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NUTRITIONAL STATUS OF ADOLESCENTS IN MALAYSIA

FINDINGS FROM ADOLESCENTS HEALTH SURVEY 2022

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INTRODUCTION

- Adolescence is a unique period of human development in which rapid physical, cognitive, and psychological development occurs and the foundations for optimal health are built[1].
- Hence, it holds immense significance to observe the nutritional well-being of adolescents regularly.
- This study aimed to describe the nutritional status of adolescents aged 13-17 years in Malaysia.

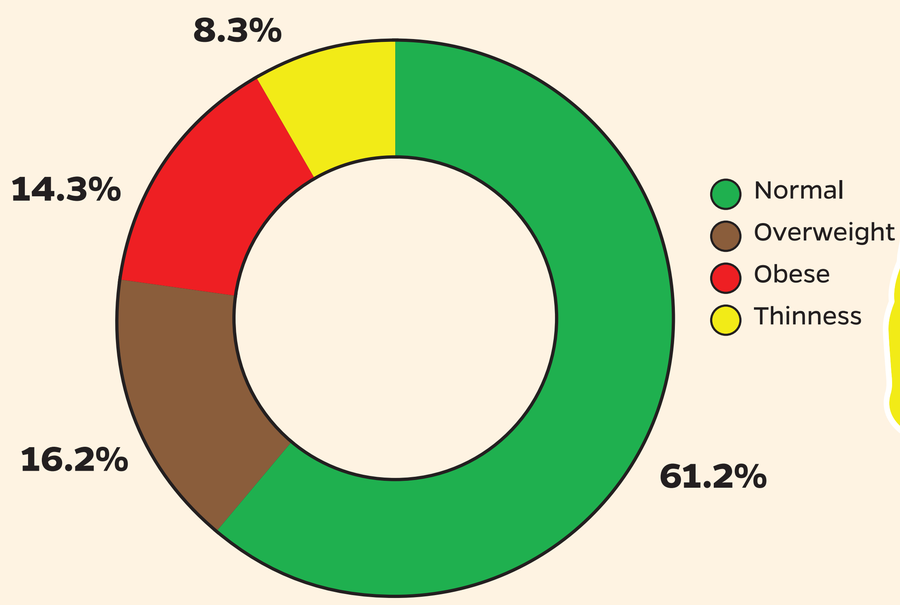
METHODOLOGY

- Data for 33,428 adolescents were drawn from the Adolescents Health Survey 2022, a nationwide cross-sectional survey of secondary schools in Malaysia.
- Respondents were recruited using multistage stratified cluster sampling, covering national and private schools nationwide.
- The data collection was from June to July 2022.
- Information on socio-demographic characteristics was collected via self-administered questionnaires.
- The anthropometric indicators of height-for-age z-scores (HAZ) and BMI-for-age z-scores (BAZ) were applied and interpreted using WHO 2007 Growth Reference Data for 5-19 years[2].
- Body weight was measured using a digital weighing scale (TANITA HD-319) and height was measured using SECA 213 stadiometer.
- Descriptive analysis and Rao-Scott F Test were performed for data analysis in SPSS Version 21. Statistical significance was set at $p<0.05$.

RESULTS

- Female respondents were 53.8% while males were 46.2%. The majority were of Malay ethnicity (69%).
- While 61.2% of the respondents had normal BMI-for-age, 16.2% were overweight, 14.3% were obese and 8.3% were experiencing thinness.
- Younger adolescents (13-14 years old) had higher percentages of being overweight (17.1%) and obese (16.1%) compared to older adolescents.
- The prevalence of stunting was 6.8%.
- The prevalence of stunting was higher among older adolescents (15-17 years old) at 8.1%, compared to 5.1% among younger adolescents.

Figure 1: Nutritional Status of Adolescents



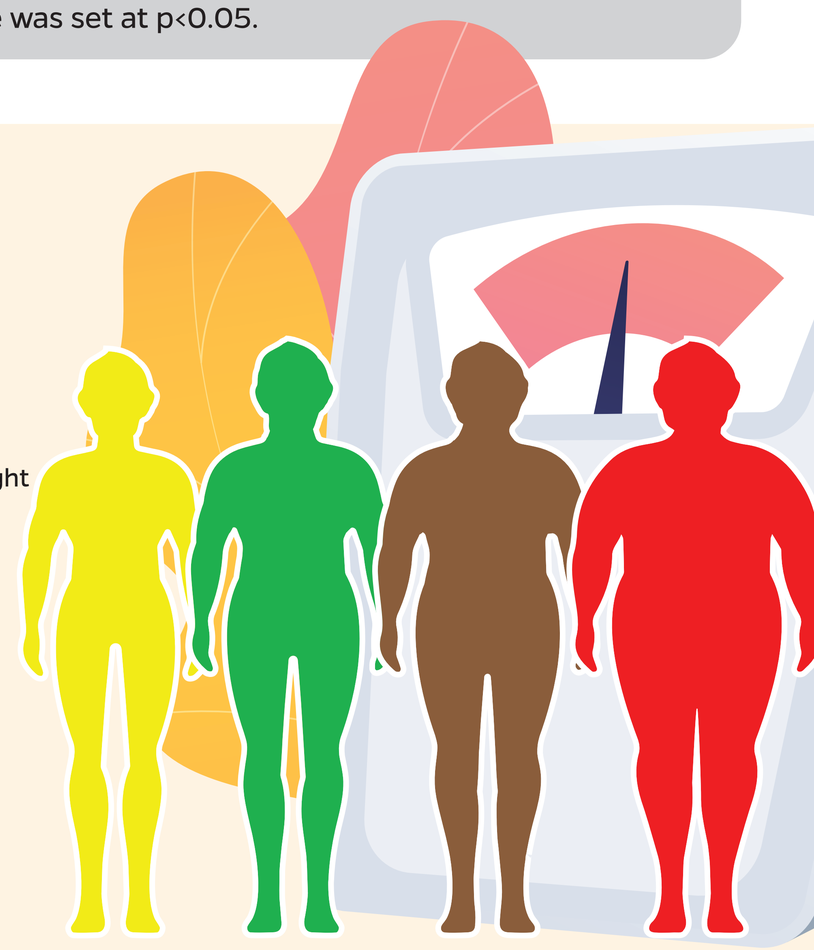


Table 1: Sociodemographic characteristics of adolescents by sex

	Males (n=15,442)	Females (n=17,986)	Total (n=33,428)
		n (%)	
Age (years)			
13-14	6484 (42.0)	7509 (41.7)	13,993 (41.9)
15-17	8958 (58.0)	10,477 (58.3)	19,435 (58.1)
Ethnicity			
Malay	10,799 (69.9)	12,264 (68.2)	23,063 (69.0)
Chinese	2299 (14.9)	2774 (15.4)	5073 (15.2)
Indian	669 (4.3)	883 (4.9)	1552 (4.6)
Sabah Natives	737 (4.8)	978 (5.4)	1715 (5.1)
Sarawak Natives	564 (3.7)	670 (3.7)	1234 (3.7)
Others	374 (2.4)	417 (2.3)	791 (2.4)
Locality of School			
Urban	12,934 (83.8)	15,152 (84.2)	537 (53.8)
Rural	2508 (16.2)	2834 (15.8)	462 (46.2)

Table 2: Anthropometric indicators by age

	Total		13-14 years		15-17 years		p-value
	N	%	N	%	N	%	
Height-for-age (HAZ)							
Stunting (<−2SD)	2,406	6.8	712	5.1	1,694	8.1	0.001
Normal (≥1SD≤+1SD)	30,885	92.7	13,162	93.9	17,724	91.8	
Tall (>1SD)	136	0.5	119	1.0	17	0.1	
Total	33,428	100.0	13,993	100.0	19,435	100.0	
BMI-for-age (BAZ)							
Thinness (<−2SD)	2665	8.3	976	7.4	1,689	9.0	<0.001
Normal (-1SD to +1SD)	20,502	61.2	8,364	59.3	12,139	62.5	
Overweight (>+1SD to ≤+2SD)	5401	16.2	2,361	17.1	3,040	15.6	
Obesity (>+2 SD)	4859	14.3	2,292	16.1	2,567	12.9	
Total	33,428	100.0	13,993	100.0	19,435	100.0	

DISCUSSION

- The prevalence of overweight and obesity in this study is similar to a study among school-going adolescents in Negeri Sembilan, Malaysia[3]. There had been a consistent rise in the prevalence of overweight and obesity among Malaysian teenagers from 2012 to 2022[4-5].
- The prevalence of overweight and obesity are notably higher among younger adolescents as it could be that older adolescents are more concerned about their weight and physical appearance, which could motivate them to regulate their dietary intake, potentially safeguarding them from becoming overweight or obese[6-7].
- The incidence of stunting among Malaysian adolescents has seen a consistent decline over the years 2012 to 2022[4-5].
- The prevalence of stunting is higher among older adolescents compared to the younger age group. As adolescence is a rapid growth phase requiring an extensive increase in calorie and micronutrient intake, prolonged deficiencies in these during this crucial life stage are likely contributors to the higher prevalence of stunting observed among older adolescents[8].

CONCLUSION

The prevalence of overweight and obesity had been on a consistent rise from 2012 to 2022. Despite the escalating rates of overweight and obesity among Malaysian adolescents, the persistence of thinness and stunting among them showed the presence of a double burden of malnutrition. Therefore, it is important to adopt a comprehensive approach to address the double burden of malnutrition among adolescents in the country.

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