KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING REPEATEDLY HEATED COOKING OIL AMONG MALAY ADULTS IN URBAN SETTING

EP041



MINISTRY OF HEALTH MALAYSIA
INSTITUTE FOR HEALTH BEHAVIOURAL RESEARCH

Noor ul-Aziha Muhammad[1*], Kimberly Wong Yuin Y'ng[1], Ruhaya Salleh[1], Khairul Hasnan Amali[1], Nurissa Amira Mohd Ajman[1,]

[1] Institute for Public Health, National Institutes of Health, Ministry of Health Malaysia, Selangor, Malaysia

INTRODUCTION

- Repeatedly heated cooking oil (RHCO) is a common household practice for deep frying.
- Repeated heating causes oil degradation and produces harmful compounds such as peroxides and aldehydes, which can be absorbed into the fried food[1].
- Frequent consumption of foods fried in RHCO may adversely affect human health[2] such as cardiovascular diseases, including hypertension[3].
- However, evidence on consumers' knowledge, attitudes and practices (KAP) regarding RHCO remains limited.

OBJECTIVE

This study aimed to assess KAP related to RHCO among Malay adults in an urban setting.

METHODOLOGY

- Cross-sectional survey
- 323 Malay adults aged ≥25 years in Bandar Baru Bangi, Selangor
- Inclusion criteria: Prepared meals for their families at least three times per week
- Online survey using a validated questionnaire (Cronbach's Alpha = 0.801) - sociodemographic characteristics and KAP regarding RHCO.



- Participants scoring >80% were classified as having good knowledge[4].
- Ethics approval by JEPUKM (PPI/111/8/JEP-2021-265)

RESULTS

SOCIODEMOGRAPHIC DATA



Gender
81% Female

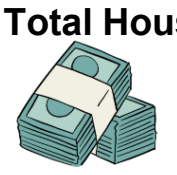


Education level
77% Degree, Master's or PHD



Occupation
53% Government Servants

Total Household Income



33% B40
36% M40
31% T20

KNOWLEDGE REGARDING RHCO

90.7%	knew the quality of the cooking oil changes after repeated frying
62.2%	knew that cooking oil should not be discarded only when it turns dark
88.5%	knew the type of food fried affects how often the same oil is reused before being discarded
61.6%	knew the duration of frying affects how often the same oil is reused before being discarded
86.4%	knew that RHCO has negative effects on health



92% used palm oil for deep frying

PRACTICES REGARDING RHCO

88.2%	reused cooking oil for deep frying
49.5%	often reused two times before discarding it
43.9%	often reused three times before discarding it
87.4%	reused oil as it still looked acceptable in colour
55.8%	reused oil due to concerns about wastage
35.1%	reused oil due to cost savings

ATTITUDES REGARDING RHCO

95.0%	had a positive attitude and obtained related information from the internet, family and friends, magazines/books and newspapers
47.7%	not satisfied or unsure with their practice of RHCO
95.0%	expressed willingness to modify their cooking practices for health reasons
85.8%	interested in receiving further information about RHCO

DISCUSSION AND CONCLUSION

- Almost 9 in 10 respondents reused cooking oil for deep frying, usually 2 to 3 times before discarding it. The main reasons were that the oil still appeared acceptable and to avoid wastage.
- Most respondents knew that cooking oil quality decreases with repeated heating, although some still lacked full knowledge of its harmful changes.
- Most respondents were willing to change their cooking practices for health reasons and expressed interest in receiving further information about RHCO.
- Although knowledge about the health risks was relatively good, repeated reuse of cooking oil was still common. Public health interventions should focus on practical strategies to bridge the knowledge-behaviour gap and promote safer cooking practices.

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to the Director-General of Health Malaysia for granting permission to present this poster. We also extend our appreciation to Universiti Kebangsaan Malaysia for their support and valuable contributions to the completion of this study.

REFERENCES

1. Choe, E. & Min, D. B. 2006. Chemistry and reactions of reactive oxygen species in foods. *Critical Reviews in Food Science and Nutrition* 46(1): 1-22.
2. Ku, S.K., Muhamad, R.M.S., Fatin, S.S., Saffana, K., Taty, A.K., Das, S. & Kamsiah, J. 2014. The harmful effects of consumption of repeatedly heated edible oils: a short review. *Clinical Therapeutics* 165(4): 217-221.
3. Owu, D. Orie, N. & Osim, E. 1997. Altered responses of isolated aortic smooth muscle following chronic ingestion of palm oil diets in rats. *African Journal of Medical Science* 26: 83–6.
4. Perumal, N., Cole, D.C., Ouédraogo, H.Z., Sindi, K., Loechl, C., Low, J., Levin, C., Kiria, C., Kurji, J. & Oyunga, M. 2013. Health and nutrition knowledge, attitudes and practices of pregnant women attending and not-attending ANC clinics in Western Kenya: a cross-sectional analysis. *BMC Pregnancy and Childbirth* 13: 146-158.