

Prevalence of fine motor delay among children below 5 years old in Malaysia: A population-based study

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ABSTRACT

Children's overall growth and daily functioning rely heavily on fine motor skills. Delays in fine motor skills can influence academic achievement and daily activities. However, there is minimal data on the prevalence of fine motor delays, particularly in Malaysia. This study aims to determine the prevalence of fine motor delay among children below 5 years old in Malaysia. A cross-sectional study was conducted using data from the National Health and Morbidity Survey 2022: Maternal and Child Health, Malaysia. A total of 15 238 children aged 6-59 months were assessed through face-to-face interviews for sociodemographic profiles and were evaluated by trained nurses using the Denver Development Screening Chart. Those who did not fulfill the expected fine motor development milestones were categorised as having fine motor delays. Data were analysed using a complex sample analysis Chi-square test. A p-value of <0.05 was considered statistically significant for categorical data comparison. The overall prevalence of fine motor delay among children below 5 years old was 1.9% (95% CI: 1.6, 2.3). By sociodemographic profiles, children with fine motor delays were found to be significantly higher in Wilayah Persekutuan Kuala Lumpur & Putrajaya (4.5%; 95% CI: 2.8, 7.4, $p < 0.001$) and among boys (2.2%; 95% CI: 1.8, 2.8, $p = 0.019$). However, no significant difference was found in the variable's rural areas, other ethnicity, permanent residents/non-citizens, and the T20 household income group. The findings emphasize the necessity of routine developmental screenings for fine motor delays in early childhood. The prevalence in this study is relatively low but still notable. Certain demographics appear to influence the likelihood of fine motor delays, underscoring the importance of early identification and targeted interventions. Further research is recommended to explore causative factors and develop effective strategies to support children at risk of fine motor delays.