

UNIVERSITI TEKNOLOGI MARA

**REVIEW ON PAEDIATRIC
VISION SCREENING WORLDWIDE**

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DECLARATION

I declare that this thesis is my original work and to the extent that any part of this work is not my own, I have indicated that it is not mine by fully acknowledgement in accordance with the standard referring practices of the discipline.

I, hereby, acknowledge that I have complied with the Academic Rules and Regulations for Under Graduate, University Teknologi MARA (UiTM) regulating the conduct of my study and research.

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ABSTRACT

Refractive error was reported to be common among children worldwide and also can impair the quality of life. The objective of this study was to review the patterns of vision screening scope, tools & procedures, target age group of children and screener involved in paediatric vision screening worldwide. A total of 267 English vision screening journals from year 1955 until March 2016 among children from birth to 15 years old were retrieved. All randomized controlled trials, nonrandomized controlled trials and cohort study research articles were selected and reviewed. Approximately, 18.7% articles showed evidence of comprehensive eye examination performed during paediatric vision screening which included vision acuity, ocular health, refraction and binocular assessments. School and adolescent (SA) were the common target age group of children assessed in vision screening. Ophthalmologists were the most common screener involved in vision screening compared to other health professionals. The usage of optotype-based charts in vision screening was preferred compared to the other assessment tool methods. High percentages showed that strabismus assessments were not included in the vision screening. Anterior and posterior segments of the eye were assessed in 42.3% vision screening. As conclusion, there are marked regional differences in terms of vision screening scope, tools, procedures, screeners and target age group of children across 6 continents, apparently based on socioeconomic factors that limit prevention and treatment schemes of vision impairment. There was also less consistent evidences available on how to conduct and at what age is the best to start vision screening, what tests or tools should be used to detect vision impairment effectively and who should best placed to conduct the vision screening in terms of availability, accuracy, efficiency and cost saving.

Keywords: Vision screening, refractive error, children, visual impairment, paediatric

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