

AIR POLLUTION HEALTH LITERACY AMONG ACTIVE COMMUTERS IN HAMILTON, ON

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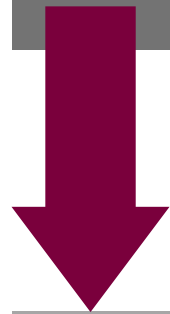
Background

Why active transportation and air pollution?

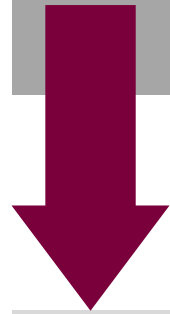
- Active transportation has been offered as solution for curbing vehicular related emission
- While beneficial, adoption of active transportation is relatively low and vehicle emissions remain high
- Active commuters may incur greater health risk during commutes
 - 1) Proximity
 - 2) Higher inhalation rates
 - 3) Duration
 - 4) Time
- Problematic: Exposure to air pollution is associated with short-term and long-term health implications

Purpose

Explored how active commuters understand these health risks and if they engage in efforts to mitigate air pollution exposure



Environmental Health Literacy (EHL) to evaluate public comprehension and utilization of environmental health, risk information to empower health protective behaviours



Assess Air Pollution Health Literacy

Data & Methods

- Anonymous survey, 200+ responses
- Transportation, SES-Demographic questions, and air pollution knowledge and behaviours
- 3 dimensions of EHL was used to develop the survey tool adapted to focus on air quality

1

awareness, knowledge, and
understanding

2

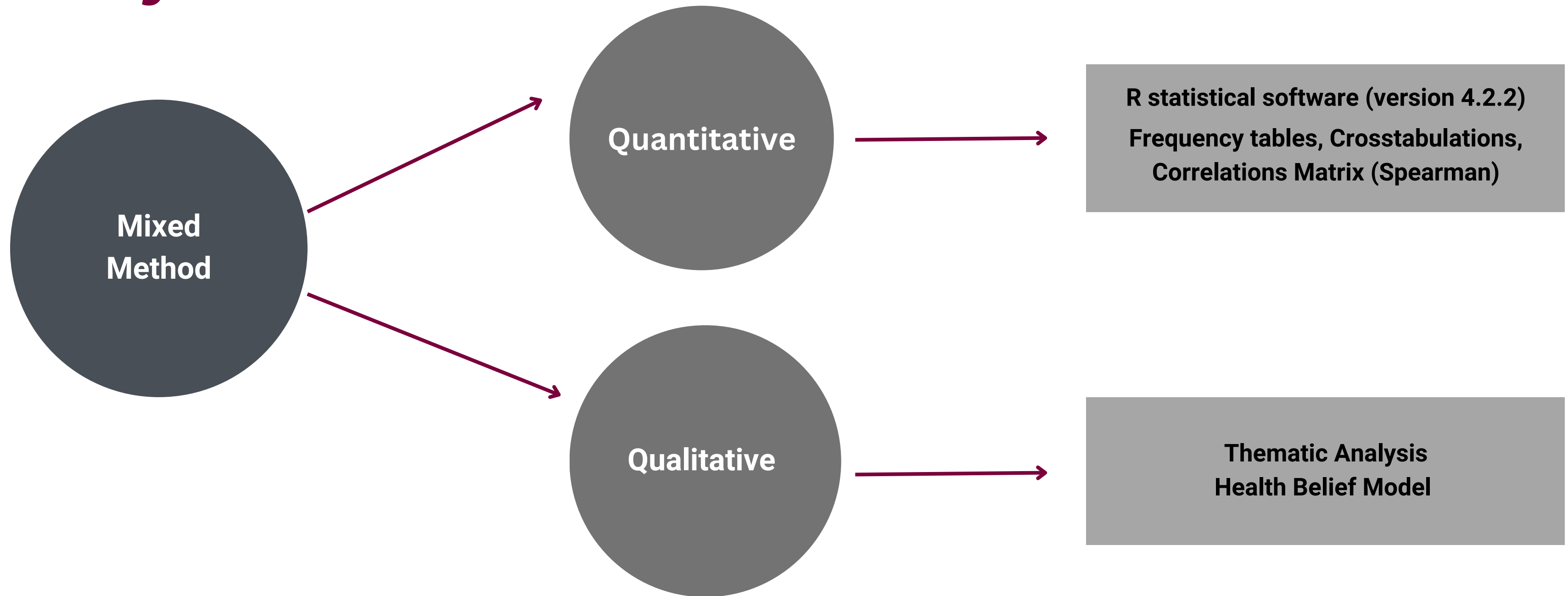
skills and self-
efficacy

3

Individual action and
change

Data & Methods

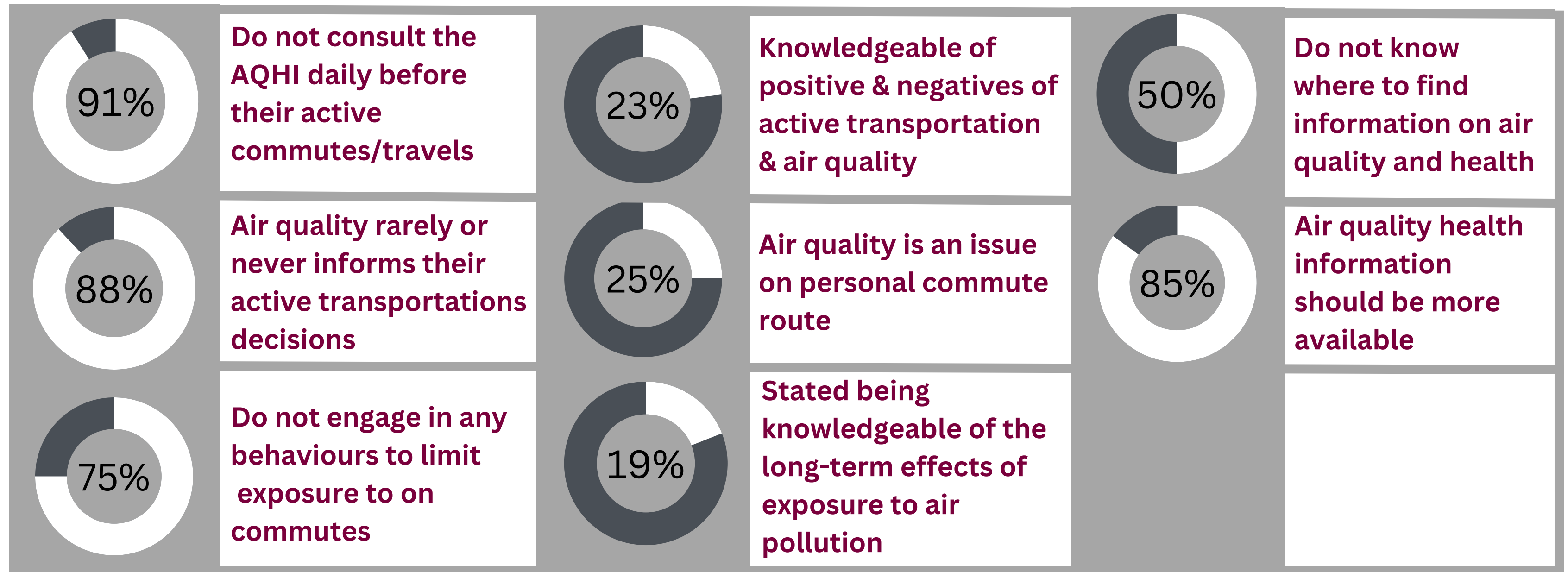
Analysis



Results

Frequency Tables

Air Quality Concerns, Behaviour, and Knowledge



Results

Crosstabulations

- Individuals that reported low self-rated knowledge were less likely to engage in any health protective behaviours
- AQHI checking shared a relationship with behaviour modification
- Not knowing where to find air quality and health information was associated with poor self-rated knowledge

Correlation matrix

- Strong agreeance that air quality is an issue on commutes -> air quality informs active transportation decisions (adverse also true)
- Strong disagreement that air quality is issue on commute -> not concerned of air pollutions impact on health (adverse true)
- Knowledgeable of long-term impacts of air pollution exposure and concern of air quality's impact on health
- Concern over air pollutions impact on health correlated with strongly agreeing that air quality and health information should be made more available to the public

Results

Time and efficacy as barriers and adopting out of health protective behaviour

Air quality sources and concerns bound by geography (industrial sector)

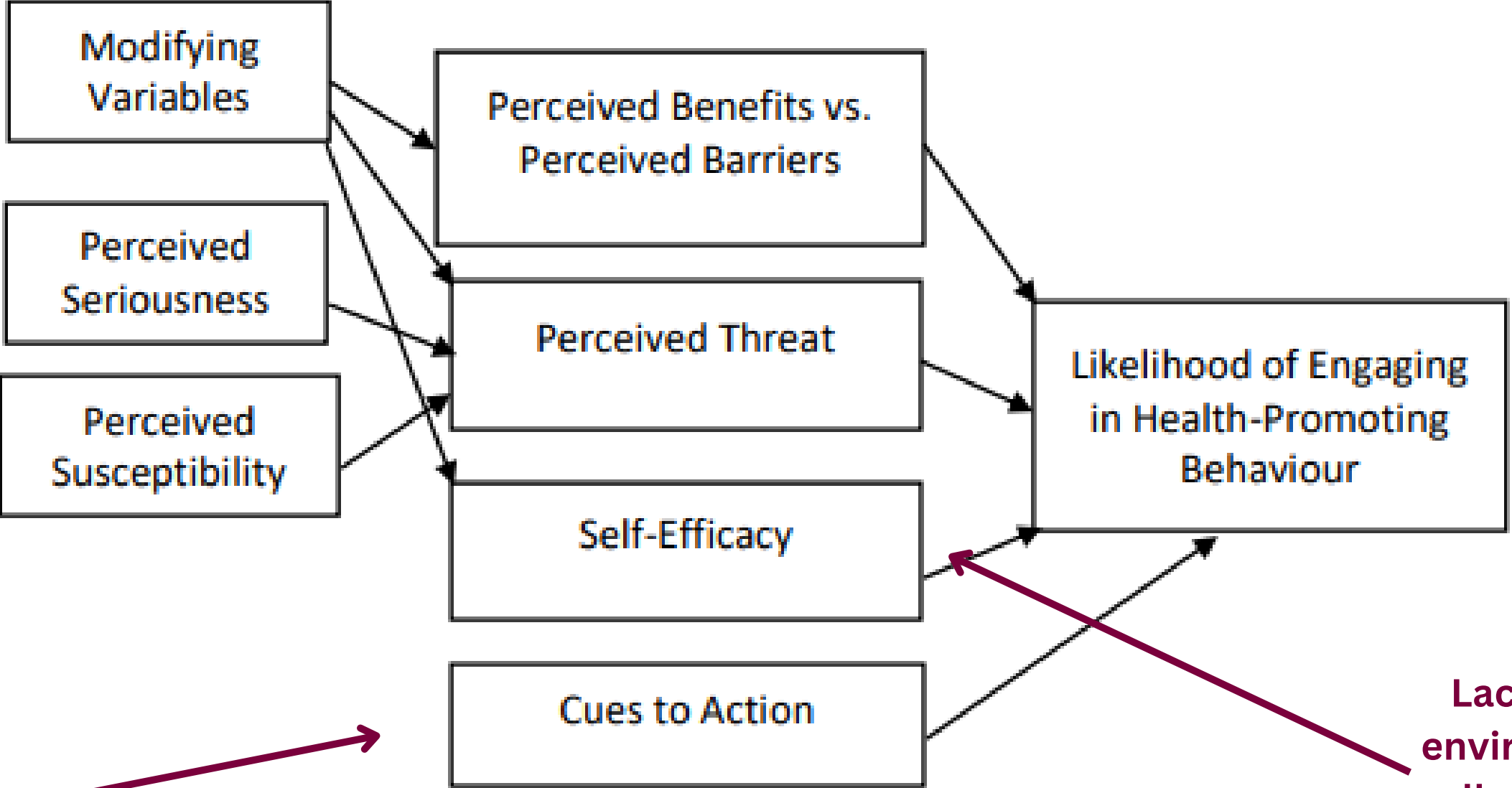


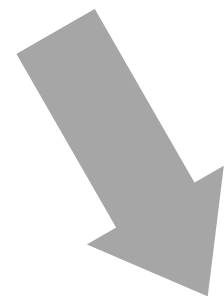
Figure 1- Health Belief Model (HBM)

Lack of perceived control of environmental exposures to air pollution and uncertainty about what steps to take

Discussion

1

Air pollution health literacy among active commuters in Hamilton is low



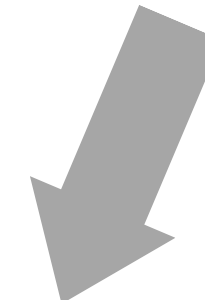
2

Misinformation and lack of critical information



3

Self-efficacy and perceived susceptibility and severity



Knowledge of air pollution health risks is a predictor of adopting self-protective behaviour

Conclusion

- Filled a gap in the literature on active commuters understanding of air quality health risks on commutes
- Confirmed and extended the knowledge-behaviour relationship to active commuters
- Adapt the key dimensions of EHL to create a survey tool for air pollution health literacy
- Improving air pollution health literacy is possible through effective knowledge translation and dissemination

Recommendation: mobilize knowledge that equips and empowers active commuters with accurate and tangible information to mitigate air pollution exposure

Thank you!

Questions?