

## Commentary: Screening of screen time in children

This study is an analysis of an online survey completed by parents on behalf of their children (<18 years) to study the digital eyestrain symptoms related to the use of display devices during the coronavirus disease 2019 (COVID-19) pandemic. The average screen time per day was found to be 7.02 h. The commonest question an eyecare practitioner gets is how much time of screen is recommended for kids. Canada was the first country to adapt 24-h movement guidelines for youth that recommended 60 min of physical exercise and less than 2 h of recreational screen time per day.<sup>[1]</sup> The American Academy of Pediatrics also revised their guidelines for screen time as follows: no screen below 18 months, some screen (<1 h) from 18 to 24 months, 1 h/day for 2–5 years, and no specific limit for 6 years and older as long as they do not interfere with sleep and physical activity. Although there was no question in the survey to address the split up of these hours for online learning and recreation, the Ministry of Human Resource Development (MHRD) of India made the following recommendations for online schooling during the pandemic: preprimary – 30 min/day, 1<sup>st</sup>–8<sup>th</sup> standard – 1.5 h/day, and 9<sup>th</sup>–12<sup>th</sup> standard – 3 h/day. There is a definite need for such guidelines to be provided by the health departments along with the government of every country.<sup>[2]</sup> This study also highlighted that the use of devices after 8:00 pm leads to increase in the incidence of headache, eye fatigue, and eye redness. There was no real data collected on sleep patterns in these children. The only proven short-term effect of blue (ultraviolet [UV]) light emanating from display devices is its effect on change in circadian rhythm of sleep by alteration of melatonin levels in the brain, especially if the device is used 1 h prior to sleep.<sup>[3]</sup> The industry manufacturing blue (UV) blocking glasses got the biggest boost during the pandemic, courtesy smart marketing directed at desperate parents. Night mode on display devices or blue blocking glasses used just before sleep can help in improving sleep patterns. An elegant study done by O'Hagan *et al.*<sup>[4]</sup> reported that none of the digital sources of blue light available in the market exceeded the exposure limits that can cause ocular damage, even for extended viewing times. This advice to our patients would go a long way in curbing baseless marketing of blue blocking glasses. Myopic progression due to increased screen time and reduced outdoor activities is the elephant in the room, which was briefly analyzed in this study. Fifty-eight percent of children in this study spent time outdoors for only 1–3 days per week, which could explain the high incidence of myopia. There is undoubted objective evidence of the protective effect of outdoor illuminance on progression

of myopia.<sup>[5]</sup> Providing scientifically accurate advice regarding reduction of screen time, swapping near screens for the TV, encouraging outdoor activities, and visual hygiene during near work is the responsibility of every eyecare practitioner.

**Ashwin Sainani**

PD Hinduja Hospital & Medical Research Centre, Mumbai and  
BJ Wadia Children's Hospital, Mumbai, Maharashtra, India

**Correspondence to:** Dr. Ashwin Sainani,  
201, Buena Vista, General Jagannath Bhosle Road, Nariman Point,  
Mumbai - 400 021, Maharashtra, India.  
E-mail: ashwinsainani@hotmail.com

## References

1. Tremblay MS, Carson V, Chaput JP, Connor Gorber S, Dinh T, Duggan M, *et al.* Canadian 24-hour movement guidelines for children and youth: An integration of physical activity, sedentary behaviour, and sleep. *Appl Physiol Nutr Metab* 2016;41(Suppl 3):S311-27.
2. Wong CW, Tsai A, Jonas JB, Ohno-Matsui K, Chen J, Ang M, *et al.* Digital screen time during the COVID-19 pandemic: Risk for a further myopia boom? *Am J Ophthalmol* 2021;223:333-7.
3. Gabel V, Reichert CF, Maire M, Schmidt C, Schlangen LJM, Kolodyazhnyi V, *et al.* Differential impact in young and older individuals of blue-enriched white light on circadian physiology and alertness during sustained wakefulness. *Sci Rep* 2017;7:7620.
4. O'Hagan JB, Khazova M, Price LL. Low-energy light bulbs, computers, tablets and the blue light hazard. *Eye (Lond)* 2016;30:230-3.
5. Wen L, Cao Y, Cheng Q, Li X, Pan L, Li L, *et al.* Objectively measured near work, outdoor exposure and myopia in children. *Br J Ophthalmol* 2020;104:1542-7.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
<b>Quick Response Code:</b>	<b>Website:</b> www.ijo.in
	<b>DOI:</b> 10.4103/ijo.IJO_381_22

**Cite this article as:** Sainani A. Commentary: Screening of screen time in children. *Indian J Ophthalmol* 2022;70:994.