

Level of Knowledge about Refractive Error and Corrective Lenses in Patients of Santa Casa de Misericórdia of Ribeirão Preto - São Paulo

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Abstract

Objective: Asses the level of awareness of patients, concerning their own refractive errors and the use of corrective lenses.

Methods: A questionnaire with 5 objective questions was conducted in 450 patients in the general clinic, after their approval, excluding the patients from subspecialty and postoperative clinics.

Results: 28 patients were excluded because of inconclusive answers. Among the selected patients, 62% attended only secondary school, 31% graduated from high school, 5% had higher education and 2% were illiterate. An amount of 73% of the patients were using corrective lenses for over five years and 59% did not know what type of lenses they used. The most prevalent ametropia from the account of patients, which was later checked was nearsightedness (17%) and 68% did not know what type of ametropia they had. Out of those 68%, 38% reported that they did not know what type of refraction error they had because their doctor had not explained it to them; 39% did not recall and 23% did not question why corrective lenses had been prescribed. Another relevant fact raised by the study is that the vast majority of the patients, 95%, had their glasses prescribed by an ophthalmologist, 3% were prescribed by a general practitioner and only 2% by an optometrist. One patient answered that he did not know who had prescribed his corrective lenses.

Conclusion: The obvious lack of knowledge of the patient about the motive of being prescribed corrective lenses and his ametropia is due to his lack of educational instruction and interest

Keywords: Refractive Errors; Internship and Residency; Surveys and Questionnaires; Eyeglasses; Refractometry

Introduction

Nowadays approximately 1.158.000 Brazilians are blind, and another 4.000.000 suffer of at least one type of visual problem. Amongst children, up to 100.000 have trouble with their sight. According to the Conselho Brasileiro de Oftalmologia (CBO), most of the causes of the impairment of sight are treatable and could be prevented.

Refractive error is one key factor that leads to the development of an impaired vision, amblyopia and damage the cognitive system development in children. When anomalies like myopia and hypermetropia are not properly treated by a specialist are responsible for 20% of the cases of low student performance, according to Ruiz Alves [1].

The non-uniform distribution of ophthalmologists in Brazil creates an unbalance scenario across regions, reason why some estates have more frequent cases of visual impairment or loss (low doctor/population ratio). The Brazilian Health Ministry considers the ratio of

one ophthalmologist specialist to 17.000 habitants as the “minimum acceptable” ratio for a specific area to be safely covered. The disparity between cities can vary according to several factors, such as how well-developed the city is, if it is near urban or rural area, etc. Sao Paulo, for example, has currently a ratio of 1 doctor to 8.165 habitats, whereas Maranhao has a 1 to 45.907 ratio.

In order to complete this study, random observations were collected as samples at the ambulatory of Santa Casa hospital. The majority of patents of the ambulatory are there to do their refraction exam.

It is also worth mentioning that an investigative research about similar works was done and there were no other published studies that had the same focus as the one analyzed below.

Methods

The study comprised of a survey given to patients, collecting both their demographic information (name, age, gender, address and education) and their perspective on five multiple choice questions. Together with the survey, the patient also had to sign a term of consent in order to authorize the use of his inputs in the study.

Residents and interns of the ophthalmology service unit were responsible for doing the survey and collecting the information from patients. They were also in charge of validating if the survey was filled correctly, eliminating cases that were incomplete or with error. Overall 450 patients participated in the study between October and December of 2015. Participant patients were selected randomly from the overall population of patients that frequented the ambulatory during weekdays (approximately 400 patients/week).

Only patients from the general ambulatory area, those who suffered of refractive errors and used corrective lenses, were considered for this study. Patients dedicated to areas focused on glaucoma, cataract and strabismus, as well as recently operated patients, were not considered in any part of this project.

All data was compiled and analyzed with the support of Microsoft Excel.

Results

Out of 450 interviewed patients, 28 forms were not considered due to errors in its filling (e.g. patients confirming having both myopia and hypermetropia).

Of all 422 patients analyzed, 11% had 30 years or less, 12% had between 30 and 45 years, 37% had between 45 and 60 years, and 39% had more than 60 years.

2% (9 patients) were illiterate, 62% (261) had finished Elementary School, 31% (132) High School, and only 5% (20) had graduated in a university (Figure 1).

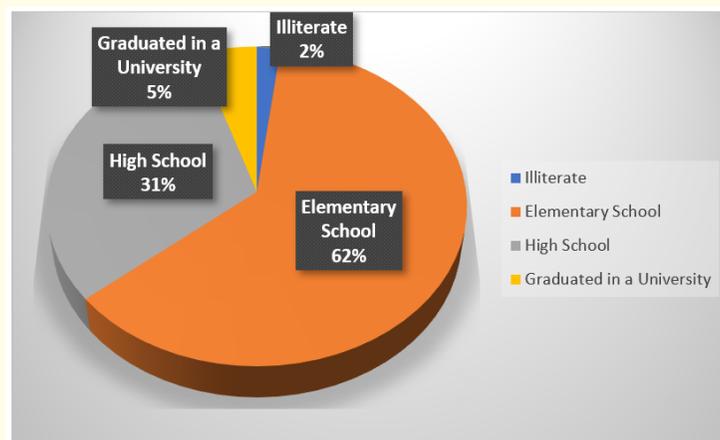


Figure 1: Level of education amongst patients.

When asked for how long did the patient used corrective lenses, 73% (306 patients) said they used corrective lenses for more than five years, and 27% for less than five years. 68% (289) did not know exactly whether they had myopia, hypermetropia, presbyopia or astigmatism. The remaining 32% of patients that knew their type of refractive error were divided as the following: 17% Myopia, 4% Hypermetropia, 13% Astigmatism and 3% Presbyopia (Figure 2).

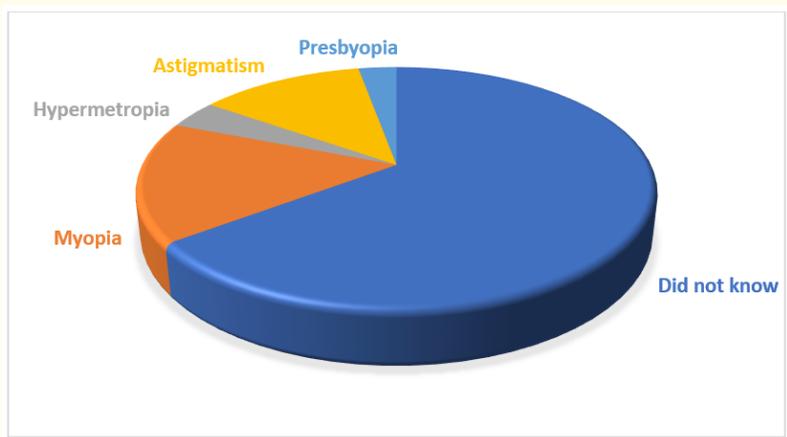


Figure 2: Patient awareness of his/her own type of refractive error.

It is worth mentioning that patients could fill up to two refractive errors in this section of the questionnaire. All patients were then analyzed by a doctor that would verify if his/her answer was initially correct.

When asked about their knowledge of their own corrective lenses, it was observed that most patients did not know the key information about the product. 59% (250 patients) said they had no information on their lenses. Out of the remaining patients, 86 said they had multifocal lenses, 60 had monofocal lenses and 26 bifocals.

Corrective lenses for the vast majority (95%, 402 patients) were prescribed by an ophthalmologist. 12 cases were prescribed by non-specialists, 7 by optometrists, and only one patient was not able to answer the question (Figure 3).

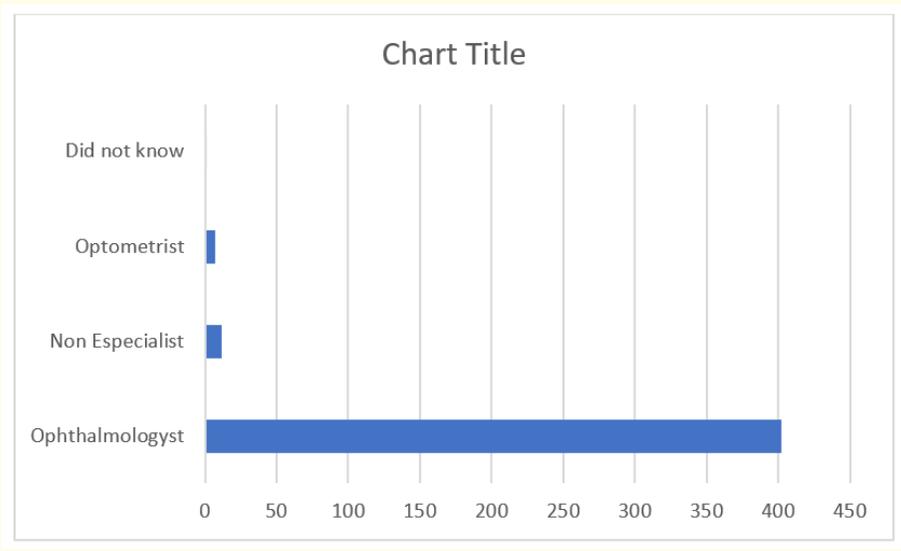


Figure 3: Level of specialization of the corrective lens's prescriber.

Finally, the study focused on understanding why patients did not know their type of refractive error. 115 patients (27% of the total sample) said they did not remember, 113 patients (27%) said that their specialists never gave him any specific information about his/her anomaly, and 70 patients said they never even asked more details on his condition.

Discussion

On one hand, the level of myopia found in our sample (17% of the total) are well aligned with the ones related in our comparative sources. The World Health Organization (WHO) relates that 20% of Brazilians have myopia, same level reported in the research conducted by Curtin and Withmor [3] found for the world population [4].

On the other hand, the level of hypermetropia found in this study varied when compared to comparative studies. One research conducted in hospitals of the mid-west region of Brazil [6] - with 2.408 observations from children that were examined between April 2009 and March 2010 - showed an incidence of hypermetropia in 46.9% of the sample (number much higher than the 5% found in this study). This discrepancy exists because of the demographic differences between samples collected in each study. The WHO, on its end, report that hypermetropia occur in 34% of the Brazilian population, whereas presbyopia is present in 26% of the population.

The incidence of presbyopia in our study was also different when compared to the one conducted at Hospital Universitario de Campo Grande (MS) [6] with 2.371 collected observations. In this specific study, presbyopia was the most common condition within the sample analyzed, present in 42% (987 patients) of the sample, 39 points higher than our reported incidence (3%).

It is important to mention that the found incidence of each condition is reporting what was answered in the surveys by the patients, and not the actual incidence (as some patients might have answered incorrectly).

Amongst the sample of patients that had 60 years or more, 62% had only studied until Elementary School, a direct consequence of the need to start working early since most of them come from a low-level income household. The limited education is a potential explanation for the lack of awareness about their anomaly.

The fact that 73% of the patients use corrective lenses for more than five years and still does not know the basic information about his/her condition indicate a high level of conformism and lack of instruction by professionals in the field. From our observations, a total of 68% had no knowledge about his type of condition and 59% about his corrective lenses.

However, since low overall level of education is a reality spread across the Brazilian population [10], it is fundamental that ophthalmologists invest more time in its regular schedule to carefully explain about the refractive error, how to treat it and its consequences. If we take into consideration that 95% of the patients had their lenses prescribed by a specialist or someone with minimum knowledge, a collective effort towards educating patients about their condition can drastically improve the numbers to be found in future studies. Nowadays one of the biggest explanations for the problems in the communication between doctor and patient is the high workload faced by ophthalmologists across the country, averaging 2.880 hours/year.

Conclusion

The patients of this study showed a low level of knowledge regarding his/her refractive error and corrective lenses. Low level of education and lack of interest are the main causes for the high number of uninformed patients.

Taking into consideration that clarity about the condition is not only important but also a human right of every patient, it is key that all specialists in the field dedicate a significant portion of his exams to explain the process of examination as well as the results found and ways to treat the condition. This simple measure will have both an immediate impact, creating a more well-educated population, and also a long-term impact, facilitating future evaluations on these patients.

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