



Ministry of Health Malaysia
National Institutes of Health
Institute for Health Behavioural Research

HEALTH LITERACY RELATED TO SALT INTAKE AMONG MALAYSIANS

TECHNICAL REPORT



TABLE OF CONTENTS

Acknowledgements	1
Technical Advisors	2
Research Team Members	2
List of Figures	3
List of Table	5
Abbreviations	6
1 INTRODUCTION	
1.1 Background of the Study	7
1.2 Health Literacy/ “Food Literacy” and Relation to Salt Intake	9
1.3 Problem Statement & Rationale of the Study	11
2 SALT REDUCTION POLICY IN MALAYSIA	12
3 METHODOLOGY	
3.1 Study Objectives	14
3.2 Study Design & Sampling	14
3.3 Sample Calculation	14
3.4. Sampling Method	15
3.5 Inclusion and exclusion criteria	15

3.6	Data collection & consent procedures	16
3.7	Study Instrument	16
3.8	Translation, Adaptation and Pilot Test of the Instrument	17
3.9	Determination of Scoring	19
3.10	Statistical analyses	19
4	RESULTS	
4.0	Sociodemographic Characteristics of Respondent	20
4.1	Awareness on the terminology Natrium & Sodium	25
4.2	Knowledge of Relationship between Sodium & Salt	25
4.3	Knowledge of Recommended Daily Limit for Salt Intake	26
4.4	Knowledge of the Salt Content of Foods	27
4.5	Knowledge of the Diseases Related to High Salt Intake	29
4.6	Perceptual Beliefs on Salt	31
4.7	Attitudes toward Salt Intake	33
4.8	Salt Intake Practices (Frequency of the practices in a week)	35
4.9	Nutrition Label Reading Practices	40
4.10	Assesment on Ability to Identify Low Sodium Content based on nutrition information	43
4.11	Ability to understand and interpret sodium content in nutrition information label	44
4.12	Overall salt literacy score on salt intake	45
4.13	Health Literacy Level on Salt Intake among Malaysians based on Sociodemographic Characteristics	46
4.14	Awareness on the Healthier Choice Logo in Food/ Drink Products	51

5 DISCUSSION

5.1	Awareness on the terminology and relation of sodium and salt	55
5.2	Knowledge on recommended level for salt intake	55
5.3	Knowledge on salt contributor to disease	56
5.4	Knowledge on Salt content in food	56
5.5	Beliefs towards Salt Intake	57
5.6	Attitudes towards Salt Intake	58
5.7	Salt Intake Practices	59
5.8	Reading Food labels	60
5.9	Ability to Interpret Food labels	61
5.10	Overall Health Literacy Pertaining to Salt Intake	62

RECOMMENDATIONS	63
------------------------	-----------

REFERENCES	66
-------------------	-----------

List of Appendices

6	Appendix A: Consent Form	73
7	Appendix B: Questionnaire	78
8	Appendix C: MREC approval letter	106

ACKNOWLEDGEMENTS

The research team would like to extend utmost appreciation and thanks to the Director General of Health Malaysia for granting the permission to publish this report and also to the National Institutes of Health, Ministry of Health Malaysia (NIH, MOH) for the approval and funding of this research project.

We would also like to extend our warmest gratitude and thanks to Dr. Manimaran Krishnan, the Director of Institute for Health Behavioural Research, (NIH, MOH), Dr. Norlen Mohamed, Sector Head for Prevention and Control of Non-Communicable Disease MOH, Dr. Hamdan Mohamed, Senior Principal Assistant Director (Dietetics) in the Disease Control Division MOH, and his technical team for all the valuable guidance, important insights and technical input provided throughout the conception of this research project until the completion of this report.

Special thanks also goes to the original author of the The Chinese Health Literacy Scale for Low Salt Consumption in the Hong Kong population (CHLSalt-HK) instrument, Associate Professor Dr. Patsy Pui Hing Chau from the School of Nursing, The University of Hong Kong, for her excellent guidance and for granting us permission to adapt the instrument. We would like to thank as well Prof Dr. Tin Tin Su, from the Jeffrey Cheah School of Medical & Health Science, Monash Data Futures Institute & Victorian Heart Institute (VHI) for providing essential technical insight during the adaptation process of the instrument.

Finally, our heartfelt gratitude goes to all the research team members, the data collection team in the field, officers and dietitian in health clinics, administrative officials at the National Institute of Health MOH, reviewers, patients, and the public for their tremendous assistance and significant contributions that ensured the successful completion of this research project.

TECHNICAL ADVISORS

Dr. Manimaran Krishnan

Director

Institute for Health Behavioural Research,
National Institutes of Health, Ministry of Health Malaysia

Dr. Norlen Bin Mohamed

Sector Head,

Sector of Prevention and Control of NCD
Disease Control Division, Ministry of Health Malaysia

Dr. Hamdan Bin Mohamad

Dietitian (U54)

Sector of Prevention and Control of NCD
Disease Control Division, Ministry of Health Malaysia

Siti Farrah Zaidah Binti Mohd Yazid

Dietitian (U48)

Sector of Prevention and Control of NCD
Disease Control Division, Ministry of Health Malaysia

Research Team Members

Investigators

Komathi Perialathan, Teresa Yong Sui Mien, Dr. Mohd Zabri Johari, Masitah Ahmad,
Norharyati Ahmad Sanusi, Ain Aqiela Azamuddin

Institute for Health Behavioural Research,
National Institutes of Health, Ministry of Health Malaysia

LIST OF FIGURES

Figure 4.1	Distribution by Gender	20
Figure 4.2	Distribution by Locality	20
Figure 4.3	Distribution by Age Group	21
Figure 4.4	Distribution by Race	21
Figure 4.5	Distribution by Highest Educational Level	22
Figure 4.6	Distribution by Occupation	22
Figure 4.7	Distribution by Marital Status	23
Figure 4.8	Distribution by Income Group	23
Figure 4.9	BMI based on Self-Reported Weight and Height	24
Figure 4.10	Self-Reported Blood Pressure Monitoring	24
Figure 4.11	Awareness on Relation between Salt and Sodium	25
Figure 4.12	Recommended Daily Limit of Salt Intake by WHO	26
Figure 4.13	Amount of Salt (g) in 1 Teaspoon	26
Figure 4.14	Minimize Salt Intake	35
Figure 4.15	Add Salt When Eating (adding salt at table)	36
Figure 4.16	Add Sauce or Condiments While Preparing Food or Before Consuming Food	36
Figure 4.17	Consume Canned or Processed Food	37
Figure 4.18	Consume Salted Fish or Vegetable/Pickled or Fermented Food Items	37
Figure 4.19	Consume Instant Noodle	38
Figure 4.20	Consume Canned or Processed Food	38

Figure 4.21	Consume Fruits Added with asam powder, kicap, or rojak sauce	39
Figure 4.22	Consume Fast Food	39
Figure 4.23	Nutrition Label Reading Practices	40
Figure 4.24	Label Reading Practices Pertaining to Salt/Sodium Content	41
Figure 4.25	Other Information Checked in Food Labels	42
Figure 4.26	Barriers to Reading Food Label	42
Figure 4.27	Health Literacy Level on Salt Intake based on Ethnicity	46
Figure 4.28	Health Literacy Level on Salt Intake based on Locality	46
Figure 4.29	Health Literacy Level on Salt Intake based on Age Group	47
Figure 4.30	Health Literacy Level on Salt Intake based on Household Income	47
Figure 4.31	Health Literacy Level Pertaining to Salt Intake based on Education Level	48
Figure 4.32	Health Literacy Level Pertaining to Salt Intake based on Self-Reported BMI (Body Mass Index) Status	49
Figure 4.33	Health Literacy Level Pertaining to Salt Intake based on Self-Reported Health Status	49
Figure 4.34	Health Literacy Level Pertaining to Salt Intake among Respondents who've Self-Reported of having High Blood Pressure	50
Figure 4.35	Health Literacy Level Pertaining to Salt Intake Based on Meals Often Taken-Home Cook vs Eat Out	50
Figure 4.36	Awareness on the Healthier Choice Logo on Food/Drink Packages	51
Figure 4.37	Preferences of Respondents in Purchasing Food/Drink products with the Healthier Choice Logo	52
Figure 4.38	Preferred Channel for source of information pertaining to health promotion on salt intake by MOH	53
Figure 4.39	Types of information needed pertaining to health promotion on salt intake by MOH	54

LIST OF TABLE

Table 3.1	Domain and Scope of Questions	17
Table 3.2	Categorisation of Health Literacy Level on Salt Intake	19
Table 4.0	Household Median Income for T20, M40, and B40	23
Table 4.1	Awareness on the Terminology Natrium/Sodium	25
Table 4.2	Assessment on Awareness Pertaining to Salt Content in Common Food Items	28
Table 4.3	Assessment on Knowledge of the Diseases Related to High Salt Intake	30
Table 4.4	Perceptual Beliefs Pertaining to Salt Intake	32
Table 4.5	Attitude Pertaining to Salt Intake	34
Table 4.6	Ability to Compare Salt Content in Different Labels	43
Table 4.7	Overall Health Literacy Score	45

ABBREVIATIONS

NCD	Non-Communicable Disease
WHO	World Health Organization
CVD	Cardiovascular Disease
MyCOSS	Malaysia Community Salt Study
MOH	Ministry of Health, Malaysia
CHLSalt-HK	Chinese Health Literacy Scale for Low Salt Consumption -Hong Kong population
MREC	Medical Research and Ethics Committee
BMI	Body Mass Index
HCL	Healthier Choice Logo

