



NATIONAL PREVALENCE AND SOCIODEMOGRAPHIC DETERMINANTS OF SOCIAL DELAY AMONG CHILDREN BELOW 5 YEARS OLD IN MALAYSIA

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1 INTRODUCTION

- Developmental delay occurs when a child does not achieve their expected development milestones compared to their same-age peers.
- A developmental delay in the social domain, is referred to as social delay.
- Children with social delays might face challenges in various areas as they grow up such as cognitive impairments, poor academic performance, relationship issues, isolation, behavioural disorders, or psychological issues in later life¹.
- In Malaysia, the prevalence of social delay among children was 1.2%, as reported in the National Health and Morbidity Survey 2016².
- Knowledge on the updated prevalence of social delay and its underlying determinants is essential for gaining insight into the extent of the delay, as well as for developing targeted prevention strategies.

THIS STUDY AIMS TO DESCRIBE THE RECENT PREVALENCE AS WELL AS SOCIODEMOGRAPHIC DETERMINANTS OF CHILDREN WITH SOCIAL DELAY IN MALAYSIA FOR YEAR 2022

2 METHODOLOGY

STUDY DESIGN	This was a cross-sectional study
DATA SOURCE	This study used data from National Health and Morbidity Survey (NHMS) 2022: Maternal & Child Health
SAMPLING DESIGN	The NHMS 2022 used a two-stage stratified random sampling design, encompassing all states and federal territories in Malaysia
STUDY DURATION	Data collection for NHMS 2022 was conducted from August 9th to October 31st, 2022
STUDY SAMPLE	This study used data for children aged from six months to five years old
STUDY TOOL	<ol style="list-style-type: none"> Sociodemographic data were collected through a face-to-face interview with the children's guardians. Social delay was assessed through developmental assessments conducted by trained nurses, based on the Denver Development Screening Chart, according to the child's age. Children exhibiting any deviation from their age-appropriate social development milestones were classified as having social delay.
ANALYSIS	Complex sample descriptive analysis and multiple logistic regression analysis were carried out using SPSS version 23 to get the prevalence and sociodemographic determinants for social delay.

3 RESULTS

- In 2022, the prevalence of social delay among children was 4.1%, with estimated population of 86,159 children in Malaysia
- Prevalence of social delay were found to be higher among children living in rural residency, boys, children aged 24-35 months, Chinese ethnicity, non-citizen and children living in T20 household income groups (Table 1).
- Sociodemographic determinants that were significantly associated with social delay among children includes gender and age group (Table 2).
- Figure 1 shows the estimated number of children in Malaysia with social delays, based age-appropriate social development assessments.

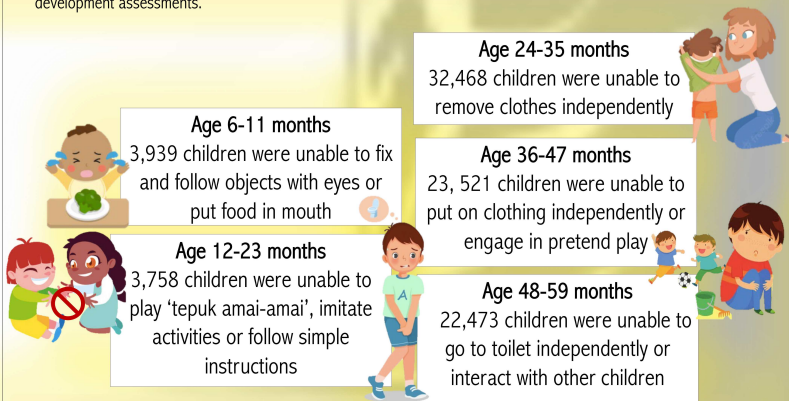


Figure 1. Estimated number of children with social delay based on age-appropriate assessments, Malaysia

Table 1. Prevalence of social delay among children aged 6-59 months, Malaysia, N = 15,238

Children's sociodemographic profile	Unweighted Count	Estimated Population	Prevalence (%)	95% Confidence Interval	
				Lower	Upper
MALAYSIA	636	86,159	4.1	3.51	4.69
Residency					
Urban	450	60,563	4.0	3.37	4.74
Rural	186	25,597	4.2	3.20	5.53
Gender					
Boys	393	53,022	4.8	4.14	5.67
Girls	243	33,137	3.2	2.55	4.06
Age Group					
6 - 11 months	27	3,939	1.8	0.99	3.36
12-23 months	38	3,758	0.8	0.51	1.25
24-35 months	233	32,468	6.4	5.22	7.72
36-47 months	170	23,521	5.1	4.01	6.41
48-59 months	168	22,473	4.9	3.86	6.13
Ethnicity					
Malay	473	47,690	3.6	3.15	4.17
Chinese	40	15,422	5.2	3.32	8.19
Indian	24	3,489	3.6	2.04	6.25
Others	98	19,438	4.7	3.18	6.86
Citizenship					
Malaysian	612	78,750	4.0	3.48	4.64
Permanent resident or non-citizen	24	7,409	4.6	1.99	10.08
Household Income Group					
B40	489	64,131	3.9	3.34	4.63
M40	118	16,800	4.2	3.07	5.84
T20	23	4,375	5.1	2.37	10.48

Table 2. Multivariable logistic regression for sociodemographic determinants associated with social delay among children aged 6 to 59 months in Malaysia, 2022

Children's sociodemographic profile	p-value	Adjusted odds ratio	95% Confidence Interval	
			Lower	Upper
Residency				
Urban	0.696	0.936	0.672	1.304
Rural	Ref	-	-	-
Gender				
Boys	0.001	1.543	1.183	2.012
Girls	Ref	-	-	-
Age Group				
6 - 11 months	Ref	-	-	-
12-23 months	0.024	0.415	0.193	0.892
24-35 months	0.000	3.492	1.827	6.672
36-47 months	0.004	2.694	1.382	5.248
48-59 months	0.004	2.695	1.378	5.271
Ethnicity				
Malay	0.711	1.126	0.601	2.108
Chinese	0.180	1.625	0.799	3.303
Indian	Ref	-	-	-
Others	0.296	1.468	0.714	3.017
Citizenship				
Malaysian	0.947	0.968	0.376	2.494
Permanent resident or non-citizen	Ref	-	-	-
Household Income Group				
B40	Ref	-	-	-
M40	0.727	1.061	0.760	1.483
T20	0.596	1.234	0.566	2.690

4 DISCUSSION

- The increasing prevalence of social delay among children in Malaysia, rising from 1.2% in 2016 to 4.2% in 2022, warrants serious attention from relevant stakeholders and authorities².
- Immediate preventive actions to promote healthy social development in children must be taken without delay, to ensure the children's well-being and future success³.
- Preventive strategies against social delay should be initiated before the children reach the age of 24 months, and must be continued the following years, while taking into account that children of Chinese ethnicity, children residing in high income households (T20 income group), boys as well as children residing in rural area deserve greater attention.
- A more comprehensive understanding can be attained through further research aimed at studying causes of social delay determinants among children in Malaysia.
- Addressing social delay among children is important because this effort aligns with the Sustainable Developmental Goals 4.2.1, which focuses on assessing the proportion of children under five years of age who are developmentally on track in terms of health, learning, and psychosocial well-being⁴.

REFERENCE

- Maleki M, Chehrzad MM, Kazemnezhad Leyli E, Mardani A, Vaismoradi M. Social skills in preschool children from teachers' perspectives. *Children*. 2019 May 1;6(5):64
- Institute for Public Health (IPH), National Institutes of Health, Ministry of Health Malaysia. 2016. National Health and Morbidity Survey (NHMS) 2016: Maternal and Child Health. Vol. II: Findings, 2016. pp 272
- Biermann, J., Franze, M. & Hoffmann, W. Social developmental delays among 3 to 6 year old children in preschools in German social hotspots: results of a dynamic prospective cohort study. *BMC Pediatr* 20, 216 (2020). <https://doi.org/10.1186/s12887-020-02128-3>
- Olusanya BO, Hadders-Algra M, Breinbauer C, Williams AN, Newton CR, Davis AC. The conundrum of a global tool for early childhood development to monitor SDG indicator 4.2. 1. *The Lancet Global Health*. 2021 May 1;9(5):e586-7

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