23.
- 31. Saunders JC. Families living with severe mental illness: A literature review. Issues in Mental Health Nursing 2003; 24:175-200.
- 32. Busch SH & Barry CL. Mental health disorders in childhood: Assessing the burden on families. Health Affair 2007; 26(4): 1088-1095.
- 33. Pecora N, Murray JP &Wartella EA. Children and Television: Fifty Years of Research Hillsdale, NJ: Lawrence Erlbaum; 2007
- 34. Rideout V. Generation M: Media in the Lives of 8- to 18-Year-Olds. Menlo Park, CA: Kaiser Family Foundation, 2010.
- 35. Strasburger VC, Wilson BJ, Jordan AB. Children, Adolescents, and the Media. 2nded. Thousand Oaks, CA: Sage; 2009.
- Karaiskos, D., Tzavellas, E., Balta, G., & Paparrigopoulos, T. Social network addiction: A new clinical disorder? European Psychiatry 2010; 25: 855.
- 37. John M. Deirmenjian, Stalking in Cyberspace. J Am Acad Psychiatry Law 1999; 27 (3): 407-413.
- Patton GC, Coff ey C, Cappa C, Currie D, Riley L, Gore F, et al. Health of the world's adolescents: a synthesis of internationally comparable data. Lancet 2012; 379: 1665–1675.
- 39. National Research Council and Institute of Medicine 2005. Growing up Global: The Changing Transitions to Adulthood in Developing Countries. Washington.