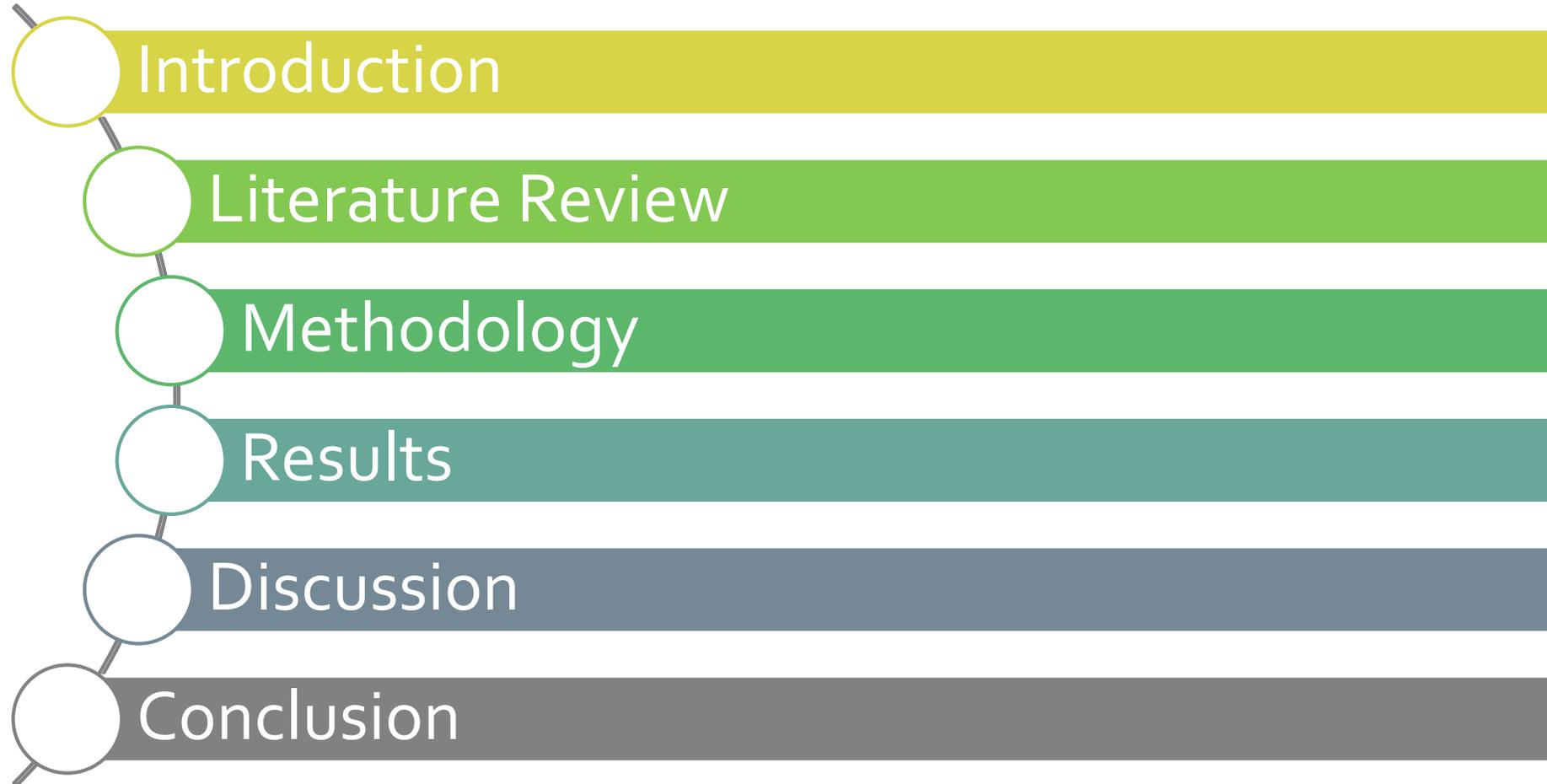


THE INFLUENCE OF PERSONAL EFFICACY ON BEHAVIORAL INTENTION OF CLIMATE CHANGE MITIGATION

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Outlines



Introduction

- Information deficit model on climate change issue → Values, belief and attitudes to climate change are often ignored (Moser, 2016; Leiserowitz, 2006; Lorenzoni, Nicholson-Cole, & Whitmarsh, 2007)
- Focus on lifestyle emission in European, Western countries → Lack of perspectives on lifestyle changes in developing, vulnerable to climate change country

Literature Review

Psychological
barriers

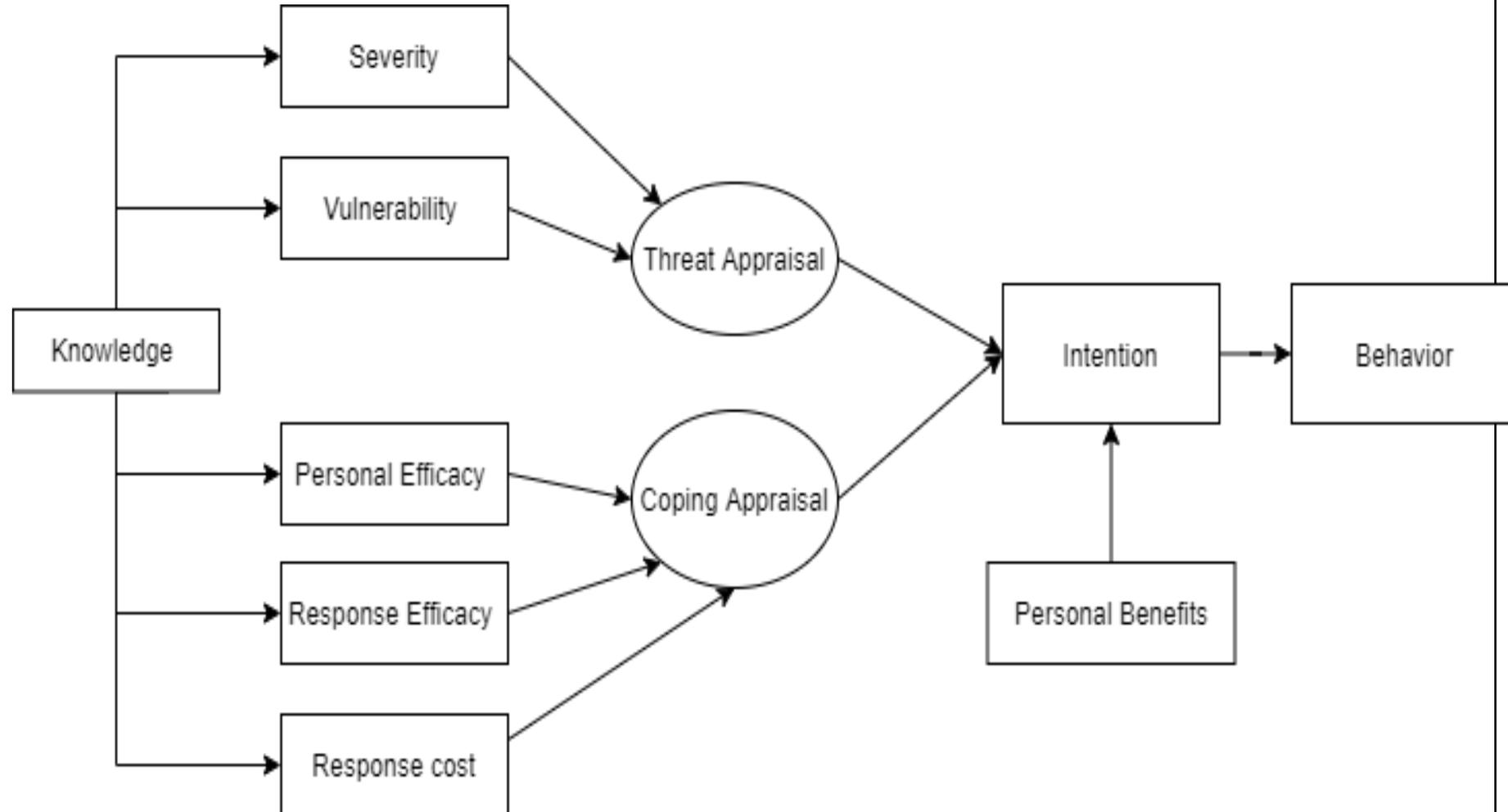
Psychological distance (Liberman & Trope, 2008)

Negative feelings (O'Neill & Nicholson-Cole, 2009)

Complexity and uncertainty (Bostrom & Lashof, 2007)

Literature Review

Protection
Motivation Theory:
combining fear
appeals with
personal efficacy to
promote change in
behavior (Rogers,
1975)



Detailed questions

Protection Motivation Theory constructs	Items	Type of questions
Severity	<ul style="list-style-type: none"> • Climate change is a serious issue • Climate change will have negative consequences • The negative impact of climate change is apocalyptic • The thought of climate change scares me 	Likert Scale
Vulnerability	<ul style="list-style-type: none"> • Climate change can negatively affect me and my family • I will experience the negative effects of climate change in my lifetime • I have a high chance of being vulnerable to the negative effects of climate change 	Likert Scale
Response efficacy	<ul style="list-style-type: none"> • Which actions do you think will reduce climate change impacts? 	Likert Scale
Personal efficacy	<ul style="list-style-type: none"> • Which actions do you think you are capable of doing? • Which actions have you taken in real life to mitigate climate change impacts? (open-ended) 	Dichotomy

Detailed questions

Protection Motivation Theory constructs	Items	Type of questions
Response costs	<ul style="list-style-type: none">• Actions to mitigate climate change costs too much money• I don't know what actions will decrease negative effects of climate change• Actions to mitigate climate change takes up too much time• I find it inconvenient to take steps to mitigate climate change	Likert Scale
Personal benefits	<ul style="list-style-type: none">• Save money• Better health• Meaningful life• Responsible• Easy to perform action	Likert Scale

Problem statement

- Case Study: Vietnam - a growing economy facing high climate change risks.



Photo: Drought in Ben Tre province, Vietnam, March 2020
Source: Ngoc Dung – Thanh Nien Newspaper



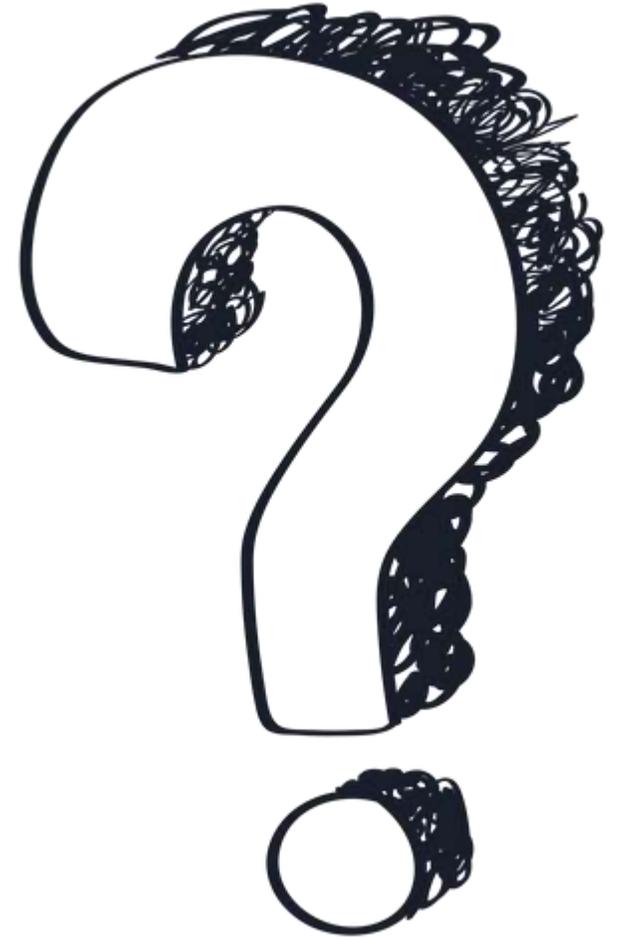
Photo: Flooding in Vietnam
Source: Tien Phong Newspaper

Problem statement

- Climate change perception: focus on adaptation and farmers' perception in disaster-prone areas of Vietnam
- Vietnam's national policy: prioritizes climate change adaptation over mitigation.

Research questions

- How is climate change perceived by people living in two largest urban areas of Vietnam – Hanoi and Ho Chi Minh City?
- Which factors influence their individual mitigation behavior?



Methodology

- ❖ Data collection
 - Pilot study
 - Quota sampling in two cities of Vietnam
 - Qualtrics panel service
- ❖ Questionnaire
- ❖ Data analysis
 - Structural Equation Modelling – identify the influence of different factors on climate change behavior



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Preliminary results – Pilot study

Goals:

- Test the validity of questionnaire items
- Explore climate change perception through open-ended questions

Results:

- 42 responses - 41 usable
- Understand the sources of climate change information
- Identify possible motivation factors to change behavior

Pilot study - Survey design

1. Demographic

- Age
- Gender
- Income
- Education

2. General information on climate change

- Source of CC information/Causes and impacts of CC
- Open-ended questions: define climate change/what CC info is not covered in the media?/what are CC impacts?

3. Protection motivation theory constructs

- Severity
- Vulnerability
- Response efficacy
- Personal efficacy
- Response cost

Pilot study – Sample summary

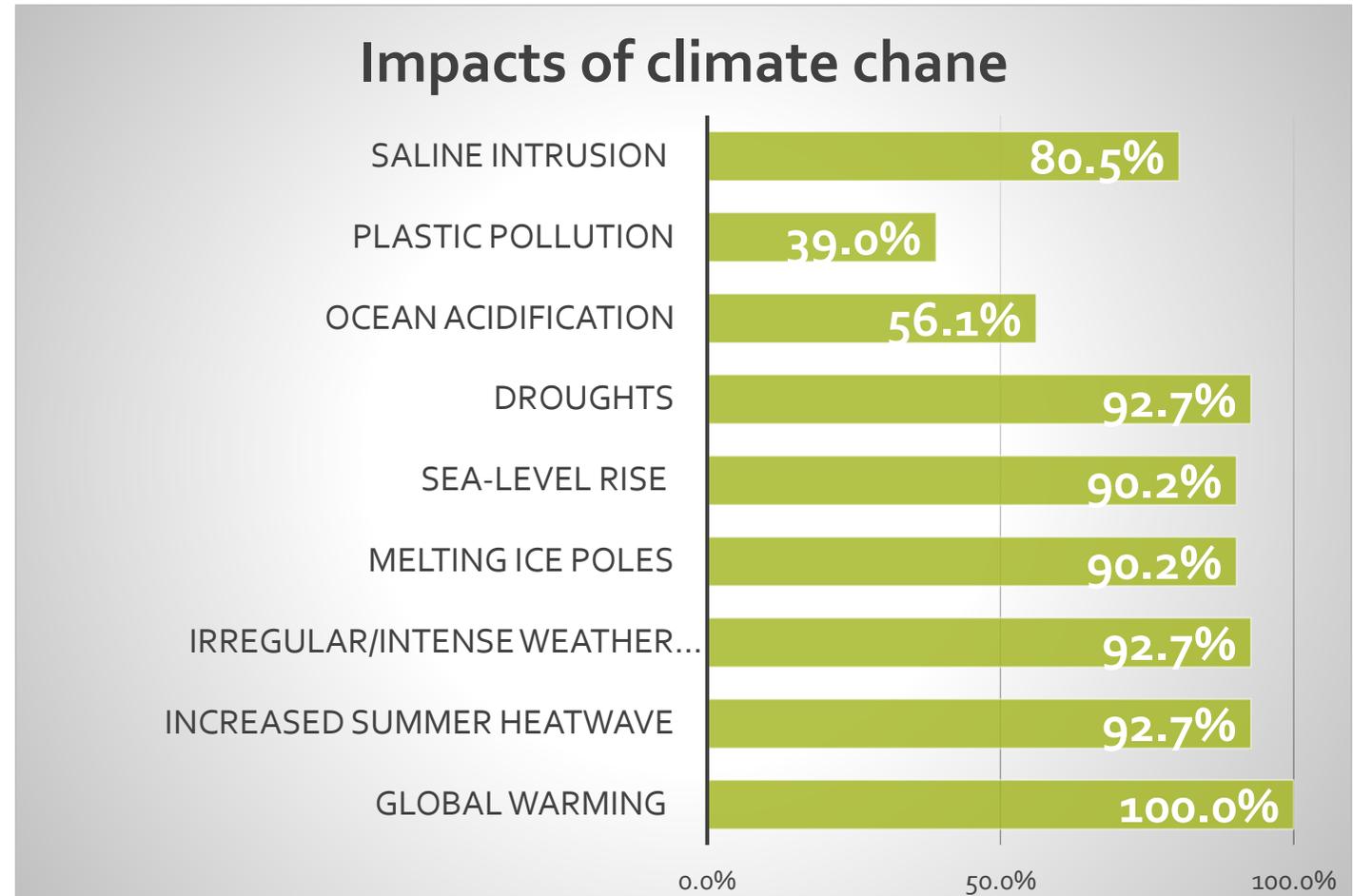
- Sample size overly represented by female (82.9%), young (M=30, SD =4.42)
- Income: Low to middle income (<5 million VND -20 million VND (216 – 864 USD per month=73.1%)
- Education: Graduate student (80.5%)

Pilot study – Climate change information

- Main sources of information:
 - Social media (95.1%)
 - TV (90.2%)
 - Online newspaper (87.8%)
 - Formal education (56.1%)
- Quality of information about CC is perceived into two camps: sufficient/insufficient, and some participants expressed doubts and vagueness towards CC information they received

Pilot study – Climate change perception

- ❖ All respondents believe climate change is happening, even though there are different opinions on causes of climate change (natural vs man-made)
- ❖ Open-ended question: define climate change
 - Change in climate over long period of time (25/41)
 - Negative change/consequences
 - Uncertain about climate change causes (natural/man-made)
 - Based on impacts rather than mechanism
- ❖ Climate change impacts are well-understood (demographic influence)



Pilot study – Protection Motivation Theory

Factor	Number of Items	Validity
Severity	4	$\alpha=0.73$, $M=4.10$, $SD=0.57$
Vulnerability	3	$\alpha=0.85$, $M=4.00$, $SD=0.13$
Response cost	4	$\alpha=0.90$, $M=2.12$, $SD=0.15$
Personal benefits	5	$\alpha=0.88$, $M=3.98$, $SD=0.11$

Pilot study – Protection Motivation Theory

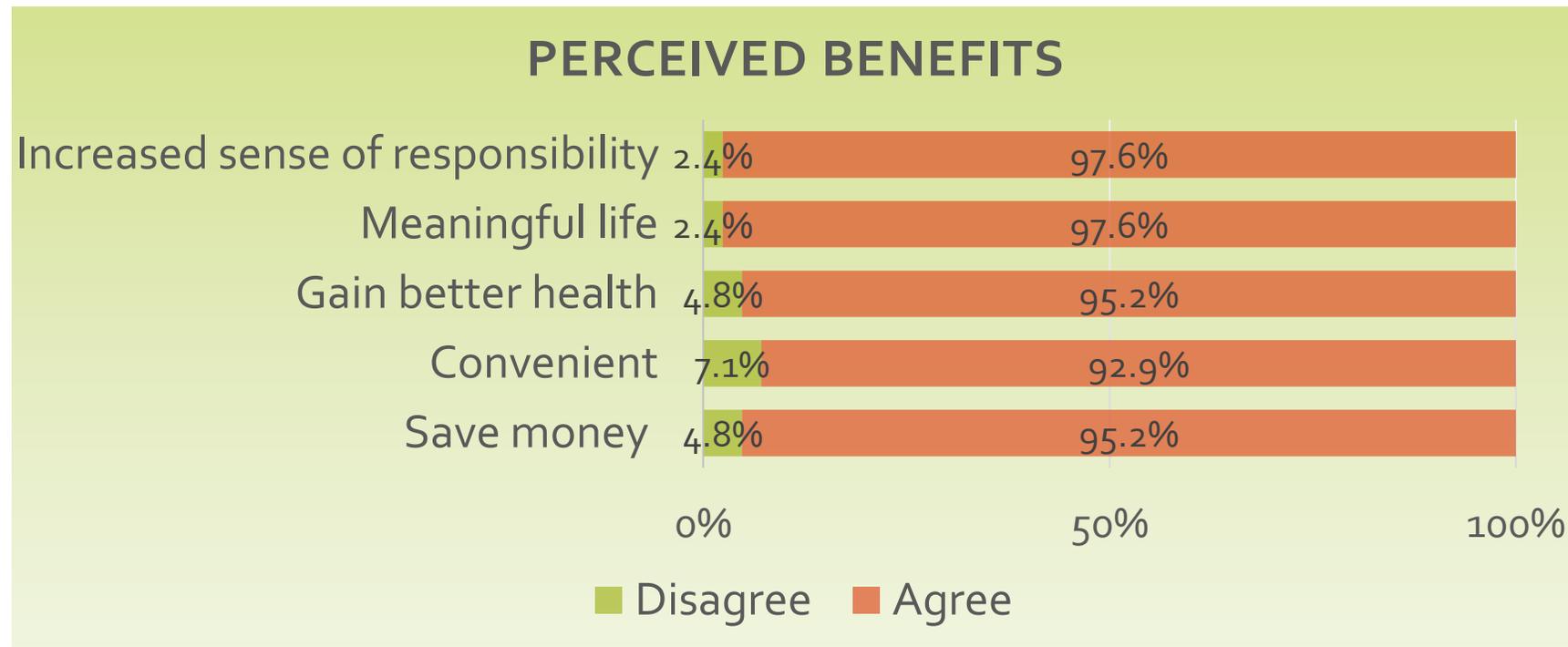
- Response efficacy: Save electricity, save water, use public transport, eat more vegetable, reduce consumption, reuse = most effective solutions to climate change
 - Highly-effective action like living car-free and avoid air travel = perceived as less effective --> possible influence by well-being/convenience

Pilot study – Protection Motivation Theory

Personal efficacy items	Can do (%)
Reduce/stop using products from cows	71
Travel without airplane	37
Walk/Cycle or use public transport in daily life	83
Using energy-efficient appliances (e.g. light bulb, television, air-conditioner, fridge)	93
Keeping air-conditioner temperature at 25-27°C in hot summer	85
Shop local where you live	88
Limit using imported products	63
Don't waste food	95
Reuse old, second-hand stuffs	95
Gift or donate your old things	95

Pilot study – Protection Motivation Theory

- Personal perceived benefits



Discussion

❖ Source of information

- Media communication of CC may not meet current demand
- Lack of formal education on CC
- Majority of respondents understood climate change impacts and causes (demographic: higher education level)
- Perception of climate change are often linked with negative impacts rather than mechanism and causes

❖ Protection Motivation Theory

- Low-support for specific behavior (travel without airplane) (37% respondents) → habit influence
- Motivation to change behavior = monetary values and moral obligations

Limitations

- Survey design
 - Bias questions
 - Negatively worded questions
 - Double-barreled questions
- Scale measurements
 - Need measurements for behavior intention
 - Consistent scale measurements between different variables

Conclusion

- Adjustment to the questionnaire
- Finding out which factors influence behavior
- Does benefits play a role in driving behavior change?

References

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