

A total of 354 female students at North South University were included in our study. And all participants were digital device (such as computer, laptop, mobile, tablet, etc.) users. The overall prevalence of Myopia was found to be 57.91% (n=205), shown in **Table 1**. Besides, the prevalence of dry eye disease was found to be 32.5% (n=115), shown in **Table 2**.

Table 1: Socio demographic and economic factor for Myopia

Variable	Total n(%)	Myopia		P- value
		Yes	No	
Female students	354 (100%)	205 (57.91%)	149 (42.09%)	
Age				
18 – 23 years	232 (65.5%)	131 (56.5%)	101 (43.5%)	0.322
24 – 29 years	94 (26.6%)	60 (63.8%)	34 (36.2%)	
30 – 35 years	28 (7.9%)	14 (50%)	14 (50%)	
Educational Status				
Undergraduate	208 (58.8%)	115 (55.3%)	93 (44.7%)	0.279
Master’s	146 (41.2%)	90 (61.6%)	56 (38.4%)	
Father’s Occupation				
Government Job	114 (32.2%)	67 (58.8%)	47 (41.2%)	0.933
Private Job	92 (26%)	54 (58.7%)	38 (41.3%)	
Business	148 (41.8%)	84 (56.8%)	64 (43.2%)	
Mother’s Occupation				
Government Job	58 (16.4%)	38 (65.5%)	20 (34.5%)	0.342
Private Job	63 (17.8%)	38 (60.3%)	25 (39.7%)	
Housewife	233 (65.8%)	104 (44.6%)	104 (44.6%)	
Family Monthly Income (BDT)				
Below 100000	110 (31.1%)	54 (49.1%)	56 (50.9%)	<0.009
100000 – 200000	150 (42.4%)	93 (62%)	57 (38%)	
200001 – 400000	71 (20.1%)	49 (69%)	22 (31%)	
400001 or More	23 (6.5%)	9 (39.1%)	14 (60.9%)	

Table 1 & Table 2 both shows the socio-demographic and socio-economic information of the participants. In this study, 65.5% (n=232) participants belonged to the 18-23 years age group and 26.6% (n=94) of the participants from 24-29 years age group and 7.9% (n=28) were from 30-35 years age group. Among the participants, 58.8% (n=208) enrolled in undergraduate program and 41.2% (n=146) from master's program. 32.2% (n=114) of their father's main occupation was business, and government job (114, n=32.2%) holder were 6.2% more than whose did private job (92, n=26%). Most of the participants mothers were housewife (65.8%, n=233). And the participants monthly family income range was below 100000 BDT to more than 400000 BDT, majority of the participants (42.4%, n=150) belonged to 100000 BDT to 200000 BDT income group.

After bivariate analysis, we found that majority of the participants (56.5%, n= 131) were myopic whose age was 18 to 23 years, 55.3% (n=115) myopic students were from undergraduate program, and 61.6% (n=90) enrolled in master's program. Majority of myopic participants (58.8%, n= 67) fathers did government job, while participants whose fathers did business (56.8%, n= 84) were 1.9% less myopic than whose fathers did private job (58.7%, n= 54). Myopic participants whose mothers did government (65.5%, n= 38) and private job (60.3%, n= 38) were 20.9% and 15.7% higher than whose mothers were housewife (44.6%, n=104). Family monthly income significantly associated with myopia found from my study. Participants (69%, n=49) from family monthly income group between 200001 BDT to 400000 BDT they were more myopic than participants in other income group, shown in **Table 1**.

Table 2: Socio demographic and economic factor for Dry Eye Disease

Variable	Total n(%)	Dry Eye Disease		P- value
		No	Yes	
Female students	354 (100%)	239 (67.5%)	115 (32.5%)	
Age				
18 – 23 years	232 (65.5%)	160 (69%)	72 (31%)	0.722
24 – 29 years	94 (26.6%)	61 (64.9%)	33 (35.1%)	
30 – 35 years	28 (7.9%)	18 (64.3%)	10 (35.7%)	
Educational Status				
Undergraduate	208 (58.8%)	147 (70.7%)	61 (29.3%)	0.162
Master’s	146 (41.2%)	92 (63%)	54 (37%)	
Father’s Occupation				
Government Job	114 (32.2%)	75 (65.8%)	39 (34.2%)	0.743
Private Job	92 (26%)	65 (70.7%)	27 (29.3%)	
Business	148 (41.8%)	99 (66.9%)	49 (33.1%)	
Mother’s Occupation				
Government Job	58 (16.4%)	36 (62.1%)	22 (37.9%)	0.437
Private Job	63 (17.8%)	46 (73%)	17 (27%)	
Housewife	233 (65.8%)	157 (67.4%)	76 (32.6%)	
Family Monthly Income (BDT)				
Below 100000	110 (31.1%)	82 (74.5%)	28 (25.5%)	0.072
100000 – 200000	150 (42.4%)	100 (66.7%)	50 (33.3%)	
200001 – 400000	71 (20.1%)	40 (56.3%)	31 (43.7%)	
400001 or More	23 (6.5%)	17 (73.9%)	6 (26.1%)	

After bivariate analysis, we determined that dry eye disease was not significantly associated with participants age, educational status, father's and mother's occupation, and family monthly income. Most of the dry eye disease participants (35.7%) were from 30 to 35 years age group where 31% and 35.1% were from 18 to 23 years and 24 to 29 years age group, respectively. DED participants from master's (37%, n=54) program were 7.7% higher than DED participants

whose were from undergraduate (29.3%, n=61) program. Majority of the DED participants fathers (34.2%, n=39) and mothers (37.9%, n=22%) were doing government job. In contrast, maximum DED participants (43.7%, n=31) family's monthly income between 200001 BDT to 400000 BDT and 66.7% (n=100) participants whose has no DED, their family's monthly income between 100000 BDT to 200000 BDT, shown in **Table 2**.

Table 3 and **Table 4** portrayed the clinical factor for myopia and dry disease among the participants. From this table we determined the acute ocular infection, conjunctivitis, other eye diseases, ocular medication uses history, ocular treatment, and their family member's chronic disease distribution of myopia and DED among participants.

Participants in this study reported that 24.9% (n=88) had acute ocular infection, 40.1% (n=142) had conjunctivitis, 9% (n=32) had other eye diseases, and 48.9% (n=173) participants had taken ocular medication for treatment. **Table 3** and **Table 4** demonstrated that 40.2% more participants household members had chronic disease (70.1%, n=248) than participants whose household members had no chronic disease (29.9%, n=106). 34.5% (122) participants both father and mother had chronic disease and 24.9% (n=88) participants parents had no chronic disease was determined from participants self-reported responses. In our study, we identified that participants whose had ocular disease 35% (n=125) among them had ocular treatment within last six months.

Table 3: Clinical Factor for Myopia

Variable	Total n(%)	Myopia		P- value
		Yes	No	
Female students	354 (100%)	205 (57.91%)	149 (42.09%)	
Acute Ocular Infection				
Yes	88 (24.9%)	71 (80.7%)	17 (19.3%)	<0.000
No	266 (75.1%)	134 (50.4%)	132 (49.6%)	
Conjunctivitis				
Yes	142 (40.1%)	88 (62%)	54 (38%)	0.247
No	212 (59.9%)	117 (55.2%)	95 (44.8%)	
Other Eye Diseases				
Yes	32 (9%)	20 (62.5%)	12 (37.5%)	0.716
No	322 (91%)	185 (57.5%)	137 (42.5%)	
Ocular Medication Use				
Yes	173 (48.9%)	107 (61.8%)	66 (38.2%)	0.174
No	181 (51.1%)	98 (54.1%)	83 (45.9%)	
Household Member Chronic Disease				
Yes	248 (70.1%)	148 (59.7%)	100 (40.3%)	0.361

No	106 (29.9%)	57 (53.8%)	49 (46.2%)	
Who has Chronic Disease				
Mother	46 (13%)	20 (43.5%)	26 (56.5%)	<0.009
Father	98 (27.7%)	58 (59.2%)	40 (40.8%)	
Both	122 (34.5%)	83 (68%)	39 (32%)	
Don't have	88 (24.9%)	44 (50%)	44 (50%)	
Ocular treatment within last six months of respondents				
Yes	125 (35.4%)	95 (76%)	30 (24%)	<0.000
No	228 (64.6%)	110 (48.2%)	118 (51.8%)	

After bivariate analysis, we found that acute ocular infection, parents' chronic disease, and ocular treatment within last six months of participants were strongly significant with myopia. Table 3 demonstrated that, 80.7% (n=71) participants were myopic whose had acute ocular infection while 50.4% (n=134) myopic participants whose had no acute ocular infection. 6.8% more myopic participants had conjunctivitis (62%, n=88) than myopic participants whose had no conjunctivitis (55.2%, n=117). Similarly, 5%, 7.7%, and 5.9% myopic participants had other ocular disease (62.5%, n=20), history of ocular medication use (61.8%, n=107), and presence of household members chronic disease (59.7%, n=148) than myopic participants whose had no ocular disease (57.5%, n=185), treatment history (54.1%, n=98) history and their household members (53.8%, n=57) had no chronic disease history, respectively. A majority of 68% (n=83) myopic participants parents had chronic disease and 50% (n=44) myopic participants parents had no chronic disease were significantly associated with myopia. Most of the myopic participants (76%, n=95) had ocular treatment within last six months and 24% (n=30) participants were vulnerable for myopia, shown in **Table 3**.

Table 4: Clinical Factor for Dry Eye Disease

Variable	Total n(%)	Dry Eye Disease		P- value
		No	Yes	
Female students	354 (100%)	239 (67.5%)	115 (32.5%)	
Acute Ocular Infection				
Yes	88 (24.9%)	46 (52.3%)	42 (47.7%)	<0.001
No	266 (75.1%)	193 (72.6%)	73 (27.4%)	
Conjunctivitis				
Yes	142 (40.1%)	81 (57%)	61 (43%)	<0.001
No	212 (59.9%)	158 (74.5%)	54 (25.5%)	
Other Eye Diseases				
Yes	32 (9%)	18 (56.2%)	14 (43.8%)	0.219
No	322 (91%)	221 (68.6%)	101 (31.4%)	
Ocular Medication Use				
Yes	173 (48.9%)	101 (58.4%)	72 (41.6%)	<0.001
No	181 (51.1%)	138 (76.2%)	43 (23.8%)	

Household Member Chronic Disease				
Yes	248 (70.1%)	159 (64.1%)	89 (35.9%)	<0.049
No	106 (29.9%)	80 (75.5%)	26 (24.5%)	
Who has Chronic Disease				
Mother	46 (13%)	41 (89.1%)	5 (10.9%)	<0.000
Father	98 (27.7%)	67 (68.4%)	31 (31.6%)	
Both	122 (34.5%)	63 (51.6%)	59 (48.4%)	
Don't have	88 (24.9%)	68 (77.3%)	20 (22.7%)	
Ocular treatment within last six months of respondents				
Yes	126 (35.6%)	65 (51.6%)	61 (48.4%)	<0.000
No	228 (64.4%)	174 (76.3%)	54 (23.7%)	

After bivariate analysis, **Table 4** demonstrated that acute ocular infection, conjunctivitis, ocular medication use, household member chronic disease, parents' chronic disease, and participants ocular treatment within last six months were strongly significant with dry eye disease. 20.3% more myopic participants who had acute ocular infection had dry eye disease where 27.4% (n=73) DED participants had no acute ocular infection, 43% (n=61) DED participants had conjunctivitis, and 41.6% (n=72) had taken ocular medication. Participants reported that, 35.9% (n=89) DED participants' household members had chronic disease, whereas 22.7% (n=20) of their parents had no chronic disease and 48.4% (n=59) of their both parents had chronic disease. And only 48.4% (n=61) DED participants follow up their ocular treatment within last six months, respectively.

Table 5 and **Table 6** shows the refractive error, family ocular history, near work, and outdoor activities associated with myopia and dry eye disease and as well as the distribution also demonstrated.

All participants self-reported that 72.9% (n=258) participants were wearing glasses ,whereas the 34.5% (n=122), 48.9% (n=173), and 30.2% (n=107) participants used glasses for cosmetic, correction of refractive error, and therapeutical purposes, respectively. Similarly, 35% (n=124) participants used contact lens for cosmetic (23.4%, n=83), correction of refractive error (13.6%, n=48), and therapeutical (5.9%, n= 21) purposes. They had used different types of contact lens. Participants mostly habituated with soft (20.9%, n=74), RGP (10.5%, n=37), and therapeutic (10.2%, n=36) type contact lens in their daily lifestyle. 19.8% more participants parents had myopia and 32.5% (n=115) had no myopia. In our study, 94.6% (n=335) and 99.7% (n=353) had computer/laptop and mobile, while only 41.8% (n=148) had tablet. Most of the participants (50.6%, n=179) had spent more than 5 hours for using the digital devices for different purposes. Only 9.3% (n=33) participants had spent less time into digital device; whereas 45.5% (n=161) participants weekdays outdoor activities were 2 to 5 hours and 21.8% (n=77) had spent more

then 5 hours at outdoor. In weekend, most of the participants (50%, n=177) outdoor activities were below 4 hours and 4.5% (n=16) participants were 12 hours or more.

Table 5: Refractive error, Family history, Near work, and Outdoor activities for Myopia

Variable	Total n(%)	Myopia		P- value
		Yes	No	
Female students	354 (100%)	205 (57.91%)	149 (42.09%)	
Domain-I Refractive Error				
Wearing Glasses				
Yes	258 (72.9%)	202 (78.3%)	56 (21.7%)	<0.000
No	96 (27.1%)	3 (3.1%)	93 (96.9%)	
Purpose of wearing glasses				
Cosmetic Use				
Yes	122 (34.5%)	91 (74.6%)	31 (25.4%)	<0.000
No	232 (65.5%)	114 (49.1%)	118 (50.9%)	
Refractive Error				
Yes	173 (48.9%)	145 (83.8%)	28 (16.2%)	<0.000
No	181 (51.1%)	60 (33.1%)	121 (66.9%)	
Therapeutical				
Yes	107 (30.2%)	99 (92.5%)	8 (7.5%)	<0.000
No	247 (69.8%)	106 (42.9%)	141 (57.1%)	
Wearing Contact Lens				
Yes	124 (35%)	96 (77.4%)	28 (22.6%)	<0.000
No	230 (65%)	109 (47.4%)	121 (52.6%)	
Purpose of wearing contact lens				
Cosmetic Use				
Yes	83 (23.4%)	65 (78.3%)	18 (21.7%)	<0.000
No	271 (76.6%)	140 (51.7%)	131 (48.3%)	
Refractive Error				
Yes	48 (13.6%)	37 (77.1%)	11 (22.9%)	<0.006
No	306 (86.4%)	168 (54.9%)	138 (45.1%)	
Therapeutical				
Yes	21 (5.9%)	18 (85.7%)	3 (14.3%)	<0.015
No	333 (94.1%)	187 (56.2%)	146 (43.8%)	
Type of contact lens				
Soft				
Yes	74 (20.9%)	53 (71.6%)	21 (28.4%)	<0.011
No	280 (79.1%)	152 (54.3%)	128 (45.7%)	
RGP				
Yes	37 (10.5%)	30 (81.1%)	7 (18.9%)	<0.004
No	317 (89.5%)	175 (55.2%)	142 (44.8%)	
Therapeutic				
Yes	36 (10.2%)	33 (91.7%)	3 (8.3%)	<0.000
No	317 (89.5%)	171 (53.9%)	146 (46.1%)	
Domain- II Family History				

Parental Myopia				
Yes	212 (59.9%)	121 (57.1%)	91 (42.9%)	0.781
No	142 (40.1%)	84 (59.2%)	58 (40.8%)	
Who has Myopia				
Father	56 (15.8%)	28 (50%)	28 (50%)	0.157
Mother	77 (21.8%)	39 (50.6%)	38 (49.4%)	
Both	106 (29.9%)	68 (64.2%)	38 (35.8%)	
Don't have	115 (32.5%)	70 (60.9%)	45 (39.1%)	
Domain- III Near Work				
Gadgets at Home				
Computer/Laptop				
Yes	335 (94.6%)	195 (58.2%)	140 (41.8%)	0.810
No	19 (5.4%)	10 (52.6%)	9 (47.4%)	
Mobile				
Yes	353 (99.7%)	204 (57.8%)	149 (42.2%)	1.000
No	1 (0.3%)	1 (100%)	0 (0.0%)	
Tablet				
Yes	148 (41.8%)	93 (62.8%)	55 (37.2%)	0.138
No	206 (58.2%)	112 (54.4%)	94 (45.6%)	
Time Spend with Digital Device				
1 – 3 hours	33 (9.3%)	9 (27.3%)	24 (72.7%)	<0.002
3 – 5 hours	141 (39.8%)	86 (61%)	55 (39%)	
>5 hours	179 (50.6%)	109 (60.9%)	70 (39.1%)	
Domain- IV Outdoor Activities				
Outdoor Activities Weekdays				
Below 2 hours	116 (32.8%)	65 (56%)	51 (44%)	0.293
2 – 5 hours	161 (45.5%)	100 (62.1%)	61 (37.9%)	
5 hours or more	77 (21.8%)	40 (51.9%)	37 (48.1%)	
Outdoor Activities Weekend				
Below 4 hours	177 (50%)	106 (59.9%)	71 (40.1%)	0.603
4 – 8 hours	125 (35.3%)	68 (54.4%)	57 (45.6%)	
8 – 12 hours	36 (10.2%)	23 (63.9%)	13 (36.1%)	
12 hours or more	16 (4.5%)	8 (50%)	8 (50%)	

After bivariate analysis, **Table 5** shows that wearing glasses, purpose of wearing glasses, wearing contact lens, purpose of wearing contact lens, type of contact lens, and time spend with digital device were highly significant with myopia. In our study we found that participants whose were wearing glasses among them 78.3% (n=202) had myopia. They had used glasses in different purposes, participants with myopia (74.6%, n=91) used glasses for cosmetic purpose. 50.7% more myopic participants (83.8%, n=145) used glasses to correct the refractive error, and 92.5% (n=99) used for therapeutic purpose. Similarly, 77.4% (n=96) myopic participants used contact lens for different purpose, and 5.2% had low risk of myopia whose had not wearing contact lens. 78.3% (n=65) used contact lens for cosmetic purposes where 85.7% (n=18) used for therapeutic. A majority 91.7% (n=33) myopic participants used

therapeutic contact lens and 71.6% (n=53) participants contact lens was soft. Parental myopia was not found significant in our study. Participants reported that 2.1% more myopic participants had no parental myopia history and 64.2% (n=68) myopic participants both father and mother had myopia and other ocular history (such as glaucoma, cataract, retinal disease, etc.). Most of the participants home had computer/laptop, mobile, and tablet and they had used these devices in different purposes, in our study most of the myopic participants were found whose used digital devices more than 5 hours, where only 27.3% (n=9) had spent time to digital devices 1 to 3 hours. According to this study, we identified that 56% (n=65) myopic participants weekdays outdoor activities were below 2 hours and 51.9% (n=40) had more than 5 hours but in holiday their outdoor activities were 8 to 12 hours.

Table 6: Refractive error, Family history, Near work, and Outdoor activities for Dry Eye Disease

Variable	Total n(%)	Dry Eye Disease		P- value
		No	Yes	
Female students	354 (100%)	239 (67.5%)	115 (32.5%)	
Domain-I Refractive Error				
Wearing Glasses				
Yes	258 (72.9%)	159 (61.6%)	99 (38.4%)	<0.000
No	96 (27.1%)	80 (83.3%)	16 (16.7%)	
Purpose of wearing glasses				
Cosmetic Use				
Yes	122 (34.5%)	83 (68%)	39 (32%)	0.975
No	232 (65.5%)	156 (67.2%)	76 (32.8%)	
Refractive Error				
Yes	173 (48.9%)	102 (59%)	71 (41%)	<0.001
No	181 (51.1%)	137 (75.7%)	44 (24.3%)	
Therapeutical				
Yes	107 (30.2%)	55 (51.4%)	52 (48.6%)	<0.000
No	247 (69.8%)	184 (74.5%)	63 (25.5%)	
Wearing Contact Lens				
Yes	124 (35%)	72 (58.1%)	52 (41.9%)	<0.008
No	230 (65%)	167 (72.6%)	63 (27.4%)	
Purpose of wearing contact lens				
Cosmetic Use				
Yes	83 (23.4%)	50 (60.2%)	33 (39.8%)	0.138
No	271 (76.6%)	189 (69.7%)	82 (30.3%)	
Refractive Error				
Yes	48 (13.6%)	26 (54.2%)	22 (45.8%)	0.050
No	306 (86.4%)	213 (69.6%)	93 (30.4%)	
Therapeutical				
Yes	21 (5.9%)	11 (52.4%)	10 (47.6%)	0.198

No	333 (94.1%)	228 (68.5%)	105 (31.5%)	
Type of contact lens				
Soft				
Yes	74 (20.9%)	45 (60.8%)	29 (39.2%)	0.213
No	280 (79.1%)	194 (69.3%)	86 (30.7%)	
RGP				
Yes	37 (10.5%)	24 (64.9%)	13 (35.1%)	0.859
No	317 (89.5%)	215 (67.8%)	102 (32.2%)	
Therapeutic				
Yes	36 (10.2%)	18 (50%)	18 (50%)	<0.029
No	318 (89.8%)	221 (69.5%)	97 (30.5%)	
Domain- II Family History				
Parental Myopia				
Yes	212 (59.9%)	144 (67.9%)	68 (32.1%)	0.932
No	142 (40.1%)	95 (66.9%)	47 (33.1%)	
Who has Myopia				
Father	56 (15.8%)	45 (80.4%)	11 (19.6%)	<0.045
Mother	77 (21.8%)	50 (64.9%)	27 (35.1%)	
Both	106 (29.9%)	63 (59.4%)	43 (40.6%)	
Don't have	115 (32.5%)	81 (70.4%)	34 (29.6%)	
Domain- III Near Work				
Gadgets at Home				
Computer/Laptop				
Yes	335 (94.6%)	224 (66.9%)	111 (33.1%)	0.399
No	19 (5.4%)	15 (78.9%)	4 (21.1%)	
Mobile				
Yes	353 (99.7%)	238 (67.4%)	115 (32.6%)	1.000
No	1 (0.3%)	1 (100%)	0 (0.0%)	
Tablet				
Yes	148 (41.8%)	87 (58.8%)	61 (41.2%)	<0.004
No	206 (58.2%)	152 (73.8%)	54 (26.2%)	
Time Spend with Digital Device				
1 – 3 hours	33 (9.3%)	28 (84.8%)	5 (15.2%)	<0.007
3 – 5 hours	141 (39.8%)	102 (72.3%)	39 (27.7%)	
>5 hours	180 (50.8%)	109 (60.6%)	71 (39.4%)	
Domain- IV Outdoor Activities				
Outdoor Activities Weekdays				
Below 2 hours	116 (32.8%)	84 (72.4%)	32 (27.6%)	0.389
2 – 5 hours	161 (45.5%)	105 (65.2%)	56 (34.8%)	
5 hours or more	77 (21.8%)	50 (64.9%)	27 (35.1%)	
Outdoor Activities Weekend				
Below 4 hours	177 (50%)	120 (67.8%)	57 (32.2%)	0.412
4 – 8 hours	125 (35.3%)	82 (65.6%)	43 (34.4%)	
8 – 12 hours	36 (10.2%)	28 (77.8%)	8 (22.2%)	
12 hours or more	16 (4.5%)	9 (56.2%)	7 (43.8%)	

Refractive error, purpose of wearing glasses, type of contact lens, family history of myopia, and near work were significantly associated with dry eye disease found from bivariate analysis, shown in Table 6. Only 38.4% (n=99) DED participants were using glasses and 41.9% (n=52) used contact lens. DED participants used glasses to correct the refractive error (41%, n=71) and therapeutic purposes (48.6%, n=52). 50% (n=18) DED participants used therapeutic contact lens alternative to glasses. Parental myopia history also significant with dry eye disease of the participants. 32.1(n=68)% DED participants responded that their parents had myopia, where 40.6% (n=43) DED participants both father and mother had myopia.

All most participants had computer/laptop, mobile, and other digital devices at their home. Nearly used of digital devices had more chances to develop dry eye disease. In our study we found that 15% more tablet user had DED where 26.2% (n=54) DED participants had no tablet device. And daily more than 5 hours 39.4% (n=71) DED participants had spent their time into digital device uses (**Table 6**).

Table 7: Dry Eye Disease (DED) for Myopia

Variable	Total n(%)	Myopia		P- value
		Yes	No	
Female students	354 (100%)	205 (57.91%)	149 (42.09%)	
Dry Eye Disease				
No	239 (67.5%)	115 (48.1%)	124 (51.9%)	<0.000
Yes	115 (32.5%)	90 (78.3%)	25 (21.7%)	

Table 7 shows that DED prevalence was 32.5% (n=115) among the participants of this study. After bivariate analysis of participants self-reported data, we found that 30.2% less myopic participants (57.91%, n=205) had no DED where 78.3% (n=90) had DED. And 21.7% (n=25) DED participants had no myopia. Result found the highly significant with myopia where $p < 0.000$.

Table 8: Myopia and Dry Eye Disease (DED)

Variable	Total n(%)	Dry Eye Disease		P- value
		No	Yes	
Female students	354 (100%)	239 (67.5%)	115 (32.5%)	
Myopia				
Yes	205 (57.9%)	115 (56.1%)	90 (43.9%)	<0.000
No	149 (42.1%)	124 (83.2%)	25 (16.8%)	

Table 8 shows that myopia prevalence was 57.9% (n=205) among the participants of this study. After bivariate analysis of participants self-reported data, we found that 27.1% more DED participants (32.5%, n=115) had myopia where 83.2% (n=124) had no myopia and DED. Result found the highly significant with DED where $p < 0.000$.

Table 9 shows the binary logistic regression analysis result where our outcome variable was myopia and significant independent variables were found from bivariate analysis. After analysis we found wearing glasses for refractive error, purpose for wearing glasses, and time spend with digital device were more significant for digital device users to develop myopia disease.

Table 9: Binary logistic regression for Myopia

Variables	Myopia vs Digital Device Users	
	AOR	95% CI
Socio Demographic & Economic		
Family Monthly Income (BDT)		
Below 100000 (RC)	1	
100000 – 200000	0.797	0.347 – 1.826
200001 – 400000	0.639	0.214 – 1.821
400001 or More	3.015	0.662 – 13.663
Clinical Treatment Information		
Acute Ocular Infection		
Yes	0.687	0.258 – 1.763
No (RC)	1	
Who has Chronic Disease		
Mother	1.034	0.329 – 3.201
Father	1.538	0.592 – 4.073
Both	0.861	0.303 – 2.429
Don't have (RC)	1	
Ocular treatment within last six months of respondents		
Yes	0.864	0.384 – 1.916
No (RC)	1	
Domain-I Refractive Error		
Wearing Glasses		
Yes	0.046***	0.008 – 0.204
No (RC)	1	
Purpose of wearing glasses		
Cosmetic Use		
Yes	1.112	0.429 – 2.768
No (RC)	1	
Refractive Error		
Yes	0.179***	0.065 – 0.452

No (RC)	1	
Therapeutical		
Yes	0.091***	0.029 – 0.242
No (RC)	1	
Wearing Contact Lens		
Yes	0.594	0.081 – 4.405
No (RC)	1	
Purpose of wearing contact lens		
Cosmetic Use		
Yes	0.302	0.033 – 2.407
No (RC)	1	
Refractive Error		
Yes	0.625	0.075 – 4.549
No (RC)	1	
Therapeutical		
Yes	0.353	0.031 – 3.306
No (RC)	1	
Type of Contact Lens		
Soft		
Yes	3.070	0.403 – 19.961
No (RC)	1	
RGP		
Yes	0.884	0.092 – 7.229
No (RC)	1	
Therapeutic		
Yes	1.799	0.181 – 12.508
No (RC)	1	
Domain- III Near Work		
Time Spend with Digital Device		
1 – 3 hours (RC)	1	
3 – 5 hours	0.188**	0.052 – 0.636
>5 hours	0.240*	0.071 – 0.772
Dry Eye Disease (DED) for Myopia		
Dry Eye Disease		
No (RC)	1	
Yes	0.552	0.229 – 1.279
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ AOR: Adjusted Odds Ratio; CI: Confidence Interval; RC: Reference Category		

According to result shows in **Table 9**, we found that participants who wore glass (AOR: 0.046, 95% CI: 0.008 – 0.204) were 95.4% lower likelihood to myopia disease compared to who did not wear glass. Myopia disease was 82.1% lower for participants who used glass to correct the refractive error (AOR: 0.179, 95% CI: 0.065 – 0.452) compared to who did not. Similarly, participants who therapeutically used the glass (AOR: 0.091, 95% CI: 0.029 – 0.242) were 0.091 times lower chance to develop myopia compared to who used glass in other purposes.

Moreover, myopia disease was higher among the participants whose daily digital device spent time were 3 to 5 hours (AOR: 0.188, 95% CI: 0.052 – 0.636) and more than 5 hours (AOR: 0.240, 95% CI: 0.071 – 0.772) compared to those who were spent time 1 to 3 hours.

Table 10 shows the binary logistic regression analysis result for dry eye disease (DED) and only significant variable was myopia.

Table 10: Binary logistic regression for Dry Eye Disease

Variables	Dry Eye Disease vs Digital Device Users	
	AOR	95% CI
Clinical Treatment Information		
Acute Ocular Infection		
Yes	0.988	0.488 – 1.978
No (RC)	1	
Conjunctivitis		
Yes	1.701	0.903 – 3.205
No (RC)	1	
Ocular Medication Use		
Yes	1.183	0.563 – 2.464
No (RC)	1	
Household Member Chronic Disease		
Yes	1.496	0.449 – 5.424
No (RC)	1	
Who has Chronic Disease		
Mother	0.192	0.033 – 0.992
Father	0.697	0.182 – 2.444
Both	1.133	0.249 – 4.794
Don't have (RC)	1	
Ocular treatment within last six months of respondents		
Yes	1.556	0.786 – 3.085
No (RC)	1	
Domain-I Refractive Error		
Wearing Glasses		
Yes	0.645	0.230 – 1.741
No (RC)	1	
Purpose of wearing glasses		
Refractive Error		
Yes	1.412	0.742 – 2.710
No (RC)	1	
Therapeutical		
Yes	1.444	0.725 – 2.877
No (RC)	1	
Wearing Contact Lens		
Yes	1.139	0.575 – 2.240

No (RC)	1	
Type of contact lens		
Therapeutic		
Yes	1.387	0.543 – 3.553
No (RC)	1	
Domain- II Family History		
Who has Myopia		
Father	0.542	0.221 – 1.262
Mother	1.198	0.573 – 2.496
Both	0.918	0.462 – 1.807
Don't have (RC)	1	
Domain- III Near Work		
Gadgets at Home		
Tablet		
Yes	1.388	0.814 – 2.362
No (RC)	1	
Time Spend with Digital Device		
1 – 3 hours (RC)	1	
3 – 5 hours	1.373	0.467 – 4.687
>5 hours	2.612	0.908 – 8.826
Myopia and Dry Eye Disease (DED)		
Myopia		
Yes	2.525*	1.113 – 5.992
No (RC)	1	
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ AOR: Adjusted Odds Ratio; CI: Confidence Interval; RC: Reference Category		

According to result we determined that, participants whose had myopia disease (AOR: 2.525, 95% CI: 1.113 – 5.992) were 2.525 times likely to be dry eye disease compared to participants who had no myopia (**Table 10**).