

## Determinants of obesity and overweight in urban school children of Coimbatore, Tamil Nadu, South India - A pilot study

Shajith Anoop S<sup>1</sup>, C. Palanivelu<sup>2</sup>, P. Senthilnathan<sup>2</sup>, P. Praveenraj<sup>2</sup>, and M. V. Usha Rani<sup>1</sup>

<sup>1</sup>Bharathiar University, India

<sup>2</sup>Suresh Diabetic Centre, India

In India, the prevalence of childhood obesity was 22% in the year 2012. The upsurge in rates of childhood obesity can be attributed due to changing lifestyle, urbanized food patterns, increased access to “fast foods” and decrease in physical activity. A cross-sectional questionnaire based pilot study was conducted in four urban schools of Coimbatore, South India and a cohort of school children (n=252, mean age 13±2.3 years, boys n=142, girls n=111) were recruited by purposive random sampling method. Anthropometric assessment was performed and data were analysed by Linear and Logistic regression models. The mean BMI of girls (19.1±3.3 kg/m<sup>2</sup>) was higher than the mean BMI of boys (16.7±2.8 kg/m<sup>2</sup>). Importantly, the mean body weight (49.4 kg) was higher in girls of hypertensive parents followed by the mean body weight of girls (44.6 kg) of obese parents. Most of the study participants (n=214) who reported their dietary habit as non-vegetarians had higher mean body mass (40.8 kg) than vegetarians (37.4 kg). Among non-vegetarians, the mean body weight (45.2 kg) was highest in participants who consumed chicken and the lowest body weight (34.1 kg) was recorded in subjects who consumed only eggs. A significant positive correlation was observed between BMI and variables such as age, physical activity, snacking habits (P<0.05). “Buffalo hump” and “Acanthosis nigricans” were absent in the study participants. The mean BMI and body weight in obese girls with “double chin” was 23.9±2.6 kg/m<sup>2</sup> and 56.8 Kg respectively. In this study, we also observed that children preferred urban food pattern than traditional foods which were homemade and nutritious. Cooked noodles and packed chips of popular brands were the most frequently consumed snack items by children. Children with two earning parents visited eateries more often than children with a single earning parent. Parents claimed lack of time on week days as a reason for not providing traditional, homemade snack items. Furthermore we observed that children of classes eight to twelve (aged between 13 to 17 years) tend to skip physical education classes at school to avail extra study time. Less physical inactivity at home and at school together poses an elevated risk for obesity and metabolic syndrome in the later years, if appropriate interventions are not adopted.

shajithanoops@gmail.com