

# Effects of Home-based Exercise on Nutritional Status Among University Students

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## Introduction

- Movement Control Order has been implemented in Malaysia to curb the spread of Covid-19.
- Outdoor activities become highly challenging while exercise from home become a good alternative to maintain an active lifestyle during pandemic.

## Objective

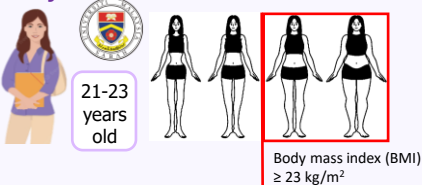
To examine the effects of 6-week home-based exercise on nutritional status among university students

## Methodology

### Study design

- Pre-post, single-arm, quasi-experimental study

### Subject:



### Exercise intervention:

Minggu	1	2	3	4	5	6	7
M1	*	K*	▲	R	*	K*	R
M2	K*	▲	R	K*	*	▲	R
M3	▲	*	K*	R	▲	K*	R
M4	K*	▲	R	K*	*	▲	R
M5	▲	*	K*	R	▲	K*	R
M6	K*	▲	R	K*	*	▲	R
M7	▲	*	K*	R	▲	K*	R
M8	K*	▲	R	K*	*	▲	R

K = Strength training  
\* = Moderate intensity exercise  
▲ = Moderate & high intensity exercise (combine)  
R = Rest day

- 5 times a week
- 40 to 50 minutes per session
- 6 weeks duration

### Ethics:

- Participants have been briefed about the study and have filled in the consent form.

### Data collection:

Subject recruitment phase

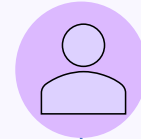
Baseline data collection

6-weeks exercise intervention

Endpoint data collection



Weight  
Body fat  
Waist circumference  
 $BMI = \frac{\text{weight (kg)}}{[\text{height (m)}]^2}$



n = 10

All female

Majority

Age: 22

Muslim

Malay

## Result and discussion

### Anthropometric profile

Parameters	Baseline	Endpoint	p-value
Weight	71.62 (11.49)	69.96 (11.29)	0.042
Body Mass Index	28.90 (4.76)	28.18 (4.58)	0.038
Waist Circumference (cm)	89.57 (9.61)	88.65 (11.59)	0.474
Body Fat (%)	35.03 (3.72)	34.03 (4.52)	0.245

### Dietary intake

Parameters	Baseline	Endpoint	p-value
Calorie (kcal)	1524.28 (522.77)	1458.37 (292.18)	0.617
Carbohydrate (g)	173.05 (81.61)	167.84 (59.27)	0.766
Protein (g)	60.73 (18.56)	50.99 (10.81)	0.229
Fat (g)	57.99 (22.89)	61.11 (9.43)	0.711

- ✓ Significant decrease was observed in body weight (mean difference, MD=1.66 kg, p=0.042) and BMI (MD = 0.72 kg/m<sup>2</sup>, p=0.038)
- × No changes were observed in waist circumference and body fat
- × No changes were observed in calorie intake, carbohydrates, protein and fat

♀ Can be the reason for the insignificant changes in waist circumference and body fat percentage

## Conclusion

- Exercising from home for six weeks could impact a subject's weight and BMI.
- Exercising from home can overcome the challenges related to outdoor physical activity and help people to stay active and healthy

## References

- New Straits Times. 2020. 14-day Movement Control Order begins nationwide on Wednesday. [Online] <https://www.nst.com.my/news/nation/2020/03/575180/14-day-movement-control-order-begins-nationwide-wednesday> [10 Mei 2021]
- Ministry of Health Malaysia. 2004. Management of Obesity. Clinical Practice Guideline. [Online] <https://www.moh.gov.my/moh/resources/Penerbitan/CPG/Endocrine/5a.pdf>

## Acknowledgements

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