Barriers and limitations of conventional oculovisual screening methods in children: a systematic review perspective

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Rahmat, Baqiatu'l Sabiqi' Assfi [a] ; Md-Muziman-Syah, Md Mustafa [b, c] ;
Nor, Noraishah Mohamed [d] ; Sanmugam, Thashini [e]

[a] Department of Optometry, Rehabilitation and Well-being, Faculty of Health and Life Sciences, Management and Science University, Selangor, Shah Alam, Malaysia

Abstract

Background: Early detection of vision problems in children is essential for preventing developmental delays and academic challenges. Conventional vision screening methods are widely implemented; however, various barriers limit their effectiveness and accessibility. Objective: This systematic review aims to identify and analyse the barriers and limitations associated with conventional vision screening methods in children. Methods: A systematic search was conducted across the Scopus, Web of Science, and PubMed databases using predefined keywords and Boolean operators. Eligible studies included empirical investigations that examined barriers and limitations in paediatric vision screening. The review adhered to PRISMA 2020 guidelines, and quality assessment was performed using the Mixed Methods Appraisal Tool (MMAT). Results: Of the studies screened, 25 met the inclusion criteria. Employing thematic analysis, five key barriers and limitations were discovered: (i)

methodological limitations, (ii) resource constraints, (iii) competency gaps, (iv) socioeconomic and psychological barriers, and (v) policy and systemic challenges. Conclusion: Future research should focus on evaluating novel screening approaches that can overcome current limitations and enhance early detection rates for a broader range of paediatric vision conditions. © The Author(s) 2025.

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Barriers and limitations; Conventional vision screening; Paediatric; Systematic review

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Corresponding authors

Corresponding author M.M. Md-Muziman-Syah

Affiliation Department of Optometry and Visual Science, Kulliyyah of Allied Health Sciences, International Islamic University Malaysia, Pahang, Kuantan, Malaysia

Email address syah@iium.edu.my

Abstract

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