Food and Nutrition Agenda: Let's Talk!



EXPANDED NATIONAL NUTRITION SURVEY NATIONAL DISSEMINATION FORUM

DUSIT THANI MANILA, MAKATI CITY NOVEMBER 14, 2022





2021 ENNS Overview and Methodology

LEGAL BASIS Executive Order 128 Section 22

The FNRI is mandated to undertake research that defines the citizenry's nutritional status, with reference particularly to the malnutrition problem, its causes and effects, and identify alternative solutions to them;

Executive Order 352

The national nutrition survey is a designated statistical activity that will generate critical data for decision-making of the government and the private sector



Designated Statistical Activities

- The **National Nutrition Survey (NNS)** is a comprehensive survey conducted every five years since 1978 and the latest of which is in 2013.
- In-between the five-year period, the Updating Survey of Nutritional Status of Children and Other Population Groups is conducted every 2 to 3 years to rapidly assess the nutrition situation of Filipinos.



HISTORICAL BACKGROUND

	1978		19	82	1987		1990	1993 199		5 1998		
	1 st NNS		2 nd	NNS	3 rd NNS		1 st Updating Survey	4 th NNS 2 nd Updatir Survey		-	5 th NNS	
2	2001	20)03	200)5	2008	2011	2013	2015	20	018, 2019 2021	9,
	3 rd pdating Survey	6 th	NNS	4 th Upda Surv	ting	7 th NNS	5 5 th Updating Survey	8 th NNS	6 th Updating Survey	E	xpanded NNS	t



What is the Expanded National Nutrition Survey or ENNS?



Rationale:

- There is a clamor from the local government units (LGUs), Congress, and other stakeholders for a local data estimates to be used for their development plan.
- There is a need to generate Nutrition and Health Data **Annually** at the National Level to collect key health and nutrition indicators that serve as basis for monitoring national programs
- Global commitment on health and nutrition



Rationale:

- In 2018, FNRI initiated a 3-year survey called the rolling survey and termed as ENNS (2018-2020)
- Adopted the 2013 Master Sample (MS) of the Philippine Statistics Authority (PSA) as its sampling design that covers all 117 provinces and HUCs.





REPUBLIC OF THE PHILIPPINS PHILIPPINE STATISTICS AUTHORITY BOARD

PSA Board Resolution No. 06 Series of 2018

APPROVING AND ADOPTING THE SURVEY DESIGN OF THE EXPANDED NATIONAL NUTRITION SURVEY

WHEREAS, in Executive Order (EO) No. 128, "Reorganizing the National Science and Technology Authority" issued on 30 January 1987, the Food and Nutrition Research Institute(FNR) is mandfated to define and update the country's food and nutrition situation, particularly that of children and other nutritionality vulnerable groups;

WHEREAS, FWRI conducts the National Notifion Survey (NNUS) every free survey and the Updating Survey of the Nutritional Satus of the Fighton Children and Other Population Groups in between the conduct of the NNS since 1968 as the country's definal survey of data on the cobstant's nutritional status; and 1969 as the country's definal survey of data on the cobstant's nutritional status; and philippine Dutinty References Insides (PDR), and the Desirable Dietary Patternu/hood production targets among others:

WHEREAS, the NNS has expanded over the years to include other components relevant to health such as the measurement of lifestyle risk factors for elevated blood pressure and blood sugar, smoking and alcohol intake, physical inactivity, and other disease conditions;

WHEREAS, Executive Order (EO) No. 352, "Designation of Statistical Activities that will Generate Critical Data for Decision Making of the Government and the Private Sector" issued on 01 July 1996, established the System of Designated Statistics (SOS) in the Philippine Statistical System (PSS);

WHEREAS, per EO No. 352, the National Nutrition Survey (NNS) and the Updating Survey of the Nutritional Status of the Filipino Children and Other Population Groups were included in the activities specified as Designated Statistical Activities;

WHEREAS, the latest survey round conducted for the NNS was in 2013 and that for the Updating Survey of the Nutritional Status of the Filipino Children and Other Population Groups was in 2015;



PSA Board Resolution No. 06, Series of 2018

Approving and Adopting the Survey Design of the Expanded National Nutrition Survey



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 Conduct the ENNS in a schedule harmonized with those of the PSA's to minimize response burden.
Approved this 9th day of May 2018, in Pasig City.____

Release and Dissemination of Microdata in the Philippine Statistical

ERNESTO M. PERNIA Secretary of Socioeconomic Planning National Economic Development Authority PSA Board Chairperson

Page 3 of 3

Lisa GRACE S. ERSALES Undersecretary National Statistician and Civil Registrar General Chairperson, FSA Board Secretariat (M)

Attested by:

System" which was issued in 2011

WHEREAS, recognizing the growing demand for provincial estimates oficially for targeting households with undencursited childrine on runitionallyserable groups, or targeting areas with high levels of mainturition, or being a runel for delivering nutrition-specific interventions, the FNIR will conduct in 2018 Expanded National Nutrition Survey (ENNS) which adopts a survey design that is able to generate data at the provincial level (Annex BR 66-20180500-01);

WHEREAS, the design for the ENNS entails changes in the schedule and ation of data collection, schedule of release and dissemination of results, and it of disaggregation and quality of statistics that can be generated;

WHEREAS, as a designated statistical activity, the change in the design of NNS necessitates the approval of the PSA Board;

WHEREAS, on 13 February 2018, the PSA Board expressed the need to mine thoroughly the ENNS design and its implications to users, hence hibitishing the PSA handr Sub-committee, which wave takes to review the ENNS in s of its implications in the quality of statistics generated from the design as well he design's responsiveness to stakeholders' needs;

WHEREAS, the PSA Board Subcommittee recommends the approval and ption of the survey design of the ENNS subject to FNRI's compliance to the ditions listed below.

NOW, THEREFORE, BE IT RESOLVED, that the Board approve for adoption ENNS survey design;

RESOLVED FURTHER, that the FNRI shall:

- Prepare and submit to the PSA Board a complete documentation of the ENNO methodology preferably before the release of the 2018 ENNS results:
- Inform data users of the trade-off on the quality of national lavel estimates and present along with the ENNS results the assumptions and coefficients of variation (CVs);
- Come up with a multiodology to calculate regional estimates from the ENNS for consideration of the Inter-Agency Committee on Health and Nutrition Statistics(ACHNS);
- 4. Submit to the PSA Board an evaluation report comparing the previous NNS with the ENNS in terms of effectiveness (accuracy and utilization) and cost efficiency after the cycle (3 years) of conduct of survey is completed; and

 Provide the metadata and public use file (PUF) one year after completion of the three-year data collection pursuant to PSA Board Resolution No 01-167, "Approving and Adopting the General Policy on the Production,

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Survey Design of the ENNS

ROLLING40 Prov**SURVEY** for40 Prov**SURVEY** for40 Prov**SYEARS**37 ProvHUCs for37 Prov

40 Provinces & HUCs for 2018 40 Provinces & HUCs for 2019 37 Provinces & HUCs for 2020 /

Target households (HHs) per domain is average of 1,536 HHs



How did we select the provinces and HUCs to be included in the ENNS?

Grouping of provinces and HUCs with similar characteristics

Replicated Sampling Formation of Replicates

A replicate has at least 5 provinces or HUCs

Design Validation

Test variables (2010 CPH)

Number of persons Number of birth registered Number of OFWs Number of WRA Number of infants Number of children below 5 Number of members with disability



Total Number of Provinces and HUCs covered in 2018

Survey year	Region	Province	нис	Region	Province	HUC
2018	Region II - Cagayan Valley	3		Region IX - Zamboanga		
	Region III - Central Luzon	2	1	Peninsula	1	1
	CALABARZON	1		Region X - Northern Mindanao	1	1
	MIMAROPA	1		Region XI - Davao	1	1
	Region V- Bicol	2		Region XII - SOCCSKSARGEN	1	
	Region VI - Western Visayas	3	1	National Capital Region		8
	Region VII - Central Visayas	1	1	Cordillera Administrative Region	2	1
	Region VIII - Eastern Visayas	3	1	Autonomous Region in Muslim		
				Mindanao	1	
				Caraga		1



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Total

23

Total Number of Provinces and HUCs covered in 2019

Survey year	Region	Province	HUC	Region	Province	HUC
2019	Region I - Ilocos Region	2		Region IX - Zamboanga Peninsula	2	1
	Region II - Cagayan Valley	1		Region X - Northern Mindanao	4	
	Region III - Central Luzon	2	1	Region XI - Davao	2	
	CALABARZON	2		Region XII - SOCCSKSARGEN	1	
	MIMAROPA	2	1	National Capital Region		4
	Region V- Bicol	1		Cordillera Administrative Region	2	
	Region VI - Western Visayas	2		ARMM	2	
	Region VII - Central Visayas	1	1	Caraga	3	
	Region VIII - Eastern Visayas	2		Total	31	8



Total Number of Provinces and HUCs covered in 2021

Survey year	Region	Province	HUC	Region	Province	HUC
2021	Region I - Ilocos Region	2		Region IX - Zamboanga Peninsula		
	Region II - Cagayan Valley	1		Region X - Northern Mindanao		1
	Region III - Central Luzon	3		Region XI - Davao	2	
	CALABARZON	2	1	Region XII - SOCCSKSARGEN	3	1
	MIMAROPA	2		National Capital Region		5
	Region V- Bicol	3		Cordillera Administrative Region	2	
	Region VI - Western Visayas	1	1	Autonomous Region in Muslim Mindanao	1	
	Region VII - Central Visayas	2	1	Tatal	27	10
	Region VIII - Eastern Visayas	1		Total	27	10



2013 Master Sample (Sampling Design)



2-Stage Cluster Sampling Design



DEFINITION:

Primary Sampling Units (PSUs)

- Exhaustive and non-overlapping area segments with about 100 to 400 households
- It can be a barangay/ Enumeration Area (EA) or a portion of a large barangay or two or more adjacent small barangays/EAs.

- 100% of HH for Anthropometry, Socio-economic, Food Security, Government Program Participation, IYCF, Maternal, questionnaires of Clinical on NCDs
- **50%** of HH for Dietary and Biochemical Components/Clinical (Blood Parameters)

General Objective of the ENNS

To provide empirical data on the nutritional and health status of Filipinos for planning nutrition and development programs, and for timely policy decisions at the national and provincial/HUC levels.



- 1. To assess the physical growth and dimensions of children and other population groups using anthropometric indicators;
- To assess the nutrition biomarkers of children and other population groups (e.g. hemoglobin, serum retinol, urinary iodine concentration, etc.);



- 3. To determine the following:
 - the prevalence of non-communicable disease risk factors of 10 years old and above (e.g. behavioral and physiologic risk factors)
 - energy and nutrient intake at the individual level;
 - the magnitude of food insecurity and coping mechanisms among households;



- 3. To determine the following:
 - the participation of households and individuals in selected health and nutrition related programs;
 - feeding practices of infants and young children, 0-23 months;
 - maternal nutrition and health status among mothers with 0-36 month old children and pregnant women;



3. To determine the following:

 To describe the socio-economic and demographic characteristics of the households and individuals;

• To evaluate association of different risk factors to nutrition and health status.



- 4. To monitor/ track progress of the achievement of the Sustainable Development Goals (SDGs) such as:
 - SDG 2 (Zero Hunger)
 - SDG 3 (Good Health and Well Being)







17 GOALS TO TRANSFORM OUR WORLD



What and how data were collected ?



Anthropometry

Measurement of physical growth (weight and height) and body composition (mid upper arm and waist circumferences)



Determine the prevalence of underweight, stunting, wasting, overweight and obesity



Biochemical

Assesses prevalence of vitamin A deficiency, anemia, iodine deficiency, and other micronutrient deficiencies.



Collection of blood and urine samples



Clinical and Health

Assesses the prevalence of elevated blood pressure, high fasting blood glucose and dyslipidemia, as well as behavioral risk factors such as smoking, alcohol consumption, physical inactivity and unhealthy diet.



Measurement of blood pressure, collection of blood and face-to-face interview



Dietary

Determines the quality and quantity of food and nutrient intakes of the individual member of the sample households using the **24-Hour Food Recall method**.



24-hour food recall (individual) through phone and face-to-face interview



Phone and face-to-face interview

Food Security	Assesses food security at the household level as well as coping mechanisms and strategies.	Interview
Government Program Participation	Assesses household's and member's participation in selected nutrition and related government programs.	
Socio-Economic Characteristics of Households/ Individuals	Includes the education and occupation of the household members, their type of housing unit, type of wall, roof and ownership of different types appliances.	



Infant and Young Child Feeding	Updates information on the feeding practices of Filipino Children 0-23 months old and other related factors affecting feeding practices.
Maternal Health and Nutrition	Determines health and nutrition of mothers with children 0-3 years old, their health-seeking behaviors and care giving practices.

Phone and faceto-face interview





Who collects the data ?



Trained professionals:





What are the uses of the survey results?



USES OF SURVEY RESULTS

To address nutrition problems by crafting policies and interventions For planning, targeting and implementing nutrition and related intervention programs, goals and commitment

For monitoring and evaluation of impact of nutrition intervention programs

As tool in advocacy for policy development/ directions



USES OF SURVEY RESULTS

To address nutrition problems by crafting policies and interventions

















PINGGANG PINOY® Healthy food plate for Filipinos





USES OF SURVEY RESULTS

For planning, targeting and implementing nutrition and related intervention programs, goals and commitment







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2021 Expanded National Nutrition Survey

Profile of Households and Respondents
Response Rates

		Eligible	Response	Response Rate%
	Households	53,147	48,530	91.3%
	Dietary Component	28,757	23,265	80.9%
	Individuals	200,853	141,189	70.3%
	Dietary Component	103,342	68,791	66.6%



Sociodemographic and Socioeconomic Profiles of Households and Individualss

The social standing or class of an individual or group. It is often measured as a combination of **education**, **income and occupation**.

Adapted from APA's Socioeconomic Status Office publications





An aggregate of persons, generally but not necessarily bound by ties of kinship, who *sleep in the same housing unit* and have a *common arrangement for the preparation and consumption of food*.





Adult person, male or female, who is **responsible** for the **organization** and **care** of the household

Reference: PSA. 2010 Census of Population and Housing (CPH) & 2015 Population Census (POPCEN)





The **highest grade/year of formal schooling completed** by each member of the household.

Reference: Statcan – Educational attainment of a person





CIVIL STATUS

Status of an individual in relation to marriage, classified as:

- 1- Single
 2- Married
 3- Widower/ Widow
- 4- Separated/ 5- Common Law/ Divorced/ Live-in Annulled

Reference: Philippine Statistics Authority – Demographic and Social Statistics: Marital Status





It refers to the type of work a person does to earn his living with work/business only in the past 6 months.

2012 Philippine Standard Occupational Codes (PSOC) is a statistical classification of the different occupational groups of the working population, including the military work force in the country

Reference: PSA - 2012 Philippine Standard Occupational Classification





A composite measure of a household's cumulative living standard. The wealth index is calculated by principal component analysis using data on household's ownership of selected assets, materials used for housing construction and types of water access and sanitation facilities.

Reference: USAID – The Demographic and Health Survey Program – Wealth Index



PROFILE OF HOUSEHOLDS

HOUSEHOLD SIZE

TYPE OF RESIDENCE







Profile of Household Heads Sex





Profile of Household Heads

Civil Status





4.6% SEPARATED/DIVORCED /ANNULLED



12.7% COMMON LAW/ LIVE-IN



Profile of Household Heads

Highest Educational Attainment





Profile of Household Heads

Occupation





Age Distribution of Household Members



46.6%

19.5%



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10.6%

Sex of Household Members





Women of Reproductive Age (WRA) (15 to 49 Years Old)





ETHNICITY





Indigenous People









www.tuv.com ID 9105083248

System ISO 9001:2015

Management

FOOD SECURITY STATUS **OF HOUSEHOLDS July 2021-June 2022**

FOOD SECURITY -

exists when all people at all times have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life

(World Food Summit, 1996)









SDG 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale

FOOD INSECURITY

the state in which people are at risk actually suffering from or inadequate consumption to meet nutritional requirements as a result of the physical unavailability of food, their lack of social or economic access to adequate food, and/or inadequate food utilization

(Global Forum on Food Security, FAO)



METHODOLOGY

QUESTIONNAIRE

Household Food Security using Food Insecurity Experience Scale (FIES)

- Eight-item questionnaire
- Experiences of the respondent's household
- Based on self-reported food-related behaviors and experiences associated with increasing difficulties in accessing food due to resource constraints
- Past 12 months recall period



Household Food Security using Food Insecurity Experience Scale (FIES)

12-month recall period





FIES Measurement

- A reference period of 12 months ensure comparability of surveys conducted in different months
- Analysis using Item Response Theory and Rasch Model
 - Produces an estimate of the <u>relative</u> position of raw scores (number of affirmative responses ranging from 0-8) on the severity scale (mild to severe food insecurity)
 - Raw score-based classifications are not directly and fully comparable across settings, requiring methods to equate measures obtained in different applications by referencing them to a global standard
 - Produces a probability estimates for being food insecure at different levels of severity, taking into account measurement error.



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PREVALENCE OF FOOD INSECURITY





Percentage of Households by Food Insecurity Experience



Percentage of households by food insecurity experience by month







Prevalence of households experiencing moderate to severe food insecurity, by household head sex, household size, place of residence, and wealth status: Philippines, 2021





Food coping strategies of households: Philippines, 2021





Non-food coping strategies of households: Philippines, 2021



Percentage of households participating in government programs: Philippines, 2021



Vegetable Gardening

Type of Food Production



Fruit Gardening

Livestock/Poultry raising/ Aquaculture

Social Protection Programs



Pantawid Pamilyang Pilipino Program (4Ps)







46.2% of the poorest households (95% CI: 41.2-51.2)



3 out of 10 households experienced moderate to severe food insecurity.

Moderate to severe food insecurity was more evident among households with **male household head**, **poor wealth status** and with **more than five members**.





Purchasing food on credit and **borrowing food** from relative/neighbor/friends were the most common **food coping strategies** of households during the pandemic

Loan from relative and non-relatives were the most common non-food coping strategies of households during the pandemic.









1 in every **2** households had fruit garden and/or raise livestock/poultry/aquaculture.

6 in every 10 households have vegetable garden, majority of which were own initiative.







4 out of 10 poorest households are members of **Pantawid Pamilyang Pilipino Program or 4P's.**







AWARENESS AND USAGE OF IODIZED SALT IN THE PHILIPPINES:

EXPANDED NATIONAL NUTRITION SURVEY 2021




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What is ASIN Law?

REPUBLIC ACT NO. 8172 (July 24, 1995)

Promoting salt iodization nationwide and for related purposes.

Known as "An <u>Act for Salt lodization</u> <u>Nationwide (ASIN)</u>"



Purpose of the ASIN Law

Contribute to the elimination of micronutrient malnutrition in the country, particularly iodine deficiency disorders, through the cost-effective preventive measure of salt iodization.



Purpose of the ASIN Law

- Require all producers manufacturers of food-grade salt to iodize the salt that they produce, manufacture, import, trade or distribute.
- Require the DOH to undertake the program and for its BFAD (FDA) to set and enforce standards for food-grade iodized salt.



Global Standard

....on adequately iodized salt

Salt containing 15 to 40 ppm of iodine at the household level (WHO, 2007)

....on indicator to determine whether fortification program is reaching the target population

> Household access to adequately iodized salt should be >90%







SALT BEING USED BY FILIPINO HOUSEHOLDS: EXPANDED NATIONAL NUTRITION SURVEY 2021



Type of salt being used by Filipino households





Sources of salt being used by Filipino households





Type of salt being used by type of residence: Philippines





Type of salt being used, by wealth quintile: Philippines





Are Filipino households aware of iodized salt?





or 6 out of 10 households are **aware of iodized salt**



Percentage of households who are aware of iodized salt: Philippines





Perception of meal planners on iodized salt: Philippines





Are Filipino households using iodized salt?





or 1 out of 2 households claims using iodized salt



Percentage of households who claimed using iodized salt: Philippines









HOUSEHOLDS USING ADEQUATELY IODIZED SALT BASED ON WYD TEST RESULTS: EXPANDED NATIONAL NUTRITION SURVEY 2021

Are Filipino households using adequately iodized salt (≥15ppm)?





or 1 out of 3 households is **using** adequately iodized salt



Distribution of households by WYD test results for salt by type of residence: Philippines





Distribution of households by WYD test results for salt by wealth quintile: Philippines





SUMMARY

TYPE OF SALT USED

- Majority of the households are using rock salt in both rural and urban areas.
- Rock salt is commonly purchased from *sari-sar* store (51.9%) while fine salt is from market/*talipapa* (38.6%).
- Meal planners' perception on iodized salt include: prevents goiter (17.3%), added with iodine (16.3%), and good for the body (16.0%).





AWARENESS AND USAGE OF IODIZED SALT

- Six out of 10 (64.9%) Filipino households are aware of iodized salt.
- One out of two (55.7%) Filipino households claims using iodized salt.



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HOUSEHOLDS USING ADEQUATELY IODIZED SALT

Section Se







Nutritional Status of Preschool-Age Children



Infants and Young Children

0 - 23 MONTHS



Preschoolers

3-5 YEARS OLD

CHILDREN UNDER-FIVE





Infants and Young Children (0-23 months)



Cut-off points used in determining magnitude and severity of underweight among children, under-five years old (0 to <60 months), as a public health problem (WHO, 1995)

Magnitude and Severity	Prevalence category for Underweight	
Low	<10	
Medium	10 – 19	
High	20 – 29	
Very High	≥30	

Cut-off points used in determining the public health significance of stunting, wasting, and overweight among children, under-five years old (0 to <60 months) (WHO, 2018)

Category of public health significance	Prevalence of stunting (%)	Prevalence of wasting (%)	Prevalence of overweight (%)
Very Low	<2.5	<2.5	<2.5
Low	2.5 – <10	2.5 – <5	2.5 – <5
Medium	10 - <20	5 – <10	5 – <10
High	20 - <30	10 – <15	10 – <15
Very High	≥30	≥15	≥15



Prevalence of malnutrition among infants and young children (0 to 23 months): Philippines, 2021



* Magnitude/severity based on WHO, 1995 ** Magnitude/severity based on WHO, 2018



Prevalence of stunting among Filipino children (0 to 23 months) by age group: Philippines, 2021





*significantly different at 5% level of significance



Prevalence of wasting among Filipino children (0 to 23 months) by age group: Philippines, 2021

(95% CI: 5.4–9.6)



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Prevalence of underweight among infants and young children (0 to 23 months) by age group: Philippines, 2021







INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES (0-23 months)



Breastfeeding Indicators



1. Early initiation of breastfeeding within one hour after birth

2. Exclusive breastfeeding from birth until six months

3. Continued breastfeeding up to two years or beyond



Percentage of infants and young children (0 to 23 months old), by breastfeeding practices: Philippines, 2021



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Complementary Feeding Practices



Minimum Dietary Diversity (MDD)

Operational Definition

Proportion of children 6-23 months of age who consumed foods and beverages from at least 5 or more food groups (DDS > 5) of the following 8 food groups:

- 1. Breastmilk
- Grains, roots and tubers and 2. plantains
- 3. Dairy products
- Legumes and nuts 4.
- Flesh foods 5.
- Eggs 6.
- Vitamin-A rich fruits and 7 vegetables
- Other fruits and vegetables 8.



13.8%

of children 6-23 months are meeting MDD





Reference: 2021 World Health Organization and the United Nations Children's Fund (UNICEF) - Indicators for Assessing Infant and Young Child Feeding Practices: Definitions and Measurement Methods.



Minimum Meal Frequency (MMF)

Operational Definition

Proportion of children 6–23 months of age who consumed solid, semisolid or soft foods (but also including milk feeds for nonbreastfed children) at least the minimum number of times during the previous day

Defined as:

2x for breastfed infants 6-8 months old 3x for breastfed children 9-23 months old 4x for non-breastfed children 6-23 months old



of children 6-23 months receives MMF



Reference: 2021 World Health Organization and the United Nations Children's Fund (UNICEF) - Indicators for Assessing Infant and Young Child Feeding Practices: Definitions and Measurement Methods.

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Minimum Acceptable Diet (MAD)

Operational Definition

Proportion of children 6-23 months meeting both the minimum dietary diversity and the minimum meal frequency to ensure both dietary and nutrient adequacy.



of children 6-23 months receives MAD



Reference: 2021 World Health Organization and the United Nations Children's Fund (UNICEF) - Indicators for Assessing Infant and Young Child Feeding Practices: Definitions and Measurement Methods.

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- **Stunting:** High public health significance, affecting 1 in 5 (21.6%) (WHO, 2018).
- Underweight: Medium public health problem, affecting 1 in 10 (12.3%) (WHO, 1995).
- **Wasting:** Medium severity, affecting 7.2% of children under two (WHO, 2018).



- Exclusive breastfeeding among infants under 6 months was 60.1%, however, continued breastfeeding at 2 years is only 41.8%.
- Only 13.8% young children 6-23 months received the minimum variety of foods (> 5 food groups), indicating low dietary diversity
- Only 13.3% of young children 6-23 months received the minimum diet.
- Poor feeding practices remains a significant challenge.







Nutritional Status of Preschoolers (3-5 years old)



Prevalence of malnutrition among preschoolers (3 to 5 years old months): Philippines, 2021





Prevalence of stunting among preschoolers (3 to 5 years old) by age group: Philippines, 2021



* Magnitude/severity based on WHO, 2018



Prevalence of stunting among preschoolers (3 to 5 years old): Philippines, 2021









Nutritional Status of Under-five children (0-59 mos old)



Prevalence of malnutrition among children under-five (0 to 59 months): Philippines, 2021



* Magnitude/severity based on WHO, 1995

****** Magnitude/severity based on WHO, 2018



Prevalence of stunting among children under-five (0 to 59 months) by age group: Philippines, 2021





Preschool-age children under five:

- **Stunting:** High public health significance, affecting 1 in 4 (26.7%) (WHO,2018).
- **Underweight:** Medium public health problem, affecting 1 in 10 (12.3%) (WHO, 1995).
- **Wasting:** Medium severity, affecting 5.5% of children under five (WHO, 2018).
- **Overweight:** Low public health problem at 3.9% (WHO, 2018)







Nutritional Status of Filipino School-age Children in the Philippines



Prevalence of malnutrition among school-age children, 5 to 10 years old: Philippines, 2021





Prevalence of underweight among school-age children, 5 to 10 years old, by age group: Philippines, 2021





Prevalence of underweight among school-age children, 5 to 10 years old, by sex, place of residence, and wealth status: Philippines, 2021



* significantly different at 5% level of significance



Prevalence of stunting among school-age children, 5 to 10 years old, by age group: Philippines, 2021







Prevalence of stunting among school-age children, 5 to 10 years old, by sex, place of residence, and wealth status: Philippines, 2021



* significantly different at 5% level of significance



Prevalence of wasting among school-age children, 5 to 10 years old, by age group: Philippines, 2021







Prevalence of wasting among school-age children, 5 to 10 years old, by sex, place of residence, and wealth status: Philippines, 2021





Prevalence of overweight & obesity among school-age children, 5 to 10 years old, by age group: Philippines, 2021





Prevalence of overweight & obesity among school-age children, 5 to 10 years old, by sex, place of residence, and wealth status: Philippines, 2021



* significantly different at 5% level of significance



- One (1) in every five (5) (20.8%) school-age children is underweight.
- Underweight is higher among males (22.3%) and those residing in rural areas (22.1%) than their counterparts. It is also significantly different across wealth quintile.



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- One (1) in every five (5) (19.7%) school-age children is stunted.
- Stunting is significantly different across wealth quintile and it is significantly highest in the poorest (32.7%) households than its counterparts.



- One (1) in every 15 (6.9%) school-age children is wasted.
- Wasting is significantly higher among males (7.8%) than females (6.0%)
- It is higher among urban residents, and those from middle-class (8.4%) and rich (7.3%) households than their counterparts.



- One (1) in every 10 (14%) school-age children is overweight.
- Overweight is significantly higher in urban (17.3%) than rural areas (11.7%).
- It is significantly different across wealth quintile.







Nutritional Status of Filipino Adolescents in the Philippines



Prevalence of malnutrition among adolescents, >10 to 19 years old, in the Philippines: ENNS, 2021





Prevalence of stunting among adolescents, >10 to 19.0 years old, by age group: Philippines, 2021





Prevalence of stunting among adolescents, >10 to 19.0 years old, by sex, place of residence, and wealth status: Philippines, 2021



*significantly different at 5% Level of significance



Prevalence of wasting among adolescents, >10 to 19.0 years old, by age group: Philippines, 2021





Prevalence of wasting among adolescents, >10 to 19.0 years old, by sex, place of residence, and wealth status: Philippines, 2021



*significantly different at 5% Level of significance



Prevalence of overweight & obesity among adolescents, >10 to 19.0 years old, by age group: Philippines, 2021





Prevalence of overweight & obesity among adolescents, >10 to 19.0 years old, by sex, place of residence, and wealth status: Philippines, 2021



*significantly different at 5% Level of significance



- One (1) in every five (22.3%) adolescents is stunted.
- Stunting is higher in households of poor to poorest wealth quintiles than their counterparts.



- One (1) in every 10 (10.9%) adolescents is wasted.
- Wasting is significantly higher among males (12.8%) than females (9.0%)



- One (1) in every 10 (13.0%) adolescents is overweight and obese.
- Significant differences in the prevalence are observed by type/place of residence and across wealth quintiles.







Current Smokers

Those who smoked during the survey either on a "daily basis" (at least one cigarette a day) or on a "regular/ occasional basis" (WHO, 2008)

- Occasional smokers are those who do not smoke daily but who smoke at least weekly and
- Those who smoke less than weekly


Percentage of current smokers adolescents, 10 to 19.9 years old, by age group: Philippines, 2021





Percentage of current smokers adolescents, 10 to 19.9 years old, by sex, place of residence, and wealth status: Philippines, 2021









Operational Definition

Those who consumed one or more drinks of any type of alcohol in the year preceding the survey (WHO, 2015)



Percentage of current drinkers among adolescents, 10 to 19.9 years old, by age group: Philippines, 2021





Percentage of current drinkers among adolescents, 10 to 19.9 years old, by sex, place of residence, and wealth status: Philippines, 2021



*Significantly different at 5% Level of significance



Percentage of current drinkers in the past 30 days among adolescents, 10 to 19.9 years old, by age group: Philippines, 2021





Percentage of current drinkers in the past 30 days among adolescents, by sex, place of residence, and wealth status: Philippines, 2021



*Significantly different at 5% Level of significance





BINGE DRINKING Operational Definition

The excessive consumption of alcoholic beverages, specifically the intake of four or more (females) or five or more (males) standard drinks in a row (WHO, 2008) by those who reported drinking alcoholic beverages in the past 30 days.



Percentage of binge drinking among currently drinking adolescents, 10 to 19.9 years old, by sex: Philippines, 2021









Doing less than 60 minutes of moderate-to vigorous-intensity physical activity per day

World Health Organization (2015) Global Reference List of 100 Care Health Indicators. Geneva 27, Switzerland



INSUFFICIENT PHYSICAL ACTIVITY among adults, 18 years old and above Operational Definition

A person not meeting any of the following criteria is considered being physically inactive or insufficiently physically active and therefore at risk of chronic disease:

- » 3 or more days of vigorous-intensity activity of at least 20 minutes per day or
- » 5 or more days of moderate-intensity activity of at least 30 minutes per day or
- » walking of at least 30 minutes per day

Reference: World Health Organization STEPwise Approach to NCD Risk Factor Surveillance



Percentage of insufficiently physically active adolescents, 10 to 19.9 years old, by age group: Philippines, 2021







Percentage of insufficiently physically active adolescents, 10 to 19.9 years old, by sex: Philippines, 2021





Percentage of insufficiently physically active adolescents, 10 to 19.9 years old, by place of residence, and wealth quintile: Philippines, 2021





SUMMARY

- The percentage of smokers is 2.3%. Smoking is higher among males (4.4%) than females (0.4%).
- One (1) in every ten (13.2%) adolescents is currently drinking alcohol beverages. This is significantly higher among males (16.1%) than females (10.4%).
- More than half (51.4%) are binge drinkers among the current alcohol drinkers.
- Seven (7) in every ten (70.2%) are insufficiently physically active.
- The percentage of insufficiently physically active is significantly higher among females (75.2%) than males (65.0%)







ID 9105083248

Nutrition Situation of Women of Reproductive Age (WRA) in the **Philippines**





Non-Pregnant / Non-lactating Women of Reproductive Age



Prevalence of chronic energy deficiency and overweight & obesity among non-pregnant/non-lactating women of reproductive age, 15 to 49 years old: Philippines, 2021



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Prevalence of chronic energy deficiency (CED), among non-pregnant/non-lactating women of reproductive age, 15 to 49 years old: Philippines, 2021



* significantly different at 5% level of significance

(95% CI: 8.2–10.3)



Prevalence of chronic energy deficiency, among non-pregnant/non-lactating women of reproductive age, 15 to 49 years old: Philippines, 2021





Prevalence of overweight & obesity, among non-pregnant/non-lactating women of reproductive age, 15 to 49 years old: Philippines, 2021

Age Groups * 50 42.3 40 Prevalence (%) 30 20 **9.9 OVERWEIGHT** & 10 **OBESITY** 35.9% < 20 years old \geq 20 years old 95% LL 8.2 40.5 (95% CI: 34.5–37.4) UL 11.8 44.1 CI

* significantly different at 5% level of significance



Prevalence of overweight & obesity, among non-pregnant/non-lactating women of reproductive age, 15 to 49 years old: Philippines, 2021



* significantly different at 5% level of significance



Pregnant Women



Percentage of nutritionally-at-risk pregnant women: Philippines, 2021



(95% CI: 12.3-21.4)



Lactating Mothers





Prevalence of chronic energy deficiency and overweight & obesity among lactating mothers: Philippines, 2021





SUMMARY

WOMEN OF REPRODUCTIVE AGE (WRA) 15 TO 49 YEARS OLD

- One (1) in every 10 (9.2%) non-pregnant/non-lactating women is chronic energy deficient (CED) and is considered of "low" public health significance.
- Four (4) in every 10 (35.9%) non-pregnant/non-lactating women are overweight/obese. It is significantly higher among urban dwellers than their counterparts.



SUMMARY

Pregnant and lactating mothers

- Two (2) in every 10 (16.4%) pregnant women are nutritionally-at-risk to deliver low birth weight babies.
- One (1) in every 10 (8.4%) lactating mothers is chronic energy deficient and classified as "low" public health significance.
- Three (3) in every 10 (30.6%) lactating mothers are overweight/obese.



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Health and Nutritional Status of Filipino Adults, 20 to 59 years old

DOST-FNR



Classification and cut-off points of Body Mass Index (BMI)

Classification	WHO	Asia-Pacific
Chronic Energy Deficiency (CED)	< 18.5	< 18.5
Normal	18.5 to 24.9	18.5 to 22.9
Overweight	25.0 to 29.9	23.0 to 24.9
Obese	<u>></u> 30.0	<u>></u> 25.0



Prevalence of chronic energy deficiency, overweight, and obesity among adults, 20 to 59 years old, Philippines: 2021





Prevalence of chronic energy deficiency among adults, 20 to 59 years old, by age group: Philippines, 2021





Prevalence of chronic energy deficiency among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021





Prevalence of overweight among adults, 20 to 59 years old, by age group: Philippines, 2021



OVERWEIGHT 30.2%(95% CI: 28.9–31.6)



Prevalence of overweight among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



Prevalence of obesity among adults, 20 to 59 years old, by age group: Philippines, 2021

OBESITY 10.0% (95% CI: 9.0–11.1)




Prevalence of obesity among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



High Waist Circumference



Prevalence of high waist circumference (WC) among adults, 20 to 59 years old, by age group: Philippines, 2021

нісника Нісника 16.2% (95% СІ: 15.3–17.1)



High waist circumference cut-off points (WHO, 2011):

Male: >102 cm Female: >88 cm



Prevalence of high waist circumference among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Elevated Blood Pressure



Classification and cut-off points of Blood Pressure based on JNC VII*

Classification	Systolic Blood Pressure (mmHg)		Diastolic Blood Pressure (mmHg)
Normal	<120	and	<80
Prehypertension	120-139	or	80-89
Hypertension, Stage 1°	140-159	or	90-99
Hypertension, Stage 2°	<u>></u> 160	or	<u>></u> 100

* Joint National Committee on Detection and Treatment of High Blood Pressure

° Hypertension Stage 1 and Stage 2 levels are considered elevated blood pressure in the survey



Prevalence of elevated blood pressure among adults, 20 to 59 years old, by age group: Philippines, 2021



<u>Elevated blood pressure</u> is based on a single-visit BP measurement



Prevalence of elevated blood pressure among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



True prevalence of hypertension among adults, 20 to 59 years old, by sex: Philippines, 2021



<u>True prevalence of hypertension</u> – determined using the Marchevsky equation (based on BP measurement, previous history of hypertension, and intake of anti-hypertensive medicines)

* significantly different at 5% level of significance

 13.5°

(95% CI: 12.6–14.5)



Percentage of adults, 20 to 59 years old, with controlled hypertension, by sex: Philippines, 2021



CONTROLLED HYPERTENSION 29.4% (95% CI: 27.1–31.8)



* significantly different at 5% level of significance

<u>Controlled hypertension</u> – Systolic BP<140 mmHg and Diastolic BP<90mmHg in adults diagnosed with hypertension





Smoking



Percentage of current smokers among adults, 20 to 59 years old, by age group: Philippines, 2021



<u>Current Smokers</u> - those who either smoke on a "daily" basis (at least 1 cigarette a day) or on a regular/occasional basis (at least weekly or less often than weekly)



Percentage of current smokers among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Current Alcohol Drinking



Percentage of current drinkers among adults, 20 to 59 years old, by age group: Philippines, 2021



<u>Current Drinkers</u> - those who drunk 1 or more standard drinks of any type of alcohol in the year preceding the survey (past 12 months)

CURRENT

DRINKERS

(95% CI: 42.6–51.6)



Percentage of current drinkers among adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Current Drinkers in the past 30 days and BINGE Drinking

(Harmful use of alcohol)



Percentage of currently drinking adults, 20 to 59 years old, in the past 30 days, by age group: Philippines, 2021





Percentage of currently drinking adults, 20 to 59 years old, in the past 30 days, by sex, place of residence, and wealth quintile: Philippines, 2021



*significantly different at 5% level of significance



Percentage of binge drinking among current drinkers, 20 to 59 years old, by sex: Philippines, 2021



<u>Binge drinkers</u> is among those who currently drinks alcoholic beverages or those who reported drinking alcoholic beverages in the past 30 days



* significantly different at 5% level of significance



Physical Activity



Percentage of insufficiently physically active adults, 20 to 59 years old, by age group: Philippines, 2021





Percentage of insufficiently physically active adults, 20 to 59 years old, by sex, place of residence, and wealth quintile: Philippines, 2021



⁴ significantly different at 5% level of significance



DOMAINS OF PHYSICAL ACTIVITY

Physical activity is also assessed in different domains, which are related to:

- » leisure (e.g. recreational activities, exercise and sports)
- » transportation (e.g. active commuting, like walking or using bicycle)
- » occupation or work (involving manual labor tasks, walking, carrying or lifting objects)



Percentage of low leisure-related, travel-related, and work-related physical activity among adults, 20 to 59 years old, by sex: Philippines, 2021



* significantly different at 5% level of significance



SUMMARY

ANTHROPOMETRY

- Chronic energy deficiency (7.2%) is of "low" public health significance.
- Four out of 10 (40.2%) are overweight or obese, and it is more common among females and those belonging in urban areas.
- High waist circumference (abdominal obesity) is more prevalent among females (25.4%) and those belonging in urban areas (18.1%) than their counterparts.



Summary of NCD risk factors among ADULTS, 20 to 59 years old

2021 ENNS

Biological Risk Factors:



4 in 10 (40.0%) adults are overweight/obese

Significantly higher among FEMALES Evidently higher among URBAN dwellers and those in UPPER WEALTH quintiles





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Health and Nutritional Status of Filipino Elderly, 60 years old and above





ISO 9001:2015

Prevalence of chronic energy deficiency, overweight, and obesity among elderly, 60 years old and above, Philippines: 2021





Prevalence of chronic energy deficiency among elderly, 60 years old and above, by age group: Philippines, 2021





Prevalence of chronic energy deficiency among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021





Prevalence of overweight among elderly, 60 years old and above, by age group: Philippines, 2021







Prevalence of overweight among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



Prevalence of obesity among elderly, 60 years old and above, by age group: Philippines, 2021



OBESITY 62% (95% CI: 5.2–7.5)



Prevalence of obesity among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



High Waist Circumference


Prevalence of high waist circumference (WC) among elderly, 60 years old and above, by age group: Philippines, 2021





Prevalence of high waist circumference among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Elevated Blood Pressure



Prevalence of elevated blood pressure among elderly, 60 years old and above, by age group: Philippines, 2021







Prevalence of elevated blood pressure among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021





True prevalence of hypertension among elderly, 60 years old and above, by sex: Philippines, 2021





Percentage of elderly, 60 years old and above, with controlled hypertension, by sex: Philippines, 2021



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Smoking



Percentage of current smokers among elderly, 60 years old and above, by age group: Philippines, 2021





Percentage of current smokers among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Current Alcohol Drinking



Percentage of current drinkers among elderly, 60 years old and above, by age group: Philippines, 2021





Percentage of current drinkers among elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance





Current Drinkers in the past 30 days and BINGE Drinking

(Harmful use of alcohol)



Percentage of currently drinking elderly in the past 30 days, by age group: Philippines, 2021





Percentage of currently drinking elderly in the past 30 days, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



Percentage of binge drinking among current drinkers, 60 years old and above, by sex: Philippines, 2021





Physical Activity



Percentage of insufficiently physically active elderly, 60 years old and above, by age group: Philippines, 2021







Percentage of insufficiently physically active elderly, 60 years old and above, by sex, place of residence, and wealth quintile: Philippines, 2021



* significantly different at 5% level of significance



SUMMARY

ANTHROPOMETRY

- Chronic energy deficiency (11.8%) is classified as a "medium" public health problem.
- Three out of 10 (31.6%) elderly are overweight or obese, and it is more common among females and those belonging in urban areas.
- High waist circumference is significantly higher among elderly females (30.2%) than males (5.4%).



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Summary of NCD risk factors among ELDERLY, 60 years old and above

2021 ENNS

Biological Risk Factors:



3 in 10 (31.6%) elderly are overweight/obese

33.4%

have elevated BP

Significantly higher among FEMALES **Evidently higher among URBAN dwellers** and those in UPPER WEALTH guintiles



Significantly higher among MALES

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