

Knowledge, Attitudes and Behaviors of Hong Kong citizens on Extreme Rainfall under the Climate Change

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RESEARCH BACKGROUND

- The frequency & intensity of extreme rainfall under climate change in HK will increase, more likely to trigger flooding & landslides
- Gov. & citizens play equally important roles in mitigating & adapting to extreme rainfall under climate change

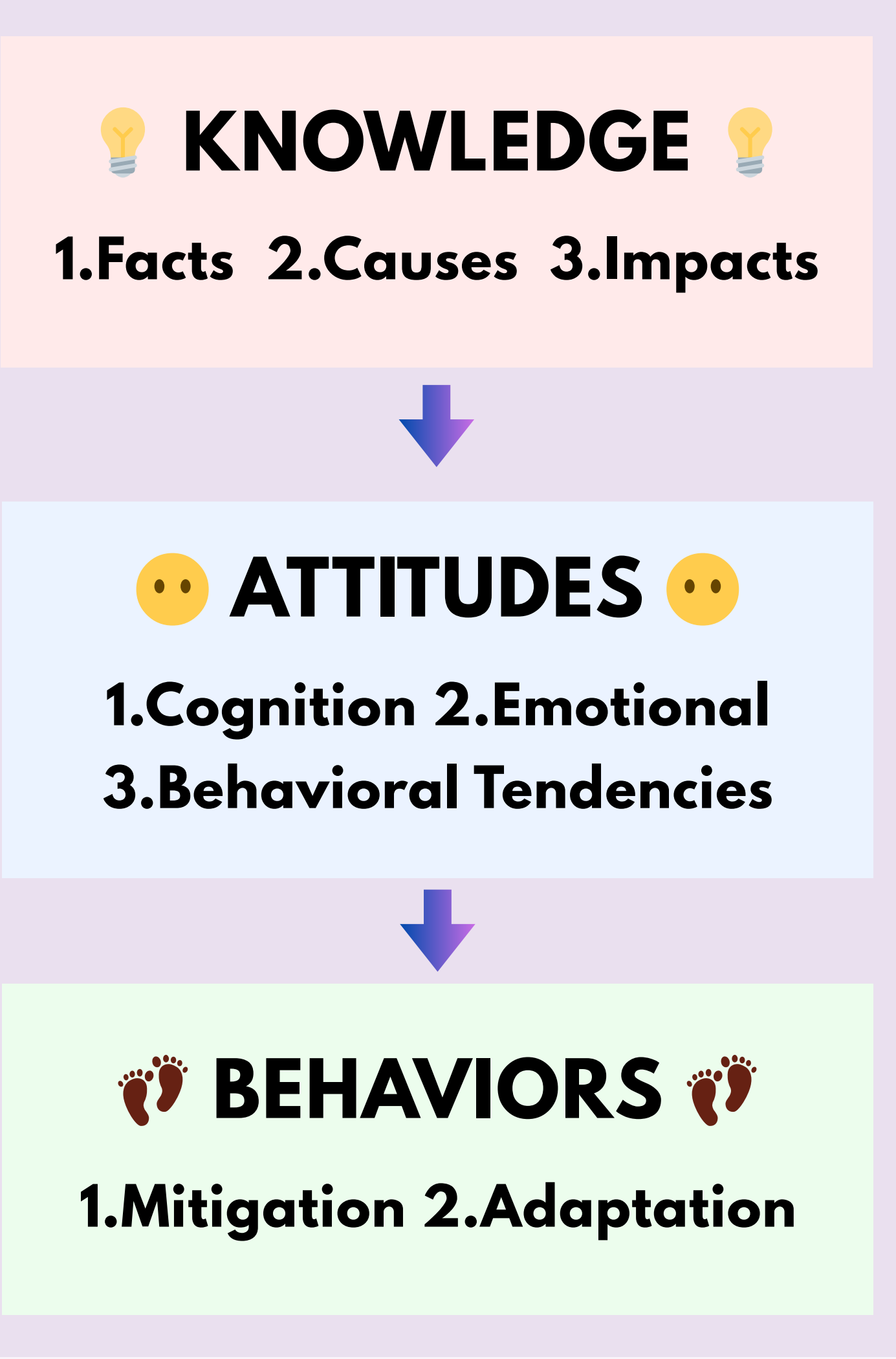
RESEARCH SIGNIFICANT

- Filling the research gap on citizens' knowledge, attitudes and behaviour(KAB) towards extreme rainfall under climate change
- Better formulate relevant education & policies
- Promote citizen action to mitigate & adapt for extreme rainfall under climate change by raising public awareness

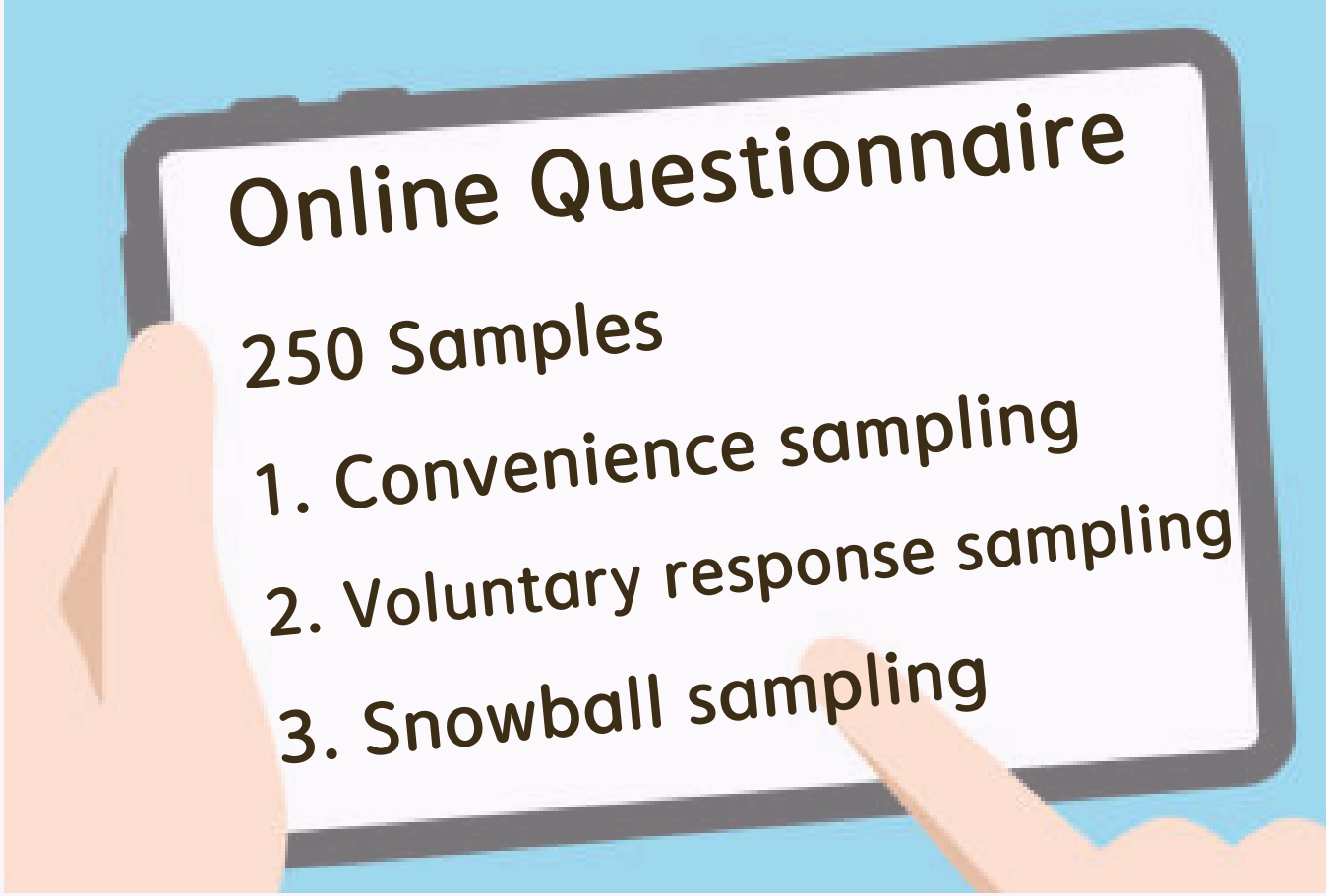
RESEARCH OBJECTIVES

- To reveal the knowledge of citizens about the causes and effects of extreme rainfall under climate change
- To know the attitudes of citizens towards mitigating and adapting to rainfall under climate change
- To investigate the behaviors of citizens to mitigate and adapt extreme rainfall climate change
- To determine the relationship between citizens' KAB

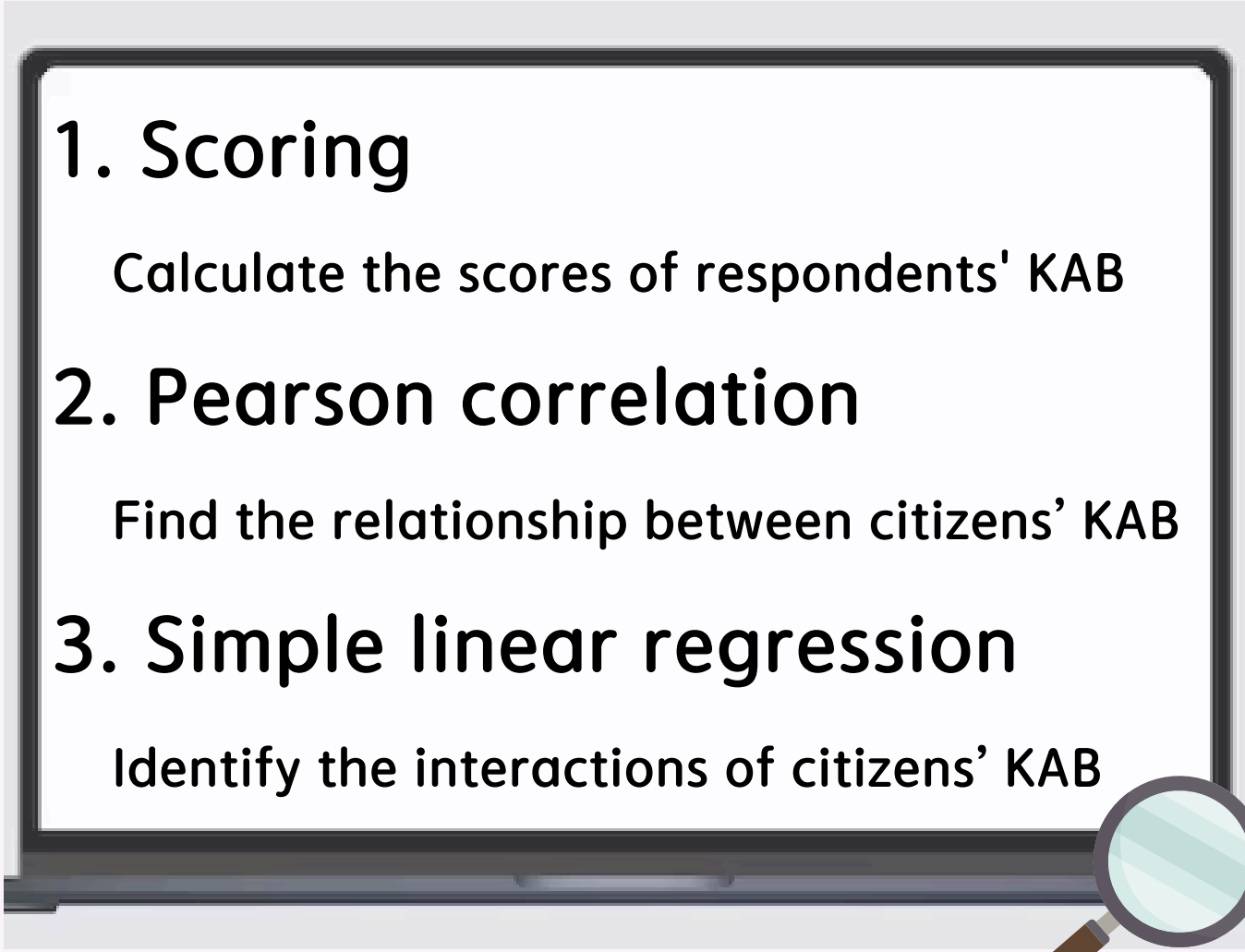
CONCEPTUAL FRAMEWORK



DATA COLLECTION



DATA ANALYSIS



MAJOR FINDINGS & IMPLICATIONS

Hong Kong citizens' knowledge on extreme rainfall under climate change (N=250)					
Category	Question	Highest Score	Lowest Score	Mean	SD
Causes of climate change	1-3	6/6	0/6	4.2/6 (70%)	1.28
Impacts of climate change	4-7	4/4	0/4	3.0/4 (75%)	1.12
Knowledge about climate change	1-7	10/10	2/10	7.2/10 (72%)	2.07
Facts about extreme rainfall	8-10	3/3	0/3	2.3/3 (76.7%)	0.98
Causes of extreme rainfall	11	5/5	1/5	3.2/5 (64%)	1.03
Impacts of extreme rainfall	12-16	8/12	2/12	6.0/12 (50%)	1.37
Knowledge about extreme rainfall	8-16	16/20	4.5/20	11.5/20 (57.5%)	2.62
Overall	1-16	25.5/30	7.5/30	18.7/30 (62.3%)	4.23

Citizens' knowledge of extreme rainfall under climate change is "Average"

Citizens' knowledge of climate change(72%) > Knowledge of extreme rainfall(57.5%)

Knowledge about greenhouse gases is still insufficient

Insufficient understanding of its causes & potential impacts

Especially: Water pollution & Unstable power supply

Hong Kong citizens' behaviors on extreme rainfall under climate change (N=250)					
Category	Que	Highest Score	Lowest Score	Mean	SD
Action about climate change mitigation behaviors	37-41	25	5	18.83/25 (3.77/5)	3.1
Raise awareness of extreme rainfall	42-44	15	3	9.82/15 (3.27/5)	2.6
Household preparedness behaviors for extreme rainfall	47-52	30	7	16.49/30 (2.75/5)	4.4
Household response behaviors for extreme rainfall	55-60	30	10	19.68/30 (3.28/5)	3.7
Overall Behaviors	18-36	100	39	64.82/100 (3.24/5)	10.3

Citizens' behavior frequency is between "Sometimes" and "Often" but tends to be "sometimes"

Citizens perform better in mitigating climate change: Energy saving & Carbon reduction

Citizens' behavior frequency of mitigating climate change > adapting extreme rainfall

The frequency of Household response behaviors for extreme rainfall > preparedness behaviors

Stay at home & Pay attention to the news from the HKO

First aid measures & Evacuation drills

Hong Kong citizens' attitude on extreme rainfall under climate change (N=250)					
Category	Que	Highest Score	Lowest Score	Mean	SD
Values of climate change and extreme rainfall	18-23	30	12	23.96/30 (3.99/5)	4.4
Feelings about climate change and extreme rainfall	24	5	1	3.78/5 (3.78/5)	0.9
Attitudes towards climate change mitigation	25-29	25	7	16.97/25 (3.39/5)	3.6
Attitudes towards extreme rainfall adaptation	30-36	35	11	25.46/35 (3.64/5)	3.9
Overall Attitudes	18-36	93	41	70.17/95 (3.69/5)	10.6

Citizens' attitude is neutral but tends to be positive

Citizens' attitude towards climate change mitigation > extreme rainfall adaption

Citizens are willing to make sacrifices to slow the climate change: Daily convenience > Time > Personal benefits

Citizens agree that it is important to understand extreme rainfall & prepare for it

Impact of knowledge on extreme rainfall under climate change on attitudes					
Independent variable	Unstandardized Coefficient	Coefficient Standard error	Standardized Coefficient (β)	T-value	P-value
Constant term	43.785	2.535		17.273	< 0.001
Knowledge	1.413	0.132	0.561	10.671	< 0.001

The higher knowledge(K) of the citizens => the more positive their attitudes(A)

Impact of attitudes on extreme rainfall under climate change on behaviors					
Independent variable	Unstandardized Coefficient	Coefficient Standard error	Standardized Coefficient (β)	T-value	P-value
Constant term	36.033	3.945		9.133	< 0.001
Behaviors	0.410	0.056	0.424	7.381	< 0.001

The higher attitudes(A) of the citizens => the more positive their behaviors(B)

Citizens' KAB towards extreme rainfall under climate change : Only at a basic level

1. Inadequate disaster prevention capacity => Educational needs

2. Community vulnerability => Community participation

3. Low long-term adaptation capacity => Long-term planning

SUGGESTIONS

EDUCATION

- School curriculum: more issues of extreme rainfall under climate change in primary general studies & junior geography
- Social media: rebranding of the HKO's low-view educational videos & interactive formats to attract public participation
- TV: convey knowledge of extreme rainfall & specific countermeasures through Quiz shows & Reality shows

COMMUNITY

- Provide convenient resource sharing programs
- Promote material sharing & exchange activities to enable residents to easily access necessary supplies before extreme rainfall

GOVERNMENT

- Financial subsidies
Reduce the financial burden of citizens in purchasing emergency supplies
- Cooperating with businesses
Promote preferential activities for purchasing emergency supplies regularly