

Assessment of Visual Acuity and Academic Performance Among Public Senior Secondary School Students in Abuja Municipal Area Council, Federal Capital Territory, Nigeria

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ABSTRACT

Background: Vision plays a vital role in the learning and development of school-aged children, yet visual impairment remains a neglected public health issue among adolescents in Nigeria. This study assessed the relationship between visual acuity and academic performance among public senior secondary school students in Abuja Municipal Area Council (AMAC), Federal Capital Territory.

Methods: A descriptive cross-sectional design was adopted, involving 451 students selected through multistage sampling from public senior secondary schools. Data were collected using a semi-structured, interviewer-administered questionnaire and standardized visual acuity tests with the Snellen and near-vision charts. Academic performance was assessed using students' official term examination scores. Data were analyzed using descriptive and inferential statistics, with significance set at $p < 0.05$.

Results: The results showed that 55.9% of respondents were male and the majority (46.6%) were aged 15–19 years. The prevalence of visual impairment was 40.1%. Although 67.2% of students performed well academically, a significant association was found between visual acuity and academic performance ($\chi^2 = 174.699$, $p = 0.001$). Students with normal vision achieved higher scores than their visually impaired peers. The study also revealed that only 33.1% of students had ever undergone a routine eye examination, while 74.9% were unaware of any school-based vision screening programs.

Barriers: The most commonly reported barriers were poor awareness, limited access to eye care services, and the absence of structured school vision health programs.

Conclusion: The study concludes that visual impairment is prevalent among adolescents in AMAC and significantly affects academic achievement and social participation. It recommends integrating routine vision screening into school health programs, training teachers to identify early signs of eye problems, and strengthening referral systems between schools and nearby eye care facilities. Policy-level interventions and funding support are essential to ensure that no student's learning potential is hindered by preventable visual impairment. **Keywords:** Visual acuity, Academic performance, Vision impairment, School-based screening, Abuja Municipal Area Council (AMAC), Nigeria.

