

## Letters to the editor

*Clin Exp Optom* 2020; 103: 555–557

### COVID-19, sweat, tears... and myopia?

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DOI:10.1111/cxo.13086

**EDITOR:** Myopia is a common ocular disorder, with around 2.5 billion myopic people around the world. The World Health Organization estimates that half of the population of the world may be myopic by 2050, with as much as 10 per cent highly myopic.<sup>1</sup> More preoccupying than school myopia, high myopia (that is, more than –5.00 D) is associated with sight-threatening ocular disease such as maculopathy, posterior staphyloma, choroidal neovascularisation, retinal atrophy, retinal detachment and optic neuropathy.<sup>2</sup>

Several authors classify myopia as an epidemic,<sup>2</sup> particularly in Asiatic populations in which the prevalence is around 80 per cent in the age group over 15 years.<sup>3</sup> In that respect, it seems to be clear that children and teenagers do not develop myopia without relevant environmental and cultural exposures. Notwithstanding genetic susceptibility,<sup>4</sup> environmental and cultural risk factors are predominant, that is, intensive education, prolonged near work and limited time outdoors.<sup>5,6</sup>

In December 2019, a coronavirus epidemic initially described in China and

named SARS-Cov-19, rapidly spread around the world to become the most severe pandemic since Spanish influenza.<sup>7</sup> This epidemic is ongoing at the time of writing. To avoid or reduce the contagion, authorities in conjunction with the World Health Organization promulgated quarantine status in the majority of worldwide countries. Coronavirus restrictions with an unprecedented containment apply to more than three billion people (more than a third of the world population). People are required to remain at home for several weeks or months, without outdoor occupational or leisure activities.

As a consequence of this containment, most children, teenagers and adults spend their time reading books, watching television, playing videogames or using computers, tablets and smartphones to access on-line media and social networks. The use of these electronic devices will dramatically increase screen time during the containment, overstimulating accommodative effort caused by the associated close working distances. This excessive near work might represent a greater risk of myopia for those with accommodative dysfunctions.<sup>8</sup>

Containment by definition limits the time outdoors. Protective effect on myopia of time outdoors and sunlight exposure can be due to both distance vision and biochemical secretion from natural light exposure,<sup>9</sup> that can prevent the pathological axial elongation of the eyes – a characteristic of myopia.<sup>10</sup> Even if the duration of the quarantine would be short – perhaps not exceeding two months – this is the first time that over three billion people are simultaneously exposed to the influence of cumulative, well-proven, risk factors for myopia.

Preventive strategies during containment should also focus on visual habits, particularly in children and young adults. Evaluation of myopia over the quarantine periods and during the forthcoming months would be salient.

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### Evaluation of the Slit Lamp Shield to reduce droplet exposure

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DOI:10.1111/cxo.13096

**EDITOR:** The current COVID-19 global pandemic has brought infection control measures