Pacific Community
Communauté du Pacifique

SPC Headquarters
95 Promenade Roger Laroque
BP D5, 98848 Noumea Cedex
New Caledonia
Email: spc@spc.int
Phone: +687 26 20 00
Fax: +687 26 38 18

Siège de la CPS
95 Promenade Roger Laroque
BP D5, 98848 Nouméa Cedex
Nouvelle-Calédonie
Email : spc@spc.int
Tel : +687 26 20 00
Fax : +687 26 38 18

2019 MAY PSMB MEETING

DOCUMENT N^{O} 7:

REVIEW OF THE FOOD INSECURITY EXPERIENCE SCALE

Prepared by
Ms Nathalie Troubat
FAO Consultant

May 2019

Pacific Community (SPC) Headquarters: Noumea, New Caledonia. Regional Offices: Suva, Fiji;
Pohnpei, Federated States of Micronesia; Port Vila, Vanuatu. Country Office: Honiara, Solomon Islands.
www.spc.int spc@spc.int

Siège de la Communauté du Pacifique (CPS) : Nouméa (Nouvelle-Calédonie). Antennes régionales : Suva (Fidji) ;
Pohnpei (États fédérés de Micronésie) ; Port-Vila (Vanuatu). Bureau de pays : Honiara (Îles Salomon).
www.spc.int spc@spc.int

Survey: Republic of Marshall Islands Household Income and Expenditure Survey Experiment, 2018

Version of FIES: Household level – Module located after individual modules and before shock module and food consumption

Reference Period: 12 months

BACKGROUND ABOUT SURVEY IMPLEMENTATION

The FIES was included in the HIES survey experiment. Questions were not adapted to local context, questions were not translated, no specific training or instruction to enumerators about the meaning of the questions. No field supervision. Enumerators reported that the scale was culturally sensitive and somewhat "offensive" in the local context.

The sample was not designed to be representative at any level as this was a pilot project that was designed to test different methodologies to capture consumption and the suitability for inclusion of new modules, including the food insecurity experience scale. The sample covers 717[1] households. Under normal survey scenarios (i.e., with a nationally representative sample), the results, if good, **could** be generalized to whole population of the country and also **could** be used for monitoring SDG indicator 2.1.2 Prevalence of moderate and severe food insecurity using FIES.

RESULTS

The analysis of missing values shows that 101 (14.2%) respondents either did not know or refused to answer any of the eight FIES questions (see distribution of raw data in Annex) of which 10 respondents did not know how to respond to any of the eight items and 47 respondents refused to reply to each of the eight items. Missing values do not show a specific pattern and are equally distributed along each item.

Missing values are not valid to be included in the analysis. The results are therefore based on 680 valid cases. The statistical validation is conducted on the complete, non-extreme sample, i.e. excluding the observations if they report a raw score of 0 (309 households) or 8 (114 households). Total number of **non-extreme cases is 187 which is not enough to conduct robust statistical tests of validity**. The analysis of the distribution of raw score shows a pattern that is completely inconsistent with more than 50% of households reporting to be food secure (raw score of 0) and 19% reporting being extremely food insecure (raw score of 8) while percentage of households reporting moderate level of food insecurity is close to 5%.

CONCLUSION

More than 10% of the respondents did not understand or refused to answer to all or some of the questions and those who answered did so in an inconsistent way, denying less severe items and affirming more severe one in too many instances. All this reveals a real problem in the field when administering the FIES due to lack of supervision, lack of good training of enumerators and lack of good adaptation of the questions to the local context. Further the number of non-extreme cases is too low to allow for robust statistical tests. **Data cannot be used to assess the performance of the scale or estimate severity of food insecurity**.

[1] The sample analyzed corresponds to 711 respondents as for 6 respondents data were given the code ".a" to which a specific meaning could not be associated.

ANNEX

Distribution of raw data

As can be seen from distribution of replies ("valid" if respondent replied Yes or No to the question and "missing" if respondent did not know or refused to answer), missing values do not follow a specific pattern (more missing on HUNGRY but nothing that allows to conclude that this item is more problematic than the others).

Statistics

		WORRIED	HEALTHY	FEWFOOD	SKIPPED	ATELESS	RUNNOUT	HUNGRY	WHLDAY
N	Valid	642	639	637	638	637	634	632	633
	Missing	75	78	80	79	80	83	85	84

Distribution was looked at for the full sample including responses to the eight items of 6 respondents to which were given the code ".a".

WORRIED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	270	37.7	38.0	38.0
	No	372	51.9	52.3	90.3
	Don't know	19	2.6	2.7	93.0
	Refuse	50	7.0	7.0	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

HEALTHY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	265	37.0	37.3	37.3
	No	374	52.2	52.6	89.9
	Don't know	19	2.6	2.7	92.5
	Refuse	53	7.4	7.5	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

FEWFOOD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	262	36.5	36.8	36.8
	No	375	52.3	52.7	89.6
	Don't know	20	2.8	2.8	92.4
	Refuse	54	7.5	7.6	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

SKIPPED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	184	25.7	25.9	25.9
	No	454	63.3	63.9	89.7
	Don't know	18	2.5	2.5	92.3
	Refuse	55	7.7	7.7	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

ATELESS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	227	31.7	31.9	31.9
	No	410	57.2	57.7	89.6
	Don't know	20	2.8	2.8	92.4
	Refuse	54	7.5	7.6	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

RUNNOUT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	200	27.9	28.1	28.1
	No	434	60.5	61.0	89.2
	Don't know	16	2.2	2.3	91.4
	Refuse	61	8.5	8.6	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

HUNGRY

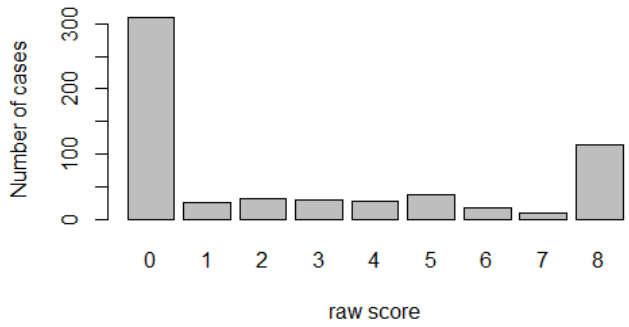
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	152	21.2	21.4	21.4
	No	480	66.9	67.5	88.9
	Don't know	18	2.5	2.5	91.4
	Refuse	61	8.5	8.6	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

WHLDAY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	138	19.2	19.4	19.4
	No	495	69.0	69.6	89.0
	Don't know	15	2.1	2.1	91.1
	Refuse	63	8.8	8.9	100.0
	Total	711	99.2	100.0	
Missing	System	6	.8		
Total		717	100.0		

Distribution of raw scores

The distribution of raw score shows a very particular pattern from which more than 50% households denied all the 8 items and 19% affirmed all of them while only 2% of households affirmed 7 items.



Matrix of residual correlation

Matrix of correlation and scree plot of residuals further show that assumption of unidimensionality is widely violated as three sub dimensions seem to emerge from the data.

	HEALTHY	FEWFOOD	SKIPPED	ATELESS	RANOUT	HUNGRY	WHLDAY
WORRIED	0.34	0.20	-0.14	0.14	-0.13	-0.45	-0.63
HEALTHY		0.23	-0.14	0.15	-0.04	-0.36	-0.52
FEWFOOD			0.14	0.43	-0.02	-0.27	-0.39
SKIPPED				0.27	0.03	0.08	-0.08
ATELESS					0.09	-0.08	-0.14
RANOUT						0.25	0.03
HUNGRY							0.54

Scree plot