

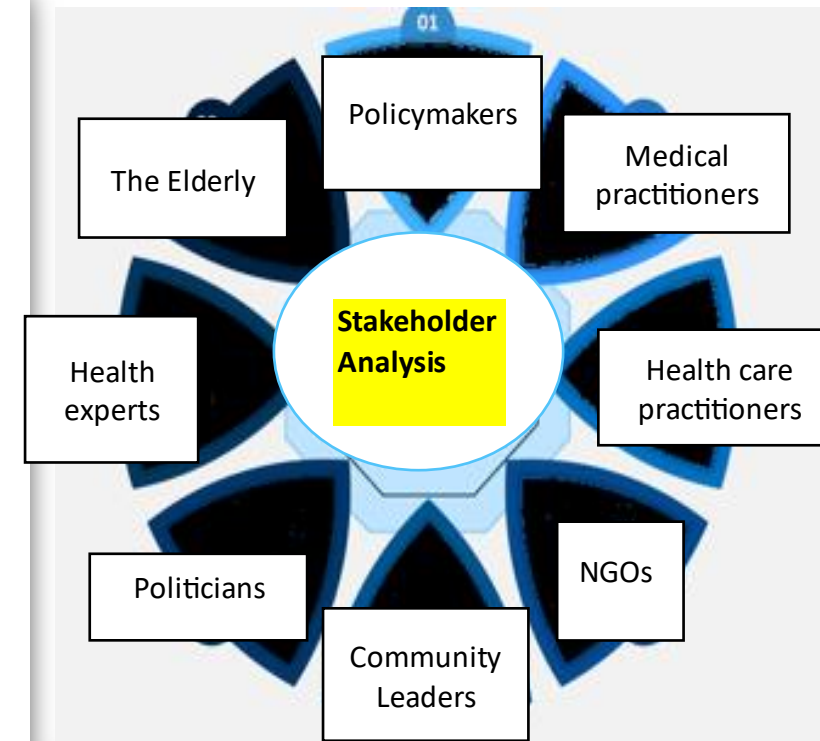
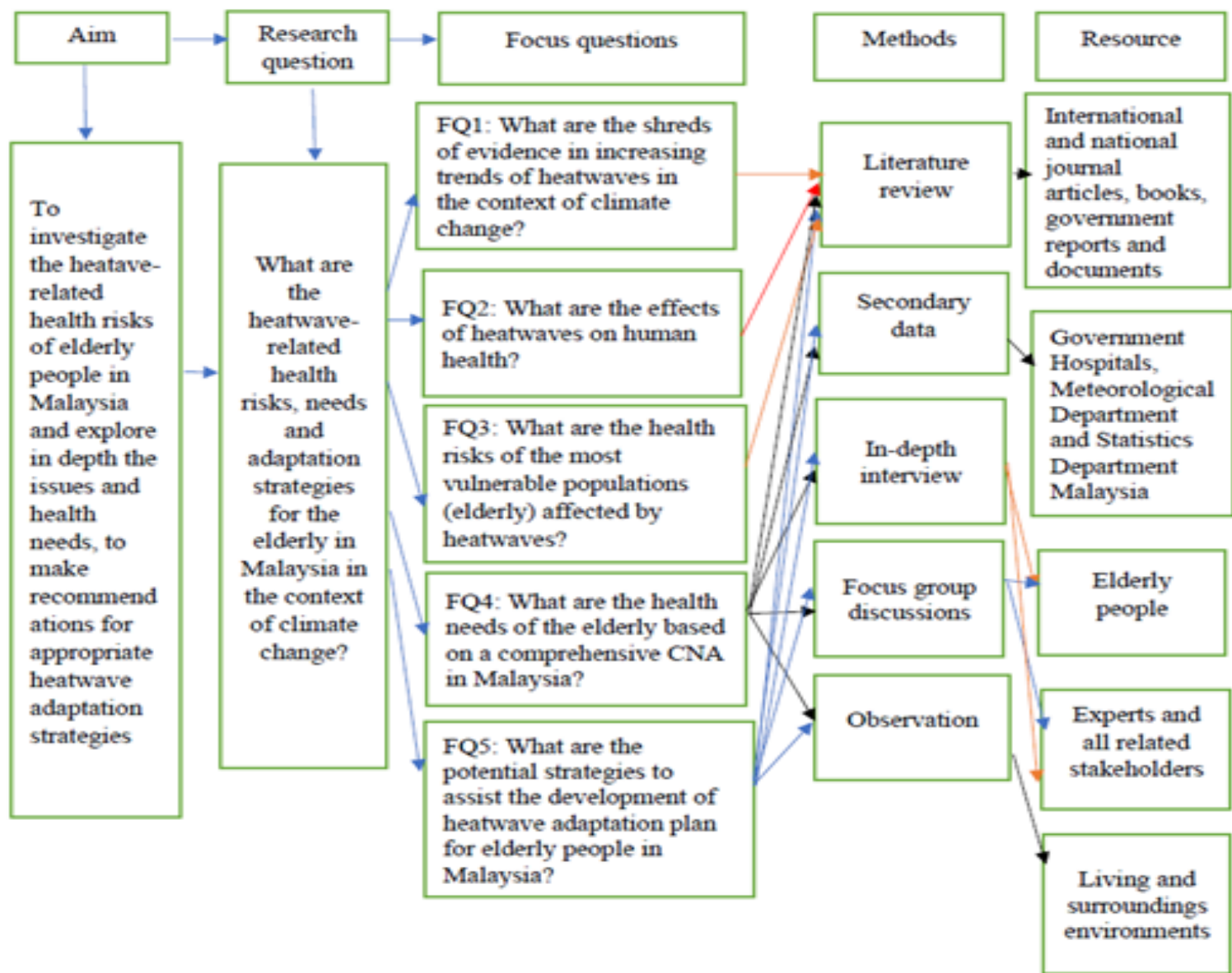
Heatwave-related health risks for the elderly: A needs assessment approach to developing adaptation strategies for Malaysia

Introduction

- Human activities have caused increasing greenhouse gas concentration levels in the atmosphere and induced climate change.
- Due to climate change, one of the climate-related events has been increasing in frequency, intensity, and duration, which is a heatwave.
- A heatwave poses the greatest health risks to the world community in terms of morbidity and mortality. The elderly are among the most vulnerable groups to heatwaves.
- Malaysia is among one of the high-risk countries exposed to heatwaves.
- ❖ Thus, this study aims to investigate the heatwave-related health risks of elderly people in Malaysia and explore their issues as well as health needs to inform decision-makers in developing a need-based heatwave adaptation plan.



Research Framework



Model 1
Temperature-mortality

$$M_t \sim \text{Poisson}(\lambda_t)$$

$$\ln(\lambda_t) = \beta_1 + \pi_1 \text{HW3D}_t + \alpha_1 \text{ATmean}_t + S(\text{ATmean}_t, 3) + S(\text{DRF}_t, 3) + S(\text{DMEANRH}_t, 5) + \delta_1 \text{DOW}_t + \varepsilon_1 \quad [1]$$

Model 2
Temperature-hospitalisation

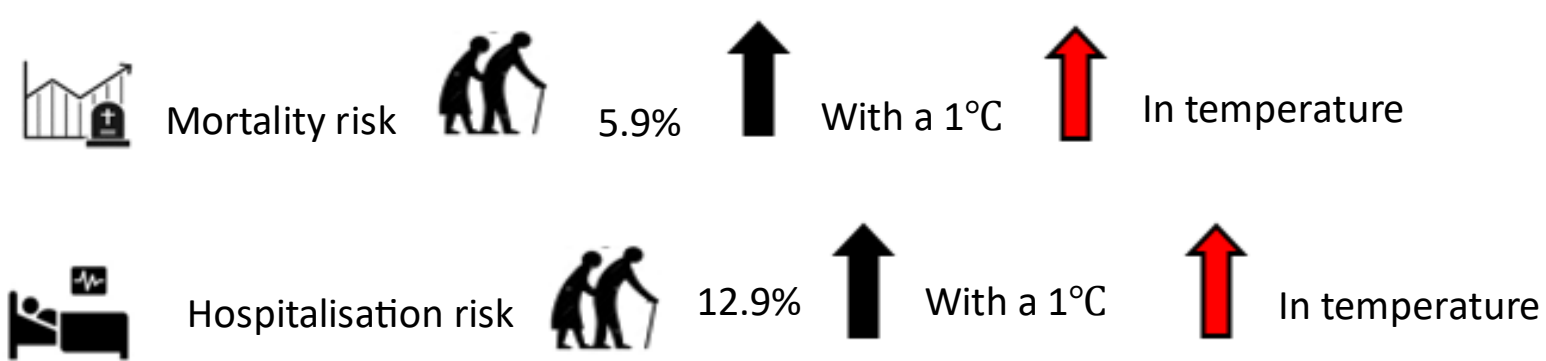
$$N_t \sim \text{Poisson}(\mu_t)$$

$$\ln(\mu_t) = \beta + \pi \text{HW3D}_t + \alpha \text{ATmean}_t + S(\text{ATmean}_t, 5) + S(\text{DRF}_t, 5) + S(\text{DMEANRH}_t, 8) + \delta \text{DOW}_t + \varepsilon \quad [2]$$

Research Significance

- Provides a greater understanding regarding the health impacts and heatwaves from the different regions, locations, and adaptive capacity of its elderly population.
- Propose potential adaptation strategies to reduce the elderly health risks from heatwaves through the Community Needs Assessment Model.
- Offers insights into future policy implications as results from this study may assist policymakers to formulate a holistic policy for elderly people in Malaysia and the surrounding region.

Primary findings



*The analysis of qualitative data from stakeholders and elderly participants is still in progress!

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