

Trends of overweight and obesity

among Malaysian adults from 2011 to 2019: Findings from National Health and Morbidity Survey (NHMS) 2011, 2015 and 2019

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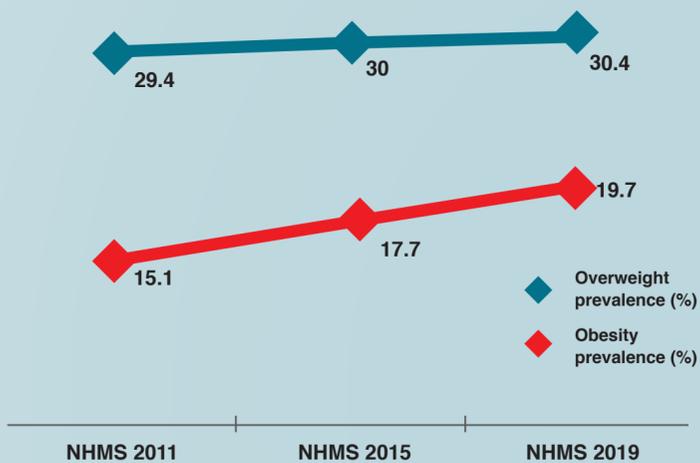
INTRODUCTION

- Obesity is associated with numerous health risks including diabetes and cardiovascular disease¹.
- Worldwide obesity has almost tripled since 1975².
- This study aimed to report overweight and obesity prevalence trends of Malaysian adults from the three National Health and Morbidity Surveys (NHMS 2011, 2015 and 2019)

RESULTS

- Approximately about 46,880 respondents were involved in the surveys
- Overweight prevalence increased from NHMS 2011 through 2015 to 2019 (29.4%, 30.0% and 30.4%).
- Obesity prevalence was seen increased from 2011 (15.1%) to 2015 (17.7%) and highest seen in 2019 (19.7%)

Figure 1: Trends of overweight and obesity prevalence from NHMS 2011, 2015 and 2019



MATERIALS AND METHODS

- A cross sectional, population based survey utilised a complex study design with two stage stratified cluster sampling
- The survey involved all states and federal territories in Malaysia to produce nationally representative data.
- Data collection included sociodemographic questionnaires via face-to-face interview and anthropometric assessment including weight, height and waist circumference (WC), were carried out by trained researchers .
- Validated and calibrated equipment were used for the assessment:
 - > TANITA HD 319 weighing scale
 - > SECA 213 Stadiometer (for height measurement)
 - > SECA 201 measuring tape (for waist circumference measurement)
- Overweight is defined with Body Mass Index (BMI) of 25 kg/m² or higher and obese, BMI 30 kg/m² or higher according to World Health Organization (WHO) classification³.
- Descriptive data analysis was done using SPSS version 26.

Table 1: Prevalence of NHMS 2011, 2015 and 2019 survey by sociodemographic characteristics

Sociodemographic characteristics	NHMS 2011		NHMS 2015		NHMS 2019	
	Overweight (%)	Obesity (%)	Overweight (%)	Obesity (%)	Overweight (%)	Obesity (%)
Gender						
Male	30.9	12.7	31.6	15.0	30.8	15.2
Female	27.8	17.6	28.3	20.6	30.0	24.7
Strata						
Urban	29.4	15.3	30.7	17.7	30.6	19.7
Rural	29.4	14.4	28.1	17.5	29.8	19.7
Education level						
No formal education	30.5	12.5	29.5	11.6	26.0	17.1
Primary education	29.9	15.2	31.3	16.8	31.4	17.5
Secondary education	30.2	16.0	29.9	19.1	30.2	21.1
Tertiary education	27.2	14.1	29.7	17.3	30.8	19.3
unclassified	25.5	7.6	26.0	14.3	47.4	0.2
Household income (RM)						
Less than 1000	27.9	13.9	29.1	16.5	27.8	18.6
1000 – 1999	28.9	14.1	30.1	16.5	30.1	18.2
2000 – 2999	29.2	15.1	31.1	17.1	30.8	19.3
3000 – 3999	31.5	16.1	30.7	18.3	27.3	22.4
4000 – 4999	29.5	17.0	28.5	18.6	28.0	26.4
5000 – 5999	27.5	14.4	28.5	17.9	30.6	19.7
6000 – 6999	30.9	21.1	30.3	18.4	34.7	18.7
7000 – 7999	32.3	16.1	28.5	20.5	30.6	20.3
8000 – 8999	30.6	16.5	27.3	20.6	36.5	20.1
9000 – 9999	28.7	10.2	34.2	22.2	22.5	18.1
10,000 and above	29.7	12.0	32.4	16.5	33.1	14.7

DISCUSSION AND CONCLUSION

- Prevalence of overweight and obesity keep increased from previous surveys.
- Increased in weight was seen to be associated with lower education level and higher household income, as supported by an international study stated the wealthier an individual, the more likely to be overweight⁴.
- Immediate action on public health policies and healthier living environment are emphasized to ensure the awareness and practice among Malaysians in reducing overall health and obesity related risks

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