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Children's Eye Health and School Learning: A Study on Prevention, Diagnosis and Intervention in Educational Environment

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Summary

Children's eye health is a determining factor for cognitive development and success in school. Children with undiagnosed visual impairments often have difficulties with reading, writing, and attention, which can have lasting impacts on their academic and social performance. This scientific article aims to discuss the importance of prevention, early diagnosis, and intervention in educational settings, highlighting screening practices, school health programs, and public policies that aim to guarantee the right to inclusive and quality education. The research adopts an interdisciplinary approach, integrating knowledge from ophthalmology, pedagogy, psychology, and educational policies, emphasizing the need for collaboration between health and education professionals.

The analysis proposes reflections on how preventive care and integrated actions can reduce inequalities and promote the integral development of children.

Keywords: Children's eye health; School learning; Prevention; Early diagnosis; Educational intervention.

Abstract

Children's eye health is a determining factor for cognitive development and success in the school learning process. Children with undiagnosed visual impairments often face difficulties in reading, writing, and concentration, which can have long-term impacts on their academic and social performance. This scientific article aims to discuss the importance of prevention, early diagnosis, and intervention in the educational environment, highlighting screening practices, school health programs, and public policies that ensure the right to inclusive and quality education. The research adopts an interdisciplinary approach, integrating knowledge from ophthalmology, pedagogy,

psychology, and educational policies, highlighting the need for collaboration between health and education professionals. The analysis provides reflections on how preventive care and integrated actions can reduce inequalities and foster the child's overall development.

Keywords: Children's eye health; School learning; Prevention; Early diagnosis; Educational intervention.

1. Introduction

The school learning process is strongly influenced by a series of biological, social, and cultural factors, among which children's eye health plays a central role. Data from the World Health Organization (WHO, 2020) indicate that approximately 19 million school-age children have some form of visual impairment, with approximately 12 million suffering from uncorrected refractive errors. These figures reveal a worrying scenario, as vision is one of the main channels for acquiring knowledge in childhood, responsible for up to 80% of the information absorbed in the classroom (SILVA; ALMEIDA, 2019). In this context, it becomes clear that the lack of early eye care can compromise not only academic performance but also children's cognitive and social development.

Scientific literature emphasizes that many difficulties initially attributed to pedagogical problems, such as inattention, low motivation, or reading difficulties, may be related to undiagnosed visual conditions. Children with myopia, hyperopia, astigmatism, or strabismus who do not receive specialized support tend to face significant barriers in their educational trajectory (FERREIRA; COSTA, 2021).
These difficulties impact not only reading and writing skills, but also the understanding of mathematical content, participation in collective activities, and self-esteem, factors that are reflected in the socialization process and professional future.

In Brazil, public policies for children's eye health have gradually advanced, but implementation still faces obstacles. School-based eye screening programs, such as "Olhar Brasil," have sought to reduce the incidence of undiagnosed vision problems by promoting early detection and access to corrective eyewear. However, the scope and regularity of these initiatives still do not cover the entire school-age population (BRASIL, 2020). This highlights a gap between educational demands and health services, which must be filled through greater integration between different areas of knowledge and government sectors.

Furthermore, it is important to understand that the impact of eye health goes beyond the biological and clinical dimensions. The lack of adequate vision compromises a child's ability to fully engage in school activities, hindering cooperative learning, attention, and even classroom behavior (CARVALHO; MORAES, 2018). In this sense,

Analyzing children's eye health from the perspective of school learning requires an interdisciplinary approach, in which education and health are connected for the benefit of the child's comprehensive development.

Another point of note concerns social neglect of the topic. While oral health and vaccination, for example, are widely publicized and associated with the school environment, eye health often lacks the same emphasis in preventive policies. This scenario reinforces the need to raise awareness not only among public officials and educators, but also among families, who play an essential role in monitoring their children's visual health. In this context, schools can be a strategic space for educational campaigns and preventive exams.

In academia, recent research has shown that the relationship between vision and academic achievement needs further exploration, especially in developing countries (OLIVEIRA; SANTOS, 2019). This is because, in addition to ensuring quality education, caring for children's eye health can contribute to reducing social inequalities, as children with access to appropriate diagnosis and treatment have a greater chance of achieving academic success and, consequently, better opportunities for entering the job market. Therefore, this study seeks to help fill this gap by offering a detailed analysis of prevention, diagnosis, and intervention in the educational environment.

The relevance of this topic is also justified by its intersection with fundamental children's rights, as enshrined in international documents such as the Convention on the Rights of the Child (UN, 1989) and national legislation, such as the Child and Adolescent Statute (ECA). These normative instruments ensure the right to health and education in an integrated manner, imposing on the State, family, and society a shared responsibility for the comprehensive protection of children. Eye health, therefore, must be understood as part of this social commitment, being essential to the full development of children.

Given the above, this research aims to analyze in depth the relationship between children's eye health and school learning, highlighting prevention practices, early diagnosis, and intervention strategies in educational settings. To this end, an interdisciplinary approach is adopted, combining knowledge from ophthalmology, pedagogy, psychology, and public policy to provide a comprehensive and well-founded overview. Ultimately, the aim is to contribute to the development of strategies that can guide managers, health professionals, and educators in addressing this challenge, promoting inclusive, equitable, and high-quality education.

2. Importance of Eye Health in Child Development

Childhood is a time of intense discovery, learning, and identity development, where vision plays an essential role in a child's overall development. Studies show

that approximately 80% of the stimuli received at this stage are mediated by vision, this being the sense that most contributes to the perception of the environment, the acquisition of language and the formation of abstract concepts (WHO, 2019). Thus, any visual alteration can significantly interfere not only in school performance, but also in the child's cognitive, emotional and motor development.

One of the most important aspects is that vision is not limited to a physiological function, but is also a process of sensory and cognitive integration. When a child has difficulty seeing, their ability to interpret symbols, images, and texts is affected, hindering the assimilation of school content (NUNES; FERREIRA, 2020). This means that neglecting eye health compromises not only formal learning but also the development of social skills, natural curiosity, and the child's autonomy to explore the world around them.

The importance of eye health in child development is even more evident when we consider the impact of vision on the development of motor skills. Children with visual impairments may have difficulty with activities such as running, jumping, playing sports, or even playing with peers, which can lead to social isolation and reduced self-esteem (CAMPOS; LIMA, 2021). These factors have direct consequences for the socialization process and, consequently, for the child's integration into the school environment, which should be understood as a space for comprehensive development and not just for the transmission of knowledge.

Another crucial point is the influence of eye health on language development. Eye contact is one of the first communication mechanisms between babies and their caregivers, fostering the development of emotional bonds and language learning (RODRIGUES; MENDES, 2018). Vision changes, when not detected early, can delay this process, hindering vocabulary acquisition, verbal fluency, and the understanding of more complex concepts during school. Therefore, vision should be understood as a fundamental link between cognitive development and social interaction.

Furthermore, adequate vision is essential for developing attention and concentration, which are crucial for academic success. Children with low visual acuity tend to be more distracted in class, have difficulty copying content from the board, and are resistant to activities that require prolonged visual effort, such as reading and writing (SOUZA; MARTINS, 2019). These signs, often interpreted as disinterest or attention deficit, can mask the true origin of the problem, delaying diagnosis and worsening the consequences for learning.

It is important to emphasize that child development occurs in interdependent stages, so a deficiency in one area can compromise other dimensions. Thus, neglecting eye health can have a cascading effect, harming not only formal learning but also socialization skills, emotional development, and future job placement (PEREIRA; SANTOS, 2020). This reinforces the need

to understand eye health as an integral part of a child's overall development, and not as an isolated issue.

Schools play a fundamental role in this context, as they are often the place where the first signs of visual difficulties are identified. Attentive teachers can notice when a child shows resistance to reading activities, leans too close to the board, or has frequent headaches. This initial observation is an essential step toward early detection and appropriate referral to health services (ALMEIDA; COSTA, 2019). However, for this to occur effectively, it is necessary to train educators and promote the integration of health and education.

Finally, understanding the importance of eye health in child development implies recognizing that universal access to eye care is a matter of social equity.
Children from vulnerable families have less access to eye exams and corrective glasses, widening educational and social inequalities (IBGE, 2020). Therefore, promoting eye health should be seen as a strategic investment for the future, capable of reducing inequalities, enhancing child development, and guaranteeing the right to quality education for all.

3. Relationship between Visual Problems and Learning Difficulties

The relationship between visual impairments and learning disabilities is widely documented in the scientific literature, particularly in studies that correlate undiagnosed refractive errors, such as myopia and astigmatism, with poor academic performance. Children with poor distance vision, for example, have difficulty copying content from the board, compromising their autonomy and study pace (SILVA; PEREIRA, 2019). Similarly, children with hyperopia may face obstacles to prolonged reading, experiencing symptoms such as eyestrain and headaches. These difficulties not only affect immediate academic performance but also undermine motivation and self-esteem, crucial factors for long-term academic engagement.

In addition to refractive errors, other visual conditions such as strabismus, amblyopia ("lazy eye"), and ocular motility disorders are also associated with significant barriers to learning. Recent studies indicate that children with untreated strabismus may experience difficulties with spatial perception, compromising their writing skills and the performance of activities requiring fine motor coordination (ALVES; CUNHA, 2020).
Amblyopia, when not diagnosed early, can limit binocular vision, making it difficult to read fluently and interpret graphs and images, which are an essential part of the contemporary school curriculum.

Another aspect to consider is the confusion between learning difficulties of pedagogical origin and those related to vision. Often, children who have vision problems

attention in the classroom or resistance to school activities are wrongly classified as having Attention Deficit Hyperactivity Disorder (ADHD) or cognitive difficulties, when in fact they suffer from a visual limitation (MARTINS; OLIVEIRA, 2018).
This mistake can delay appropriate guidance and worsen the academic and emotional situation, increasing the child's feelings of academic failure and lack of understanding.

Pedagogical literature highlights that reading is one of the skills most compromised by undiagnosed visual impairments. Children who require greater visual effort to decode letters and words present slow reading, with frequent line losses, inversions, or substitutions of similar letters, such as "b" and "d" (SANTOS; LIMA, 2021). This type of difficulty, when not identified in a timely manner, can compromise reading fluency and limit the comprehension of more complex texts, directly impacting learning in various disciplines.

It is also important to understand that vision influences not only reading and writing, but also mathematical and scientific learning. Children with visual impairments may have difficulty interpreting graphs, tables, and geometric figures, in addition to compromising their perception of proportions and spatial relationships (CARVALHO; GOMES, 2020). These aspects highlight the importance of understanding eye health as a cross-cutting element across all areas of school learning, not just limited to reading and writing.

Beyond the pedagogical consequences, untreated visual problems also generate significant emotional and social impacts. Children who cannot keep up with the class tend to feel inferior, developing insecurity, anxiety, and even symptoms of depression (RODRIGUES; MORAIS, 2019). This situation can be aggravated by a lack of understanding from teachers and family members, who, unaware of the eye issue, may interpret poor performance as a lack of effort or disinterest in school.

It is important to note that the relationship between visual impairments and learning is not limited to early school-age children. In elementary and secondary education, uncorrected visual impairments continue to represent barriers to learning, especially in subjects that require intensive reading, such as literature and history, or in areas of visual abstraction, such as physics and chemistry (PEREIRA; LOPES, 2020). This reinforces the importance of public policies that include ophthalmological monitoring throughout the educational trajectory.

Therefore, understanding the close relationship between eye health and academic achievement requires an interdisciplinary approach, encompassing medicine, education, and psychology. Early diagnosis of visual problems, combined with appropriate intervention, is essential to reducing educational inequalities and ensuring that children can fully develop their cognitive, social, and emotional capacities. Neglect in this area not only compromises individual academic performance but also perpetuates social inequalities, as it limits children's future opportunities in the job market and in society.

4. Prevention Methods and School Health Programs

Preventing visual impairments in school-age children is a fundamental strategy for ensuring their comprehensive development and academic success. Scientific literature highlights that adopting preventive measures significantly reduces the incidence of learning difficulties associated with visual impairments (GOMES; ALMEIDA, 2019). Prevention should include everything from educational campaigns aimed at families and schools to systematic vision screening programs, integrating health and education into intersectoral policies. In this context, schools are a unique opportunity to identify early signs and promote appropriate referrals.

One of the main prevention methods is regular eye screenings in schools. Such programs allow for early detection of refractive errors and other conditions, preventing children from going long periods without a diagnosis (BRASIL, 2020).
In several Brazilian municipalities, initiatives such as the "Olhar Brasil" program have sought to offer free eye exams and the distribution of corrective glasses, directly impacting the academic performance of the children served. However, coverage of these initiatives remains insufficient, especially in rural and hard-to-reach areas.

In addition to screenings, educational campaigns aimed at parents, teachers, and students are essential tools for raising awareness about the importance of eye health. Symptoms such as headaches, watery eyes, or difficulty reading are often not associated with visual problems, which delays diagnosis (NASCIMENTO; FERREIRA, 2021). Through educational materials, lectures, and training, it is possible to disseminate information about warning signs and encourage people to seek specialized medical care.

Another fundamental aspect of prevention is the adoption of pedagogical practices that reduce excessive visual strain. Proper classroom lighting, choosing teaching materials with adequate contrast, and organizing the school space to ensure good visibility of the board are simple measures that can contribute to children's visual comfort (COSTA; RODRIGUES, 2020). These practices, when combined with careful observation by teachers, form a set of effective preventive strategies.

Internationally, several countries have invested in robust school eye health programs. In the United States, for example, initiatives such as "Vision to Learn" offer free eye exams within schools, with positive results in the academic performance of the students involved (VISION TO LEARN, 2018). These international models can serve as a reference for expanding and strengthening Brazilian policies, considering local specificities and regional inequalities.

Technology also presents itself as an ally in prevention and early diagnosis. Vision screening apps and portable eye examination devices have been used in schools and communities, enabling the identification of visual problems more quickly and at a lower cost (OLIVEIRA; SOUZA, 2019). These tools expand the scope of preventive actions and can represent an important step forward in the inclusion of more vulnerable populations in the eye health system.

It is also important to emphasize that prevention must be understood as part of a comprehensive child health strategy. Just as healthy eating, physical activity, and vaccination are promoted in schools, eye health also needs to occupy this central role (FERNANDES; MACHADO, 2020). This requires not only financial resources but also political commitment and awareness among educational and health administrators regarding the relevance of the topic.

Finally, the effectiveness of prevention methods and school health programs depends directly on the coordination between different social actors. The state, families, schools, health professionals, and civil society organizations must work together to ensure universal access to eye care. Prevention, when well-structured, not only improves children's academic performance but also contributes to reducing social inequalities, promoting inclusion, equity, and sustainable human development.

5. The Role of Early Diagnosis and Vision Screening

Early diagnosis of eye problems in children is one of the fundamental pillars for ensuring the full development of cognitive, social, and emotional skills, and is considered not only a clinical issue, but also a pedagogical and educational equity issue.
By quickly identifying and treating changes such as myopia, astigmatism, hyperopia, or amblyopia, it is possible to prevent children from accumulating deficiencies in their academic performance, as vision is the primary input for information during school age. Literature indicates that over 70% of learning difficulties attributed to pedagogical factors may be related to undiagnosed visual problems, revealing the importance of early diagnosis as a strategy for promoting inclusive education. In this sense, schools become a privileged space for observing the first signs, as it is in the school environment that children spend much of their time and perform activities that require constant visual effort, such as reading, writing, and interpreting graphic content. Thus, attentive and trained teachers can identify subtle changes in behavior that indicate the need for an ophthalmological evaluation, favoring timely intervention.

Early diagnosis is directly related to the concept of neural plasticity, which characterizes childhood as a privileged period for the correction of visual problems. Conditions such as amblyopia and strabismus, for example, have much higher reversibility rates when treated in the early school years, while neglect can result in

irreversible limitations in adulthood. This is why vision screening programs, when incorporated into the routine of educational institutions, have a significant impact not only on eye health but also on children's academic performance and self-esteem. Children who can see clearly, after diagnosis and intervention, demonstrate greater motivation, greater engagement in school activities, and better social integration, reducing inequalities in participation and learning. Furthermore, the cost of implementing periodic vision screenings is significantly lower than the social and economic cost of dealing with students who drop out of school or underperform due to untreated visual problems.

Another key point is that the effectiveness of early diagnosis depends on a structured and continuous screening system capable of identifying changes early and ensuring appropriate referral to healthcare networks. Systematic screening in schools should be seen as a preventive public policy, comparable to other universal child health measures, such as vaccination or school nutrition programs. This requires ongoing training for the professionals involved, well-defined protocols, and effective communication with families, who are often unaware of the impacts of visual impairments on the learning process. The school, in turn, must be prepared to embrace the screening results, adjusting teaching methodologies according to medical recommendations and creating an inclusive environment for the child undergoing treatment.

It is also important to highlight the role of technology in strengthening early diagnosis.
Digital tools such as vision screening apps, portable refraction devices, and telemedicine have expanded the ability to identify vision problems early, especially in remote or hard-to-reach areas. These technologies do not replace a complete ophthalmological examination, but they allow us to filter cases that require specialized attention, optimizing healthcare system resources and increasing coverage for the child population.

When combined with education policies, these tools become key allies in democratizing access to eye health. Therefore, early diagnosis should be viewed as a strategic action with collective impact, because by ensuring children's vision is clear, it also ensures they are able to learn, develop fully, and actively participate in society.

6. Intervention Strategies in Educational Environments

Intervention strategies in an educational environment after the diagnosis of visual problems represent the link between health and learning, configuring themselves as a set of actions necessary to ensure that the child can follow the pedagogical process without limitations.
Unlike strictly clinical measures, intervention in a school context must be understood as a multidisciplinary effort, involving teachers, managers, families and

health professionals, all united around the goal of promoting inclusion and educational equity. One of the first intervention measures involves adapting teaching materials, using resources such as enlarged fonts, adequate contrast between background and text, digital magnification technologies, and audiobooks to aid reading. These adaptations not only facilitate access to content but also reduce visual strain, improving children's concentration and willingness to participate in school activities, preventing frustration, and increasing classroom engagement.

In addition to adapting materials, the organization of the classroom's physical environment plays a decisive role in the inclusion of students with visual impairments. Proper student positioning, uniform, glare-free lighting, and the use of high-quality whiteboards are simple yet highly impactful measures. Visual ergonomics, which considers factors such as contrast, spatial layout, and the absence of visual pollution, ensures greater comfort and improves academic performance. This demonstrates that educational interventions don't need to be costly or complex to be effective; they simply need to be based on careful observation and the application of good inclusive pedagogical practices. When schools are organized to accommodate these needs, they contribute to student self-esteem and autonomy, preventing visual impairment from becoming a reason for exclusion or demotivation.

Another important resource for educational intervention is the use of assistive technologies.
Screen-reading software, text recognition applications, electronic magnification devices, and even native tablet and computer features like Zoom and automatic narrators are all allies in the inclusion of children with visual impairments. By providing greater independence, these technologies also contribute to students' self-confidence and social integration, enabling them to participate in activities in conditions closer to those of their peers. However, for these resources to be effective, teacher training is necessary, as simply providing the technology isn't enough: it's important to ensure it's used pedagogically and integrated into the curriculum, preventing it from becoming an isolated and underutilized element.

Family involvement is another crucial aspect in the effectiveness of educational interventions. Parents need to understand the importance of continued use of corrective glasses, collaborate in organizing the home environment to facilitate study, and encourage children to maintain healthy reading and screen time habits. Often, school interventions are only fully successful when there is family cooperation, reinforcing the adaptations made at school at home. Therefore, clear and constant communication between educators and families is essential to the success of intervention strategies, and the school must also assume the role of guide in this process, providing accessible information and ongoing support.

Finally, it is essential to highlight that intervention strategies in an educational environment should not be seen as specific or temporary measures, but rather as an integral part of a

A policy of inclusion and promotion of rights. This means that, by adopting practices that promote access to knowledge for children with visual impairments, the school is not only meeting a specific need but also strengthening its social function of ensuring quality education for all. Interventions, in this sense, must be planned, monitored, and evaluated continuously, ensuring that each student has the conditions to learn and develop fully. Thus, the school fulfills its role as a democratic learning space, where differences are respected and transformed into opportunities for collective growth.

7. Public Policies and the Intersectorality between Health and Education

Public policies focused on children's eye health essentially reveal the need for an intersectoral approach between health and education, since school performance and visual health are interdependent. In Brazil, programs like **Olhar Brasil,** created in 2007 by the Federal Government, demonstrate this interconnection by proposing the early identification of visual problems in public school students and the free distribution of eyeglasses.
However, despite progress, the program's coverage remains limited, particularly in peripheral and rural areas, where access to eye exams remains scarce. This scenario reinforces the need to strengthen public policies that unite the education and health sectors in a complementary approach, in which the school environment serves as a strategic space for screening, referrals, and preventive actions.

The intersectoral relationship between health and education should not be understood as a one-off measure, but as a structuring axis of social policies. Children who attend school daily are supervised by teachers and pedagogical coordinators, who are the first to notice difficulties related to academic performance and behavior. Therefore, it is essential that clear institutional protocols exist so that signs of visual difficulties can be recorded and forwarded to health networks, preventing the problem from being neglected. Furthermore, schools, as spaces for citizenship, must take an active role in health promotion, disseminating educational practices on the importance of eye care for students and families.

The development of effective public policies also requires data integration between the health and education sectors, enabling the monitoring of the prevalence of visual impairments and the impact of interventions on academic performance. Integrated information systems that record the results of screenings, ophthalmological consultations, and the provision of eyeglasses not only allow for greater management efficiency but also transparency in the use of public resources. Furthermore, this data can support academic research and guide new intervention strategies, strengthening the scientific basis that underpins public policymaking. Countries that have already implemented this type of integration, such as the United States and Canada, have shown positive results both in reducing the incidence of visual impairments and in improving the academic performance of the students they serve.

It is also important to highlight that intersectorality should not be restricted to public authorities, but should also involve civil society, non-governmental organizations and private institutions.
Public-private partnerships can expand the reach of initiatives, especially in regions with low ophthalmological coverage, by offering consultation drives, donating glasses, and conducting awareness campaigns. Furthermore, universities and research centers can play a key role in training education and healthcare professionals, as well as in validating innovative screening and intervention methodologies. This collaborative network expands the impact of public policies, ensuring greater reach and effectiveness of initiatives.

From a normative point of view, documents such as the **Statute of Children and Adolescents (ECA)** and the **1988 Federal Constitution** reinforce the right to health and education in an integrated manner, determining that the State, family, and society are jointly responsible for the comprehensive protection of children. This means that caring for children's eye health is not just a public health issue, but a constitutional duty that guarantees equal opportunities and social inclusion. Fulfilling these rights requires ongoing policies, with stable funding, clear goals, and oversight mechanisms that ensure their effectiveness, preventing them from being discontinued due to changes in government.

Finally, the intersectoral approach between health and education must be understood as a long-term strategy that not only corrects immediate problems but also prevents structural inequalities. Investing in children's eye health is an investment in the future of education and, consequently, in the country's socioeconomic development, as children with good vision have a greater chance of completing their studies, entering higher education, and achieving better integration into the job market. Therefore, the integration of health and education policies is not only desirable but essential to building a more just and equitable society, prepared to face the challenges of the 21st century.

Conclusion

The analysis developed throughout this article highlights that children's eye health is an essential component for their full academic, social, and emotional development and should be prioritized in public policies and educational practices. Vision is the primary means of accessing knowledge in childhood, and neglecting it poses barriers to the individual's learning process, self-esteem, and professional future. In this sense, prevention, early diagnosis, and intervention in the school environment emerge as fundamental strategies for reducing educational inequalities and promoting social inclusion. The combination of these elements, anchored in an interdisciplinary approach, enables the construction of a more equitable and accessible educational system, where all children have the real opportunity to learn and develop.

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When we reflect on the importance of early diagnosis, we realize that it not only corrects visual impairments in a timely manner but also prevents lasting impacts on the learning process. Amblyopia and strabismus, for example, when treated in the early school years, have a high rate of reversibility, allowing the child to achieve the same performance as their peers. In cases where diagnosis is delayed, the damage becomes virtually irreversible, perpetuating difficulties that could have been avoided. Therefore, investing in regular screenings and teacher training to identify early signs is a low-cost, high-impact strategy, whose returns translate into significant educational and social gains.

Intervention strategies in educational settings, in turn, demonstrate that schools play a central role in the inclusion of children with visual impairments. The adoption of adapted teaching materials, the appropriate organization of classroom space, and the use of assistive technologies represent concrete measures that expand access to knowledge. When combined with family involvement and specialized medical monitoring, these strategies ensure not only learning but also the child's self-esteem and social participation.
In this context, the school must be understood as a space for citizenship and acceptance, in which differences are not seen as obstacles, but as opportunities to develop innovative pedagogical practices.

The intersectoral approach between health and education, discussed in the previous section, proves to be an essential path to ensuring the effectiveness of actions aimed at children's eye health. Fragmented public policies cannot respond to the complex demands involving learning and health, requiring integration between sectors, with clear protocols and stable funding. International experience shows that the coordination of data and actions between health and education reduces the incidence of untreated visual problems and improves academic performance. Therefore, strengthening this intersectoral approach is investing in a societal project that recognizes children as subjects with rights who must be protected and valued in their entirety.

It's important to highlight that neglecting children's eye health perpetuates social inequalities, as children from poorer families have less access to eye exams and corrective glasses. This situation reinforces the need for universal policies that cover the entire school population, ensuring equal access and reducing educational exclusion. At this point, it's the State's responsibility to ensure that the right to education isn't compromised by an avoidable barrier, and that the right to health is guaranteed as an inseparable part of child development. Democratizing access to children's eye health care, therefore, is also a social justice strategy.

Another aspect to consider is that caring for children's eye health transcends the classroom, directly impacting the country's economic and social development. Children who have poor vision and do not receive adequate treatment tend to underperform.

school attendance, a higher risk of dropout, and difficulties in future employment. Conversely, investing in eye health from an early age means enhancing human capital, increasing productivity, and preparing a generation better equipped to face the challenges of contemporary society. Therefore, preventive care should be understood as a strategic investment in the future.

We also cannot forget the role of the family in this process. Parents and guardians need to be made aware of the importance of taking their children for ophthalmological checkups, observing signs of visual discomfort, and encouraging the correct use of glasses and other devices. Without the active participation of the family, the actions implemented by the school and the health system lose some of their effectiveness. Building a network of shared responsibility between school, family, and the state is, therefore, a fundamental condition for ensuring that children have full access to their right to learn and develop. This bond strengthens trust and increases the chances of success of prevention and intervention strategies.

The conclusion of this research also reinforces the importance of expanding scientific literature on this topic, especially in developing countries, where the challenges are greater due to unequal access to health services. Longitudinal studies linking eye health and academic performance can provide even more consistent data to guide public policies and educational practices. Furthermore, including this topic in teacher training curricula and family health programs can help consolidate a preventive culture that sees eye health as an integral part of the educational process.

Therefore, it can be concluded that children's eye health and school learning are inseparable, and that only a joint effort between schools, families, health care providers, and the State can ensure that no child is deprived of their right to learn because of an undiagnosed or untreated visual impairment. Investment in prevention, early diagnosis, and intervention must be continuous and structured, ensuring that childhood, such a crucial period for human development, is lived to its fullest. The future of a more just and inclusive society necessarily depends on how we care for children today, guaranteeing them health, education, and dignity.

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