

عنوان مقاله:

Digital Screen Time and the Risk of Female Breast Cancer : A Retrospective Matched Case-Control Study

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خلاصه مقاله:

**Background:** As the use of electronic devices such as mobile phones, tablets, and computers continues to rise globally, concerns have been raised about their potential impact on human health. Exposure to high energy visible (HEV) blue light, emitted from digital screens, particularly the so-called artificial light at night (ALAN), has been associated with adverse health effects, ranging from disruption of circadian rhythms to cancer. Breast cancer incidence rates are also increasing worldwide. **Objective:** This study aimed at finding a correlation between breast cancer and exposure to blue light from mobile phone. **Material and Methods:** In this retrospective matched case-control study, we aimed to investigate whether exposure to blue light from mobile phone screens is associated with an increased risk of female breast cancer. We interviewed ۳۰۱ breast cancer patients (cases) and ۲۹۴ controls using a standard questionnaire and performed multivariate analysis, chi-square, and Fisher's exact tests for data analysis. **Results:** Although heavy users in the case group of our study had a statistically significant higher mean ۱۰-year cumulative exposure to digital screens compared to the control group ( $۷۰۸۹ \pm ۱۴۹۸۵$  vs

۴۰۵۲±۱۲۵۱۵ hours, respectively,  $P=۰.۰۳۸$ ), our study did not find a strong relationship between exposure to HEV and development of breast cancer.  
Conclusion: Our findings suggest that heavy exposure to HEV blue light emitted from mobile phone screens at night might constitute a risk factor for promoting the development of breast cancer, but further large-scale cohort studies are warranted

کلمات کلیدی:

Visible Light, Blue Light, Mobile Phones, Digital Screens, cancer, Breast cancer, Circadian Disruption, Melatonin, Light Pollution, Screen Time, circadian rhythm

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