Prevalence of Non-Communicable Disease Risk Factors Among Adolescent Girls and Boys in Bangladesh: Evidence from the National Nutrition Surveillance Study

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Objectives: Non-communicable diseases (NCD) and their risk factors have become a major public health problem worldwide. Understanding NCD risk factors among adolescents is important as many risk behaviors start in this period. In the recently completed round of national nutrition surveillance (NNS 2018–2019), we assessed the prevalence of NCD risk factors among adolescents and the factors associated with the co-presence of multiple risk factors.

Methods: This study was conducted in 82 randomly selected clusters (57 rural, 15 non-slums urban and 10 slums) from Bangladesh. We interviewed 4761 adolescent boys and 4808 adolescent girls for selected NCD risk factors using the World Health Organization (WHO) STEPS questionnaire. We also measured the height and weight of adolescents.

Results: The prevalence of insufficient fruits and vegetables intake, inadequate physical activity, any tobacco use, overweight and obesity in adolescent boys and girls was 90.8% and 93.6%, 33.4% and 51.9%, 4.5% and 0.9%, and 7.7% and 11.3%, respectively. The prevalence of one, two and three NCD risk factors among adolescent boys and girls was 55.5% and 42.5%, 35.1% and 48.8%, and 3.5% and 5.9%, respectively. Co-presence of two or more risk factors was higher among adolescent girls and early adolescent girls. For adolescent boys, area of residence (non-slum urban: AOR 2.8, $P < 0.001$; slum: AOR 1.6, $P < 0.001$), father's occupation (farmer: AOR 0.70, $P = 0.005$), and household wealth status (middle quintile, AOR 0.8, $P = 0.022$) were associated with: co-presence of multiple risk factors. In case of adolescent girls, age (15–19 y: AOR 0.8, $P = 0.002$), area of residence (non-slum urban: AOR 2.2, $P < 0.001$; slum: AOR 1.4, $P < 0.001$), occupation (non-student: AOR 0.6, $P < 0.001$), maternal education (e.g., partial secondary: AOR: 1.6, $P < 0.001$), father's occupation (e.g., farmer: AOR 0.6, $P < 0.001$) were associated with co-presence of multiple risk factors.

Conclusions: We found a high prevalence of NCD risk factors among adolescent boys and girls in Bangladesh. The co-presence of multiple risk factors was higher among girls than the boys and among early adolescent girls than the late-adolescent girls. The government and others should address these risk factors while implementing programs for improving the health of adolescents in Bangladesh.

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