

Visual characteristics of Queensland Aboriginal and Torres Strait Islander children

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Purpose: The prevalence of eye problems in Australian Aboriginal and Torres Strait Islander children is largely unknown, particularly those relating to achieving clear, comfortable vision in the classroom. Only one study has explored this issue and reported that while Aboriginal and Torres Strait Islander children had less refractive error and strabismus, convergence insufficiency, a condition affecting the ability to sustain comfortable and clear near vision, was twice as common.

Methods: 138 primary school children (46% Aboriginal and Torres Strait Islander; mean age 8.8 ± 2.12 years), were recruited from rural Queensland. All children underwent an eye examination that included assessment of visual acuity, cycloplegic refractive error, colour vision, and binocular and accommodative function.

Results: Aboriginal and Torres Strait Islander children were 3x less likely to have had a previous eye examination than non-Indigenous children (18% vs. 43%, $p < 0.01$), however both groups had similar rates of spectacle wear (8% and 9%). There was no significant difference in the prevalence of eye conditions including refractive error, reduced visual acuity, strabismus, binocular vision and accommodative dysfunction, and colour vision deficiencies, between Aboriginal and Torres Strait Islander and non-Indigenous children (all $p > 0.05$). The proportion of children with myopia $\geq 0.50D$, hyperopia $\geq 2.00D$, and astigmatism $\geq 1.50D$, was not significantly different between Aboriginal and Torres Strait Islander and non-Indigenous children.

Conclusion: Aboriginal and Torres Strait Islander children had similar rates of eye problems compared to non-Indigenous children attending the same rural school, however, Aboriginal and Torres Strait Islander children were less likely to attend routine eye examinations. Without interventions such as primary school vision screenings and increased health promotion regarding the importance of routine eye examinations, many of these eye problems will remain undetected, impacting on children's vision and education.