




The Impact of Electronic Device Use on Dry Eye Disease Symptoms based on Age and Gender: A Cross-sectional Study in Health Science University Students



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3. RESULTS

3.1. Descriptive Analysis

Table S1. Demographics (A) and digital device usage information (B).

(A) Demographics.

Characteristic	Number (%)
Male: Female	29.2%:70.8%
Age	
18-20 years	62.4%
21-25 years	36.8%
26 years and above	0.8%
Class	
1 st	33.7%
2 nd	19.2%
3 rd	20.3%
4 th	14.8%
5 th	2.5%
6 th	4.7%
7 th	4.7%
Attending Online Classes	
Yes (often)	39.6%
No	11.1%
Sometimes	49.3%

Characteristic	Number (%)
Smoking Status	86.9%
Never smoked	6.4%
Occasional smoker	1.1%
Former smoker	3.6%
Second-hand smoker	1.9%
Heavy smoker	

(B) Digital device usage parameters.

Device used for online classes	
Computer PC	8.1%
Laptop	29%
Smartphone	15.6%
Tablet	85%
*Digital device usage duration after online classes	
< 5 h	14.2%
> = 5 h	85.8%
*Digital device usage duration before online classes	
< 5h	38.7%
> = 5h	61.3%

Note: *Refers to the COVID-19 pandemic.

3.2. Comparisons between DED Symptoms and Intensity Levels

Table S2. Comparing DED symptoms and intensity levels.

Question	(Intensity levels) N (%)				
	Never	Occasionally to Moderate	Occasionally to Severe	Always to Moderate	Always to Severe
Have you experienced burning in your eyes?	49 (13.6%)	208 (57.9%)	52 (14.5%)	26 (7.2%)	24 (6.7%)
Have you experienced itching in your eyes?	77 (21.4%)	175 (48.7%)	58 (16.2%)	29 (8.1%)	20 (5.6%)
Have you experienced foreign body sensations in your eyes?	156 (43.5%)	132 (36.8%)	43 (12%)	12 (3.3%)	16 (4.5%)
Have you experienced watering tearing in your eyes?	109 (30.4%)	153 (42.6%)	34 (9.5%)	40 (11.1%)	23 (6.4%)
Have you experienced excessive blinking of your eyes?	159 (44.3%)	127 (35.4%)	46 (12.8%)	12 (3.9%)	13 (3.6%)
Have you experienced redness in your eyes?	93 (25.9%)	181 (50.4%)	45 (12.5%)	26 (7.2%)	14 (3.9%)
Have you experienced pain in the eyes?	101 (28.1%)	174 (48.5%)	52 (14.5%)	19 (5.3%)	13 (3.6%)
Have you experienced heaviness in your eyelids?	214 (59.6%)	95 (26.5%)	28 (7.8%)	15 (4.2%)	7 (1.9%)
Have you experienced a feeling of dryness in your eyes?	90 (25.1%)	139 (38.7%)	56 (15.6%)	43 (12%)	31 (8.6%)
Have you experienced any blurring of vision?	115 (32%)	138 (38.4%)	41 (11.4%)	42 (11.7%)	23 (6.4%)

3.3. Correlation Analysis

3.3.1. Correlations between Gender, Study Year, and DED Symptoms

Table S3. Correlation analyses between dry eye symptoms and gender and study years.

Eye Symptoms	Independent Variables Coefficient (r)	
	Gender	Study Years
Burning	*0.132	-0.047
Itching	0.029	0.005
Foreign body	*0.118	-0.004
Watering in eyes	0.092	-0.083
Blinking	0.190	-0.017

-	Independent Variables Coefficient (r)	
	Gender	Study Years
Eye Symptoms		
Redness	0.009	-0.073
Pain in eyes	*0.114	*- 0.127
Heavy eyelids	*0.108	-0.043
Dryness	0.142	0.028
Blurring	0.098	*- 0.129

Note: * Correlation is significant at 0.05 level 2-tailed.

3.3.2. Correlations between Gender and Study Year with Electronic Device Usage Duration and Smoking

Table S4. Correlation analyses between gender and study year with electronic device usage duration and smoking.

-	Independent Variables Coefficient (r)	
	Gender	Study Year
Number of hours you use electronic devices during classes in a day	*0.109	-0.179
Smoking	-0.047	*0.133

Note: * Correlation is significant at 0.05 level 2-tailed.