

Knowledge and Attitude on Salt Iodisation Programme in Malaysia among Malaysian Adults in Klang Valley, Malaysia



Lee CY¹, Siew JX¹, Chong MHZ¹, Tan KL²

¹Division of Nutrition and Dietetics, School of Health Sciences, International Medical University
²Department of Community Nutrition, School of Medicine, International Medical University



Undergraduate

INTRODUCTION

- The **national iodine deficiency disorders (IDD) survey** reported that the adults in Peninsular Malaysia had **borderline iodine deficiency** (urinary iodine concentration = **104 µg/L**). [1]
- On 30th September 2020, all commercially available household **salt** in Malaysia were required to undergo **iodine fortification** to prevent IDD which may cause irreversible health problems such as goiter, cretinism and cognitive impairments. [2,3]
- Currently, no research has been conducted on the public's understanding and perception of the salt iodisation programme in Malaysia.

OBJECTIVES

- To **assess the knowledge and attitude** on salt iodisation programme in Malaysia amongst Malaysian adults in Klang Valley.
- To **determine the association** between **sociodemographic characteristics** with **knowledge and attitude**.
- To **determine the association** between **knowledge** with **attitude** on salt iodisation programme.

METHODOLOGY

Study Population

- Malaysian adults aged **≥ 18 years old residing in Klang valley** (N=134)

Study Tools

- Knowledge and attitude self-administered **online questionnaire**
- Adopted from **FAO and Habib et al.** [4-5]
- Score classification:** Divided into three levels according to **tertiles** (33rd and 67th percentile)

Study Method

- Cross-sectional study
- Convenience sampling

Statistical Analysis

- SPSS version 28.0
- Descriptive statistics** (frequency and percentage)
- Pearson's Chi-square test** (95% significance level)

RESULTS

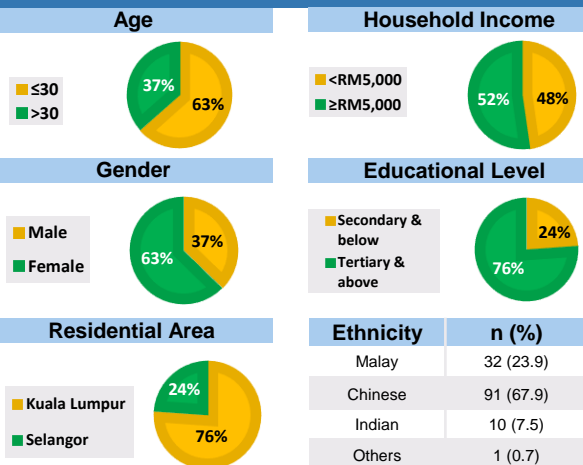


Figure 1: Sociodemographic characteristics of respondents (N=134).

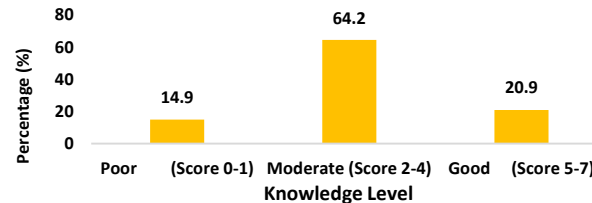


Figure 2: Knowledge level of salt iodisation programme (N=134).

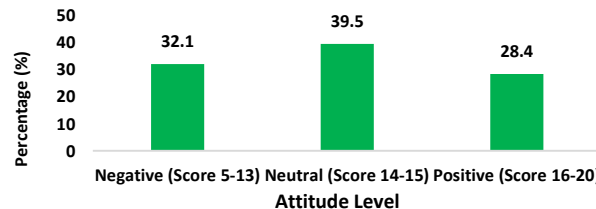


Figure 3: Attitude level of salt iodisation programme (N=134).

Table 1. Chi-square test of association between variables.

Variables	Knowledge				Attitude			
	Poor (n=20)	Moderate (n=86)	Good (n=28)	p-value	Negative (n=43)	Neutral (n=53)	Positive (n=38)	p-value
Age (years)								
≤30	13 (15.3)	53 (62.3)	19 (22.4)	0.828	25 (29.4)	37 (43.5)	23 (27.1)	0.452
>30	7 (14.3)	33 (67.3)	9 (18.4)		18 (36.7)	16 (32.7)	15 (30.6)	
Gender								
Male	10 (20.0)	36 (72.0)	4 (8.0)	0.014*	18 (36.0)	21 (42.0)	11 (22.0)	0.441
Female	10 (11.9)	50 (59.5)	24 (28.6)		25 (29.8)	32 (38.1)	27 (32.1)	
Highest formal education level								
Secondary and below	9 (28.1)	20 (62.5)	3 (9.4)	0.022*	10 (31.3)	14 (43.7)	8 (25.0)	0.834
Tertiary and above	11 (10.8)	66 (64.7)	25 (24.5)		33 (32.4)	39 (38.2)	30 (29.4)	
Household income (RM/month)								
<RM 5,000	14 (21.9)	38 (59.3)	12 (18.8)	0.097	20 (31.3)	26 (40.6)	18 (28.1)	0.968
≥RM 5,000	6 (8.6)	48 (68.5)	16 (22.9)		23 (32.9)	27 (38.6)	20 (28.5)	
Knowledge								
Poor					7 (35.0)	10 (50.0)	3 (15.0)	0.016*
Moderate					33 (38.4)	32 (37.2)	21 (24.4)	
Good					3 (10.7)	11 (39.3)	14 (50.0)	

DISCUSSION

- Moderate knowledge** level of respondents is **consistent** with studies in Bangladesh, Sudan and India. [5-7]
- Unsatisfactory attitude** coincides with the other studies. [5-7]
- Females** subjects had **better knowledge** than the **males** ($p < 0.05$).
- This can be explained as studies have shown that **women are more health-conscious** than men. [7,8]
- Knowledge** of respondents **reduced** with **low educational level** which may be due to **inadequate knowledge** that substantially lowers the health literacy. [8]
- Individuals with a **high knowledge** score demonstrate a **more positive perception** which correlates with the study done by Habib et al. [5]

CONCLUSION

- Knowledge and attitude** of Malaysian adults on salt iodisation programme were **unsatisfactory**.
- Gender, education level and attitude** were **associated** with **knowledge**.
- No association** between **sociodemographic characteristics** and **attitude** was found.
- Nutrition education** and health **promotion activities** on use of iodised salt are necessary to address the low knowledge and to gain public confidence on the salt iodisation programme.

REFERENCES

- Selamat R, Wan Nazaimoon WM, Ahmad Ali Z, Nor Syamirah CAR, Suhaila AG, Tahir A. Iodine deficiency status and iodised salt consumption in Malaysia: Findings from a national iodine deficiency disorders survey. *Asia Pac J Clin Nutr*. 2010; 19: 578-85.
- Zimmermann MB. The effects of iodine deficiency in pregnancy and infancy. *Pediatr Perin Epidemiol*. 2012; 26 (1): 108-17.
- Ministry of Health Malaysia [Internet]. Universal Salt Iodisation; 14 December 2020. Available from: <http://www.moh.gov.my/moh/jom/jomnawar-sgaram-sgaram-univers>
- Guidelines for assessing nutrition-related Knowledge, Attitudes and Practices [Internet]. Rome: Food and Agriculture Organization of the United Nations; 2014. Concepts and purpose of KAP surveys. [cited 20 March 2021]. Available from: <http://www.fao.org/3/a/i4564e04.pdf>
- Habib MA, Alam MK, Ghosh S, Rahman T, Reza S, Mamun S. Impact of knowledge, attitude, and practice on iodized salt consumption at the household level in selected coastal regions of Bangladesh. *Hygion*. 2021; 7 (6): e06747. doi: 10.1016/j.hygion.2021.e06747
- Kamakar N, Datta A, Naga K, Datta SS, Datta S. Knowledge, attitude, and practice regarding household consumption of iodized salt among rural women of Tripura, India: A mixed-methods study. *J Educ Health Promot* [Internet]. 2019; 8:21. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC673882/>; doi: 10.4103/jehp.jehp_248_18.
- Elmossad YGA, Elmoad SA, Elmoad YM. Knowledge and Attitude of Population Towards Iodized Salt in Sherak Locality River Nile State in Sudan. *European Scientific Journal*. 2017; 13 (6): 312-322. Available from: <https://www.eurjournals.com/doi/pdf/10.18687/ejs.13060372.pdf>
- Hahn RA, Truman BL. Education Improves Public Health and Promotes Health Equity. *Int J Health Serv*. 2015; 45 (4): 657-78. doi: 10.1177/0020731415265698.

ACKNOWLEDGEMENT

This study BNT I 2021-(06) was funded by the International Medical University, Kuala Lumpur. We would like to thank all the subjects for participating and those who supported and assisted in this project.