

Cross-Sectional Study on the Dietary Habits and Lifestyle Practices among University Students in Malaysia

Kavii Varma a/l Rajasegaran^{1*}, Kogila a/p Muthusamy², Yeoh Chia Rou³,
Ghana Kavinya a/p Gunasegaran⁴, Dr. Thein Win Naing⁵

^{1,2,3,4,5}Department of Community Medicine, Faculty of Medicine, University of Cyberjaya, 63000, Cyberjaya, Malaysia

ABSTRACT

Introduction: Growing rates of young adults have fallen prey to poor eating habits leading to obesity and various health issues. The National Health and Morbidity Survey conducted in 2019 revealed 50.1% of Malaysia's adult population to be within the weight range of overweight and obese. While a rising number of university students contributed to these numbers, it was also noted that the factors contributing to such findings were unhealthy eating habits and poor lifestyle choices.

Objective(s): This study assess the prevalence of overweight/obesity and explores the eating patterns and lifestyle practices among university students in Malaysia.

Methodologies: A cross-sectional study was conducted among university students in Malaysia. A total of 268 students participated in the study. Data was collected from December 2022 to June 2023. Self-administered questionnaire comprising of questions pertaining to living circumstances, current weight, height, information on dietary habits, lifestyle practices and knowledge of balanced nutrition. The collected data were used to correlate the student's dietary habits with their lifestyle practices based on gender and BMI.

Results: The prevalence of overweight and obese students (53.378%) is higher than underweight and normal weight students consist of 55.245% of male students and 44.755% of female students. There is a significant association found between BMI, gender and assessment of dietary habits suggest that eating habits vary based on body weight and gender. Students with higher knowledge levels regarding food, lifestyle and nutrition tend to adopt better lifestyle practices. **Conclusion:** The study highlights the need for targeted interventions to promote healthier eating habits, lifestyle practices, and knowledge among university students. Strategies may include nutritional education programs, lifestyle workshops, and initiatives to enhance students' understanding of dieting, nutrition, and self-body image.

Keywords: Dietary habits; lifestyle practices; obese; university students

INTRODUCTION

Obesity is a global health concern, with Malaysia having the highest prevalence of obesity among adults in Southeast Asia. The University of Malaya's Department of Social and Preventive Medicine found that 50.1% of Malaysian adults were overweight (30.4%) or obese (19.7%). (Department of

Social and Preventive Medicine of University Malaya, 2021) University students in Malaysia contribute to this issue, mostly due to lifestyle and unhealthy eating habits. (The ASEAN Post Team, 2020) Determining factors influencing dietary habits could help eradicate obesity among university students. Studies show that few students consume a balanced diet, and gender plays a significant role in assessing healthy weight and body type. A study on 1100 Malaysian university students revealed that 31.6% were smokers, 75.6% never drank alcohol, and 53.7% never exercised. Most students showed poor practice of a healthy lifestyle, and universities should emphasize a healthy lifestyle in all faculties as a required subject. Socio-demographic characteristics should be considered when planning preventive measures among university students, with frequent campaigns and educational seminars being encouraged. This study assesses the prevalence of overweight/obesity and explores the eating patterns and lifestyle practices among university students in Malaysia.

METHODOLOGIES

A cross-sectional study was conducted through online questionnaire in English and Bahasa Melayu from 5th of March 2022 to September 2023 among university students in Malaysia. University students of all ages excluding international students were eligible for participation. Participation was voluntary with informed consent. A total of 268 university students participated in the study. The sample size was calculated using the following equation; where n is the minimum sample size required in the study, Z is the area under normal curve corresponding to the desired confidence interval used in this study, i.e. 95% CI (1.96), P is the prevalence of obesity/obese among Malaysian universities students [(0.163; Che et al, 2019)], and M is Margin of error (0.05).

$$n = \left[\frac{(z/m)^2 \times P(1-P)}{0.05} \right] + 20\% \text{ non-respondents}$$

$$n = \left[\frac{(1.96)^2}{(0.05)^2} \times 0.163(1 - 0.163) \right] + 20\%$$

$$n = 251.5 \approx 252$$

We will be using a self-administered questionnaire on dietary habits among University Students which will be given through Google form. The self-administered structured questionnaire consisted of 31 multiple choice answer questions and answers from the participants will be automatically saved in Google Forms. To ensure the reliability and validity of the questionnaire, we adapted the questionnaire from the previous study to obtain relevant information in the most reliable and valid manner. The questionnaire was adapted from a research entitled 'Dietary Habits and Lifestyle Practices among University Students in Universiti Brunei Darussalam' by Tok Chen Yun, Siti Rohaiza Ahmad, David Koh Soo Quee which was published on 28th June 2018. Apart from obtaining sociodemographic information such as age, gender, ethnicity, current study semester, faculty, and accommodation status, the questions were designed to explore the dietary habits, lifestyles practice of university students and participants' knowledge about balanced diet and personal views on dieting, and self-body image.

Data to correlate the student's dietary habits with their lifestyle practices among university students in Malaysia and the association with gender and BMI will be analysed using Statistical Package for Social Sciences (SPSS). Frequencies and percentages will be determined for categorical variables. To compare the associations between dietary habits and lifestyles practices among university students in Malaysia

based on gender and BMI, Chi Square test will be used. This technique will be used to compare observed results with expected results.

RESULTS

This study included a total of 279 participants, however 268 participants had valid responses. Table 1 presents the sociodemographic data of the participants.

Table 1. Sociodemographic characteristics of respondents (n = 268)

Characteristics	n (%)
Age / Umur	
18 – 25	176 (65.672)
26 – 44	82 (30.597)
≥45	10 (3.731)
Gender / Jantina	
Male / Lelaki	129 (48.134)
Female / Perempuan	139 (51.866)
Ethnicity / Kaum	
Malay / Melayu	122 (45.522)
Chinese / Cina	34 (12.687)
Indian / India	92 (34.328)
Others / Lain-lain	20 (7.463)
Education level / Tahap Pendidikan	
Diploma / foundation Diploma/Asasi	57 (21.269)
Undergraduate / Sarjana Muda	191 (71.269)
Postgraduate / Pascasiswazah	20 (7.463)
Year of course (Tahun Pengajian)	
Year 1 (Tahun 1)	29 (10.821)
Year 2 (Tahun 2)	25 (9.328)
Year 3 (Tahun 3)	62 (23.134)
Year 4 (Tahun 4)	88 (32.836)
Year 5 (Tahun 5)	24 (8.955)
Others (Others)	40 (14.925)
Accommodation status / Taraf Penginapan	
Hostel / Asrama	90 (33.582)
Rented House / Rumah Sewa	109 (40.672)
Living with family / Tinggal bersama keluarga	69 (25.746)

The data collected was used to calculate the prevalence of overweight/obese and its association with gender in Table 2. The data showed that the percentage of overweight and obese students (53.358%) is higher than the percentage of underweight and normal weight students. The data also revealed that a higher percentage of male students (55.245%) are categorized as overweight and obese compared to female students (44.755%).

Table 2. Distribution of students according to BMI status and gender

BMI category	Male		Female		Total	
	n	(%)	n	(%)	n	(%)
Underweight and Normal	50	40.000	75	60.000	125	46.642
Overweight and obese	79	55.245	64	44.755	143	53.358

Table 3 depicts the link between three variables: Dietary Habit Assessment, Lifestyle Practise Assessment, and Knowledge (regarding food, lifestyle, and nutrition). The Pearson association between Dietary Habits and Lifestyle Practises is -0.078 , indicating a modest negative association. For dietary habits and knowledge assessment, the Pearson association is -0.066 , showing a slight negative association. The two-tailed significance value is $.284$, which is larger than $.05$. This indicates that the relationship between the variables is not statistically significant in the general population. The Pearson link for Lifestyle Practices and Knowledge is $.953$, showing a very significant positive link. the strongest positive association between Assessment of Lifestyle Practices and Knowledge is the most important discovery in this correlation matrix. This might imply that when students' understanding of food, lifestyle, and nutrition grows, they are more likely to adopt better lifestyle practices.

		Assessment of dietary habits	Assessment of lifestyle practices	Knowledge
Assessment of dietary habits	Pearson correlation	1	$-.078$	$-.066$
	Sig. (2-tailed)		$.205$	$.284$
	N	268	268	268
Assessment of lifestyle practices	Pearson correlation	$-.078$	1	$.953^{**}$
	Sig. (2-tailed)	$.205$		$.000$
	N	268	268	268
Knowledge	Pearson Correlation	$-.066$	$.953^{**}$	1
	Sig. (2-tailed)	$.284$	$.000$	
	N	268	268	268

DISCUSSION

This study aimed to shed some light on the dietary habits and lifestyle practices within this specific populations and provide useful information for developing treatment and educational initiatives to instill

a healthy lifestyle among university students. Our research categorized the respondents into male and female, and the data indicates that the sample consists of roughly equal numbers of male and female respondents with female (51.866%) being slightly higher than male (48.134%). These results are supported by studies conducted by Wang et al (2015) and Tok CY et al (2018) which show that females had a higher prevalence than males with the percentage of 73% and 72.6% respectively.

Our study also showed that the respondents were represented by various ethnic groups with Malays being the largest group (45.522%), followed by Indians (34.328%), Chinese (12.867%) and others (7.463%). This finding correlates with a study conducted by Ganasegaran et al (2012) that stated most respondents in their study were Malays with a percentage of 61.4%.

The data collected was used to calculate the prevalence of overweight/obese and its association with gender. The data showed that the percentage of overweight and obese students (53.358%) is higher than the percentage of underweight and normal weight students. The data also revealed that a higher percentage of male students (55.245%) are categorized as overweight and obese compared to female students (44.755%). This information suggests that there might be gender-based differences in the body weight and could indicate the need for gender-specific interventions related to healthy eating habits and lifestyle choices. On the contrary, studies conducted by Al-Rethaiaa et al (2010) and Ahmad SR et al (2018) showed that most of their respondents were of normal weight with the percentage of 57.4% and 58.1% respectively.

The study also assessed the eating habits of university students and its association with gender and BMI. The “Assessment of Dietary Habits” scale was used to assess the eating habits of university students. The high reliability score (Cronbach’s Alpha score of 0.864) indicates that the scale’s question consistently measures food habits among the students. The significant association found between BMI, gender and assessment of dietary habits suggest that eating habits vary based on body weight and gender. However, the specific nature of these associations requires further investigations.

The study assessed the lifestyle practices of university students and its association with gender and BMI. The “Assessment of Lifestyle Practices” scale evaluates the lifestyle practices of university students. The scale shows high internal consistency (Cronbach’s Alpha of 0.879), indicating that the questions are related and consistently measure lifestyle practices among the students. The significant positive correlation between Lifestyle Practice Assessment and Knowledge (Pearson correlation of 0.953) indicates that students with higher knowledge levels regarding food, lifestyle and nutrition tend to adopt better lifestyle practices. This finding is valuable, as it suggests that promoting nutritional education and knowledge among students can potentially lead to healthier lifestyle choices.

The “Knowledge” scale measures students’ understanding of dieting, balanced nutrition, and self-body image. The scale shows high reliability (Cronbach’s Alpha of 0.767), suggesting that the questions consistently measure students’ knowledge on these topics. The correlation matrix shows a slight negative correlation between Dietary Habit Assessment and Knowledge (Pearson correlation of -0.066), which is not statistically significant. This means that students’ dietary habits are not strongly related to their knowledge about dieting and nutrition. Similarly, there is no statistically significant correlation between Lifestyle Practice Assessment and Knowledge.

Overall, the study provides valuable insights into university students' socio-demographic characteristics, eating habits, lifestyle practices, and knowledge on dieting, nutrition, and self-body image. The data reveals potential associations between these factors, highlighting areas where interventions and educational programs may be beneficial for promoting healthier habits and well-being among university students. However, further research and analysis would be required to gain a deeper understanding of the specific relationships and underlying factors at play in this population.

CONCLUSION

The study emphasizes the importance of targeted interventions to promote healthier eating habits, lifestyle practices, and knowledge among university students. Strategies may include nutritional education programs, lifestyle workshops, and initiatives to enhance students' understanding of dieting, nutrition, and self-body image. Educational efforts should focus on fostering behavioral changes and encouraging students to adopt healthier practices, leading to positive health outcomes. Preventive measures and promoting a culture of wellness within the university environment are crucial, considering the specific needs and challenges faced by different genders and BMI groups. Socio-demographic characteristics provide valuable insights for creating inclusive and diverse health promotion initiatives, considering cultural and lifestyle differences among students from various ethnic backgrounds.

ACKNOWLEDGEMENT

First and foremost, we would like to express our appreciation to all of the respondents who participated in answering our study questionnaire. We would not have been able to write this acknowledgement on our completed study report without their little support. We owe a tremendous debt of appreciation to our lecturers and supervisors, who have helped us through this process. This research would not have been possible without their assistance and suggestions.

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