**ABSTRACT**

**PURPOSE**

The ubiquitous amount of digital devices and their frequent use throughout the day may very well impact the symptomatology of patients especially with a less stable pre-lens tear film in the contact lens wearing population compared to the tear film of a non-contact lens wearer. This study attempted to study the relationship between device use and contact lens symptoms.

**METHODS**

A simple two page customized digital device survey paired with the OSDI and SPEED questionnaires were administered to subjects at 7 clinical sites.

**RESULTS**

This contact lens cohort (n = 243) had an average age of 36.43 +/- 14.40. When comparing the younger than 45 and older than 45 cohorts, the number of devices used (2.7 vs 2.6) were the same (p = 0.52). Eye dryness at the beginning of the day and after device use were also similar (p = 0.58, p = 0.22). What was significant was that the younger cohort looked at their phones more times in an hour than the older cohort at 8.08 +/- 5.68 times compared to 3.68 +/- 3.91 times (p < 0.0001). Lastly, an entire contact lens cohort, comfortable wear time was 2.26 hours shorter than total wear time (p < 0.0001) and was inversely correlated with OSDI (-0.27, p < 0.0001) more than SPEED (-0.15, p = 0.011). There was a stronger inverse correlation of comfortable wear time to OSDI in the older group (-0.41, p < 0.0001) compared to the younger group (-0.22, p = 0.0003).

**CONCLUSIONS**

Our findings are consistent with prior studies on comfortable wear time being two hours shorter than total wear time. Digital device use may modify the symptom status of younger individuals differently than older individuals as hormonal or autoimmune risk factor manifest with increasing age. Contact lens wear further potentiates dry eye symptoms.

**METHODS**

The above two page survey was printed and administered to clinical patients at seven sites

**RESULTS**

• Comfortable wear time was 2.26 hours shorter than total wear time  o 8.77 ± 3.83 vs. 11.02 ± 4.02 hours (p < 0.0001)

**CONCLUSIONS**

Many studies have found that the comfortable wear time is often two hours shorter than total wear time. Hickson-Curran et al. found that there was reduced comfortable wear time in over three-quarters (78%) of problem patients.


The OSDI has been validated in contact lens wearers and continues to be a useful instrument to diagnose and stage the severity of symptomatic patients.

Digital device use may supersede other risk factors associated with the prevalence of dry eye in older individuals.

Future work involves evaluating the relative contributions of each risk factor using multivariate analysis.