

# Wasting children under five years old in Putrajaya

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## Introduction

- Malnutrition among children under five years old was critical public health concern<sup>1</sup>.
- Wasting was one of them and it known as low weight for height<sup>2</sup>.
- This study aimed to determine associated factors of wasting among children under five years old in Putrajaya.

## Material and Methods

- This was a case control study that involved children aged 6- 59 months of age, Malaysian citizen and living in Putrajaya. The case was wasted (BMI-for-age <-2SDs) and the control group was the normal children. About 512 screened children were wasted (Table 1).
- Sample was collected at all Health Clinic and Pre-schools in Putrajaya from September 2018 to January 2019.
- Sociodemographic questionnaires, anthropometric measurement, test for hemoglobin level and three days food diary were instrument used in this study. For measuring eligible for being cases respondent and control respondent WHO Anthro software was used in this study.
- Descriptive statistics and multiple logistic regression was performed to determine potential factors that contributed in

## Results

- A total of 335 of wasted cases and 335 of normal children were involved in this study.
- Result of logistic regression showed that after control for age and gender found the sociodemographic characteristic that significantly associated lead to wasting were primary and secondary education level of the mother (aOR 1.848) and father (aOR 1.723), father work with private sector (aOR 1.559) and household monthly income which is B40 (aOR 3.382) and M40 (aOR 3.285). (Table 2)

Table 1: Nutritional status of screened children by sex and age groups

Socio-demography characteristics	Wasted (n)	Normal (n)
All screened	512	5223
<b>Sex</b>		
• Boy	289	2583
• Girl	223	2640
<b>Age groups</b>		
6-11 months	101	632
12-35 months	258	2566
36-59 months	153	2025

Table 2: Wasted and its socio-demography associated factors

Socio-demography characteristics		Wasted n(%)	Normal n(%)	Logistic Regression Analysis	
				OR (95%CI)	aOR (95%CI)
<b>BMI</b> Mother	Normal	159 (47.5)	132 (39.4)	1	1
	Underweight	29 (8.6)	12 (12.6)	2.01(0.985-4.086)	1.86(0.750-4.588)
	Overweight/Obese	47 (43.9)	191(57.0)	<b>0.62(0.466-0.876)*</b>	<b>0.77(0.473-1.263)</b>
Father	Normal	136 (40.6)	98 (29.3)	1	1
	Underweight	18 (5.4)	21 (6.3)	0.84(0.425-1.661)	0.48(0.206-1.136)
	Overweight/Obese	178 (53.1)	219 (65.4)	<b>0.57(0.423-0.812)*</b>	<b>0.60(0.407-0.891)*</b>
<b>Education Level</b> Mother	Primary & Secondary	95 (28.4)	45 (13.4)	<b>2.55(1.721-3.782)*</b>	<b>1.85(1.084-3.148)*</b>
	Tertiary	240 (71.6)	290 (86.6)	1	1
	Father	Primary & Secondary	110 (32.8)	66 (19.7)	<b>1.99(1.400-2.836)*</b>
	Tertiary	225 (67.2)	269 (80.3)	1	1
<b>Occupation</b> Mother	Government servant	245(73.1)	259(77.3)	0.87(0.576-1.302)	1.14(0.625-2.071)
	Private servant	31(9.3)	22(6.6)	1.29(0.667-2.494)	1.68(0.742-3.788)
	Not working/Housewife	59(17.6)	54(16.1)	1	1
Father	Government servant	209(62.4)	230(68.7)	1	1
	Private servant	110(32.8)	97(29)	1.25(0.896-1.738)	<b>1.56(1.021-2.382)*</b>
	Not working/Housewife	16(4.8)	8(2.3)	2.20(0.923-5.249)	2.39(0.835-6.822)
<b>Household Income</b>	<RM7380 (B40)	221(66.0)	172(51.3)	<b>4.93(1.962-12.363)*</b>	<b>3.38(1.015-11.270)*</b>
	RM7380-RM14789 (M40) ≥	108(32.2)	140 (41.8)	<b>2.96 (1.163-7.517)*</b>	<b>3.29(1.042-10.361)*</b>
	RM14720 (T20)	6(1.8)	23(6.9)	1	1

\*Significant at p<0.05

## Discussion/Conclusion

- Education level of parents, private sector, B40, were the sociodemographic factors of wasting among children under five years old in Putrajaya.
- Similar with this result, low birth weight and low household income were also found to be one of the factors associated with wasted among children in Karnataka India<sup>3</sup>.
- Therefore, strengthen the nutrition and health promotion and educate the parent/babysitter/kindergarten to provide more nutritious food to reduce the prevalence of malnutrition<sup>4</sup>.

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