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Attitudes Toward Plasmodium knowlesi Malaria Prevention Behaviours Among at-risk Communities and Health District Officers' Efforts and Challenges in Promoting These Behaviours: An Elicitation Study in Peninsular Malaysia

(2023) *Jurnal Komunikasi: Malaysian Journal of Communication*, 39 (2), pp. 269-292.

DOI: 10.17576/JKMJC-2023-3902-15

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Abstract
This study explores at-risk communities' attitudes toward Plasmodium knowlesi (P. knowlesi) malaria prevention behaviours using the Integrated Behavioural Model (IBM) as a guiding framework. This study also presents efforts and challenges faced by district health officers in Peninsular Malaysia in their role as the health authority for mitigating the disease. Seventeen informants were selected from at-risk areas in three states with high cases of P. knowlesi in 2019 (Johor, Pahang, Kelantan) to be interviewed. Semistructured interview questions were developed guided by the IBM framework. Three district health officers who were involved in malaria prevention efforts in the selected states were also interviewed. Qualitative data analysis using Atlas.ti 8 software was used to facilitate thematic coding. Five prevention behaviours were found to be prevalent among the informants and are hypothesised to be suited for behavioural improvement intervention among at-risk communities. The prevention behaviours identified are: consuming prophylaxis, wearing long sleeves, using bed nets, mosquito coils and insect repellent. Current efforts by health district officers for P. knowlesi malaria prevention include erecting warning signs, community education programmes, and empowering community influencers. Challenges faced by the health district officers include difficulty accessing remote locations, limited facilities, and military-specific issues. This study suggests that future prevention efforts focused on behavioural improvement among atrisk communities in Malaysia should concentrate on the five prevention efforts most prevalent among these communities.

Author Keywords
attitude; P. knowlesi malaria; peninsular Malaysia; prevention challenges; prevention efforts

References

- Agius, P. A., Cutts, J. C., Han Oo, W., Thi, A., O'Flaherty, K., Zayar Aung, K., Kyaw Thu, H., Fowkes, F. J. I.
  Evaluation of the effectiveness of topical repellent distributed by village health volunteer networks against Plasmodium spp. infection in Myanmar: A stepped-wedge cluster randomised trial
  (2020) *PLOS Medicine*, 17 (8), p. e1003177.
- Ajzen, I.
  The theory of planned behavior
  (1991) *Organizational Behavior and Human Decision Processes*, 50 (2), pp. 179-211.
- Ajzen, I.
  (2002) *Constructing a TpB questionnaire: Conceptual and methodological considerations*,
- Ajzen, I., Driver, B. L.
  Application of the Theory of Planned Behavior to leisure choice
  (1992) *Journal of Leisure Research*, 24 (3), pp. 207-224.
- Aung, P. L., Win, K. M., Pumpaibool, T.
  Malaria preventive practices among people residing in different Malaria-endemic settings in a township of Myanmar: A mixedmethods study
  (2022) *Tropical Medicine and Infectious Disease*, 7 (11), p. 353.

- Bertaux, D.
  From the life-history approach to the transformation of sociological practice
  (1981) *Biography and society: The life history approach in the social sciences*, pp. 29-45.
  D. Bertaux (Ed), London: Sage

- Brant, H. L., Ewers, R. M., Vythilingam, I., Drakeley, C., Benedick, S., Mumford, J. D.
  Vertical stratification of adult mosquitoes (Diptera: Culicidae) within a tropical rainforest in Sabah, Malaysia
  (2016) *Malaria Journal*, 15, p. 370.

- Brügger, A., Höchli, B.
  The role of attitude strength in behavioral spillover: Attitude matters—But not necessarily as a moderator
  (2019) *Frontiers in Psychology*, 10, p. 1018.

- Canana, N.
  A cost analysis to address issues of budget constraints on the implementation of the indoor residual spray programme in two districts of Maputo Province, Mozambique
  (2021) *Malaria Journal*, 20, p. 8.

- Chen-Hussey, V., Carneiro, I., Keomanila, H., Gray, R., Bannavong, S., Phanalasy, S., Lindsay, S. W.
  Can topical insect repellents reduce Malaria? A cluster-randomised controlled trial of the insect repellent N,N-diethyl-m-toluamide (DEET) in Lao PDR
  (2013) *PLoS ONE*, 8 (8), p. e70664.

- Chin, A. Z., Maluda, M. C. M., Jelip, J., Jeffree, M. S. B., Culleton, R., Ahmed, K.
  Malaria elimination in Malaysia and the rising threat of Plasmodium knowlesi
  (2020) *Journal of Physiological Anthropology*, 39, p. 36.

- Cote, C. M., Goel, V., Muhindo, R., Baguma, E., Ntaro, M., Shook-Sa, B. E., Reyes, R., Boyce, R. M.
  Malaria prevalence and long-lasting insecticidal net use in rural western Uganda: Results of a cross-sectional survey conducted in an area of highly variable malaria transmission intensity
  (2021) *Malaria Journal*, 20, p. 304.

- Crawshaw, A. F., Maung, T. M., Shafique, M., Sint, N., Nicholas, S., Li, M. S., Roca-Feltrer, A., Hii, J.
  Acceptability of insecticide-treated clothing for malaria prevention among migrant rubber tappers in Myanmar: A cluster-randomized non-inferiority crossover trial
  (2017) *Malaria Journal*, 16, p. 92.

- Curtis, C.
  Personal protection against malaria vectors
  (1998) *Parasitology International*, 47, p. 89.
  (Supp. 1)

- Fradin, M. S.
  Protection from blood-feeding Arthropods
  (2001) *Wilderness medicine*, pp. 754-768.
  P. S. Auerbach (Ed), (4th ed., Mosby Inc

- Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., Grimshaw, J. M.
  What is an adequate sample size? Operationalising data saturation for theory-based interview studies
  (2010) *Psychology & Health*, 25 (10), pp. 1229-1245.

- Gryseels, C., Uk, S., Sluydts, V., Durnez, L., Phoeuk, P., Suon, S., Set, S., Peeters Grietens, K.
  Factors influencing the use of topical repellents: Implications for the effectiveness of malaria elimination strategies
  (2015) *Scientific Reports*, 5, p. 16847.

- Hagger, M. S., Smith, S. R., Keech, J. J., Moyers, S. A., Hamilton, K.
  Predicting social distancing intention and behavior during the COVID-19 pandemic: An integrated social cognition model
  (2020) *Annals of Behavioral Medicine*, 54 (10), pp. 713-727.

- Heng, S., Durnez, L., Gryseels, C., Van Roey, K., Mean, V., Uk, S., Siv, S., Sluydts, V.
  Assuring access to topical mosquito repellents within an intensive distribution scheme: A case study in a remote province of Cambodia
  (2015) *Malaria Journal*, 14, p. 468.

- Hussin, N., Lim, Y. A. L., Goh, P. P., William, T., Jelip, J., Mudin, R. N.
  Updates on malaria incidence and profile in Malaysia from 2013 to 2017
  (2020) *Malaria Journal*, 19, p. 55.

- Inchana, W., Kamchoo, K., Wetasin, K.
  Factors associated with Malaria infection in Vibhavadi District, Surat Thani Province, Southern Thailand
  (2013) *Journal of Tropical Medicine & Parasitology*, 36, pp. 49-57.

- Ipa, M., Widawati, M., Laksono, A. D., Kusrini, I., Dhewantara, P. W.
  Variation of preventive practices and its association with malaria infection in eastern Indonesia: Findings from community-based survey
  (2020) *PLoS ONE*, 15 (5), p. e0232909.

- Jiram, A. I., Hisam, S., Reuben, H., Husin, S. Z., Roslan, A., Wan Ismail, W. Z.
  Submicroscopic evidence of Simian Malaria parasite, Plasmodium knowlesi, in an Orang Asli community
  (2016) *Southeast Asian Journal Tropical Medicine Public Health*, 47, pp. 591-599.

- Kader Maideen, S. F., Rashid, A., Ahmad, N. I., Zahari, S. N. A., Hamat, R. A.
  Seroprevalence of malaria and the knowledge, attitudes and practices relating to the prevention of malaria among indigenous people living in the central forest spine in Peninsular Malaysia: A mixed-methods study
  (2022) *Malaria Journal*, 21, p. 281.

- Kaur, G.
  Malaria endemicity in an Orang Asli community in Pahang, Malaysia
  (2009) *Tropical Biomedicine*, 26, pp. 57-66.

- Killeen, G. F., Kiware, S. S., Okumu, F. O., Sinka, M. E., Moyes, C. L., Massey, N. C., Gething, P. W., Tusting, L. S.
  Going beyond personal protection against mosquito bites to eliminate malaria transmission: Population suppression of malaria vectors that exploit both human and animal blood
  (2017) *BMJ Global Health*, 2 (2), p. e000198.

- Manin, B. O., Ferguson, H. M., Vythilingam, I., Fornace, K., William, T., Torr, S. J., Drakeley, C., Chua, T. H.
  Investigating the contribution of peri-domestic transmission to risk of Zoonotic Malaria infection in humans
  (2016) *PLOS Neglected Tropical Diseases*, 10 (10), p. e0005064.

- Montano, D. E., Kasprzyk, D.
  Theory of reasoned action, theory of planned behavior, and the integrated behavioral model

(2008) *Health behavior and health education*, pp. 67-92.
B. R. K. Glanz & F. Lewis (Eds), (4th ed., –). San Francisco, CA: JosseyBass

- Norhayati, M., Rohani, A. K., Noor Hayati, M., Halimah, A. S., Sharom, M. Y., Zainal Abidin, A. H., Fatmah, M. S.
  Clinical features of malaria in Orang Asli population in Pos Piah, Malaysia
  (2001) *Medical Journal Malaysia*, 56, pp. 271-274.

- Ogden, J., Karim, L., Choudry, A., Brown, K.
  Understanding successful behaviour change: The role of intentions, attitudes to the target and motivations and the example of diet
  (2006) *Health Education Research*, 22 (3), pp. 397-405.

- Oxborough, R. M., Kitau, J., Jones, R., Feston, E., Matowo, J., Mosha, F. W., Rowland, M. W.
  Long-lasting control of Anopheles arabiensis by a single spray application of microencapsulated pirimiphos-methyl (Actellic® 300 CS)
  (2014) *Malaria Journal*, 13, p. 37.

- Pandit, N., Patel, Y., Bhavsar, B.
  Awareness and practice about preventive method against mosquito bite in Gujarat
  (2010) *Healthline*, 1 (1), pp. 16-20.

- Pramasivan, S., Ngui, R., Jeyaprakasam, N. K., Liew, J. W. K., Low, V. L., Mohamed Hassan, N., Wan Sulaiman, W. Y., Vythilingam, I.
  Spatial distribution of Plasmodium knowlesi cases and their vectors in Johor, Malaysia: In light of human Malaria elimination
  (2021) *Malaria Journal*, 20, p. 426.

- Rafidah., A., Ahmad, Rohani, Zurainee, M. N., Noraishah, M. S.
  Preliminary assessment on malaria-related knowledge, attitudes and practices (KAP) amongst visitors at selected recreational parks in Peninsular Malaysia
  (2020) *Serangga*, 25 (2), pp. 108-122.

- Rahim, M. A. F. A., Munajat, M. B., Idris, Z. M.
  Malaria distribution and performance of malaria diagnostic methods in Malaysia (1980–2019): A systematic review
  (2020) *Malaria Journal*, 19, p. 395.

- Rajahram, G. S., Cooper, D. J., William, T., Grigg, M. J., Anstey, N. M., Barber, B. E.
  Deaths from Plasmodium knowlesi Malaria: Case series and systematic review
  (2019) *Clinical Infectious Diseases*, 69 (10), pp. 1703-1711.

- Rajvanshi, H., Bharti, P. K., Nisar, S., Jayswar, H., Mishra, A. K., Sharma, R. K., Saha, K. B., Lal, A. A.
  A model for malaria elimination based on learnings from the Malaria elimination demonstration project, Mandla district, Madhya Pradesh
  (2021) *Malaria Journal*, 20, p. 98.

- Roughton, S., Green, A.
  Plasmodium knowlesi Malaria: Assessing the risk to the British Armed Forces
  (2012) *Journal of the Royal Army Medical Corps*, 158 (4), pp. 318-321.

- Sangho, O., Tounkara, M., Whiting-Collins, L. J., Beebe, M., Winch, P. J., Doumbia, S.
  Determinants of intermittent preventive treatment with sulfadoxine–pyrimethamine in pregnant women (IPTp-SP) in Mali, a household survey
  (2021) *Malaria Journal*, 20, p. 231.

- Sluydts, V., Durnez, L., Heng, S., Gryseels, C., Canier, L., Kim, S., Van Roey, K., Coosemans, M.
  Efficacy of topical mosquito repellent (Picaridin) plus long-lasting insecticidal nets

versus long-lasting insecticidal nets alone for control of Malaria: A cluster randomised controlled trial
(2016) *The Lancet Infectious Diseases*, 16 (10), pp. 1169-1177.

- Tangena, J. A. A., Thammavong, P., Wilson, A. L., Brey, P. T., Lindsay, S. W.
Risk and control of Mosquito-Borne diseases in Southeast Asian Rubber Plantations
(2016) *Trends in Parasitology*, 32 (5), pp. 402-415.

- Van Roey, K., Sokny, M., Denis, L., Van den Broeck, N., Heng, S., Siv, S., Sluydts, V., Durnez, L.
Field evaluation of Picaridin repellents reveals differences in repellent sensitivity between Southeast Asian vectors of Malaria and Arboviruses
(2014) *PLoS Neglected Tropical Diseases*, 8 (12), p. e3326.

- Wilson, A. L., Chen-Hussey, V., Logan, J. G., Lindsay, S. W.
Are topical insect repellents effective against Malaria in endemic populations? A systematic review and meta-analysis
(2014) *Malaria Journal*, 13 (1).

- (2017) *Outcomes from the evidence review group on plasmodium knowlesi (WHO/HTM/GMP/MPAC/2017.8)*,
Retrieved June 23, 2023, from

- (2020) *World Malaria report 2020: 20 years of global progress and challenges*,

- (2021) *WHO Malaria Policy Advisory Group (MPAG) meeting*,
(April). 19th meeting of the Malaria Policy Advisory Group (MPAG), 13-15 April 2021

- Zint, M.
Comparing three attitude-behavior theories for predicting science teachers' intentions
(2002) *Journal of Research in Science Teaching*, 39 (9), pp. 819-844.

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Publisher: Penerbit Universiti Kebangsaan Malaysia

ISSN: 2289151X
Language of Original Document: English
Abbreviated Source Title: Jurnal Komunikasi Malays. J. Commun.
2-s2.0-85164399302
Document Type: Article
Publication Stage: Final
Source: Scopus