



Profile of Filipino Children: Nutritional Status and Schooling

Nanette Lee Mayol

USC-Office of Population Studies Foundation, Inc.

UNIVERSITY RESEARCH CONFERENCES



April 19-20, 2023



April 20-21, 2023



April 21-22, 2023

SDGs promoting human capital formation of Filipino youth



GOAL 1: END POVERTY IN ALL ITS FORMS EVERYWHERE

- **SES indicators**



GOAL 2: END HUNGER, ACHIEVE FOOD SECURITY, IMPROVE NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

- **Food and water insecurity, nutritional status**



GOAL 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

- **Mental health, sexual and reproductive health**



GOAL 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION FOR ALL AND PROMOTE LIFE-LONG LEARNING OPPORTUNITIES FOR ALL

- **Schooling, human capital index, access to technology**



GOAL 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

SDGs promoting human capital formation of Filipino youth



GOAL 2: END HUNGER, ACHIEVE FOOD SECURITY, IMPROVE NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

- Food and water insecurity, nutritional status



GOAL 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION FOR ALL AND PROMOTE LIFE-LONG LEARNING OPPORTUNITIES FOR ALL

- Schooling, human capital index, access to technology



GOAL 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

Key points

- ❖ High levels of malnutrition among Filipino adolescents
- ❖ Enrolment decreasing as the children got older, but remained high over the years
- ❖ During the pandemic (SY 2020-2021):
 - ❖ printed modules were most commonly used
 - ❖ most children had difficulties with remote learning
- ❖ Nutritional status affects schooling outcomes



Baseline Profile of Cohort Participants (n = 4,951)

Selected Characteristics	% or mean
Mean \pm SE age, years	10.5 \pm 0.01
Males,%	52.4
Presence of parents in household,%	
Both parents in household	77.5
Mother only	11.6
Father only	4.0
No parents in household	6.8
HH income below poverty threshold, %	79.2
HH 4Ps member, %	46.8
Had illness in past 6 months, %	29.9
Currently smoking, %	4.3
Currently drinking alcoholic beverages, %	4.6





Nutritional Status

UNIVERSITY RESEARCH CONFERENCES



April 19-20, 2023

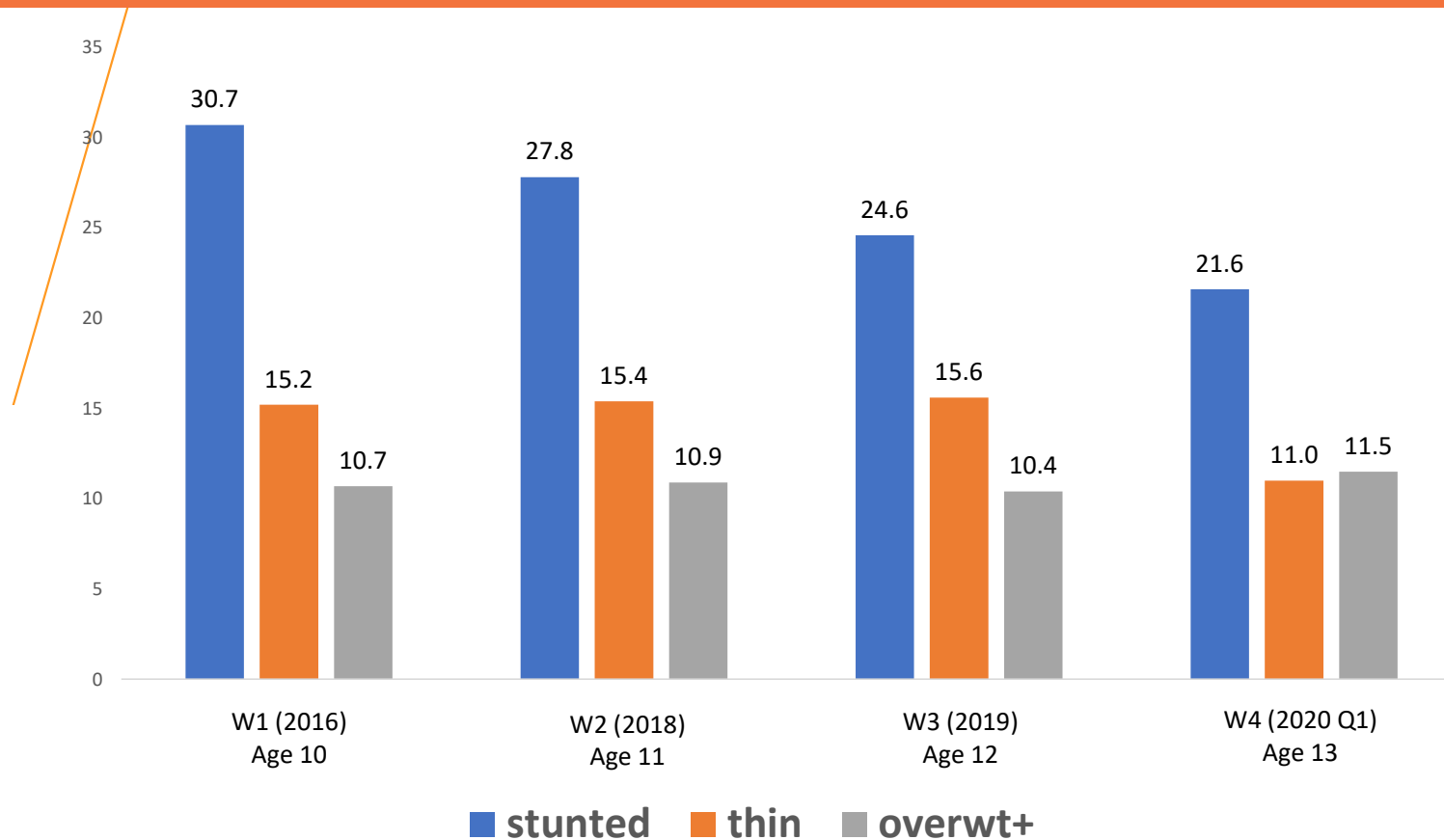


April 20-21, 2023



April 21-22, 2023

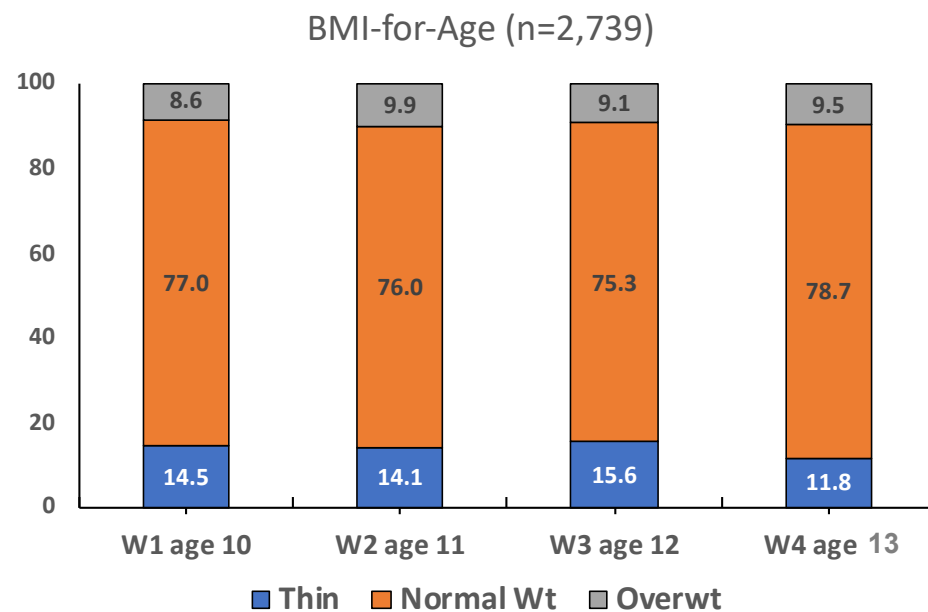
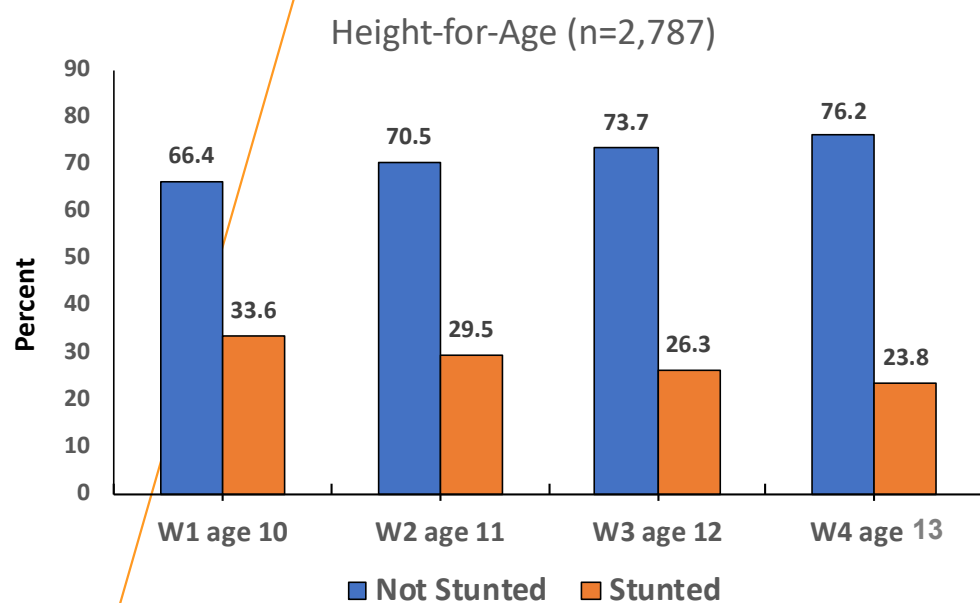
High rates of malnutrition (stunting, thinness, overweight/obese); Undernutrition decreased while overnutrition increased over the years.



Nutritional Status trend (ages 10-13)

% stunted decreased* over time (mainly due to growth spurts toward end of puberty)

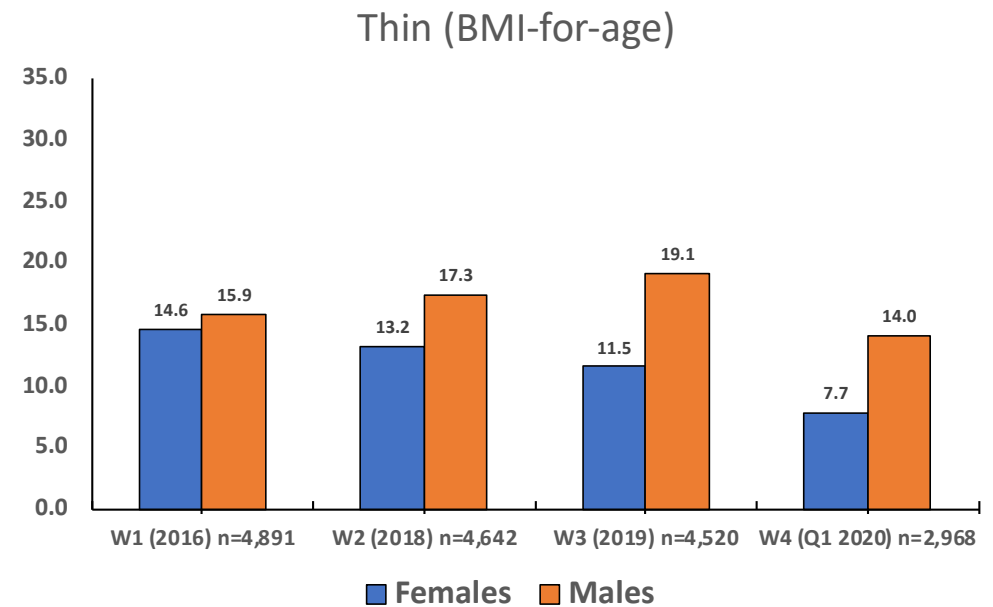
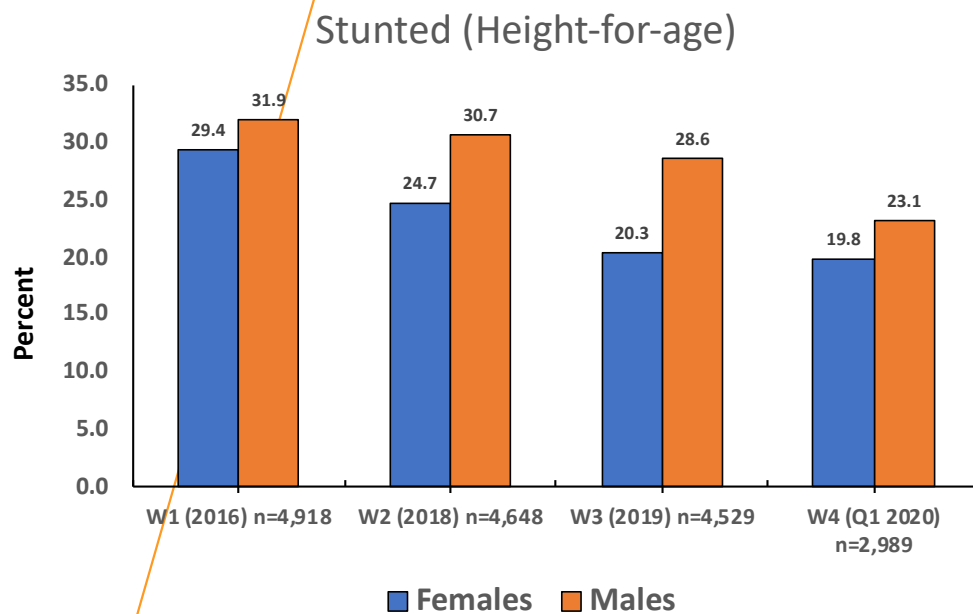
Double burden of malnutrition evident in BMI (body mass index) categories



* Sample includes those who participated in all 4 waves; unweighted proportions significantly different in all waves; test for significance based on linear combination of estimators

Nutritional Status by sex (ages 10-13)

In Waves 2 and 3 (ages 11-12), more males than females were stunted*
More males were classified as thin* across waves



*Significantly higher at $p < 0.05$; Test for significant differences in weighted proportions based on Pearson's chi-squared test of independence



Schooling

UNIVERSITY RESEARCH CONFERENCES



April 19-20, 2023

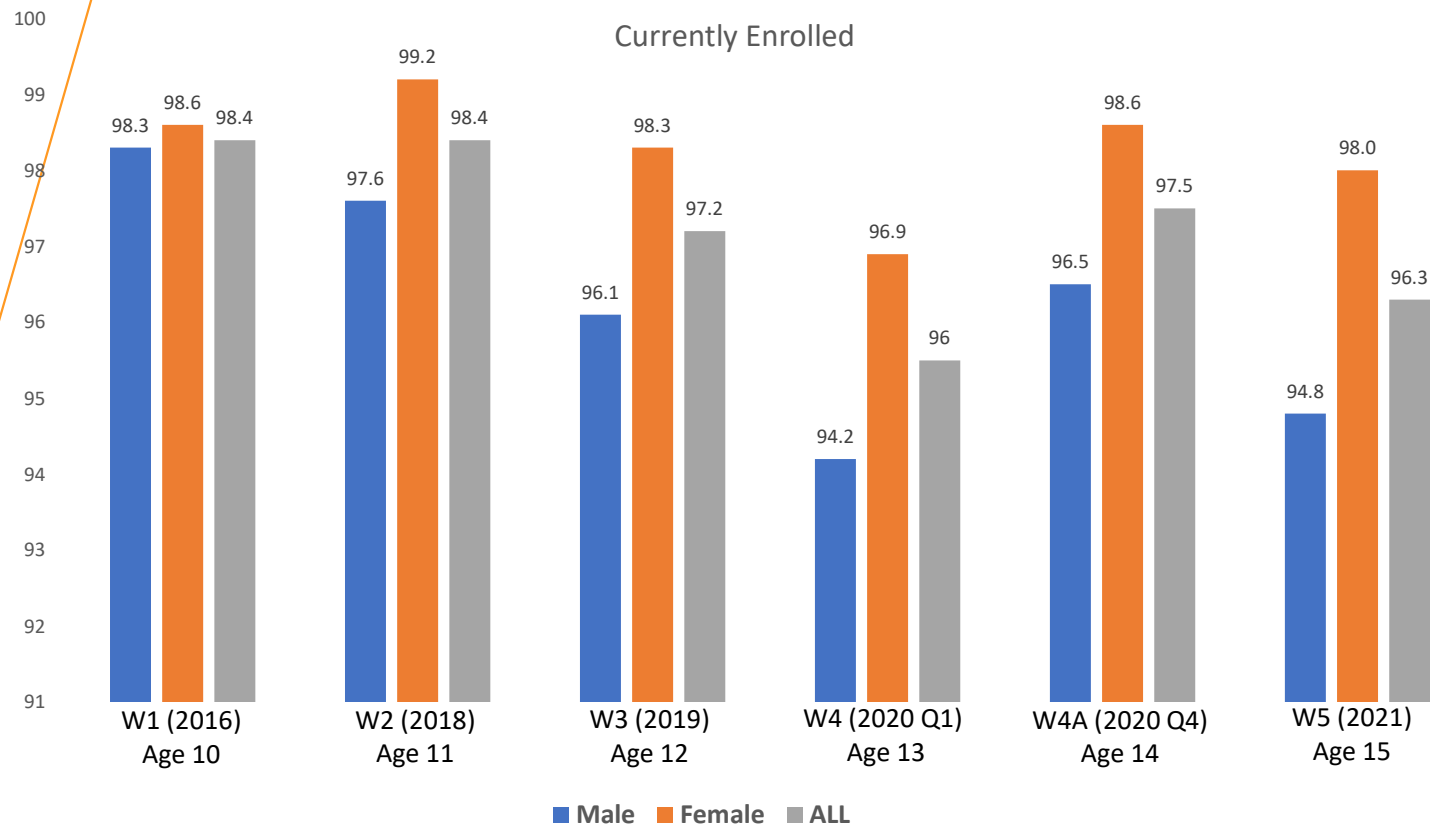


April 20-21, 2023

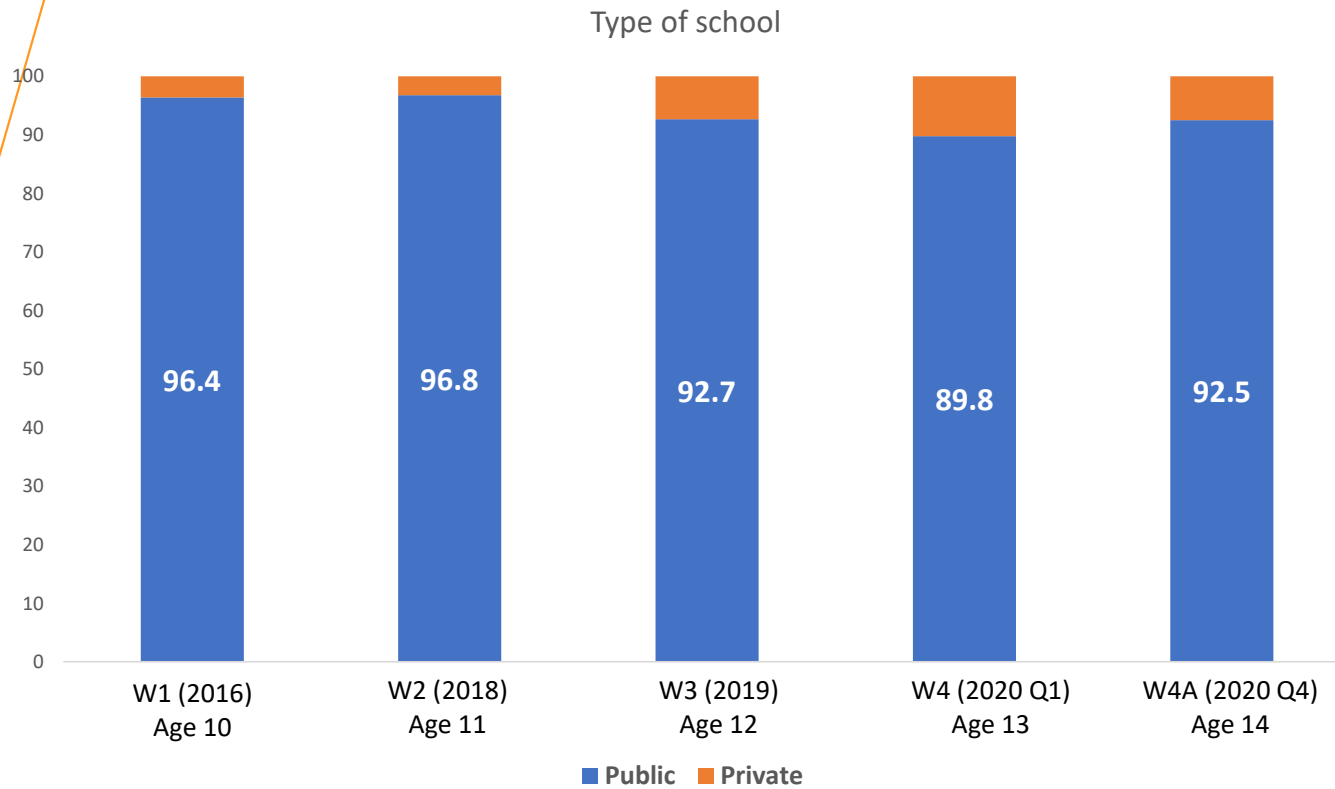


April 21-22, 2023

Enrolment almost universal at Baseline. Slowly decreased over the years, but remained high.



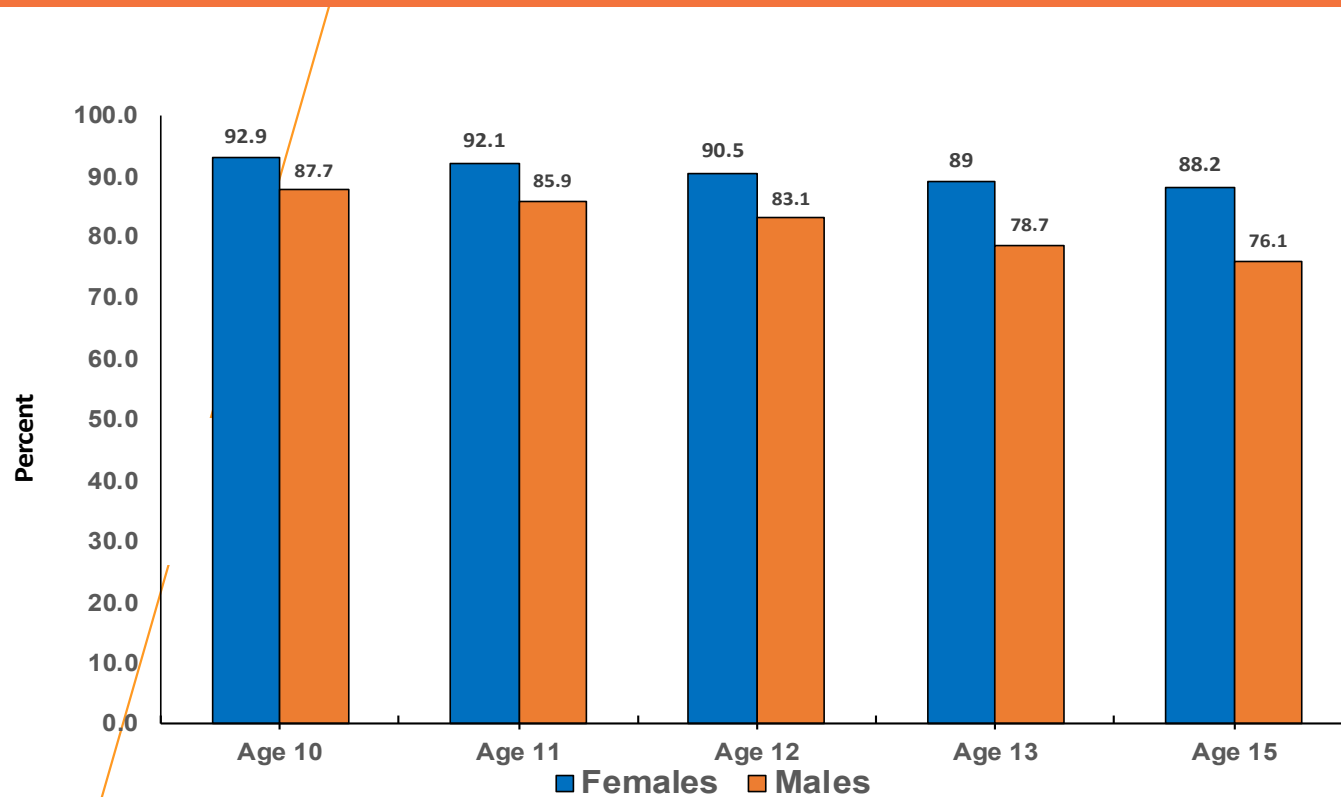
Majority of students were enrolled in public schools



Trend in age-appropriate grade levels by sex

A higher proportion of females than males stayed on track from age 10 to 15

From age 10 to 15: proportion dropped by about 12 percentage points in males vs 5 points in females



Mindanao had **lowest % on track** adolescents, followed by Luzon and Visayas

*Sample with complete data across waves (n=4,545); *unweighted proportions significantly higher at $p < 0.01$* based on linear combination of estimators

SY 2020-2021: Printed modules most common mode of schooling, especially in Visayas and Mindanao. More so in the latter part of the SY.

	Luzon	Visayas	Mindanao	ALL
SY 2020-2021 – November 2020				
Mode of schooling, %				
Online/internet only - access videos, modules online	12.3	3.9	3.0	8.1
Printed modules picked-up from school/barangay or delivered to home only	62.1	92.3	85.3	74.3
Blended learning - combination of online and delivered modules	24.8	2.9	11.2	16.9
Others	0.8	0.9	0.5	0.7
SY 2020-2021 June-August 2021				
Mode of schooling, %				
Online/internet only - access videos, modules online	15.0	3.0	1.5	8.9
Printed modules picked-up from school/barangay or delivered to home only	71.1	92.6	95.5	82.1
Blended learning - combination of online and delivered modules	13.0	2.8	2.5	8.1
Others	1.0	1.6	0.5	1.0

Note: Same children, n=2,854

Most children reported having difficulty in classes, Females more likely than males

	Luzon	Visayas	Mindanao	ALL
Reported having difficulty, %	87.0	81.3	82.3	84.6
Males	84.4	80.3	80.8	82.7
Females	89.8	82.3	83.9	86.7

Having difficulty is significantly associated with mode of learning: Compared to printed modules, those on online mode had higher odds of having difficulty (adjusted for sex, income, household density, type of school, domain)



Nutritional Status and Schooling

- ❖ All forms of undernutrition were associated with poor schooling outcomes
 - ❖ Grade repetition
 - ❖ Missing classes
 - ❖ Lower average grades
 - ❖ Lower aspirations
- ❖ Worse for children who were both thin and stunted.



Summary

- ❖ High levels of malnutrition among Filipino adolescents
 - ❖ Double burden of undernutrition and overnutrition
 - ❖ Males more affected than females
- ❖ Enrolment decreasing but remained high over the years
 - ❖ Most enrolled in public schools
 - ❖ Males less likely to be in school and to be in age-appropriate grade levels than females
- ❖ During the pandemic:
 - ❖ printed modules were most commonly used
 - ❖ most children had difficulties with remote learning
- ❖ Nutritional status affects schooling outcomes



Thank you.

Profile of Filipino Children: Nutritional Status and Schooling

Mayol NL^a, Bechayda SA^a, Borja JB^a, Bautista CAP^b

^aUSC-Office of Population Studies Foundation, Inc., University of San Carlos

^bUnited Nations Population Fund, Philippines

References:

The Impact of the COVID-19 Pandemic on the Youth Agenda

Policy Note 1: Mitigating the Effects of Undernutrition on Schooling Performance among 10-Year-Old Children:

What can be done? (Largo, F. et al.)

