Obesity and Overweight Prevalence among School Children and Adolescents Aged 8-18 Years in Rajkot, Gujarat

*RAJESH K CHUDASAMA, TKM ESHWAR, SUBHASINI T ESHWAR AND DHARA THAKKAR

From Department of Community Medicine, Government Medical College; and #Milestone Hospital; Rajkot, Gujarat, India. Email: *dranakonda@yahoo.com

PII: S097475591600008
ABSTRACT

A total of 1496 school children and adolescents aged 8-18 years, including 79.1% boys and 20.9% girls participated in this study. Prevalence of obesity and overweight was estimated by using three different growth standards. Revised IAP 2015 growth standards detected more obese and overweight children than WHO 2007 and IOTF standards.

Keywords: Epidemiology, Obesity, Overweight, Thinness.

High prevalence of childhood and adolescent obesity and overweight is being reported in developing countries, including India [1-5]. These problems have shown rapid increase, especially in cities and among affluent youth [6,7]. Obesity in children and adolescents leads to health consequences among them, and increases risk of obesity in adulthood [2]. A rapid epidemiological and nutritional transition along with demographic transition in India leads to double threat of over- and under-nutrition [3]. Different studies conducted during last decade in India reported prevalence of obesity in range of 2.9% to 14.3% [5-9], and of overweight in range of 1.5% to 24.0% [2-6]. These studies conducted at different times in India by using different standards with different cut-off points to assess the prevalence of obesity and overweight. The present study was conducted to estimate the prevalence of obesity and overweight by using the Indian Academy of Pediatrics (IAP) 2015 standards [8], WHO 2007 standards [9] and International Obesity Task Force (IOTF) standards [10], among school children and adolescents aged 8-18 years from Rajkot city.

Four out of five selected schools agreed to participate in the study, and anthropometric data was collected from 3rd to 12th standard children aged 8-18 years between January to April 2015. The children studying in these schools belonged to affluent families. The data were collected from 1496 school children and adolescents. An ethical clearance was taken from the institutional ethical committee to conduct the study.

A total of 1496 students (1183 boys) participated in the study. Prevalence of obesity was 14.0% by IAP 2015 standards, 11.1% by WHO standards and 5.1% by IOTF standards (Table 1). Obesity prevalence for boys was 16.2% by IAP standards, 12.8% by WHO standards and 5.8% with IOTF standards. Overweight prevalence for boys by IAP 2015 standards was 19.6%. Prevalence of obesity among girls was found low for all three standards. The prevalence rates of obesity and overweight as per IAP 2015 standards were higher than WHO 2007 and IOTF standards. A study from New Delhi also reported similar observations among school-aged youth [7]. The prevalence of obesity and overweight in present study was higher than some other studies conducted in different parts of India [1-7]. As the school children and adolescents selected in this study belonged to affluent families, their lifestyle and dietary habits makes them more prone to overweight and obesity.
Limitations of this study include convenience sampling, no \textit{a priori} sample size calculation, and a disproportionate boys-to-girls ratio.

\section*{REFERENCES}


**TABLE I**  
Prevalence of Obesity and Overweight Among School Children and Adolescents Aged 8-18 Years as per Three Different Growth Standards* (N=1496)

<table>
<thead>
<tr>
<th>Growth status</th>
<th>IAP 2015 (%)</th>
<th>WHO 2007 (%)</th>
<th>IOTF 2000 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>Obesity</td>
<td>14.0</td>
<td>16.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Overweight</td>
<td>19.1</td>
<td>19.6</td>
<td>16.9</td>
</tr>
</tbody>
</table>