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## Authors' response

We thank Rathi *et al*<sup>1</sup> for their comments on our article on obesity in urban and rural India<sup>2</sup>. We agree with the authors that adulthood and childhood obesity has risen to alarming levels globally as well as nationally and it has a short and long term impact on health. The weight gain in childhood tracks into adulthood, thus increasing the risk of metabolic non-communicable diseases (NCDs) such as type 2 diabetes, cardiovascular disease and hypertension<sup>3</sup>.

As the ICMR-INDIAB study was planned to evaluate adults of either gender, aged 20 years and above in all the 28 States (now 29 States) of India, the National Capital Territory (NCT) of Delhi and two Union Territories (UTs) namely Chandigarh and Puducherry in the mainland of India (phased manner), data on childhood obesity were not available. However, our group through the Obesity Reduction and Awareness and screening of Noncommunicable diseases through Group Education in children and adolescents (ORANGE) project has screened 18,955 children (age 6-11 yr) and adolescents (age 12-17 yr) across 51 schools (31 private and 20 government) of Chennai, Tamil Nadu, for obesity and other metabolic NCDs<sup>4</sup>. The prevalence of overweight/obesity was 15.4 and 18.1 per cent among children and adolescents, respectively, while the prevalence was significantly higher in private (21.4%) compared to government schools (3.6%)<sup>5</sup>. This study has shown that the epidemic of childhood obesity is now spreading to the low socio-economic groups as well. In addition, we also studied 368 childhood and adolescent-onset type 2 diabetes mellitus (CAT2DM) registered at our center and reported that 56 per cent of boys and 50.4 per cent of girls were >85<sup>th</sup> percentile of body mass index for age<sup>6</sup>. Overweight and obese children are more likely to become obese adults, and have a higher risk of morbidity, disability and premature mortality in adulthood compared to non obese children. A recent systemic review that investigated the ability of simple measures, such as body mass index (BMI), to predict the persistence of obesity from childhood into adulthood reported that obesity (measured using BMI) was found to persist from childhood to adulthood, with most obese adolescents also being obese in adulthood<sup>7</sup>.

Studies have shown that short term consequences are mostly represented by psychological effects and long term effect is represented by the fact that childhood

obesity continues into adulthood obesity and this results in negative effects in young adult life, since obesity increases the risk to develop morbidity and premature mortality<sup>8</sup>. In addition to suffering from poor physical health, overweight/ obese children can often be targets of early social discrimination. Regarding management of childhood obesity, medical treatment should be discouraged and lifestyle changes such as dietary changes and increased physical activity should be recommended.

As India is now waking up to this epidemic of childhood obesity, existing gaps in knowledge regarding prevention strategies for this age group should be addressed and evidence-based interventions that can be successful and sustainable in the Indian setting should be implemented.

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