



SEACO POLICY BRIEF 008

# Initiation of national preschool vision screening

South East Asia Community Observatory  
(SEACO):  
Research for a Healthy Community

# This research-based evidence brief highlights potential policy options

## Who are the readers of this Policy Brief?

Policymakers and other stakeholders who are interested in addressing the problem based on research evidence

## Why was it prepared?

To inform stakeholders about health policies and interventions by summarizing the best available research-based evidence about the problem

## What is Research-Based Evidence Brief for Policy?

Research-Based Evidence Brief for Policy generates from the studies implemented by SEACO; an ISO accredited health and demographic surveillance site which acts as a research platform for health-related research

## Full Publication

The research-based evidence describes in detail in the SEACO publication

*Chew, F., Kumar Thavaratnam, L., Nor Chahaya Bt Shukor, I., Ramasamy, S., Rahmat, J., Reidpath, D., ... Alagaratnam, J. (2018). Visual impairment and amblyopia in Malaysian pre-school children - The SEGPAEDS study. The Medical Journal of Malaysia, 73.*

[https://www.researchgate.net/publication/322936324\\_Visual\\_impairment\\_and\\_amblyopia\\_in\\_Malaysian\\_pre-school\\_children\\_-\\_The\\_SEGPAEDS\\_study](https://www.researchgate.net/publication/322936324_Visual_impairment_and_amblyopia_in_Malaysian_pre-school_children_-_The_SEGPAEDS_study)

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## **The Problem:**

Though there is no global consensus on the ideal age and frequency of pre-school children vision screening; vision screening is available in the United States for the children aged between three to five years old, and in the European countries for the children aged three to four years. School-based screening is available in the neighbour country Singapore for the children aged four to five years old. But there is no national vision screening program for preschool children in Malaysia where 17% of the population is at the age of nine years and below. This leads to lack of information about the extent of visual impairment in Malaysian pre-school children. Henceforth, it becomes important to conduct a multi-ethnic survey to determine the prevalence of visual impairment and amblyopia in Malaysian pre-school children.

## **Evidence to Support Policy Options:**

A population-based cross-sectional study conducted in 51 kindergartens located in five sub-districts (Sungai Segamat, Bekok, Chaah, Jabi, and Gemereh) in the district of Segamat, Johor state. In total, 1287 children, aged four to six years, joined the study. Visual impairment was present in 13% of the respondents, among them 61% had visual impairment in both eyes. Bilateral visual impairment was more common in four-year-old students compared to the older group (five and six-year-old) of students. Visual acuity also tested, and the study found that the six and five-year-old students had better visual acuity than four-year-old students. The prevalence of amblyopia was 8%, and 66% of the amblyopic students had bilateral amblyopia. Refractive error was diagnosed (95%) as a common ocular disorder. Significant astigmatism was found among 84% of the respondents. It was more common among the older age groups compared to the four-year-old group. Though the four-year-olds also had more oblique astigmatism. Prevalence of myopia is 9%, hypermetropia is 7%, and anisometropia is 3%. Myopia and hypermetropia were less common in all age groups. Formal eye assessment done for 221 children, and 89% of them required ophthalmic intervention.

## **Recommendations:**

Study findings highly recommend taking the initiative to start the pre-school vision screening in Malaysia as the majority of the detected ocular abnormalities are treatable. Early detection and initiation of treatment may lead to recovering prognosis of the vision of the future generation of Malaysia.