

## Letter to the Editor

# The Need for Cognitive Neuropsychological Assessments for Estimating Risk Factors for Obesity in Adolescents

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### Dear Editor

We read with interest the recent article published by Rani and Sathiyasekaran [1] on estimating the prevalence of behavioural risk factors for obesity among 1842 urban adolescent schoolchildren in Chennai, India. In their prospective survey the authors conclude that there is a high prevalence of risk factors for obesity among these adolescents. Although we recognize the value of this study, a closer look reveals some problematic conclusions.

First, the authors reported that “the prevalence of overweight/obesity was not significantly associated with television viewing, computer use, or time spent in outdoor games”. The rea-

son given for the lack of an association is that “70% of the obese adolescents were aware of their weight and would have modified their sedentary lifestyle and spent more time in outdoor games”. This explanation proposed by the authors contradicts the reported data.

Secondly, the authors reported that “overweight/obese adolescents were actually consuming fast food at a lesser frequency”. The authors argued that this observation regarding fast food consumption can “be explained on the basis of better awareness about their body weight and necessary dietary modifications the students had initiated for weight reduction”.

However, the study did not include an awareness scale as a metric and hence it would be very premature to conclude that improved awareness of weight led to a reduction in fast food consumption, especially when the frequency of fast food consumption was reported over the last 7 days, which could lead to non-representative results.

Similarly, the authors’ conclusion that a higher proportion of students who did not eat fast food items during the previous 7 days were overweight/obese than other students is also misleading, since there were only 2 subgroups in the analysis: those with  $\leq 3$  d/wk fast food intake and those with 4-7 days/week fast food intake. There was no subgroup with zero frequency of fast food consumption. The lower frequency of fast food consumption in the group that reported  $\leq 3$  d/wk fast food intake may have been counterbalanced by a higher caloric intake, which could result in obesity when combined with inactivity or minimal physical activity levels.

Finally, regarding the observation that many adolescents reported eating fast food in the past 7 days, the authors suggested that “high intake of fast food among the adolescents could indicate that personal preferences played an important role in their dietary habits beyond economic considerations.”

If adolescents are struggling between developing better awareness about their weight and making the necessary dietary modifications on one hand, while, on the other hand, becoming a victim of their personal preferences towards fast food, and ig-

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noring the physical consequences, this must have psychological implications. Recent studies have suggested a correlation between reduced cognitive functioning in children and overweight/obesity [2,3]. Moreover, higher cognitive abilities may be negatively correlated with the development of obesity [4].

In general, reporting the last 7 days of dietary habits and physical activity levels will not suffice for drawing conclusions about the risk factors for obesity. It would be more appropriate to assess dietary habits and activity levels for a longer duration along with cognitive neuropsychological assessments. There is a need for epidemiological studies to explore the presence of psychological symptoms such as stress, anxiety, mood swings, emotional bingeing, etc. in the adolescent population. Such an approach would better elucidate the risk factors for obesity and would help to develop strategies for modifying behavior at young ages.

Nonetheless, we wish to emphasize that we are confident in the results of the data analysis presented in this study and consider this study to be a significant contribution to the field.

## CONFLICT OF INTEREST

The author has no conflicts of interest with the material presented in this paper.

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