

Factors Associated With Sedentary Behaviour Among University Students in Faculty of Engineering, UPM.

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Introduction

- Sedentary behaviour is described as any sitting or reclining activity distinguished by energy consumption of less than 1.5 METs (Lissak, 2018).
- A past study has claimed that a high prevalence of sedentary time was found among young people especially university students (Farinola and Bazán, 2011).

Study regarding sedentary behaviour in Malaysia is **limited** especially among university students and the findings from past studies were **inconsistent**

Sedentary behaviour can lead to **negative health outcome** and the presence of comorbidities can **increase risk of mortality of COVID-19**

Covid-19 pandemic might **alter the results** from previous studies.

Objective

To determine the factors associated with sedentary behaviour among students in the Faculty of Engineering, Universiti Putra Malaysia.

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Methodology

- Study design** : cross-sectional study
- Study location** : Faculty of Engineering, UPM
- Respondents**: Malaysian. Aged 19 – 25 years old, undergraduate student from Faculty of Engineering, UPM.
- Sample size**: 130 respondents
- Sampling design**: Simple random sampling
- Data analysis**: Pearson Correlation Test, Spearman Correlation Test, Chi-square test and Fisher Exact Test
- Instrument**:

Variables	Instruments
Socio-demographic factors	Self-developed questionnaire
Body weight status	Self- reported
Sedentary behaviour	Past-day Adult Sedentary Time Questionnaire (PAST)
Physical activity	Global Physical Activity Questionnaire (GPAQ)
Psychological factors	Depression Anxiety Stress Scale-21 (DASS-21)
Sleep quality	The Pittsburgh Sleep Quality Index (PSQI)

Table 1: Distribution of Respondent's Socio-demographic Factors by Sex (n=122)

Variables	Mean±SD / n (%)			P
	Women (N=66)	Men (N=56)	Total (N=122)	
Age	22.24±1.07	21.75±1.08	22.02±1.10	0.635
Ethnicity				0.955
Malay	60 (49.2)	39 (31.9)	99 (81.1)	
Indian	1 (0.8)	8 (6.5)	9 (7.3)	
Chinese	4 (3.2)	6 (4.9)	10 (8.1)	
Others	1 (0.8)	3 (2.5)	4 (3.3)	
Family Income (RM)	7287.21±7121.39	13679.07±31205.72	10221.18±21911.35	0.022*
B40	26 (21.3)	24 (19.7)	50 (41.0)	
M40	27 (22.1)	19 (15.6)	46 (37.7)	
T20	13 (10.7)	13 (10.7)	26 (21.4)	
Place of Residence				0.186
Rural area	1 (0.8)	1 (0.8)	2 (1.6)	
Urban area	65 (53.3)	54 (44.3)	119 (97.6)	

Results & Discussion

Table 2: Distribution of Respondent's Psychological Factors by Sex (n=122)

Variables	Mean±SD / n (%)			P
	Women	Men	Total	
Depression	16.09±8.13	15.46±7.53	15.80±7.83	0.013*
Normal	18 (14.8)	9 (7.4)	27 (22.1)	
Mild	7 (5.7)	11 (9.0)	18 (14.7)	
Moderate	20 (16.4)	22 (18.0)	42 (34.4)	
Severe	13 (10.7)	7 (5.7)	20 (16.4)	
Extremely severe	8 (6.6)	7 (5.7)	15 (12.3)	
Stress	16.48±9.89	12.39±8.59	14.06±9.50	0.064
Normal	28 (23.0)	35 (28.6)	63 (51.6)	
Mild	11 (9.0)	9 (7.4)	20 (16.4)	
Moderate	15 (12.3)	7 (5.7)	22 (18.0)	
Severe	7 (5.7)	5 (4.1)	12 (9.8)	
Extremely severe	5 (4.1)	0 (0.0)	5 (4.1)	

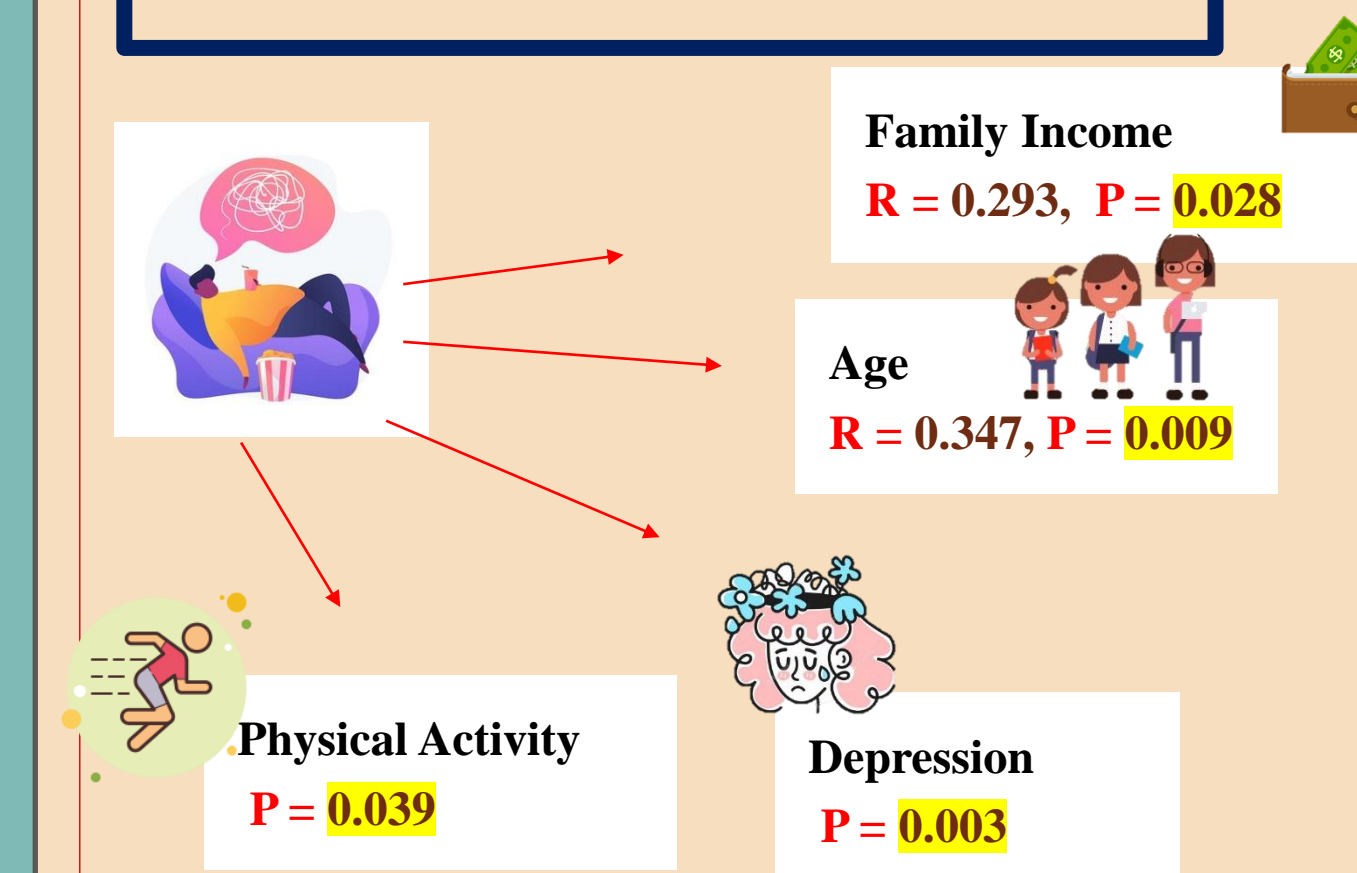
Table 3: Distribution of Respondent's Physical Activity Level by Sex (n=122)

Variables	Mean±SD /			P
	Female	Male	Total	
Physical Activity Level (METs/Week)	8640.00±1801.90	3284.29±3508.47	2340.36±2846.33	0.021*
Low	27 (22.1)	16 (13.1)	43 (35.2)	
Moderate	26 (21.3)	18 (14.7)	44 (36.1)	
Vigorous	13 (10.7)	22 (18.0)	35 (28.7)	

Table 4: Distribution of Respondent's Body Weight Status by Sex (n=122)

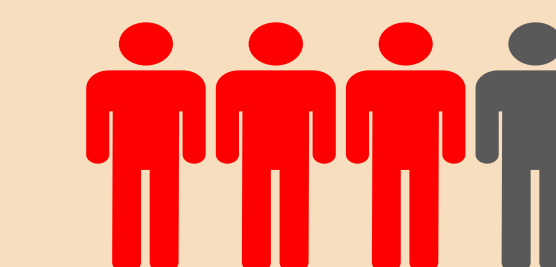
Variables	Mean±SD / n (%)			P
	Women	Men	Total	
Body Mass Index (kg/m ²)	21.84±3.83	22.62±4.36	22.20±4.08	0.521
Underweight	10 (8.2)	6 (4.9)	16 (13.1)	
Normal	45 (36.9)	40 (32.8)	85 (69.7)	
Overweight	9 (7.4)	6 (4.9)	15 (12.3)	
Obese	2 (1.6)	4 (3.3)	6 (4.9)	

Factors Associated with Sedentary Behaviour



Prevalence of Sedentary Behaviour

89.3% of engineering engaging with sedentary behaviour



Mean of sedentary time was 12.45±4.721

Age - This is because the older students did not attract to other activities including exercising as it was not important for them and prefer to substitute it with sedentary activities (Dias et al., 2014).

Family income - A previous study by Mielke et al., (2018) explained that students in lower family income engage more on manual labor while students in higher family income spend more time on studying.

Depression - People with depression usually spend most of their time with screen time activities (Maras et al., 2015). These activities are used as a coping mechanism to overcome the sadness and escape from reality (Dupuis & Ramsey, 2011).

Physical activity - A researcher Ammar et al., (2020) elaborate that sitting time increase was because of lockdown where people spend most of their time at home and the restricted movement order limit their physical exercise.

Conclusion

Age, family income, depression and physical activity were associated with sedentary behaviour among engineering students in UPM. Hence, this situation urged for appropriate intervention programs as well as the nutritional approach in order to reduce the risk of certain avoidable diseases and at the same time improving the quality of life among youth.