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Obesity and Its Determinants Among Adolescents and Young Adults in Bangladesh: Evidence from a Nationwide Study

*Ratul RH[1], Hasan M[2], Ashraf K[3], Noman-Bhuiyan AA[4], Sultana N[5], Hasanat MA[6]

[1]Rifat Hossain Ratul, Research associate, SODY group, Bangladesh Medical University, Bangladesh; [2]Mashfiqul Hasan, PhD researcher, Dept. of Endocrinology, Bangladesh Medical University, Bangladesh; [3]Koushik Ashraf, Resident, Dept. of Endocrinology, Bangladesh Medical University, Bangladesh; [4]Abdullah Al Noman Bhuiyan, Resident, Bangladesh Medical University, Bangladesh; [5]Nusrat Sultana, Associate Professor, Dept. of Endocrinology, Bangladesh Medical University, Bangladesh; [6]Muhammad Abul Hasanat, Professor, Dept. of Endocrinology, Bangladesh Medical University, Bangladesh.

Abstract

Background: Limited studies explored the determinants of obesity among Bangladeshi youth.

Aims: To estimate the prevalence of obesity and identify socio-demographic, lifestyle, and metabolic risk factors among Bangladeshi adolescents and young adults.

Method: This is a post-hoc analysis of a nationwide study that included 2300 young [adolescents: 10-18 years, n=1118 and young adults: 19-34 years, n=1182] by multistage random sampling during March-August 2024. Obesity among adolescents was defined by BMI percentiles (overweight 85th-94th, obesity ≥95th), while in adults by BMI cut-offs (overweight 23-24.9 kg/m², obesity ≥25 kg/m²). Data on lifestyle, family, and socioeconomic history were collected. Blood pressure (BP), plasma glucose, and lipid profile were measured.

Results: The prevalence of overweight/obesity was 29.2% (overweight 11.6%, obesity 17.6%), higher among young adults (43.8%) vs. adolescents (13.6%), and in urban areas (38.2%) vs. rural areas (21.1%). In both adolescents and young adults, overweight/obesity was associated with higher wealth index (OR 3.3, 95% CI 2.4-4.8 and 1.9, 95% CI 1.5–2.4 respectively), urban residence (OR 2.9, 95% CI 2.1-4.2 and 1.5, 95% CI 1.2-1.9 respectively), and late bedtime (OR 3.0, 95% CI 2.1–4.3 and 1.3, 95% CI 1.0-1.6 respectively). In addition, overweight/obesity was associated with increased screen time (OR 2.1, 95% CI 1.5–2.9) and short sleep duration (OR 2.2, 95% CI 1.5-3.2) in adolescents while frequent meals outside home (OR 1.3, 95% CI 1.0-1.7) and female gender (OR 1.4, 95% CI 1.1-1.8) in young adults. Elevated BP, acanthosis, and dyslipidemia were associated with overweight/obesity in both groups and diabetes in young adults (all $p<0.01$).

Conclusion: Obesity is highly prevalent among Bangladeshi youth, with distinct risk profiles in adolescents and young adults. Lifestyle factors such as late bedtime, short sleep, poor diet, and inactivity, together with urbanization and metabolic disorders, contribute significantly.
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***Presenting & Corresponding Author:** Dr. Rifat Hossain Ratul, Research associate, SODY group, Bangladesh Medical University, Bangladesh, email: dr.ratulrifat@gmail.com, Cell# +88-01631907154