



# TRANSCENDENCE OF COMPUTER VISION SYNDROME DUE TO PROLONGED EXPOSURE TO ELECTRONIC DEVICES

TRANSCENDENCIA DEL SÍNDROME VISUAL INFORMÁTICO POR EXPOSICIÓN PROLONGADA A DISPOSITIVOS ELECTRÓNICOS

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## Mr. Editor

Eye health, without a doubt, has been gaining more relevance in recent years due to the promotion of healthy habits in search of caring for our eyes, but the question also arises as to whether we are increasingly exposed to electronic devices with screens, these, can be detrimental to our visual well-being since, due to confinement, the use of these as a work and study tool has increased exponentially.

The American Optometric Association (AOA) defines Computer Visual Syndrome (CVS) or digital eyestrain as a "group of eye-related problems resulting from prolonged use of computers and cell phones". The term may not be completely accurate, but it is prevalent among computer users. The most important symptoms are: dry eyes, asthenopia, blurred vision, etc.<sup>(1)</sup>.

It is estimated that the average American worker spends around seven hours a day in front of the computer (AOA) and 90% of the 70 million of these, who use computers for more than three hours a day, experience CVS in some form. Symptoms may be due to inadequate viewing distances, poor posture, or a combination of these factors<sup>(2)</sup>. The 2016 CVS report in the United States, where more than 10,000 adults participated, identified a prevalence of symptoms of 65%, with women being more affected than men (69% vs 60%, respectively). CVS was reported more frequently by people who used two or more devices simultaneously, with a 75% prevalence. The finding of greater symptoms in women was in line with the 2012 findings among a cohort of 520 office workers in New York and may be related to gender differences in the prevalence of CVS<sup>(3)</sup>.

In the European Union, the number of workers using information and communications technology (ICT) has been increasing<sup>(4)</sup>. The use of these devices is more widespread in the financial services sectors, who reported using it at a high intensity of up to 57%<sup>(4)</sup>.

Among 426 Spanish workers, the prevalence of CVS was 53%. With six or more hours of computer use, contact lens wearers were more likely to be affected than non-wearers, with prevalence of 65% and 50%, respectively. The finding was attributed to the mechanical interaction of the silicone hydrogel lenses with the ocular surface<sup>(3)</sup>.

The Peruvian context is no stranger to global data, there has been an increase in household access to ICT. In the second quarter of 2020, for every 100 households in 99 there is at least one ICT<sup>(5)</sup>. In relation to households with at least one computer in the first quarter of 2020, 94% is for exclusive household use<sup>(5)</sup>. There is not much specific information on CVS has been found in Peru, it may be possible to cite a study on the effect of exposure time to data display screens on visual fatigue in digitizers of the

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Almenara Hospital in which it is concluded that there is a greater probability of presenting it due to the exposure time<sup>(6)</sup>. A second study, conducted at the Universidad Peruana Unión, shows the prevalence of CVS among all postgraduate university students (61%), due to computers (57.5%), followed by cell phone (37%)<sup>(7)</sup>.

Given that pedagogical and productive tasks require the use of ICT, it is possible to predict that CVS could

become a public health problem taking as a reference the world statistics that shows a high prevalence and adding the lack of knowledge of this problem, it will be of utmost importance to disseminate eye health awareness campaigns, as well as to educate the population on the use of adequate lighting levels, correct posture and periodic breaks, which will lead to an improvement in people's eye health.

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