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## PH338

Abstract Category: Public Health

**Computer Vision Syndrome and Blue Light Filtering Lens Wear in Architecture Community**

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**Introduction**

Computer vision syndrome (CVS) is a multifaceted condition, displaying range of ocular and visual symptoms. To curb CVS, blue light filtering lens (BLFL) wear is promoted in reducing chronic radiation exposure from digital devices, reported to damaging the eyes. Nonetheless, the efficacy of BLFL is equivocal. This study aims to explore the influence of BLFL on CVS among architecture personnel – a susceptible community due to their work.

**Methods**

Student and professional architects provided info on computer exposure, awareness on CVS, ergonomic practices, and BLFL wear through a cross-sectional survey. CVS is identified when CVS-Q questionnaire score is  $\geq 6$ . Chi-square and logistic regression analyses were used to identify the factors influencing the condition.

**Results**

Of 209 respondents, 43.5% were identified with CVS. The student and professional architects suffered from CVS similarly in prevalence (45.2%, n=42 vs. 42.2%, n=49) and severity suggested by the CVS-Q score (Median= 13.5 [interquartile range= 8.0–19.7] vs. 13.0 [8.50–15.0]). Sixty-eight percent with CVS indicated wearing BLFL, yet no significant effect was found with the non-wearing group (P=0.491). CVS is more likely to worsen by longer computer use (Odds ratio=3.80; 95% CI, 2.28–6.32; P <0.05) starting at >4 hours. Only 19.6% of them taking frequent breaks while working. CVS was also influenced by the lack of awareness on visual hygiene hygiene 20-20-20 rule (P=0.017).

**Discussion**

The notion of BLFL wear in reducing CVS requires cautious interpretation. Instead, taking frequent breaks could curb CVS as longer duration of computer use aggravated the condition. The 20-20-20 rule is a recommended visual hygiene practice to prevent CVS. It entails taking a 20-second break for every 20 minutes of computer use by looking at far (20 feet). As student and professional architects suffered from CVS similarly, imparting awareness on CVS and visual hygiene practices in architecture education is crucial to prevent the condition when working.

**Keywords:** Blue light filtering lens, digital eye strain, **computer vision syndrome**, visual ergonomics