

Analysis of the prevalence of patients in need of eyeglasses in Ophthalmologic Hospital in Goiânia, Goiás, Brazil: Projeto Olhar Brasil

Análise da prevalência dos pacientes que necessitam de óculos em um Hospital Oftalmológico em Goiânia, Goiás, Brasil. Projeto Olhar Brasil

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ABSTRACT

Objective: Measure the “Projeto Olhar Brasil” under a critic point of view, examining the prevalence of patients referred for ophthalmological appointment, post-screening, that show refractive errors uncorrected. **Methods:** Review of records between March 2014 and August 2016, in totality of 339 patients between 6 and 18 years old, 5 preschools (2 – 6 years and 11 months) 124 school (7 – 9 years and 11 months) and 210 teenagers (10 – 20 years old). There were 156 males and 183 females, in an Ophthalmologic Hospital in Goiânia, Goiás, Brazil. **Results:** In total of 339 patients examined, 143 (42.1%) needed optical correction against 196 (57.8%) that not benefiting from the same. There were 74 (47.4%) males patients who required the use of eyeglasses, against 69 (37.7%) of females gender who obtained eyes test alterations. In relation to age, the teenagers, school and preschool showed in absolute numbers and percentage respectively 102 (48.5%), 40 (32.2%) and 2 (40%) indications of corrective lenses. **Conclusion:** The “Projeto Olhar Brasil” has great importance for society in general reducing the loss of students in school, improving school performance and consequently the quality of life of the beneficiaries, although it needs better training and improvement of professionals in primary health care, elementary school teachers and educators that are responsible for screening.

Keywords: Visual acuity; Prevalence; Refraction; School health; Eye health

RESUMO

Objetivo: Avaliar o projeto Olhar Brasil sob um olhar crítico, examinando a prevalência dos pacientes encaminhados para consulta oftalmológica, pós-triagem, que realmente apresentem vícios de refração não corrigidos. **Métodos:** Revisão de prontuários entre Março de 2014 e Agosto de 2016, totalizando 339 pacientes entre 6 e 18 anos de idade, sendo 5 pré-escolares (2 – 6 anos e 11 meses), 124 escolares (2 – 6 anos e 11 meses) e 210 adolescentes (10-20 anos) entre os quais 156 do sexo masculino e 183 do feminino, em um hospital oftalmológico em Goiânia, Goiás, Brasil. **Resultados:** No total dos 339 pacientes examinados 143 (42,1 %) necessitaram de correção e 196 (57,8%) não. Entre os 156 pacientes do sexo masculino 74 (47,4%) apresentaram necessidade de uso de óculos contra 82 (52,5%) que não precisaram, em relação ao sexo feminino os números foram de 69 (37,7%) que tiveram alteração ao exame e 114 (62,2%) que não apresentaram alterações refrativas. Em relação a faixa etária, os adolescentes, escolares, e pré-escolares apresentaram em números absolutos e porcentagem respectivamente 102 (48,5%), 40 (32,2%) e 2 (40%) de indicação de lentes corretivas. **Conclusão:** O projeto Olhar Brasil tem importância relevante para sociedade em geral, com diminuição da evasão escolar, melhor rendimento escolar e consequentemente da qualidade de vida dos beneficiários, embora necessite melhor treinamento e aperfeiçoamento dos profissionais da Atenção Básica em Saúde, professores do ensino fundamental e os alfabetizadores que são responsáveis pela triagem.

Descritores: Acuidade visual; Prevalência; Refração; Saúde escolar; Saúde ocular

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INTRODUCTION

On April 24, 2007, Projeto “Olhar Brasil” was instituted by the Federal Government through Interministerial Ordinance No. 15/2007 as an initiative of the Ministry of Health and the Ministry of Education with direct supervision of the Civil House of the Presidency of the Republic. The goal of “Olhar Brasil” is to identify visual problems in students enrolled in the public elementary school system (1st to 8th grade), in students of Programa “Brasil Alfabetizado” of MEC, and in the population over 60 years of age, providing ophthalmological care with supply of eyeglasses in cases of detection of refractive errors (Figure 1).⁽¹⁾

This initiative, besides expanding access to eye health, aims to improve the learning of children and adults in school phase. That is, it acts in the identification of visual problems, reducing the rate of school dropout, contributing to the learning of students who participate in Programa “Saúde na Escola” (PSE) and of alphabetized students enrolled in Programa “Brasil Alfabetizado”.⁽¹⁾

Projeto “Olhar Brasil” is the natural development of various campaigns developed by the Brazilian Council of Ophthalmology (CBO), as “Veja Bem” and “Olho no Olho”. It has a different approach, with a perennial nature structured within the Single Health System, and focusing on people (children and adults) who are developing their basic education.⁽¹⁾ Thus, it is already fulfilling the main objectives chosen in “Plano de Ação Global

para a Prevenção da Cegueira Evitável e Deficiência Visual 2014 – 2019 – na busca da Saúde Ocular Universal”, approved by the LXIV World Health Assembly in May 2013. The new Plano de Ação Global (PAG) is currently the most important strategic eye-health document and represents a significant step towards “universal access” to eye health.⁽²⁾

This study was carried out in order to evaluate Projeto Olhar Brasil from a critical point of view, examining the prevalence of patients referred for ophthalmologic appointment, post-screening, who actually present uncorrected refractive errors.

METHODS

Descriptive retrospective cross-sectional epidemiological study using medical records from Instituto de Olhos de Goiânia (IOG) of the period from March 2014 to August 2016, totaling 339 patients between 6 and 18 years of age. All patients were screened from Projeto Olhar Brasil and underwent a complete ophthalmologic examination at the IOG. They were evaluated as to the gender, age and whether they needed corrective lenses. Patients who had incomplete data on registration form were excluded from the survey. Children and adolescents were grouped into age groups commonly used in the medical literature according to the World Health Organization (WHO): nursing (0 to 1 years), preschoolers (2 to 6 years), schoolers (7 to 9 years) and adolescents (10 to 20 years), accounting for 5 preschoolers, 124 schoolers and 210 adolescents at the end of the study (Figure 2). Regarding gender, 156 were males and 183 females (Figure 3).

RESULTS

Of the 339 patients examined, 143 (42.1%) needed correction and 196 (57.8%) did not. Among the 156 male patients, 74 (47.4%) needed to wear eyeglasses compared to 82 (52.5%) who did not need it; regarding females, the numbers were 69 (37.7%) who had an alteration in the exam compared to 114 (62.2%) who did not have it (Figure 4). In relation to the age group, adolescents, schoolers, and preschoolers presented in absolute numbers and percentage, respectively, 102 (48.5%), 40 (32.2%) and 2 (40%) of prescription of corrective lenses (Figure 5).

DISCUSSION

According to WHO, it is estimated that 12.8 million children between the ages of 5 and 15 have uncorrected refractive error (URE), being the main cause of visual deficiency in childhood, with a global prevalence of 0.96%.^(3,4)

Over the last decade, several population-based studies composing a series known as “Estudo de erros de refração em crianças oculares” (Refractive error study in children – RESC) and using the same research methodology were performed in populations of different Ethnic and cultural backgrounds in various regions of the world.^(4,5) Said studies have confirmed that the prevalence of visual impairment caused by uncorrected refractive errors is considerably high in school-age children in low- and middle-income countries, including Brazil.⁽⁶⁾

RESC Brasil revealed that the prevalence of visual impairment in schoolers aged 11 to 14 years old in a low-income urban region had URE as the main cause in 72.3% of cases.⁽⁶⁾

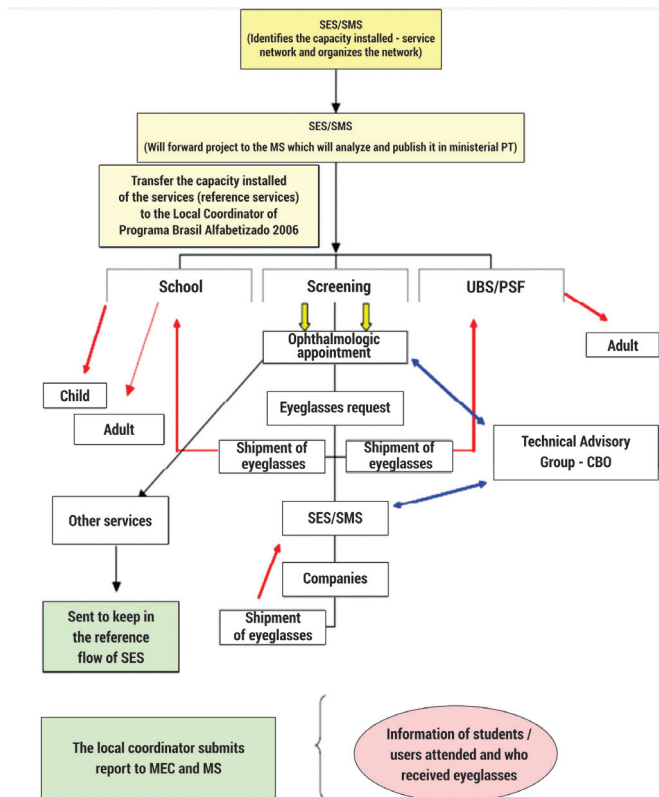


Figure 1: Service Flow Olhar Brasil

Source: Brazil. Ministry of Education. Interministerial Normative Ordinance No. 15 of April 24, 2007. Available at: http://portal.mec.gov.br/arquivos/pdf/olhar_brasil.pdf

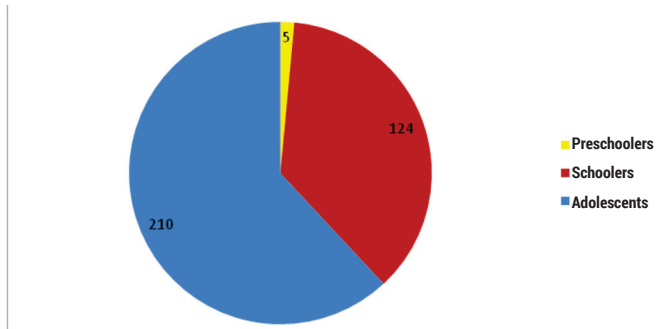


Figure 2: Age group of patients in the reference Ophthalmic Service of Projeto Olhar Brasil - Goiânia-GO

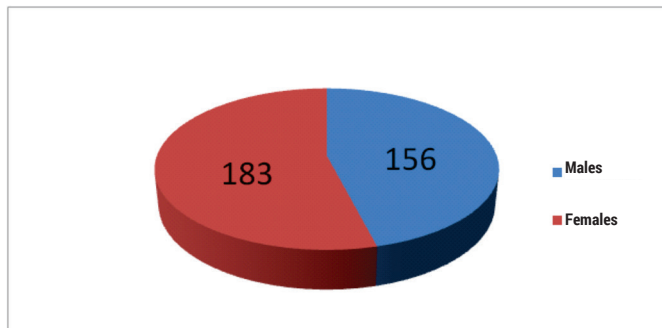


Figure 3: Gender of patients in the reference Ophthalmic Service of Projeto Olhar Brasil - Goiânia-GO

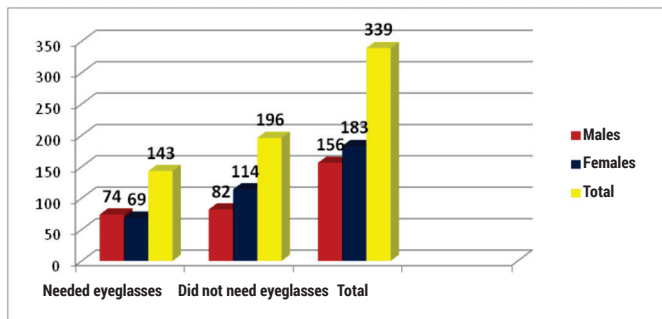


Figure 4: Need of wearing eyeglasses by gender in patients examined in the Ophthalmic service in Goiânia-GO: Projeto Olhar Brasil

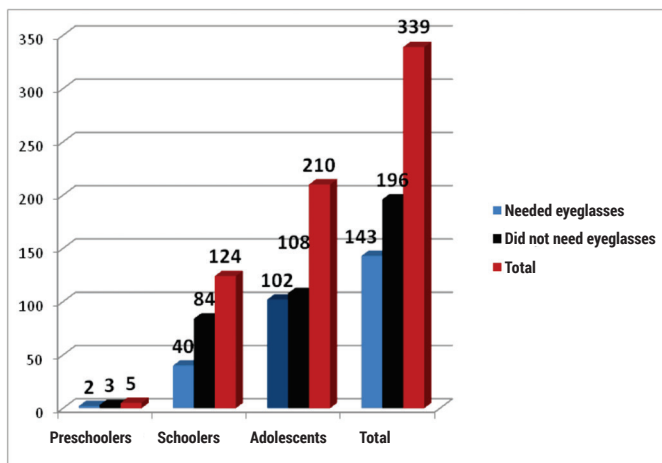


Figure 5: Need of wearing eyeglasses by age group in patients examined in the Ophthalmic service in Goiânia-GO: Projeto Olhar Brasil

According to data from the Brazilian Council of Ophthalmology (CBO) in non-population studies, URE is also the main cause of visual impairment in schoolers in the country. (7) According to the CBO, about 20% of elementary school students present some ophthalmological alteration, approximately 10% of them require optical correction, and of these, 5% present a severe reduction of visual acuity. (8)

In view of the high prevalence of visual impairment due to URE in children, and because they are easily diagnosed, measured and corrected with eyeglasses or contact lenses, in order to obtain normal vision and functional improvement, the correction of URE is an excellent intervention of low cost and high benefit. (3,4,9) This fact was corroborated by cross-sectional population-based studies revealing the benefit of wearing eyeglasses in schoolers aged 5 to 15 years old. (3,8)

At school age from 7 to 14 years, factors for which RE are not corrected can also be attributed to the lack of perception of the need and the ocular problem by the individual and the family, or by lack of screening, besides the difficult access and availability of services for eye examination and obtaining free or low cost eyeglasses. (9-11)

The Brazilian Ministry of Health acknowledges that, although they may be corrected by an apparently simple measure with simple eyeglasses, refractive errors still have a difficult resolution in the Single Health System due to the demand for ophthalmological appointment be greater than the supply, as well as the cost and acquisition of the eyeglasses, which often makes the appropriate treatment unfeasible. (12)

Even in economically developed societies where there is availability for screening, routine exams and free or low-cost eyeglasses, it is observed that adhesion is also low and with high levels of abstention. (10)

Absenteeism in the ophthalmological exam of the children referred is significant in community eye health programs, which also contributes for schoolers to continue with URE in the country. (14,15)

Studies in the Brazilian population have shown that transportation difficulties, lack of guidance, and skipping a working day are causes of non-attendance. However, even with access to the exam, transportation, food and eyeglasses, absenteeism is high, ranging from 31.2 to 68.7%. (14)

The screening or “visual screening” aims to detect suspected cases of URE and other ocular pathologies to be referred for diagnosis and treatment. Screening is performed by measuring the visual acuity (visual acuity test - VAT), and in schools it can be done by teachers who are able to identify changes in the student’s behavior and performance, and by trained education agents or volunteers. (12,13)

The choice of age, from the age of 7 years, was justified because it is the first year of compulsory school enrollment, when the child needs glasses for school activities, and is already able to understand and accept better the treatment, when compared to younger ages. In addition, at this age, parents are usually more present to follow their children, facilitating the educational work regarding notions of eye health. (13)

Nassaralla Jr et al. (16) studied the refractive errors of 16,806 schoolers from the municipal public schools of Goiânia in the period from October 1995 to December 2000, with the result of twenty-four percent (24%) having mixed astigmatism, 15% with simple myopic astigmatism, and 7% with compound myopic astigmatism. Thirty-one percent (31%) of eyes had hypermetropia, and only 2% had myopia only.

CONCLUSION

Primary health care professionals, elementary school teachers and literacy teachers are the main responsible for the screening of patients for tertiary care, so a very large number were observed, specifically of the subgroup of schoolers who did not need optical correction. We came to the conclusion that improvement and better training of those responsible for the initial exam would be of key importance to the project's even greater success, with emphasis on the above-mentioned age group.

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