



Determination Of Sodium Intake Control and Its Association With 24-Hour Urinary Excretion among Malaysian Adults



Syafinaz Mohd Sallehuddin*, Nor Azian Mohd Zaki, Lalitha Palaniveloo, Nurul Huda Ibrahim, Ahmad Ali Zainuddin

Institute for Public Health, National Institutes of Health (NIH), Ministry of Health Malaysia, Jalan Setia Murni U13/52, Seksyen U13 Setia Alam, 40170 Shah Alam, Selangor

INTRODUCTION

- One of the primary risk factors for cardiovascular disease is hypertension, which may be worsened by a high sodium intake^{1,2}.
- Knowledge, attitude, and practice (KAP) on sodium intake are crucial for developing more successful sodium reduction strategies.
- This study aimed to assess the association between sodium intake control and 24-hour urine excretion among Malaysian adults based on KAP on sodium intake.

SALT INTAKE CONTROL PRACTICES

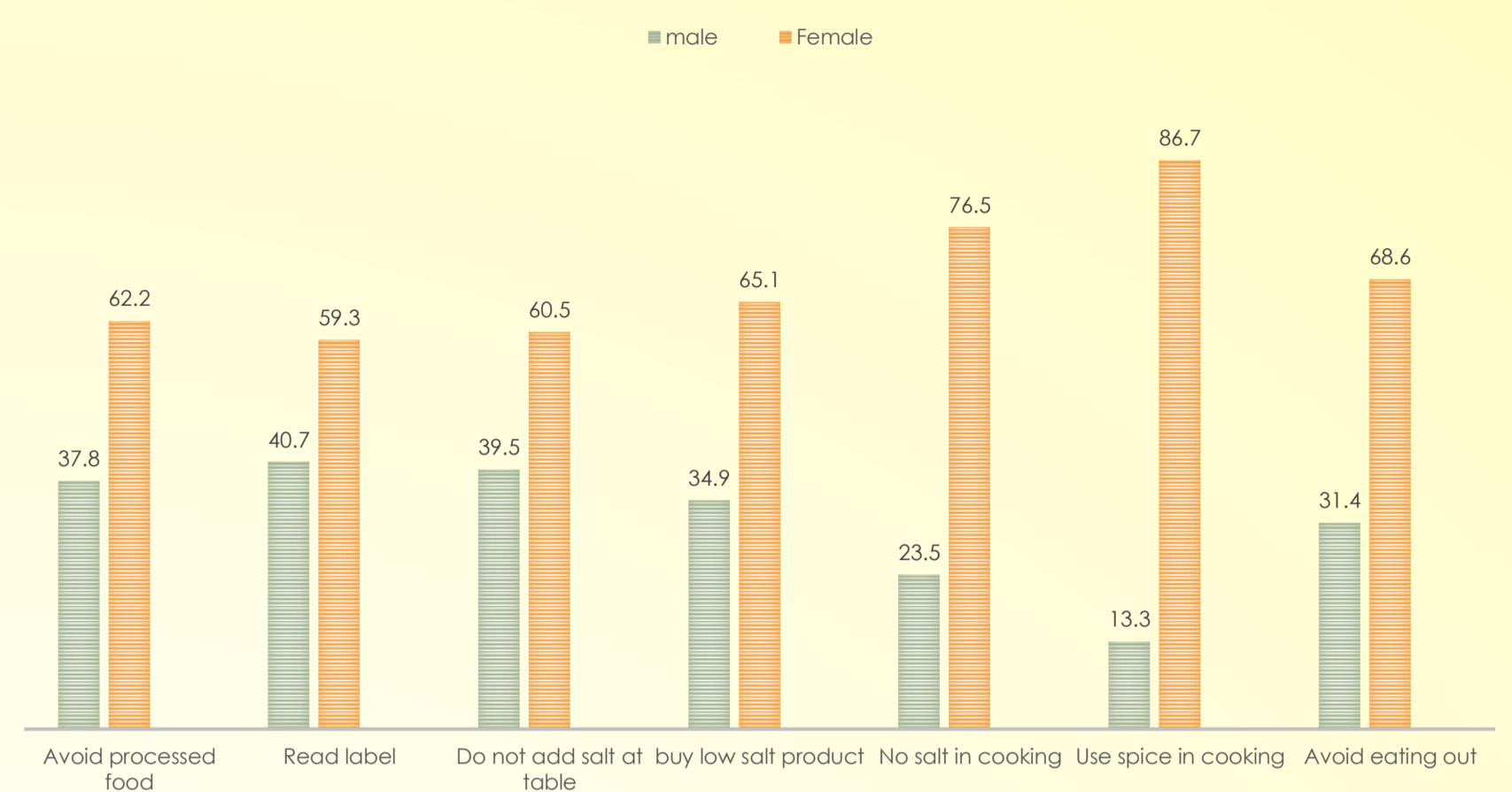


Table 2: The practices of salt intake control among Malaysian adults who controlled their salt intake by sex

METHODS

- Malaysian Community Salt Survey (MyCoSS) 2017-2018 was a cross-sectional study using a proportionate stratified cluster sampling design, conducted among 1047 Malaysian individuals, aged 18 years old and above.
- This survey used a stratified cluster sampling technique in order to accurately represent the Malaysian population.
- Every state's sampling plan included both urban and rural areas.
- The Department of Statistics Malaysia (DOSM) chose residences at random. One resident was chosen from each selected household.
- A modified Kish Table was used to choose participants when there were multiple eligible participants.
- Information on sociodemographic background and KAP of sodium intake was acquired using a pre-tested questionnaire.
- The amount of sodium intake was calculated based on the 24-hour urine excretion.

Variable		Mean (mg/day)	SD	P-value
Avoid processed food	Yes	2883.0	1282.8	0.109
	No	3049.9	1494.3	
Read label	Yes	3019.5	1358.8	0.536
	No	2954.8	1393.4	
Do not add salt at table	Yes	3022.7	1349.9	0.620
	No	2893.0	1430.9	
buy low salt product	Yes	2904.8	1393.0	0.668
	No	2989.3	1412.1	
No salt in cooking	Yes	2921.4	1368.9	0.621
	No	2963.7	1390.4	
Use spice in cooking	Yes	2616.0	769.7	0.05*
	No	2973.5	1407.9	
Avoid eating out	Yes	2787.6	1192.5	0.192
	No	3000.9	1426.5	

Table 3: Salt intake control practices with association to 24 hours urine excretion

RESULTS

- Four hundred and seventy-four respondents reported having controlled sodium intake. The majority were between the age of 40 to 59 years old (45.6%) and married (76.4%).
- Reading food labels was the most common sodium-control measure among men (40.7%), while utilizing spices in cooking was preferred by women (86.7%).
- Nevertheless, there was no statistically significant difference in mean 24-hour urinary excretion between those who practice sodium control and not control except in those using spice during cooking [2616 (769.7) mg/day, p= <0.05]

Sociodemographic characteristics		Count (n)	Prevalence (%)
sex	Male	170	35.9
	Female	304	64.1
age	18-39	126	26.6
	40-59	216	45.6
	>60	132	27.8
Ethnicity	Malay	313	66
	Non Malay	161	34
Marital status	Married	362	76.4
	Single	111	23.4
Education level	Non/Primary	128	27
	Secondary	222	46.8
	Tertiary	124	26.2

Table 1: Prevalence of salt intake control among Malaysian adults

DISCUSSION AND CONCLUSION

- The findings described the individuals who claimed to have reduced their salt intake in a variety of ways but continued to consume large amounts of sodium. These results were similar to a foreign study involving individuals who knew the benefits of salt reduction but continued to consume large amounts of salt each day^{3,4}.
- Therefore, adults in Malaysia still have inadequate eating habits despite their means to reduce their salt intake⁵.
- To raise public awareness of and advocate for probable risks associated with high sodium consumption, regular educational initiatives that may be effective at informing the public and encouraging salt control measures should be taken into consideration.

ACKNOWLEDGEMENT

The authors would like to thank the Director of Health Malaysia for permission to present this poster. Gratitude as well to all the individuals who directly or indirectly have contributed to the success of this study.

REFERENCE

1. Mohd Isa, D., Shahr, S., He, F. J., & Majid, H. A. (2021). Associations of health literacy with blood pressure and dietary salt intake among adults: A systematic review. *Nutrients*, 13(12), 4534.
2. Cheong, S. M., Ambak, R., Othman, F., He, F. J., Salleh, R., Mohd Sallehuddin, S., ... & Ganapathy, S. S. (2021). Knowledge, perception, and practice related to sodium intake among Malaysian adults: findings from the Malaysian Community Salt Study (MyCoSS). *Journal of Health, Population and Nutrition*, 40, 1-9.
3. Kenao, T. S., Sossa, J. C., Paraiso, M. N., Belo, M., Bouraima, M., Sophe, G., ... & Agueh, V. (2023). Knowledge, Attitudes and Practices of the Populations of Dapaong and Its Surroundings in Togo on Sodium/Salt and Potassium Intakes. *Open Journal of Epidemiology*, 13(02), 113-127
4. Land, M. A., Webster, J., Christoforou, A., Johnson, C., Trevena, H., Hodgins, F., ... & Neal, B. (2014). The association of knowledge, attitudes and behaviours related to salt with 24-hour urinary sodium excretion. *International Journal of Behavioral Nutrition and Physical Activity*, 11(1), 1-8.
5. Du, X., Fang, L., Xu, J., Chen, X., Bai, Y., Wu, J., ... & Zhong, J. (2022). The association of knowledge, attitudes and behaviors related to salt with 24-hour urinary sodium, potassium excretion and hypertensive status. *Scientific Reports*, 12(1), 13901.