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CONVENTION
ON STATISTICS**

03-05 OCTOBER 2022

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Spearheaded by the Philippine Statistics Authority*



Diet Adequacy of Food Secure and Insecure Households: Using Food Threshold as Reference Cost

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Crowne Plaza Manila Galleria
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BACKGROUND



Access to nutritious food

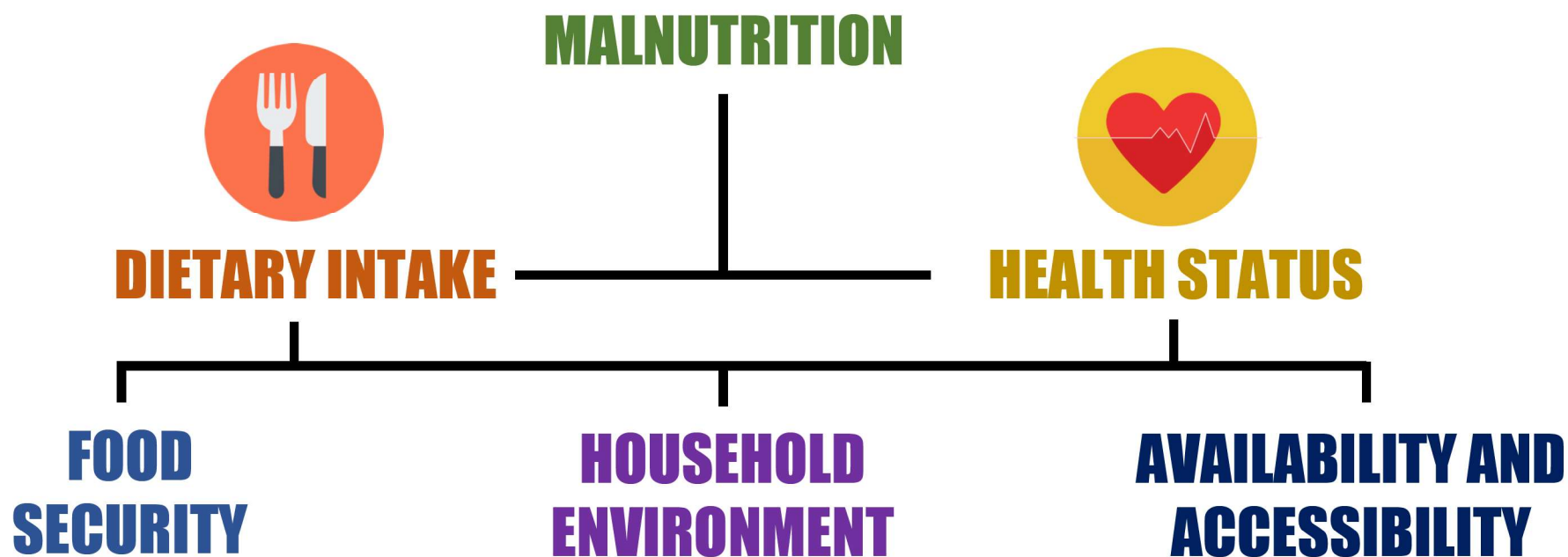
- A challenge that often strain many households with limited resource
- Make food choices that are short from recommended intakes.



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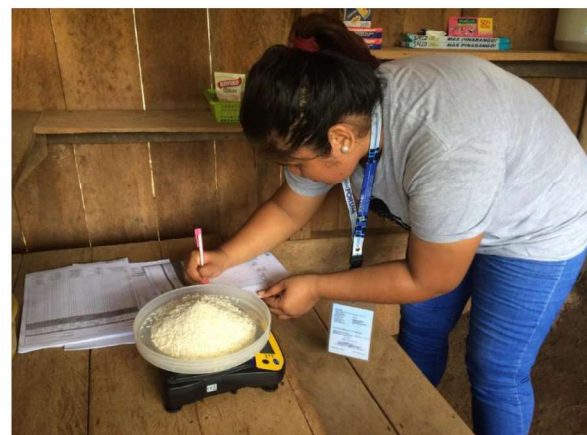
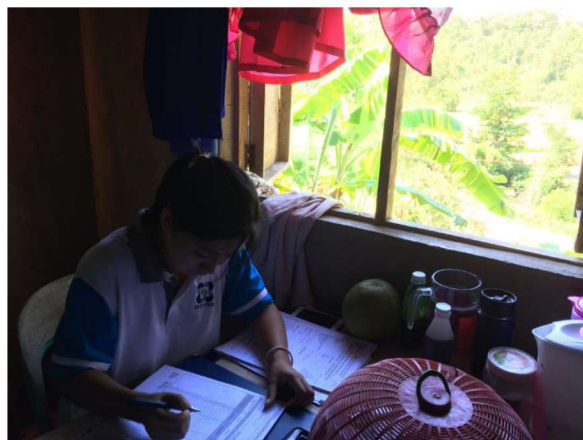
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- Limited empirical evidence are available that looks into the actual food intake and food cost of food secure and insecure households.





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OBJECTIVES

To estimate and compare between food secure and insecure households:

- One-day household food consumption and percent contribution to total intake
- Household intake and adequacy of energy and selected nutrient intake
- Proportion of households with food costs above and below the minimum cost of nutritious diet
- Adequate energy and protein intakes by food costs



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METHODOLOGY

2018 Expanded Nation Nutrition Survey (ENNS)



20,171
Households

FOOD SECURITY

Household Food Insecurity Access Scale (HFIAS)

HOUSEHOLD DIETARY INTAKE

Food Weighing – Inventory – Recall
Dietary Analysis

FOOD THRESHOLD

2018 PSA Food Threshold



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FOOD SECURITY

Household Food Insecurity Access Scale (HFIAS)

Situation(s) experienced in the past month	FREQUENCY			
	Rarely 1-2x	Sometimes 3-10x	Often >10x	
1. Worry about food				
2. Unable to eat preferred foods				
3. Eat just a few kinds of foods				
4. Eat foods they really do not want to eat				
5. Eat smaller meal				
6. Eat fewer meals in a day				
7. No food of any kind in the household				
8. Go to sleep hungry				
9. Go a whole day and night without eating				
Legend:	Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure



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HOUSEHOLD DIETARY INTAKE

Food Inventory



One-day Food Weighing

Food Recall





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DIETARY ADEQUACY

$$\text{HOUSEHOLD ADEQUACY (\%)} = \frac{\text{One-day Household Energy and Nutrient Intake}}{\Sigma \text{ energy or nutrient requirement of household members}^*} \times 100$$

**Based on the Philippine Dietary Reference Intakes*



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FOOD THRESHOLD

2018
Food Threshold



P 7,548.36 \approx **P 248.30**
per month per day

Source: https://psa.gov.ph/system/files/Press%20Release_2018FY.pdf



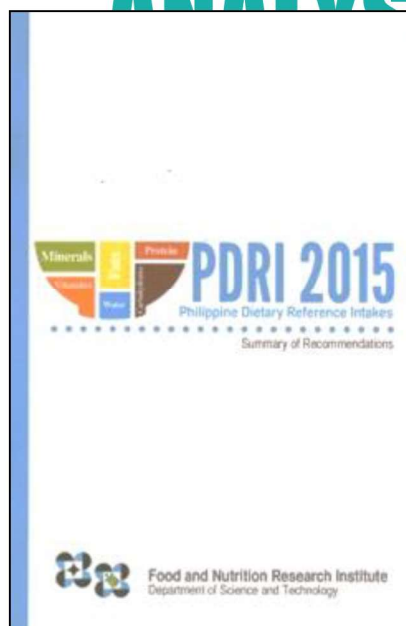
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DATA PROCESSING AND ANALYSIS



&

STATA version 16

(StateCorp)

Descriptive and analytical statistics

- Mean
- Percentage
- Proportion
- Confidence Interval
- Coefficient of Variation



Limitations

- The food intake and energy and nutrient adequacies were based on one-day consumption of the household
- The household food cost are based on the price of the food items that the household paid at the time of the survey.

- This study also tried to use the **food threshold** only as a **reference value** for the household food cost with the following caveats:
 - The food threshold is the amount needed to acquire adequate food of the household
 - The food threshold by the PSA is based on the cost per capita of the one-day food menu (food bundle) while the one-day food cost in the survey is based on actual cost of food items consumed by the household



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RESULT S



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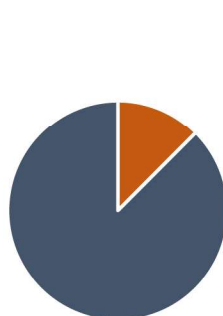
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Percent distribution of households by food security status: Philippines 2018

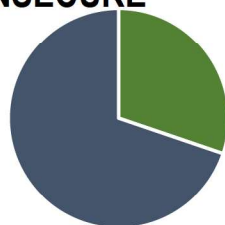


**FOOD
SECURE**
4 out of 10 (44.5%)

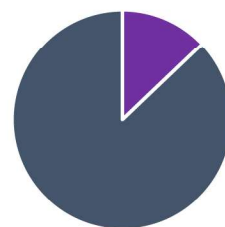


12.5%
Mildly Food
Insecure

**FOOD
INSECURE**



30.2%
Moderately Food
Insecure



12.9%
Severely
Food
Insecure





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HOUSEHOLD SIZE

<5 members

Food Secure **49.5%**

Mildly Food Insecure **12.0%**

Moderately Food Insecure **26.9%**

Severely Food Insecure **11.6%**



≥5 members

Food Secure **39.4%**

Mildly Food Insecure **12.9%**

Moderately Food Insecure **33.5%**

Severely Food Insecure **14.2%**





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PLACE OF RESIDENCE

RURAL

Food Secure **37.9%**

Mildly Food Insecure **12.9%**

Moderately Food Insecure **34.8%**

Severely Food Insecure **14.4%**



URBAN

Food Secure **52.0%**

Mildly Food Insecure **12.0%**

Moderately Food Insecure **24.9%**

Severely Food Insecure **11.1%**





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WEALTH QUINTILE

	FOOD SECURE	MILDLY FOOD INSECURE	MODERATELY FOOD INSECURE	SEVERELY FOOD INSECURE
POOREST	18.2	10.9	43.0	27.9
POOR	28.3	14.0	41.5	16.3
MIDDLE	41.3	16.0	32.0	10.8
RICH	61.7	13.7	20.2	4.4
RICHEST	84.1	6.5	7.8	1.5





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SEX OF HOUSEHOLD HEAD BY FOOD SECURITY STATUS

	Food Secure	FOOD INSECURE		
		Mildly	Moderately	Severely
 FEMALE	50.5 %	11.3 %	25.0 %	13.3 %
 MALE	42.6 %	12.8 %	31.8 %	12.8 %



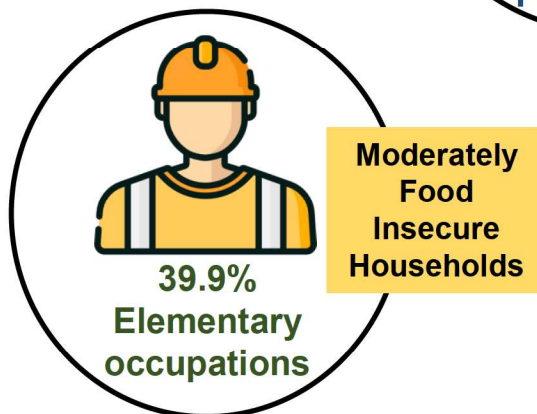
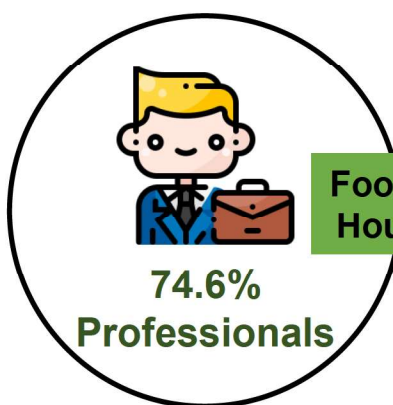
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OCCUPATION OF HOUSEHOLD HEAD





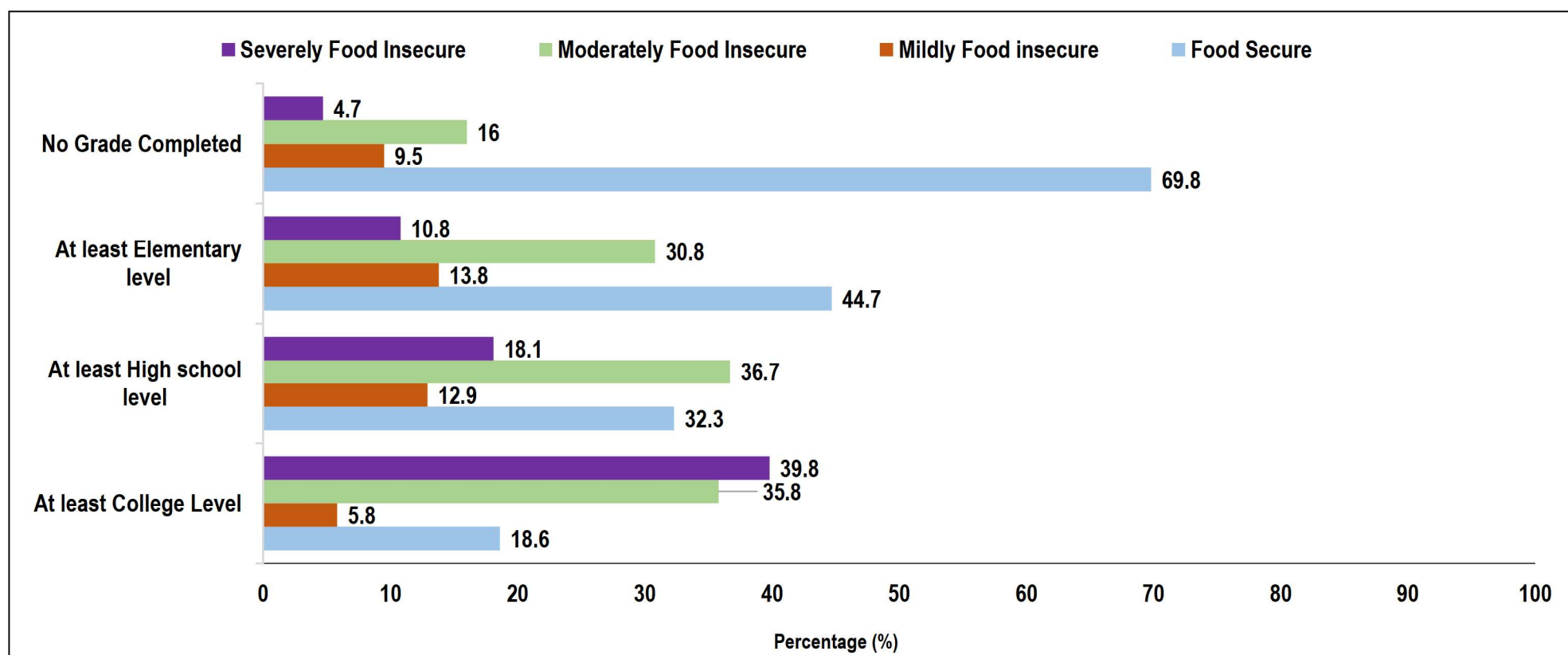
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EDUCATIONAL ATTAINMENT OF HOUSEHOLD HEAD





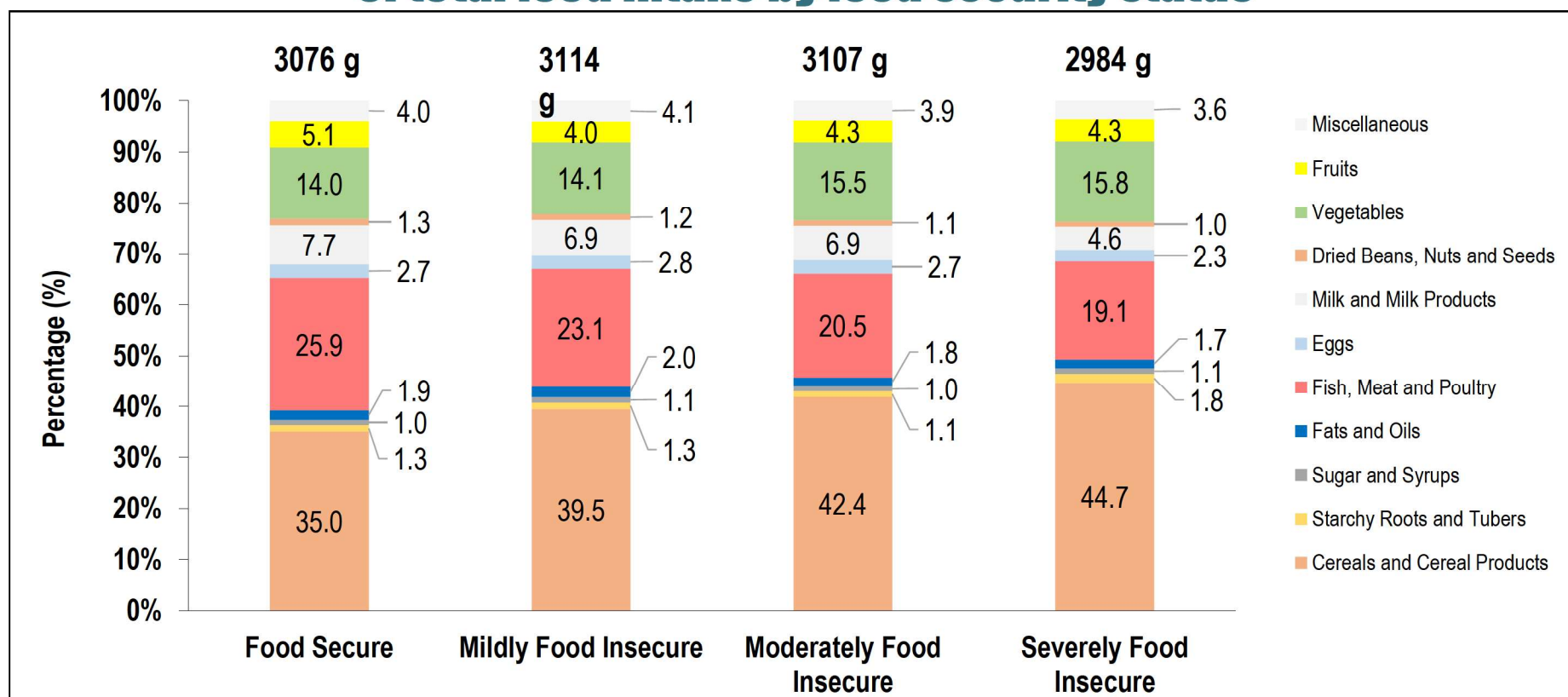
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Food intake by food group as percent of total food intake by food security status

























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TOP COMMONLY CONSUMED FOOD ITEMS, BY FOOD SECURITY STATUS

Food Secure		FOOD INSECURE		
		Mildly	Moderately	Severely
1	 Rice, well-milled (97.9%, 931.0g)	 Rice, well-milled (97.9%, 1071.2g)	 Rice, well-milled (96.6%, 1150.8g)	 Rice, well-milled (97.0%, 1187.7g)
2	 Oil, coconut (64.4%, 32.1g)	 Oil, coconut (69.8%, 33.3g)	 Salt, coarse (69.6%, 13.1g)	 Salt, coarse (67.4%, 13.7g)
3	 Salt, coarse (58.0%, 9.9g)	 Salt, coarse (66.9%, 11.7g)	 Oil, coconut (66.1%, 31.8g)	 Oil, coconut (62.6%, 28.2g)
4	 Onion, Bombay bulb (56.7%, 22.7g)	 Onion, Bombay bulb (56.8%, 20.4g)	 Onion, Bombay bulb (54.2%, 18.5g)	 Sugar, Brown (46.3%, 25.8g)
5	 Egg, chicken, whole (45.7%, 76.9g)	 garlic (46.8%, 7.5g)	 Sugar, Brown (44.8%, 22.5g)	 Onion, Bombay bulb (46.1%, 15.6g)



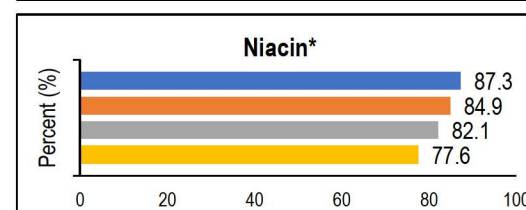
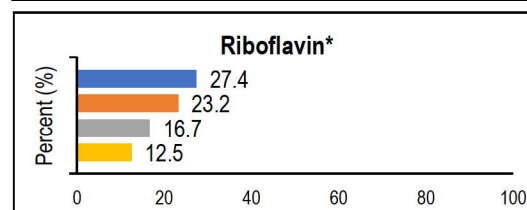
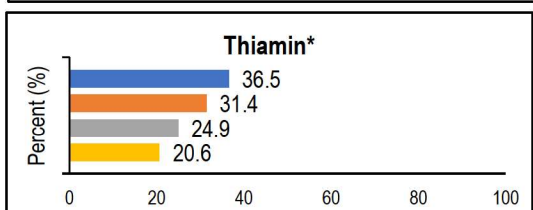
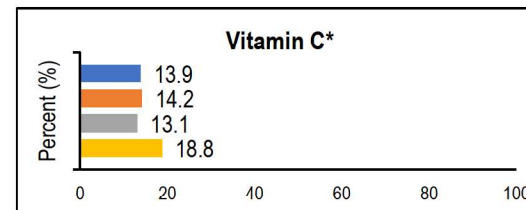
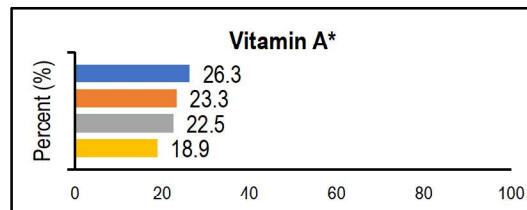
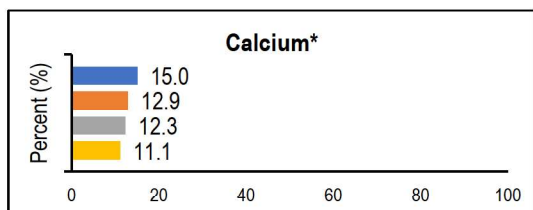
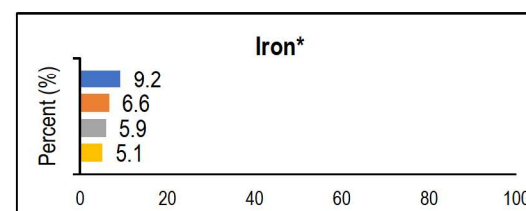
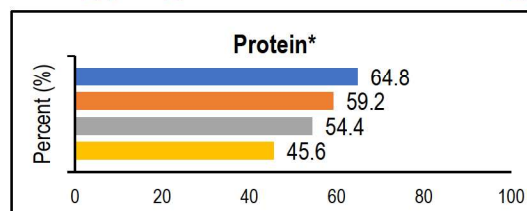
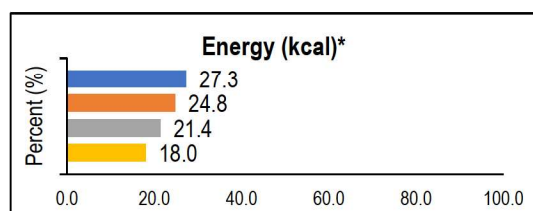
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Proportion of households meeting energy and nutrient adequacy, by food security status



Note:

* significant at $p < 0.05$

Legends:

- Food Secure
- Mildly Food Insecure
- Moderately Food Insecure
- Severely Food Insecure



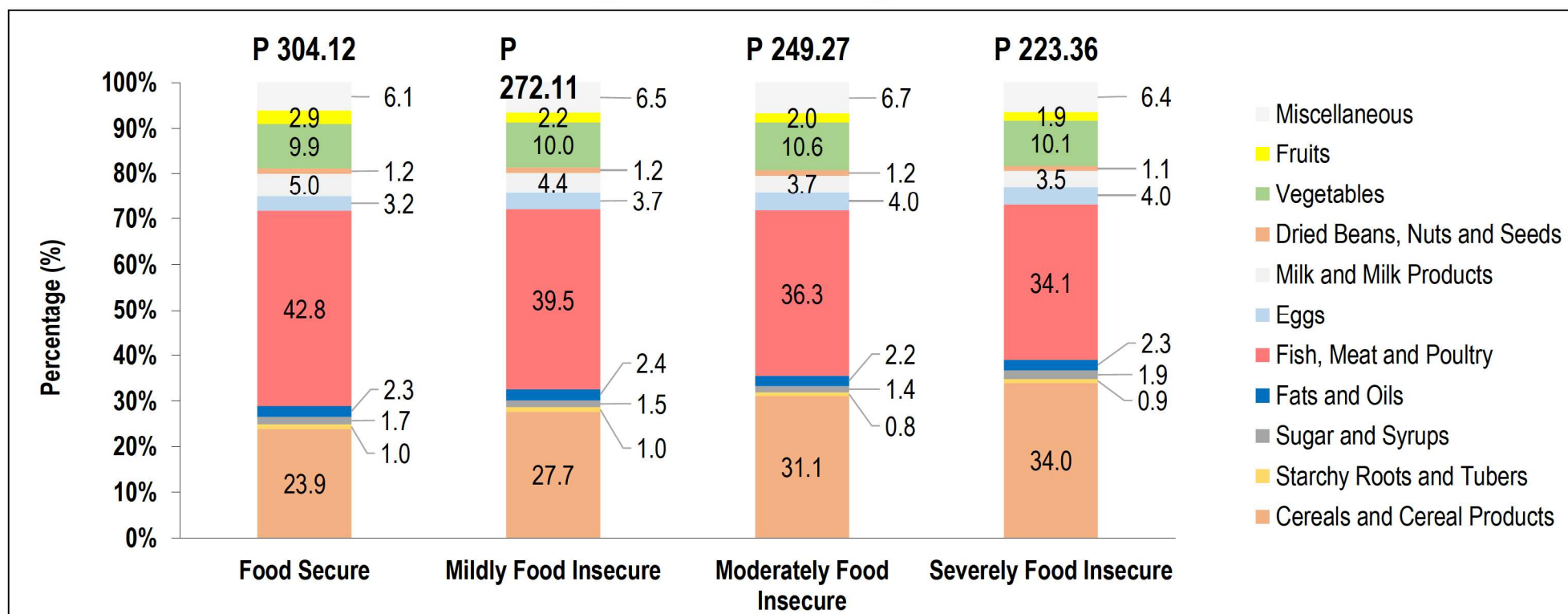
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Household food cost and percent distribution by food security status





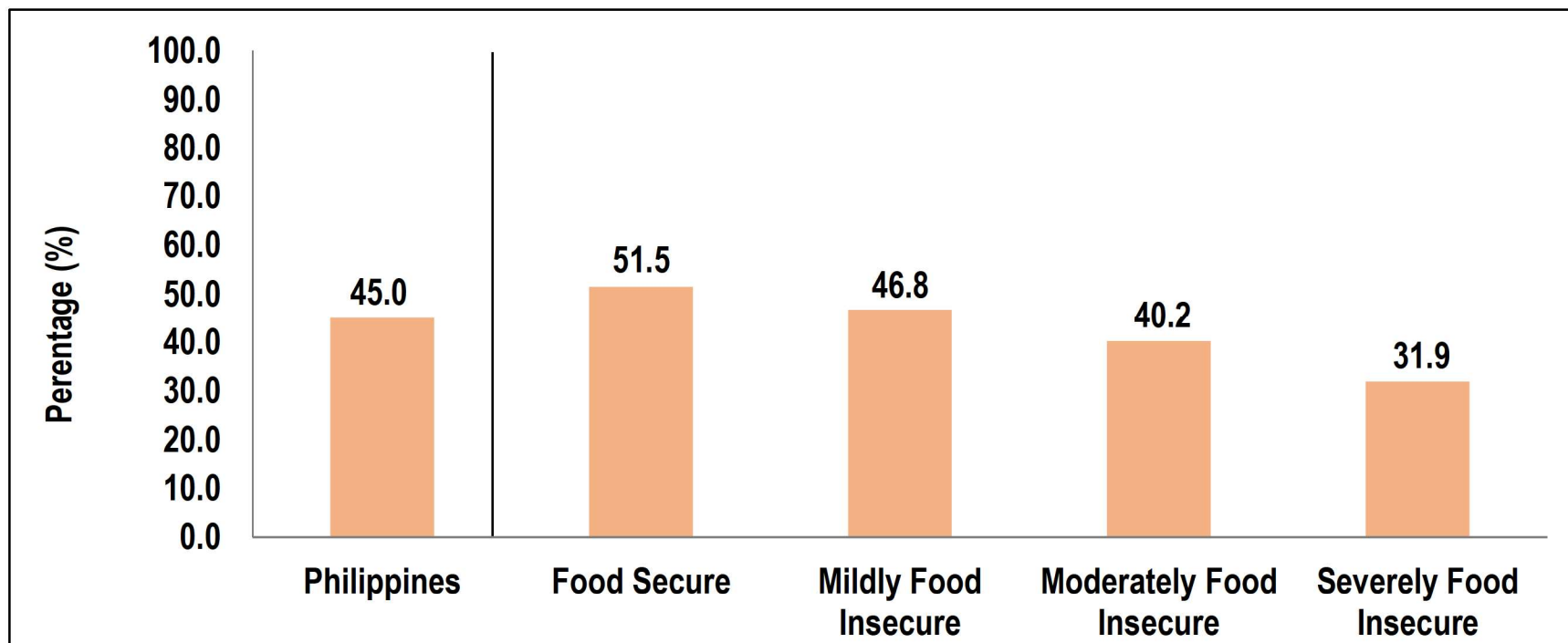
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Proportion of households by food security whose one-day food cost is \geq food threshold (Php248.30)





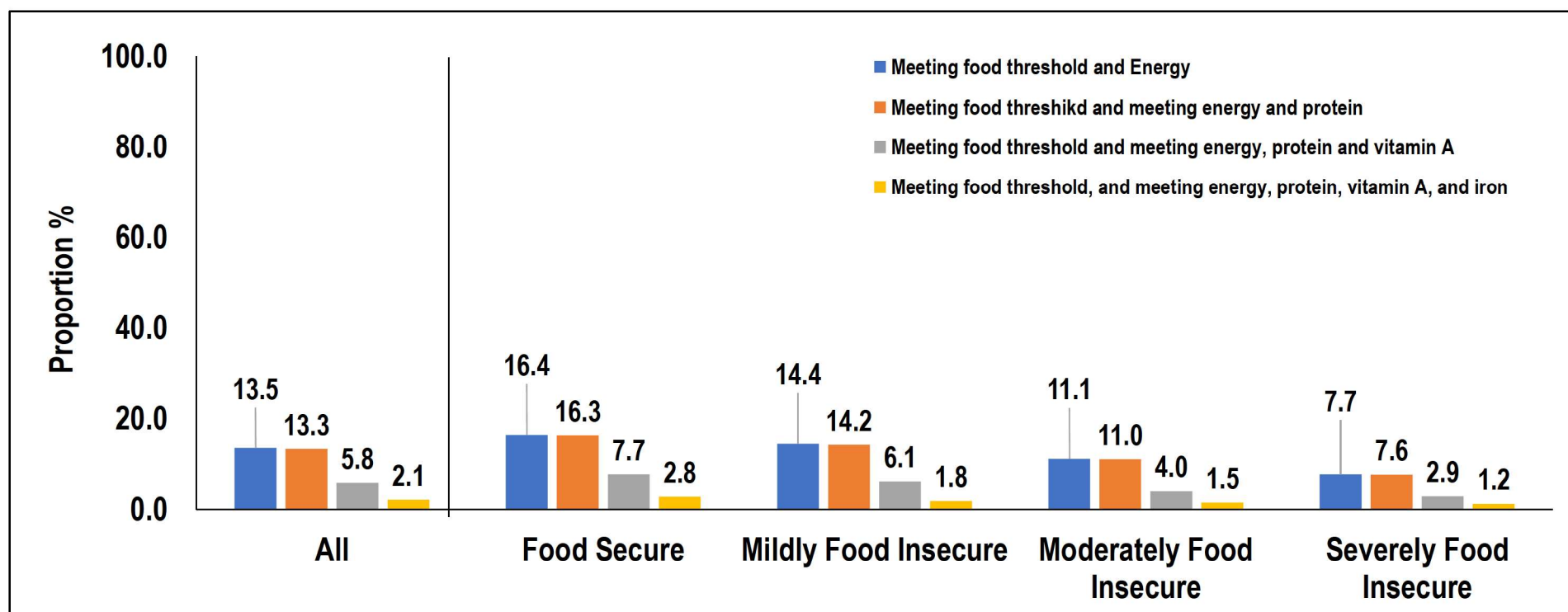
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Proportion of household meeting both food threshold (Php 248.30) and adequacy, by food security status





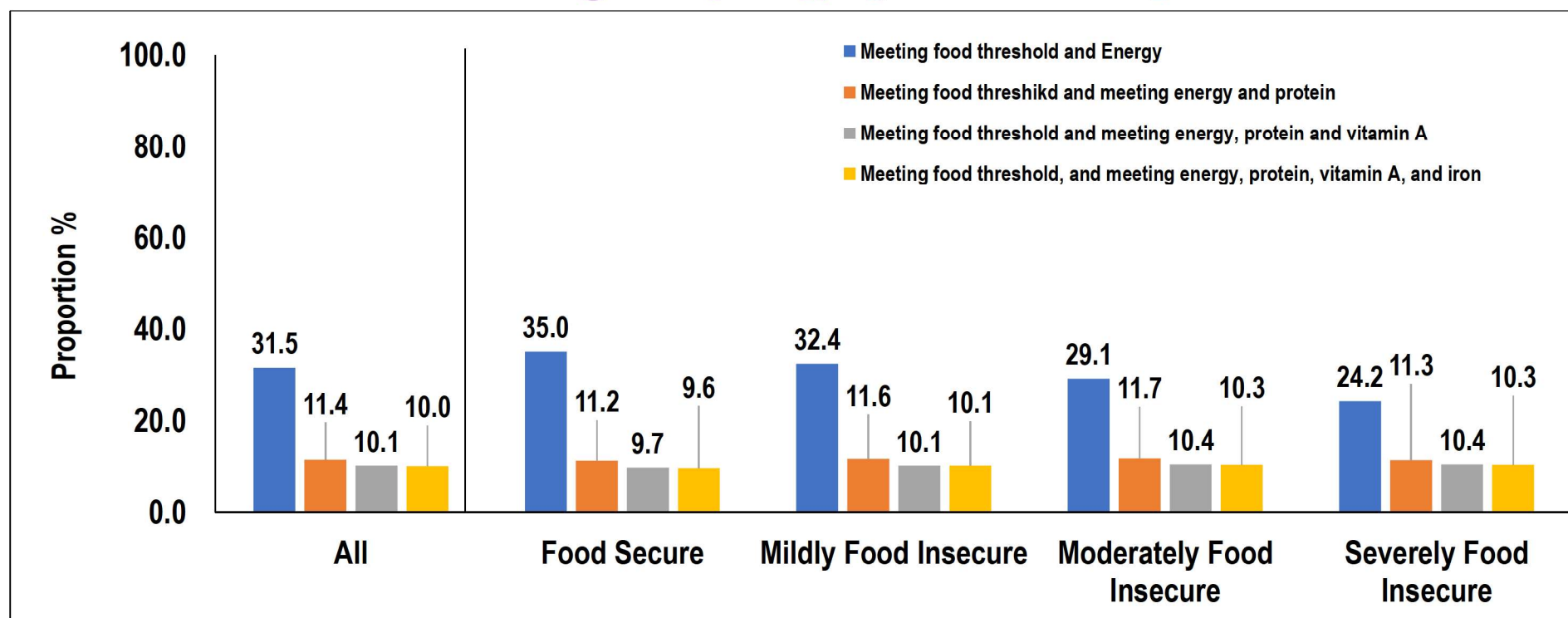
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Proportion of household meeting food threshold (Php 248.30) but not meeting adequacy, by food security status





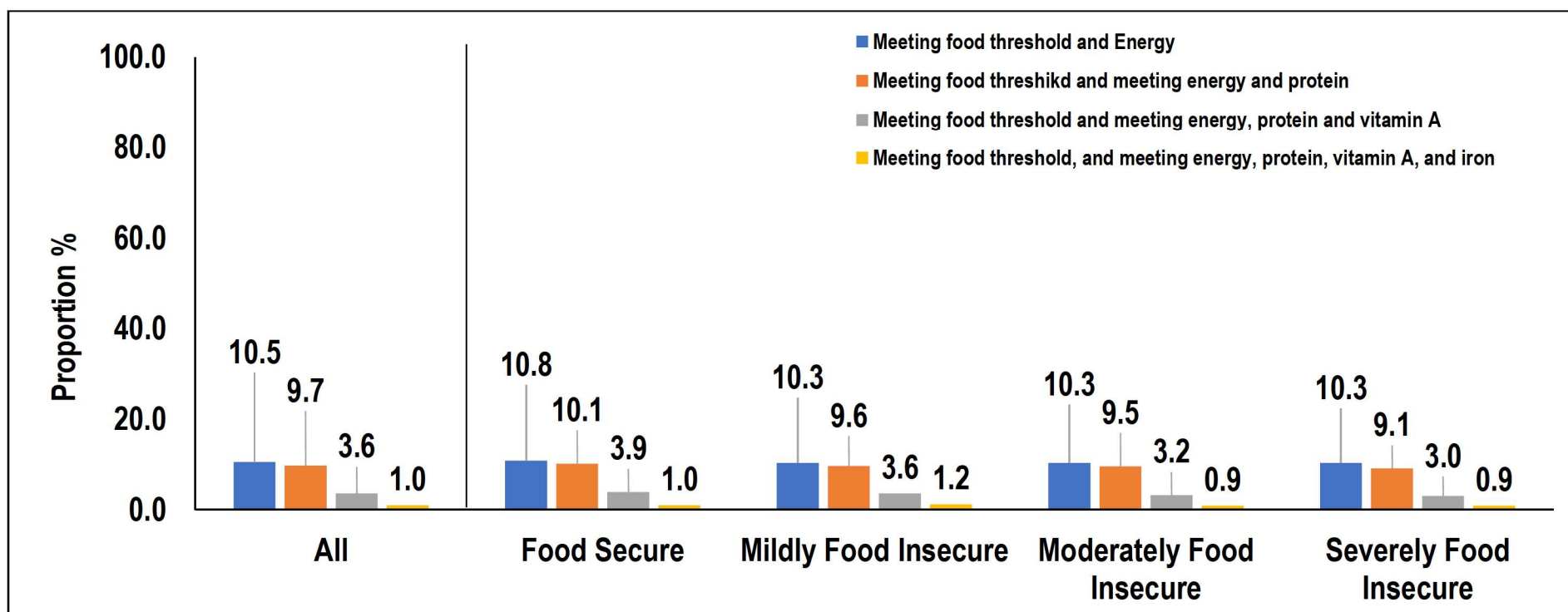
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Proportion of household not meeting food threshold (Php 248.30) but meeting adequacy, by food security status





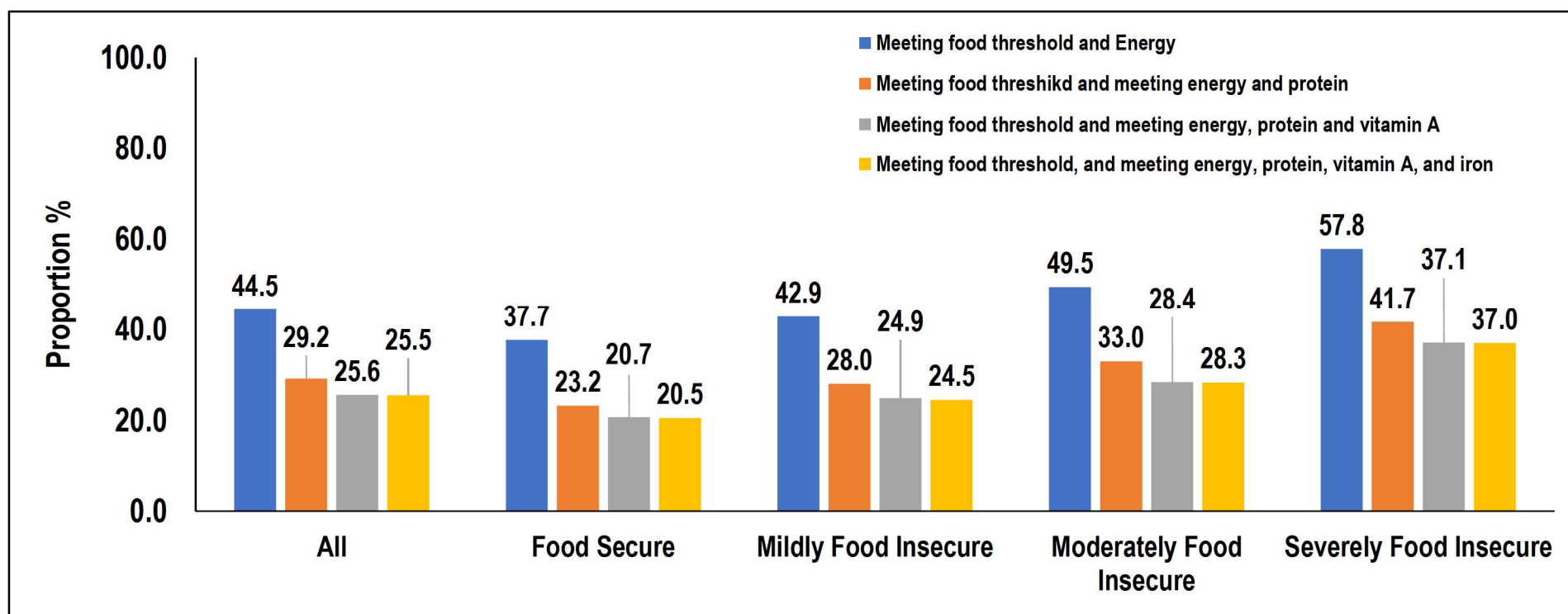
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Proportion of household not meeting both food threshold (Php 248.30) and nutrient adequacy, by food security status





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CONCLUSION

- Foods that provide energy, like rice and other cereals, are consumed at much higher proportion in food insecure households than in food secure homes, whereas body-building foods like fish, meat, and poultry, are consumed at significantly lower proportions.
- Household food cost was significantly higher among food secure households than moderately and severely food insecure households.



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CONCLUSION

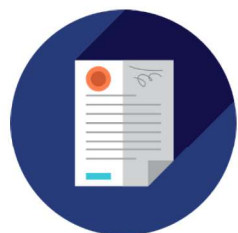
- Even households with food insecurity can meet the food threshold when merely taking into account the average household food cost, but this did not result to meeting recommended intakes.
- Majority of households did not meet the recommended energy and nutrient intakes.



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POLICY IMPLICATIONS

- For those who are met both the reference food cost and the energy and nutrient adequacies, programs that would promote prevention of excessive intakes (especially for energy) are needed.
- Promote less expensive alternative food sources and monitor local prices to help households that reach the food cost [threshold] but fall short in nutrients and energy.



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POLICY IMPLICATIONS

- Social protection programs may be required for non-food basic requirements in households who did not meet the food cost [threshold] but met the energy and nutrient adequacy, as they may be easily affected if there are large shocks.



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POLICY IMPLICATIONS

- For households who did not meet both reference food cost and energy and nutrient adequacies, livelihood and other social protection program as well as nutrition education program are needed to address the economic constraints of acquiring food and planning nutritious meals that are affordable.



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Thank you!



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