Exploring Mental Health and Other Risk Factors of Obesity Among the Urban-Poor (B40) Community in Malaysia During COVID-19 Pandemic

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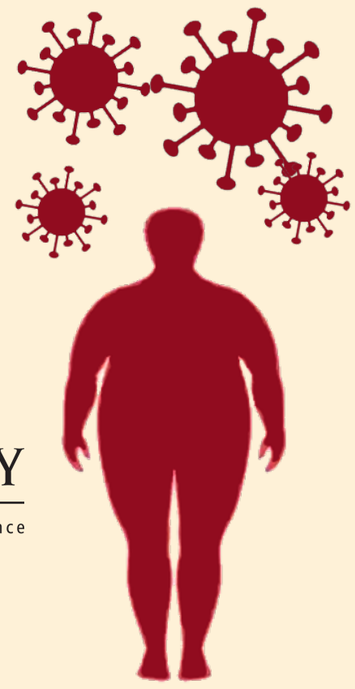

INTRODUCTION

The recent rise of mental health problems, due to the COVID-19 pandemic, could mean a rise in obesity prevalence in the coming years. The World Health Organization has declared COVID-19 a Public Health Emergency and International Concern (PHEIC) in March 2020 and ever since then, Malaysia has implemented Movement Control Order (MCO) for over a year. As the globe puts all its efforts and resources into the COVID19 pandemic, mental health problems continue to soar while adiposity goes gradually undetected. A double burden of disease could overwhelm the healthcare system in the coming years if the obesity rate is further increased by the current pandemic. There are no current studies that explored mental health problems and obesity among communities greatly affected by the pandemic in Malaysia. Therefore, we investigated the prevalence and factors associated with obesity and explored its association with mental health problems among B40 residents in Malaysia.

OBJECTIVES

1. To find out the prevalence of obesity among the B40 community in Malaysia
2. To study the association between sociodemographic factors and obesity
3. To find the association between depression, anxiety and stress with obesity

METHODOLOGY

Study setting

A cross sectional study was conducted involving residents of **Seri Pantai PPR, an urban-poor community in Kuala Lumpur, Malaysia**.

Survey Instruments

Data were collected via a standardized self-administered questionnaire from **14th July 2021 to 24th July 2021**. The questionnaire included items on

- Sociodemography
- Anthropometry information
- Self-reporting scales on Depression, Anxiety and Stress. DASS-21 Questionnaire (Lovibond & Lovibond 1995)

Method were collected were then organized and analyzed **using Statistical Package for the Social Sciences** (IBM SPSS version 27, New York, USA).

Sample size was 174 with the following **inclusion criteria**

- Residents of Seri Pantai PPR
- Malaysia citizens
- Aged 18 years above

Data Analysis

A total of two **chi-square tests** were done to

1. Determine the association between Sociodemographic variables and BMI categories (CPG Malaysia, 2020)
2. Compare the prevalence of overweight and obese participants in study population with the average National Prevalence according to BMI categories of CPG and WHO classifications.

A **logistic regression test** was also done to determine the association between different risk factors and obesity. Significant variables with a p-value <0.25 using univariate test was then followed up using a multivariate test and values were significant with a p-value <0.05

RESULTS

Table 1: Association between Sociodemographic variables and BMI categories

Variables	Underweight/ Normal weight n (%)	Overweight n (%)	Obese n (%)	X^2	p-value
Marital Status					
Married	20(17.9)	33(29.5)	59(52.7)	11.716	**0.020**
Single	11(35.5)	5(16.1)	15(48.4)		
Others	3(9.7)	15(48.4)	13(41.9)		

Table 2: Distribution of BMI according to BMI Classification

Categories	BMI[a] (Kg/m²)	n (%)	Categories	BMI[b] (Kg/m²)	n (%)
Underweight	<18.5	2 (1.1)	Underweight	<18.5	2 (1.1)
Normal weight	18.50 – 22.99	32 (18.4)	Normal weight	18.50 – 24.9	47 (27)
Overweight	23.00 – 27.49	53 (30.5)	Overweight	25 – 29.99	64 (36.8)
Obese	≥27.50	87 (50.0)	Obese	≥30.00	61 (35.1)

[a]CPG, Clinical Practice Guidelines, Malaysia; [b]WHO, World Health Organization. BMI, Body Mass Index

Table 3: Comparison of the prevalence of overweight and obese participants in study population with the average national prevalence.

BMI Category	Prevalence (%) CPG Classification		X^2	p value
	National sample	Study sample		
Overweight	32.3	30.5	0.269	0.604
Obese	33.7	50.0	20.691	**<0.001**

BMI, body mass index; CPG, Clinical Practice Guidelines in Malaysia. WHO, World Health Organization.

Results indicated that most of the participants were obese using both Asian (50%) and International BMI (35.1%) cut-off points. These values are significantly higher compared to the national prevalence of the same age group (p = <0.001). Among the factors investigated using logistic regression indicated marital status significantly predicted the odds of being obese (p =.036), while other sociodemographic factors, depression, anxiety, and stress were not associated with obesity. **Married individuals were 2.5 times more likely to be obese compared to singles, p = .032, OR= 2.530; (95% CI: 1.049 – 6.102) whereas widowed or divorced individual were 5.1 times more likely to be obese compared to singles, p = .022, OR= 5.133; (95% CI: 1.266–20.809).**

CONCLUSION

In conclusion, the **prevalence of obesity in the B40 community is significantly higher compared to the national prevalence** with a **significant association between marital status and obesity.** However, we found that there were **no significant association between mental health and obesity.**

Larger scale studies involving communities greatly affected by the pandemic and the prolonged lockdown measures should be carried out to determine its impact on health and prevent any potential future consequences.

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