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The clinical findings of different refractive error for students studying at college of medical technology, Al-Mustaqbal University in Babylon City of Iraq from 18 to 20 years

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***Abstract*---**Aim: determining the clinical results of refractive error for students of Mustaqbal University College from18 to 20 years. Introduction: Refractive error is a type of vision poor that affects about 2.3 billion persons global. Refractive error is a main reason of slight toward moderate visual loss, so determining their part can help plan a strategic health program. Methods: This study was cross-sectional and it spent only three-month showed at the Mustaqbal University Clinic from November 2021 to January 2022. We selected 215 students from different stages. Result: All participants in this study were glad to do examination. The male were 142(66%) students and the female 73 (34%). The mean age of 19.5± 1.06 (range, 17.5 – 21.5) years. VA in the right eye was 196 (91.2%) and the left eye was 181 (84.2%). The refractive error in congenital (male, female) and acquired (male , female) in this study was 21 (9.8%), 9 (4.2%), 12(5.6%), 17(7.9%),12 (5.6%), 1(0.7%) ,respectively. Only 4 male (1.9%) have diplopia. Conclusion: The spread of refractive error in College of Medical Technology was somewhat higher among students.

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Myopia was also the most common in this study, and males had more amblyopia than females.

***Keywords*---**Mustaqbal University, visual acuity, myopia, amblyopia.

Introduction

Refractive errors are the greatest common reason of poor vision [1,2]. Refractive error refers to the form of ocular defects in which the optical structure is inept sharply effort parallel waves onto the retina when the adjustment is stationary [3,4]. Most common types of refractive error are myopic, hyperopic, and astigmatism [5]. The eyes defined as “the windows to the soul”. This was stated by the Intercontinental Activity for the Preclusion of Blindness and the World Health Group at the introduction of a global initiative called "VISION 2020" to reduce needless blindness [6,7].

Poor eyesight is a major limitation to strong and enlightening study/college conditions for students in several of the country. Poor vision was because they uncorrected the refractive errors is particularly common in young adults and is the additional most common cause behind fixable visual disturbances [8]. The world most effective then curable answer to young people's low vision is a refractive error [9]. Refractive errors are now a major problem in many countries around the world. The rate of myopia was beginning to rise, especially in Asian, countries that have reached plague levels. [10].

As myopia is related with main ophthalmic illnesses such as retinopathy plus glaucoma optic neuropathy. The spread bigger of myopia shows an increased danger of nearsightedness vision loss [11,12]. Many studies have examined the spread of myopia. These studies were performed in countries other than interior China [13,14]. The refractive error has severe common in economic effects on characters and communities, off-putting their academic of professional latent [15,16].

Types of refractive error vary rendering to the features of the population such as age [17,18-19], sex [20,21]. Therefore, the study was designing investigate the prevalence many refractive errors of College of Medical Technology students attending Mustaqbal University's medical school in Babylon, Iraq. The data poised from this study aids to raise alertness about refractive errors and improve vision-related elevations to lessen refractive error not only among medical students, also among university students.

SPSS version 24 was used to analyze the data. To present qualitative data, frequency and percentage were used. For quantitative data, the mean and standard deviation were computed. The chi-squared significance exam was applied to novelty the relationship among the independent and dependent variables.

Methods

The study was cross-sectional, shown in Mustaqbal University clinics a three-month, the period from November 2021 to January 2022. The investigation involved 215 male and female students from multiple education years. All students in this study were selected at random, so about 30- 45 students are selected from every academic stage. The research subjects were selected with description of the study's objectives and a printed approval form specifying purposes, methods , benefits and ensuring the confidentiality of the facts collected from each student. After accord, every subject was studied using an automated refractometer. Checking done by an optometrist without cycloplegic eye drop. Both eyes were carefully observed with an auto-refraction and three evaluations used in the refractive measurements were averaged. Every individual's readings were recorded on a data paper, and the statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS). After obtaining agreement from the participants, each was evaluated using an auto refractometer (Auto Refractometer ARK-510A, NIDEK, Aichi, Japan), as previously reported [22,23]. Momentarily, all measurements were taken with all participants of refractive for all eyes with an auto- refractometer.

Inclusion: only students at Al-Mustaqbal University's College of Medical Technology in Iraq's Babylon-city, prior surgery, and strabismus.
Exclusion: age over 22 years, teachers, we didn't use cyclopentolate (any dilation drops) and any student did Lasik surgery.
This is a research that was authorized by the college's dean, heads of departments at the College of Medical Technology, and the students who were surveyed.

Result

This study was cross-sectional, covers totally 215 students from dissimilar stages from years and colleges of medical technology at Mustaqbal University. This study contained, male were 142(66%) students and female 73 (34%) students were with the mean age of 19.5± 1.06 (range, 17.5 – 21.5) years. Fig.1

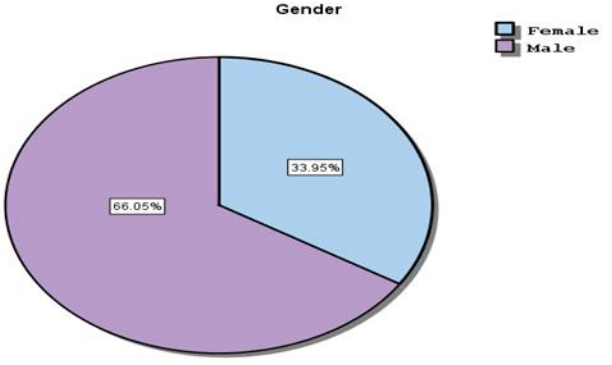

Fig.1: Distribution gender

In our study, we discovered that the right eye had a visual acuity of 196 (91.2 %) while the left eye had a visual acuity of 181. (84.2 %). TABL.2

Table 2: Visual Acuity Distribution in Both Eyes

VA		6/60	6/36	6/24	6/18	6/12	6/9	6/6
Types the eye	Right	0	5	1	0	1	1	4
	Left	0	0	0	0	0	3	22
	both	0	0	0	1	1	6	170
	right	0	0	0	0	0	2	10
LE.BCVA	Left	0	6	0	3	2	13	1
	both	0	0	0	0	1	7	170

Also, the refractive error in congenital (male, female) and acquired (male , female) in this study were 21 (9.8%), 9 (4.2%), 12(5.6%), 17(7.9%),12 (5.6%), 1(0.7%) ,respectively. Table 3.

Table 3: Distribution the refractive error in gender of congenital and acquired

		Types		
		Cong.	Acquire	Normal
		Count	Count	Count
Gender	M	9	16	117
	F	12	1	60

Distribution refractive error of students in all stages Tabl.4

Refractive Error	Frequency	Percent	Valid Percent
Myopia	23	10.7%	10.7%
Hypermetropia	14	6.5%	6.5%
Astigmatisms	11	5.1%	5.1%
Myopia			
Emmetropia	167	77.7%	77.7%
Total	215	100%	100%

However, the strabismus was little spread among students. Esotropia was 13(6.1%) students but Exotropia was 4(1.9%) students and the normal eye without strabismus were 198(90.7%) students. Tabl.5.

Table 5. Distribution the strabismus in all students of this study

Strabismus			
	Frequency	Percentage	Valid Percent
Esotropia	13	6.1%	6.1%
Exotropia	4	1.9%	1.9%
Normal	198	92.0 %	92.0%
Total	215	100%	100%

In our study, we found some students suffering from headaches (Male , Female) and Amblyopia (Male, Female) also, Diplopia (Male only). 15 (7%), (8(3.7%), (7(3.3%)) , 12(5.6%),(10(4.7%), 2(0.9%))and 4(1.9%), respectively.

Table 6: Symptom distribution among students

	Symptom			
	headache	Amblyopic	diplopia	normal
Male	8	10	4	120
Female	7	2	0	64

Discussion

This study was cross-sectional. We checked all students from College of Medical Technology and it took three months. The study included two hindered fivteen male and female students from different departments of college at different stages of study. The male was 142(66%) students and the female 73 (34%) students were with the mean age of 19.5± 1.06 (range, 17.5 – 21.5) years. Examining students who present to college clinic facilities reveals refractive errors.

In our study, we found the Myopia 10% common ,this similar with Sultan H(2018)[24] and Ghaderi S(2018)[25]. It is now well established that myopia is the most common kind of refractive error on a global scale. It deteriorates with time and has now become a major social and economic burden for affected pupils worldwide[26]. Strabismus was 17 students this nearly from SHI, Xue-Ying(2018)[27] was 10 students. We also discovered that female first-year university students had a slightly higher incidence of myopia. According to some studies, female subjects have in the height prevalence of myopia. Female students finished extra time reading and doing close work [28] . According to the Shunyi Study, which was piloted in a semirural part of northern China [29]. Nonetheless, another study[30] found no significant variance the spread the myopia based on sex. Large-scale research is required to corroborate this finding.
The study's limitations were due to the small size of the students. The age was determined from us. Difficult approvals to examine the largest number of students.

Conclusion

The prevalence refractive error in this university was a little between the students and the myopia was most common in this study also, the amblyopia in the male was more than the female because they did not notice the weakness of their eyesight in one eye due to their preoccupation with work for the past years.

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