

## The association between body mass index and duration spent on electronic devices in children and adolescents in Western Saudi Arabia

To the Editor

I have 3 comments on the interesting study by Al-Agha et al<sup>1</sup> on the association between body mass index (BMI) and duration spent on electronic devices in children and adolescents in Western Saudi Arabia.

First, Al-Agha et al<sup>1</sup> did well in evaluating the relationship between BMI and the duration spent on electronic devices as well as determining the relationship between BMI, reduced physical activity, and eating during TV viewing. Apart from many limitations addressed in the study, I presume that there is another important methodological limitation that might cast suspicions on the accuracy of the study results. In the methodology, Al-Agha et al<sup>1</sup> mentioned that the BMI (weight in kg divided by height in square meters) was calculated and BMI standard deviation was set based on Center for Disease Control and Prevention (CDC) growth standards.<sup>1</sup> It is worth mentioning that there are many growth standards to be used in the clinical setting to evaluate growth parameters, namely the World Health Organization (WHO) and CDC growth standards. Comparing the use of the various growth standards to the use of country-specific growth references suggested that the latter might describe the growth of children more faithfully.<sup>2</sup> Body mass index reference percentiles for normal Saudi children and adolescents have been constructed to be used by clinicians and researchers.<sup>3</sup> I wonder why Al-Agha et al<sup>1</sup> did not consider the Saudi specific BMI reference percentiles in the methodology rather than CDC growth standards. Thus, employing these national BMI standards might alter the results of Al-Agha et al's study.<sup>1</sup>

Second, Al-Agha et al<sup>1</sup> stated that an increased BMI was found among children who spent  $\geq 2$  hours per day on electronic devices. However, there was no association between the duration spent (specifically) watching TV and BMI.<sup>1</sup> I believe that this is an interesting point as it contributes to the growing body of evidence indicating a questionable correlation between the exact duration of watching TV and the risk of increasing BMI. Having a TV in the child bedroom has been found to predict the obesity risk ( $p=0.01$ ); however, watching TV/computer for more than 2 hours a day did not ( $p=0.54$ ). Therefore, asking whether a child has a TV in

the bedroom might be more important than asking on the duration of screen exposure to predict the risk for obesity.<sup>4</sup> Therefore, children watching  $<1$  to  $<2$  hours of TV daily have been noticed to be more likely to become overweight and obese over time.<sup>5</sup>

Third, I do agree with Al-Agha et al's recommendation on restricting the use of various electronic devices for not more than 2 hours per day, specifically watching TV.<sup>1</sup> I presume that such restriction could be achieved through close parental supervision early in life as childhood TV viewing tends to track into adulthood.<sup>6</sup> This would be fundamental to limit further uprising in the pediatric prevalence of obesity, and ultimately halting the grave consequences of obesity in later life. Moreover, it would be beneficial in minimizing the adverse cardiovascular, respiratory, mental, and psychiatric health and well-being (happiness) associated with prolonged TV watching.<sup>7</sup>

Mahmood D. Al-Mendalawi  
Department of Pediatrics  
Al-Kindy College of Medicine  
Baghdad University, Baghdad, Iraq

### Reply from the Author

We would like to thank Prof. Mahmood D. Al-Mendalawi for his message and for taking interest in our research. Firstly, he mentioned an important methodological limitation in our study. There are indeed many growth standards being used to evaluate growth parameters and we agree that we used the national growth references to better evaluate these parameters.<sup>2,3</sup> Secondly, we were unable to include any information regarding the presence of TVs in children's bedrooms as we did not have a sufficient amount of data that we could have used in our study. Finally, we agree that close parental supervision in early childhood regarding TV viewing can indeed have an impact on future viewing habits.<sup>6</sup>

Abdulmoein E. Al-Agha  
F. Sarah Nizar  
Anwar M. Nahhas  
Department of Pediatrics  
King Abdulaziz University Hospital  
Jeddah, Saudi Arabia

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