SEAMEO CENTRES POLICY RESEARCH NETWORK (CPRN) SUMMIT 2025

Building Bridges to a Sustainable Future: Inclusive Collaboration and Innovation in Education, Science, and Culture

The Knowledge, Attitudes, Practices (KAP) toward Food Security during COVID-19 crisis: case study among urban Indonesia and the Philippines

Dwi Nastiti Iswarawanti, Arienta R.P Sudibya[1], Jesus C. Fernandez[1], Pedcris M. Orencio [2], Risa Rosita[3], Gerlie T. Tatlonghari[4], Anna Gale C. Valez[4], Donna B. Malayang[4]

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Background

- **Crisis situation**, like the COVID-19 pandemic, can affect food security status of households, including in **urban communities**
- Multi dimensions of food security: food availability, accessibility, utilization and stability
- **Indonesia and the Philippines** in that rank 1st and 2nd in terms of total population and the number of recorded COVID-19 cases (ASEAN, 2021, CSIS, 2021)
- Evidence of KAP on food security dimension and factors influencing the food security would provide strategies to prevent threatening during crisis in the countries

Objectives

- Analyze the association between the KAP on food security dimensions with food security status ;
- Analyze the key determinants of the food security;
- Recommend specific strategies to mitigate the food insecurities among urban households in Indonesia and the Philippines during the crisis.

Methodology

- **Population & Sample**

  Indonesia : Matraman sub-district (East Jakarta), South Bogor sub-district (Bogor)

  Philippines : 6 barangays in Los Banos municipality

  One hundred twenty (**120) randomly selected** HH from each country

- **Face-to-face interview** done by trained enumerators using **pre-tested structured** questionnaires of Indonesia and Tagalog versions in June-July 2022
- Food Insecurity Experience Scale Survey Module -**FIES -SM (** FAO)
- **Ethical approval :** the ethical committee of the Faculty of Medicine of Universitas Indonesia. Informed consents obtained after were informed about the objectives and study benefits
- **Multinomial logistic regression** to analyze determinant factors in respective countries

Findings

Food security status :

- 79.3 % and 84.2 % of Indonesian and Filipino HH affected by food insecurity during COVID-19 pandemic, ($p<0.001$)

KAP between countries:

- Indonesian HH significantly higher knowledge (50.0% vs. 25.0%) and attitude (50.0% vs. 26.6%) scores
- Filipino HH significantly higher practice scores in accessibility (68.8% vs. 56.3%) and stability (43.8% vs. 37.5)

Association between KAP with food security status :

- In Indonesia, no association was found
- In the Philippines, KAP utilization ($\beta = -0.217$, $p = 0.008$) and practice ($\beta = 0.215$, $p < 0.001$)

Table. The KAP on food security of respective countries

KAP variables	Indonesia (n=120) Median (min-max)	Philippines (n=120) Median (min-max)	p-value
Accessibility			
Knowledge	50.0% (25.0% - 66.7%)	25.0% (25.0% - 50.0%)	<0.001
Attitude	50.0% (25.0% - 75.0%)	25.0% (25.0% - 56.3%)	<0.001
Practice	56.3% (31.3% - 87.5%)	68.8% (25.0% - 100.0%)	0.001
Total score	50.0% (34.0% - 63.9%)	41.7% (25.0% - 60.4%)	<0.001
Availability			
Knowledge	50.0% (25.0% - 62.5%)	25.0% (25.0% - 50.0%)	<0.001
Attitude	50.0% (25.0% - 62.5%)	25.0% (25.0% - 56.3%)	<0.001
Practice	50.0% (31.3% - 75.0%)	50.0% (25.0% - 75.0%)	<0.001
Total score	50.0% (35.4% - 64.6%)	33.3% (25.0% - 58.3%)	<0.001
Utilization			
Knowledge	50.0% (25.0% - 55.0%)	25.0% (25.0% - 55.0%)	<0.001
Attitude	50.0% (25.0% - 65.0%)	25.0% (25.0% - 55.0%)	<0.001
Practice	55.0% (25.0% - 70.0%)	55.0% (25.0% - 80.0%)	0.156
Total score	50.0% (25.0% - 60.0%)	38.3% (25.0% - 61.7%)	<0.001

Filipino HH significantly higher practice scores in accessibility (68.8% vs. 56.3%)

Table. The KAP on food security of respective countries (cont.)

KAP Variables	Indonesia (n=120) Median (min-max)	Philippines (n=120) Median (min-max)	p-value
Stability			
Knowledge	50.0% (25.0% - 58.3%)	25.0% (25.0% - 50.0%)	<0.001
Attitude	50.0% (25.0% - 66.7%)	25.0% (25.0% - 58.3%)	<0.001
Practice	37.5% (18.8% - 56.3%)	43.8% (18.8% - 75.0%)	<0.001
Total score	45.8% (22.9% - 55.6%)	31.3% (22.9% - 55.1%)	<0.001
Knowledge-total score	50.0% (25.0% - 58.3%)	25.0% (25.0% - 50.0%)	<0.001
Attitude-total score	50.0% (25.0% - 59.5%)	26.6% (25.0% - 52.8%)	<0.001
Practice total score	50.0% (31.3% - 67.5%)	51.7% (23.4% - 76.9%)	0.579
KAP total score	49.5% (30.7% - 58.7%)	35.2% (24.5% - 57.2%)	<0.001

Filipino HH significantly higher practice scores in stability (43.8% vs. 37.5%)scores

Indonesian HH significantly higher knowledge-total (50.0% vs. 25.0%) attitude-total (50.0% vs. 26.6%) scores

Multivariate analysis of factors related to Food Security status in Indonesia

Predictor variables		Food Security (FIES) score (n=119)			
	p-value bivariate analysis	coefficient	p-value regression	95% CI	
				Upper	Lower
Husband's Education Level	0.007	-0.353	0.681	-2.053	1.347
Wife's Education Level	0.081	-0.068	0.950	-2.186	2.051
Husband's Occupation	<0.001	-0.851	0.131	-1.962	0.259
Wife's Occupation	0.012	0.168	0.749	-0.869	1.205
Household Income/capita/day (USD)	<0.001	-0.479	0.303	-1.398	0.440
Social protection received by household	0.004	-0.319	0.493	-1.238	0.601
Family beneficiary of conditional cash transfer (i.e. PKH	0.006	-0.291	0.594	-1.371	0.789
R-Coping strategy Index score	<0.001	0.094	**<0.001**	0.055	0.134
Total attitude score on food security dimensions	0.024	-0.071	0.253	-0.194	0.052
Total practice score on food security dimensions	0.006	0.055	0.370	-0.066	0.177

R squared = 0.331; Mean absolute error = 1.3195

None of KAP variables associated with food security status among Indonesia HH, but coping strategy

Multivariate analysis of factors to Food Security status in the Philippines

Predictor variables		Food Security (FIES) score (n=119)			
	p-value bivariate analysis	coefficient	p-value regression	95% CI	
				Upper	Lower
Income/capita/day (USD)	<0.001	-1.068	**0.026**	-2.005	-0.132
KAP accessibility score	<0.001	-0.134	0.194	-0.338	0.070
KAP availability score	<0.001	0.111	0.262	-0.084	0.305
KAP utilization score	<0.001	-0.217	**0.008**	-0.377	-0.057
KAP stability score	<0.001	0.129	0.483	-0.234	0.491
Total practice score	<0.001	0.215	**<0.001**	0.133	0.297
Family Member	0.030	0.216	0.643	-0.707	1.140
Spouse Education Level	0.109	-0.124	0.779	-0.993	0.746
Wife Education Level	0.057	-0.697	0.163	-1.681	0.286
Spouse Occupation	0.206	0.083	0.850	-0.785	0.951
Wife Occupation	0.175	0.990	0.536	-2.167	4.147
Largest source of income in the family	0.143	0.492	0.702	-2.051	3.035
Family beneficiary of conditional cash transfer (i.e. PKH)	0.228	-.342	0.651	-1.837	1.152

R-squared = 0.3673; Mean absolute error = 1.5232

Conclusions

- Indonesia and Philippines has different determinant factors toward food security status as may aligned to social, culture and policy of respective countries
- Good coping strategies (Indonesia) and good KAP (Philippines) are essential for building food secure urban communities during crisis

Recommendations

Different focus on **strengthening provision of capacity building** to ensure food secure during crisis :

- Indonesia:Coping strategy skills on locally affordable food for improved affordable balanced diet and menu variations

- Philippines: Knowledge and skills on food production and processing towards having a sustainable food-oriented behavior based on social, culture and local policies.

Thank You
Terima Kasih
Salamat Po
Khawp Kun Kha
Au Koon Ch'ran

- Lac Jak, Cam On
- Chezu Tinbade
- Ua Tsaug, Khawp Jai