USC-Office of Population Studies Foundation, Inc.

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

A research funded by

JOINT SDG FUND

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

Findings from the Longitudinal Cohort Study on the Filipino Child (LCSFC) (2016-2021)

***** DRAFT FOR CLEARANCE *****

A Report Prepared by the
USC-Office of Population Studies Foundation, Inc. (OPS)
and the LCSFC Study Team

The LCSFC Study Team

The LCSFC was conceptualized by the United Nations Population Fund (UNFPA) Philippines which manages funding and direction for this project in coordination with the National Steering Committee (NSC) which is composed of government agencies and chaired by the National Economic Development Authority (NEDA).

The USC-Office of Population Studies Foundation, Inc. (OPS) is the implementing agency of the LCSFC in collaboration with the following research institutions designated to conduct data collection in their respective areas:

Luzon:	Demographic Research and Development Foundation (DRDF) University of the Philippines Diliman, Quezon City
Visayas:	Center for Social Research and Education (CSRE) University of San Carlos, Cebu City
Mindanao:	Research Institute for Mindanao Culture (RIMCU) Xavier University, Cagayan de Oro City

The successful completion of each LCSFC survey round is attributed to the hardworking and dedicated cast of OPS Research Associates and staff, and the field supervisors and interviewers of DRDF, CSRE and RIMCU.

Also joining the team are established experts in their respective fields: Dr. Alejandro N. Herrin, Mr. Francisco M. Largo and Mr. Jan Lorenzo G. Alegado (Policy Analysis), Dr. Erniel B. Barrios (Statistics), Dr. Delia E. Belleza and Ms. Priscilla G. Fernando (Psychology), Dr. Maria Fiscalina A. Nolasco (Qualitative Research) and Mr. Leo Angelo L. Ocampo (Database Programming).

Finally, the LCSFC cohort and study respondents - consisting of 4, 952 10-year old respondents across Luzon, Visayas and Mindanao who were recruited at baseline, their mothers, caregivers and community informants – comprise an essential component of the team for providing us relevant data at each wave.

Report Leadership:

This report was completed under the overall direction of Dr. Judith Rafaelita B. Borja and Dr. Nanette L. Mayol of OPS with assistance from the Tita Lorna L. Perez, Delia B. Carba, George C. Soria and Isabelita N. Bas. Dr. Alejandro N. Herrin, Dr. Erniel B. Barrios and Dr. Charl Andrew A. Bautista provided guidance on the report.

Suggested Citation: USC-Office of Population Studies Foundation, Inc. (OPS). (2023). The Impact of the COVID-19 Pandemic on the SDG Youth Agenda. https://www.opsusc.org/lcsfc-survey-reports.php

Disclaimer
All discussions and interpretations of study findings presented in this report are not necessarily that of the UNFPA nor of the other agencies providing support to the LCSFC.

CONTENTS

LIST OF TABLES

CHAPTER 9

LIST OF FIGURES

Executive Summary

This report documents how our country has fared so far in terms of the youth-relevant targets of the Sustainable Development Goals (SDG). Featured in this report are the latest key findings from the ongoing Longitudinal Cohort Study on the Filipino Child (LCSFC) which tracks a nationally representative cohort of Filipino children who were age 10 in 2016 until they reach age 24 in 2030. The LCSFC is designed to assess the influence of the SDG on the lives of Filipinos as they transition from childhood to young adulthood or working age in the course of the SDG agenda implementation (2015-2030). Data on the cohort, their parents and household, and the barangay they live in are collected at each wave, measuring characteristics and behaviors that correspond to indicators used in monitoring SDG progress. The LCSFC collects such information on 13 of the 17 goals. The study period covers important milestones in the cohort's life course (see Figure 1). Using completed LCSFC survey data from 2016 to 2021, covering the cohort from age 10-15, this report presents critical information on their pubertal experience, a period marked by physical, emotional, psychological, and behavioral changes (as discussed in Chapter 6). The report period also captures the cohort's exposure to the unprecedented COVID-19 pandemic.

The cohort's progress, based on the parameters envisioned by the SDG, is described using data that approximate select indicators for Goals 1 thru 5, whose targets have the most impact on the youth's human capital formation. Data on these indicators are tracked from 2016-2021, about a third of the way to the 2030 SDG endline. Results are stratified by sex, urban-rural residence and island group (Luzon, Visayas and Mindanao) where relevant. The key LCSFC findings for Goals 1-5 are summarized below.

SDG1: END POVERTY IN ALL ITS FORMS EVERYWHERE

Within the study period (2016-2021), poverty incidence appeared to be significantly higher among households in the Visayas compared to those in Luzon and Mindanao (see Figures 2.2 and 2.4). Prior to the pandemic, from 2016 to the first quarter of 2020, there was a decreasing trend in the proportion of households whose income was classified as below the poverty line. During the pandemic, evident of the adverse consequences brought on to the world by this phenomenon, the proportion of poor households (based on income on a poor month) reverted to the 2016 baseline levels (Figure 2.2). The proportion of households having considerable difficulty in meeting household expenses in the context of their current total household income significantly increased during the pandemic years (33.9% in late 2020 and 18.5% in 2021) from 14.6% in early 2020 before the start of the pandemic (Figure 2.8). In these socio-economic measures, rural households were shown to be more disadvantaged than urban households (Figures 2.3, 2.5 and 2.10). Intensifying efforts to address the increase in poverty rates or regain the improvements in poverty alleviation prior to the pandemic, especially among households with adolescents, is imperative, especially in the Visayas and in rural areas. An additional impetus for helping poor households, particularly those with children and adolescents, is the LCSFC finding that adolescents from household-beneficiaries of the Pantawid Pamilyang Pilipino Program (4Ps) are less likely to be on track with their schooling versus those from non-4Ps households (see Chapter 7). Thus, the youth from poorer households also tend to lag behind in their human capital foundation, further compromising their potentials for a productive adulthood.

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

The momentum gained in increased food security prior to COVID-19 (2016-Q1 2020) was lost during the pandemic, with the proportion of food secure households reverting back to the level in 2019 (Wave 3) (see Figure 3.2). This is an unfortunate setback because evidence shows that household food insecurity is likely to be felt and expressed by the youth as well. Households classified as severely food insecure have the highest proportions of adolescents experiencing hunger (see Figure 3.8). Undernutrition in the form of wasting and stunting remain a concern among young adolescents (ages 10 thru 13), particularly among males (Figures 3.11 & 3.12). A Policy Note based on LCSFC findings reported that undernutrition at age 10 is significantly associated with poor schooling outcomes (see Chapter 3). These results on adolescent nutritional status call for strategic nutrition interventions focused on young adolescents to ensure human capital acquisition in the form of good health, nutriture and improved school performance.

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

Morbidity and disability profile: Morbidities reported for this age group consisted mostly of cough, colds, diarrhea, and fever/vomiting. While the proportion of adolescents who brush their teeth twice a day or more increased from 79% at age 10 to 92% at age 15 (see Figure 4.1), this health practice still needs promoting since dental cavities/decay affects more than half of the adolescents (see Figure 4.2). There were very few who reported having a non-communicable disease (NCD). However, their NCD risk profile needs to be monitored because the number of overweight/obese adolescents appears to be increasing, particularly among male adolescents (see Table 4.8). Another health risk that has to be addressed is the rise in the consumption of alcoholic drinks of young people, with higher rates among males, as they get older. In terms of disability, there were 136 cohort adolescents (of the 4,952 enrolled in LCSFC) with disabilities occurring before age 10, and incident cases reported at later ages mostly involved visual and hearing impairments. Data on functional limitations showed that there were about 34% who reported having some difficulty with at least one function, mostly visual difficulty, with about 8% reporting difficulty in seeing but not wearing glasses implying a significant unmet need in this area (see Table 4.10).

Early sexual behaviors: Eighty-four of the cohort participants, 73 of whom were males, reported to have experienced sexual intercourse by age 13 (see Tables 4.27 and 4.28). The early initiation of sexual activity and reports of having family members, strangers or mere acquaintances as their first sexual partners are reasons for concern. Furthermore, for more than half of those who initiated early sexual activity, their first partners were adolescents their age, clearly stressing the need for young adolescents to learn about responsible sexual behavior early on. While their awareness of reproductive health and family planning increased as they got older, only about 78% have reported discussing these topics in school subjects as part of the Department of Education's Comprehensive Sexuality Education mandate (see Table 4.25). For the 21% who reported knowing anything about family planning and correspondingly 26% on reproductive health, awareness did not translate to comprehension as reported in Chapter 4. Thus, not all of them are equipped with the needed information to protect them from unsafe sexual engagements.

Health care access and utilization: There was a declining trend in barangay health station utilization, particularly during the pandemic (Figure 5.3). Prior to the pandemic, health care consultations within the barangay only accounted for about a third or less of the total number of consultations (Figure 5.14). These results imply access or utilization issues to the closest health care points for households within the barangay. Health care was sought less the cohort adolescents than other household members (Figure 5.12), possibly due to the mild nature of illnesses experienced by the adolescents. A high proportion among those who did not seek care resorted to self-management or perceived the illness to be non-serious (Figure 5.17), and this was likewise true during the pandemic. Such household behavior becomes a major concern as it might affect how adolescents regard health care and their access to it. They may lack the initiative to seek care on their own.

Adolescent mental health: The pandemic brought about increased concerns regarding the mental health status of adolescents, particularly as a result of being locked down and confined for a prolonged period at home. While depression scores increased among the adolescents as they got older (Table 6.2), the proportion of adolescents whose scores were classified into more severe categories actually decreased during the pandemic (Figure 6.2). Data further show that about 1.9% of these adolescents at age 13 rated high in the suicidal attempt scale, or confirmed to have deliberately tried suicide. The corresponding rate was much lower at age 15 (0.5%) during the pandemic, but was significantly higher among females (Figure 6.6). A similar trend is seen in the suicide ideation scale, or confirmed thinking about suicide (Figure 6.7). The more concerning results are those on anxiety, where those classified in the clinical range increased from 2.4% prior to the pandemic to 16.6% in the early stage of the pandemic (Figure 6.4), with more adolescent males than females having scores that fall under more severe anxiety categories (Figure 6.5). Chapter 9 examined the effects of pandemic-related restrictions, as measured by the community quarantine levels the households were exposed to, on adolescent anxiety levels (Table 9.4). The increased anxiety levels during the pandemic do not appear to be triggered by community quarantine levels but may be more associated with difficulties experienced with the administration of the modular learning mode. These mental health red flags are made more worrisome given the lack of available facilities at the barangay level, as reported in Chapter 6, that could provide mental health care to adolescents, independent of counselling services for domestic and gender-based violence cases and medical services provided in health centers.

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

Chapter 7 reports that, at age 10, 98.4% of the cohort adolescents were in school, with 96% enrolled in public schools. At age 10, 91% were on-track with schooling, or being enrolled in age-appropriate grade levels with no missed school year. By age 15 only about 83% remained on-track. Higher proportions of females than males were on-track from age 10 through 15 (Figure 7.3). Across island groups and survey waves, adolescents from the Visayas were more likely to be on-track than their peers from Luzon, more so compared against those from Mindanao (Figure 7.4). Being on-track with schooling is significantly associated with poverty (at age 10: 93% on track among those in non-4Ps households versus 88% among 4Ps households) and maternal education (at age 10: 96% on track among college-level mothers versus 82% among elementary-level mothers). The exposure to severe COVID-19 status in the community also took a toll on school performance as discussed in Chapter 9. At the start of the extended school year during the pandemic (October 2020 to July 2021), about 98% of the adolescents were enrolled. By the

end of the school year, only 97% remained enrolled. The proportion who remained enrolled in 2021 was much lower among adolescents exposed to the more severe community quarantine categories compared to those in less severe areas (Table 9.4). These results highlight the importance of taking into account: a) gender differences in education, early in life, b) parental and household factors that significantly predict adolescents' capacity to be on track with schooling, and c) setbacks experienced by adolescents who suffered more during the pandemic.

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

From ages 10 to 15, female adolescents appear to be better off than the males in all human capital domains. In terms of enrollment rates (at age 15: 98% of females were in school versus 95% of males; Table 8.1) and being on track with schooling (Chapter 7), peer violence (at age 13: 14% of females versus 22% of males experienced physical violence from friends, Table 8.5) and physical and mental health risks reported in Chapters 4 and 6. It would be interesting to see how the significant edge that females have over the males will hold in subsequent life stages, particularly as they engage in reproductive life events such as pregnancy and marriage.

Revealing the youth's performance in these key Goals, a third of the way to the 2030 SDG implementation endline, provides important insights and useful information to all stakeholders on where the Filipino youth stand as far as SDG targets are concerned. Data presented in this report reflect what is really happening in the lives of the Filipino youth– individually and on their household level – and more clearly operationalize what needs to be done and where urgent action is needed while there is still time to make changes and meet SDG targets. These findings illustrate the extent to which the pandemic has delayed or disrupted what might have been a gradual trend towards meeting the 2030 targets or worsened the already slow progress of some even prior to the pandemic. This body of work also identifies indicators that appear resilient to crisis situations such as at the height of the COVID-19 pandemic.

In the remaining years until the 2030 deadline, the key questions that come to mind are: where do we go from here given these results and how do we catch up or get back on track after the pandemic?

Introduction

The implementation of the agenda for the Sustainable Development Goals (SDG) (2015-2030) coincides with the period (2015-2050) when the Philippines experiences the demographic phenomenon called the "youth bulge", the historic increase in the 15-29 age group. This shift in age structure implies an increase in the proportion of potentially productive, working age population. For this demographic event to translate into increased economic growth and a subsequent decline in dependency ratio relies so much on the human capital foundation of the emerging working age population (Mapa, 2015, NEDA, 2017, United Nations, 2017).

The SDG agenda on the youth, as reflected in the targets laid out in the first five goals, plays a crucial role in the country's capacity to maximize on this youth bulge window and claim its demographic dividend or the potentials for increased per capita income given the increase in the country's labor force. The country needs to invest in and capitalize on the programs under the SDG agenda implementation that maximize human capital potentials among the youth and correspondingly ensure that the labor market is primed to accommodate the large influx of job-seeking youth. Such initiatives include the National Economic Development Authority's (NEDA) Philippine Development Plan for 2017-2022 and the "Ambisyon Natin 2040" which visualized and initiated the preconditions ensuring that today's youth can enjoy gainful adulthood in their future (NEDA, 2016; NEDA, 2017).

A number of factors threaten the Philippines' claim to its demographic dividend such as high rates of stunting which compromise school performance and wage rates (Adair et al., 2013), prevailing high rates of out-of-school youth belonging to the 16-24 age group, high prevalence of risky sexual behaviors, and increasing rates of adolescent pregnancy particularly among the poor (Bongolan, 2013; NEDA, 2017; PSA, 2014). Adding to the challenge is the life-changing event in the form of the COVID-19 pandemic. This global crisis not only threatened people's health, initially resulting in a staggering number of deaths, but also resulted in adverse economic conditions. The pandemic's impact on the community and households subsequently and even directly affected the youth, considered as among the most vulnerable sector during the pandemic (ILO, 2020).

The Longitudinal Cohort Study on the Filipino Child

The main objective of the LCSFC is to examine how the lives of a cohort of Filipinos are changed as they transition from early adolescence to young adulthood in the course of our country's implementation of the SDG agenda. This cohort of Filipinos represents the SDG generation or the population sector on whom the country's demographic dividend depends. Specifically, the study aims to:

1. Contribute to the body of evidence on population dynamics and sexual reproductive health and rights, with a special focus on the SDG agenda.

2. Provide an evidence-based resource that will inform national policy making and development planning particularly on how the SDG agenda can contribute to maximizing the potentials of the Filipino youth.

This research study recruited a nationally representative sample of Filipinos who were 10 years old in 2016 and who will be tracked until they reach age 24 in 2030. A two-stage sample selection scheme was used with barangays as the primary sampling units, selected using probability proportional to size systematic sampling, with the number of 10-year-old children per barangay as the size measure. In each sample barangay, sample children were selected using equal probability systematic sampling. Implicit stratification was used to ensure selection of urban-rural sample barangays with children considered as vulnerable (indigenous peoples and children with disabilities). The final sampling draw yielded 345 barangays. The goal was to retain about 2,000 24-year-old cohort participants by the 2030 Endline Survey. To attain this endline sample required enrolling 5,000 10-year- old children at Baseline. Thus, the household recruitment process aimed to enroll 15 households per barangay, or a maximum of 5,175 households to provide enough margin to get at the desired sample size of 5,000 across all domains. Of the 5,175 households recruited at baseline, we interviewed a total of 4,952 households with eligible 10-year-old children, giving a response rate of 95.7%. The LCSFC baseline sample corresponds to a population of about two million 10-year-old children in 2016 across the country's major island groups of Luzon, Visayas and Mindanao, which are the study's sampling domains (see Table 1).

The main impetus for doing this study is to put a human face to the SDG generation and observe how their lives are affected as SDG-targeted programs are implemented. Each survey wave collects data at the community-, household-, and adolescent-levels that represent indicators on 13 of the 17 SDGs. It is hoped that important insights are gained regarding the challenges that this cohort experiences and opportunities for intervention are identified as they cross important milestones that determine their fate as young adults (Figure 1). This evidence-based resource will inform national policy making and development planning particularly on how the development goals are contributing to maximizing the potential of the Filipino youth[1].

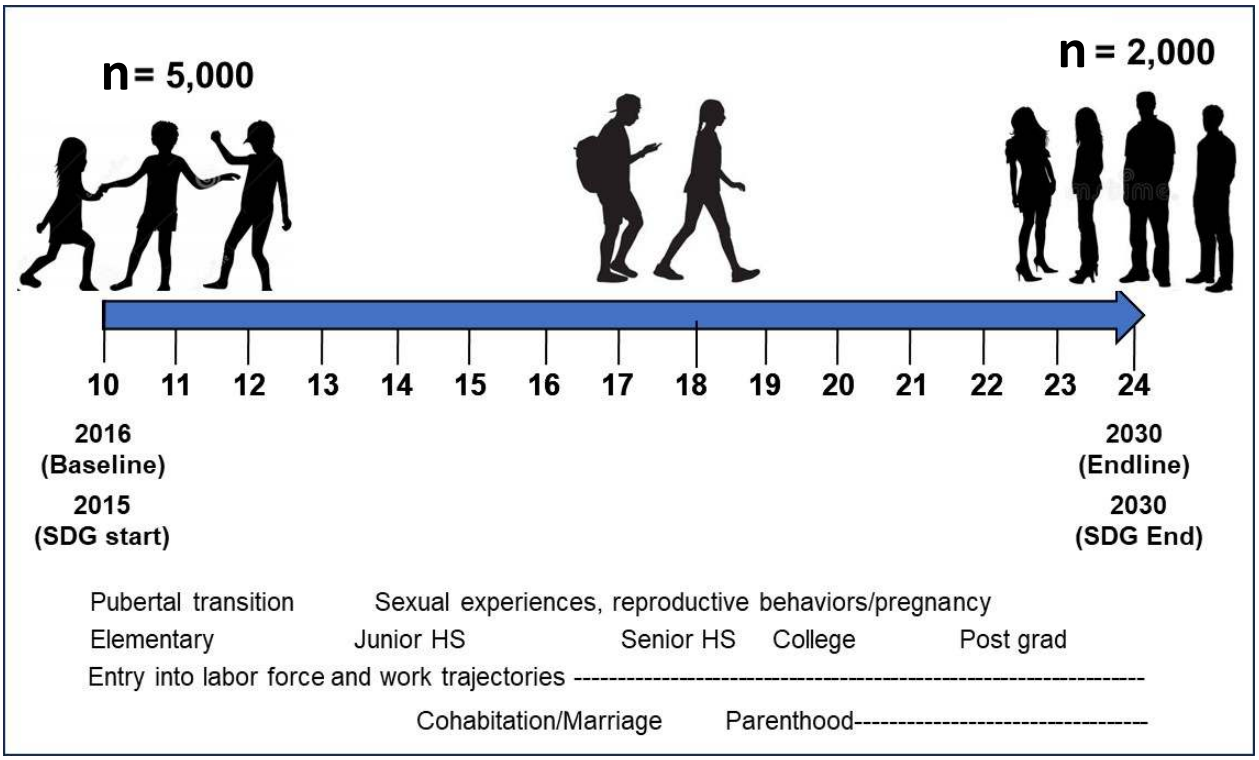
[1]For more details on the study methodology, please refer to the LCSFC Baseline Survey Technical Report (OPS, 2018).

Table 1. LCSFC Baseline Sample Distribution by Island Group (OPS, 2018)

Survey statistics	Luzon	Visayas	Mindanao	TOTAL
No. of barangays enumerated	115	115	115	345
Target households for enrollment	1,725	1,725	1,725	5,175
No. of households enrolled in the study[a]	1,618	1,639	1,695	4,952[b]
No. of 10-year old index children interviewed	1,600	1,639	1,688	4,927
Population size (weighted sample)[c]/domain	1,134,764	414,162	561,253	2,110,179

[a] Eligible households: with children aged 10 and consented to participate in the Baseline and future surveys
[b] Target sample size at baseline: 5000 households
[c] Matches population of 9-year-old children in 2015 Census Survey (PSA, 2015) who were age 10 in 2016

Figure 1. Key Milestones Measured in the Lives of the LCSFC Cohort



The LCSFC is designed to collect data through in-person interviews via home visits. The Wave 4 data collection was in progress when the pandemic hit the country, causing field operations to be halted and thus missing about 38% of the target sample. In November of 2020, a brief phone survey was conducted to track the status of the cohort. The planned home visits for the 2021 Wave 5 data collection had to be cancelled due to the resurgence of COVID-19 cases. Instead, a phone survey was conducted. Table 2 shows basic details regarding the surveys covered in this report and information on the cohort's age and grade levels at each wave.

Table 2. LCSFC Survey Timelines and Sample Sizes

Surveys (data collection period)	Mean Age/ Grade level	Sample sizes (retention rates)
Wave 1 (Baseline; Nov 2016-Jan 2017)	10.5/ Gr. 4-5	4,952
Wave 2 (Feb-May 2018)	11.8/ Gr. 5-6	4,734 (95.6%)
Wave 3 (Jan-Jun 2019)	12.8/ Gr. 6-7	4,662 (94.1%)
Wave 4 (Jan-Mar 2020)	13.7/ Gr. 7-8	3,079 (62.2%)
Wave 4A (Supplemental phone survey; Nov 2020)	14.4/ Gr. 8-9	3,182 (64.3%)
Wave 5 (Phone survey; Jun-Aug 2021)	15.0/ Gr. 8-9	4,195 (84.7%)

Report Structure and Appendix Table

This report presents data on how the Filipino youth fared in terms of select indicators for SDG Goals 1 through 5 using LCSFC data from 2016 through 2021, covering 5 years of the 15-year SDG implementation period or about a third of the way to the 2030 endline. Featured in this report are data collected on the same cohort of Filipinos from age 10 (2016) to 15 (2021) and over a period of time that encompasses pre-pandemic (2016 to the first quarter of 2020), early pandemic (November 2020) and later pandemic exposures (2021). Data on key indicators for each of the five goals are described, stratified by sex, urban/rural stratum and island groups (Luzon, Visayas and Mindanao, the sampling domains which the LCSFC sample represent). The report begins with a description of the COVID-19 situation covered by the survey period to provide context to the discussions in subsequent chapters.

A companion document to this report is an excel file (Appendix Tables; https://www.opsusc.org/lcsfc-survey-reports.php) containing summary statistics of key LCSFC variables from Waves 1 to 5. Weighted cross-sectional data are recorded by Goal, stratified by sex wherever applicable.

REFERENCES:

Adair, L.S., Fall, C.H.D., Osmond, C., Stein, A.D., Martorell, R., Ramirez-Zea, M.… COHORTS Group. (2013). Associations of linear growth and relative weight gain during early life with adult health and human capital in countries of low- and middle-income: findings from five birth cohort studies. *Lancet*, 382 (9891), 525-34. https://doi.org/10.1016/S0140-6736(13)60103-8

Bongolan, H.R. (2013). More Pinoy youth engage in risky sexual activity, survey confirms. Retrieved from https://www.pchrd.dost.gov.ph/news_and_updates/more-pinoy-youth-engage-in-risky-sexual-activities-survey-confirms/#:~:text=Research%20and%20Development-,More%20Pinoy%20youth%20engage%20in%20risky%20sexual%20activities%2C%20survey%20confirms,Sexuality%20(YAFS%204)%20study.

International Labour Organization (ILO). (2020). Youth and COVID-19. Impacts on jobs, education, rights and mental well-being. Survey Report 2020. Geneva, Switzerland.

Mapa, D.S., (2015). *Demographic sweet spot and dividend in the Philippines: The window of opportunity is closing fast*. [Powerpoint presentation]. Retrieved from http://www.bsp.gov.ph/events/pcls/downloads/2015/BSP_2b_mapa_presentation.pdf

National Economic Development Authority (NEDA). (2016). Ambisyon Natin 2040. A long-term vision for the Philippines. Retrieved from http://2040.neda.gov.ph/about-ambisyon- natin-2040/.

National Economic Development Authority (NEDA). (2017). Philippine Development Plan. 2017-2022. Retrieved from https://pdp.neda.gov.ph/wp-content/uploads/2021/02/Pre-publication-copy-Updated-PDP-2017-2022.pdf

Philippine Statistics Authority (PSA). (2015). POPCEN 2015, from https://www.psa.gov.ph/tags/popcen-2015

Philippine Statistics Authority (PSA) [Philippines], and ICF International. (2014). *Philippines National Demographic and Health Survey 2013.* Manila, Philippines, and Rockville, Maryland, USA: PSA and ICF International.

United Nations. (2017). *The Sustainable Development Goals Report 2017*. New York, New York: Department of Economic and Social Affairs.

USC-Office of Population Studies Foundation, Inc. (OPS). (2018). Longitudinal Cohort Study on the Filipino Child. Baseline Survey Technical Report. OPS Report Series No. 2. Retrieved from https://www.opsusc.org/paper_series.php.

Chapter 1

COVID-19 and the Youth in the Philippines: A Situationer

Chapter 1

COVID-19 and the Youth in the Philippines: A Situationer

Maria Fiscalina A. Nolasco[2]

Understanding the COVID-19 situation in the Philippines and the country's response to this crisis provide essential context in assessing movements in the youth-relevant SDG indicators, particularly in the first two years of the pandemic (2020-2021) covered by the Longitudinal Cohort Study on the Filipino Child (LCSFC). In this chapter, the history of COVID-19 in the country is retraced and situations affecting the lives of the youth within the study period are also examined. Focus is done on the safety restrictions imposed by the Inter-Agency Task Force on Emerging Infectious Diseases (IATF-EID) that involve the youth, looking at the various classifications of community quarantine and corresponding mobility restrictions that are likely to affect the well-being of children and youth, their households, daily physical activity routines, social interactions, and schooling (specifically the shift to distance learning). The resolutions and memos passed by the IATF-EID are described to determine how these might be associated with maintaining the health and well-being of children and youth during the COVID-19 crisis (IATF-EID, 2020; IATF-EID, 2021).

This chapter begins with a description of the COVID-19 situation in the country as reported by the WHO (2022). From January 3, 2020, to July 8, 2022, about 3,713,131 COVID-19 cases in the Philippines were confirmed, with 60,622 deaths. As of June 22, 2022, the number of vaccine doses administered had reached a total of 153,852,751. The pandemic ushered in a "new normal" condition in which government development programs are required to mainstream COVID-19 response and recovery measures to ensure full implementation of the IATF-EID Guidelines.

Start of Lockdown

The first novel coronavirus (2019nCoV, now COVID-19) suspected case in the Philippines was identified on January 22, 2020. The number of suspected cases increased to 633 in March 2020, 183 of which were from the National Capital Region (NCR) (Edrada et al., 2020). Subsequently, President Rodrigo R. Duterte declared a state of public health emergency in the Philippines under Proclamation No. 922 in adherence to Article II, Section 15 of the 1987 Constitution and Republic Act No. 11332 (Law on Reporting of Communicable Diseases) (Atienza, 2021). A partial lockdown was implemented from March 14 to April 14, 2020 in Metro Manila, and by March 16, 2020, all parts in Luzon were under total lockdown. Other provinces and cities of the country were subsequently put under lockdown in March 2020, following an increasing number of confirmed cases. The government believed that a social isolation restriction, such as the lockdown, can significantly prevent the spread of COVID-19. In addition to the social distancing and stay-at-home orders, businesses were closed except for those that provide essential goods and services. Public transportation was restricted, classes at all levels were suspended, mass and religious gatherings were prohibited, and offices (government and private)

[2] Consultant, USC-Office of Population Studies Foundation, Inc., University of San Carlos-Talamban Campus, Cebu City. Email: fiscalina@yahoo.com

were to operate with a skeletal workforce. Children and young people below 21 years old were among those strictly ordered by the government to stay at home during the lockdown period.

On March 16, 2020, President Duterte placed the country under a state of calamity due to COVID-19 (Proclamation No. 929) in adherence to RA No. 10121 (The Philippine Disaster Risk Reduction and Management Act) (Atienza, 2021). RA 10121 allowed local and national governments to use disaster preparedness and relief funds for COVID-19 response and recovery efforts. The government loosened the safety restrictions from June to July 2020 in most provinces, highly urbanized cities (HUCs), and independent component cities (ICCs), but these were put under lockdown once more in August 2020 as the virus was rapidly spreading. Subsequently, the government allowed the gradual easing of the lockdown order in provinces, HUCs, and ICCs, based on epidemic risk levels.

The next section presents the classifications of community quarantine laid out by the IATF-EID from 2020 to 2021 and the social and economic activities allowed and disallowed under each category.

Community Quarantine Classifications

Home quarantine or the stay-at-home order was the first strategy imposed by the government at the onset of the pandemic. The IATF-EID developed guidelines that categorize people's movements into four: enhanced community quarantine, modified enhanced community quarantine, general community quarantine, and modified general community quarantine.

Enhanced Community Quarantine (ECQ). ECQ is equivalent to a total lockdown and is the most stringent quarantine classification. Face-to-face or in-person classes were suspended. Limitations were imposed on people's movements such as in accessing essential goods and services, reporting for onsite work in offices, and permitting businesses to operate. People were strictly required to stay home, particularly those under 18 years old and 65 years old and above, pregnant women, and those with immunodeficiencies, comorbidities, or other health risks. Public transport was suspended except for transport services of permitted business establishments and those provided by the government. Only essential workers such health personnel were allowed to work. Establishments that were granted permission to operate, such as Business Process Outsourcing (BPO) companies, were required, among others, to conduct business at 50% operational capacity or have a skeleton workforce to observe health protocols on social distancing.

Modified Enhanced Community Quarantine (MECQ). Under this classification, ECQ safety measures were applied with some modifications. For instance, in some local government units (LGUs), the age range for the youth required to stay at home was reduced to 15 and below. Authorized company and personal vehicles were subject to the guidelines of the Department of Transportation (DOTr). Use of bicycles and non-motorized transportation was strongly encouraged. In addition, individual outdoor exercise was now allowed any time (previously allowed from 6AM-9AM only in ECQ), provided that people wear face masks and practice social distancing. Face-to-face or in-person classes were still suspended.

General Community Quarantine (GCQ). Movements to access goods and services remained limited in the GCQ classification but mobility was less restricted for the vulnerable age groups, including those below 18 years old. Public modes of transportation were allowed to operate, albeit at a 50% operational and vehicle capacity, and required to observe DOTr guidelines such as maintaining a one-meter distance between

passengers. Jeepneys were given the least priority in the listing of the types of public transportation allowed to operate. Face-to-face or in-person classes were still suspended.

Modified General Community Quarantine (MGCQ). MGCQ is considered the most lenient quarantine classification. All persons, including children, youth, and senior citizens were allowed to go out of their residences. Indoor and outdoor non-contact sports and other forms of exercise were also permitted. Both public and private transportation were allowed, subject to the DOTr guidelines. Social distancing and the use of face masks particularly in public places were still required. Face-to-face or in-person classes were still suspended.

The strict implementation of community lockdowns and quarantines in the Philippines has significantly affected all sectors of society regardless of age, gender, education, and income. It has primarily jeopardized the livelihood of the many, particularly those who rely on a daily income and marginalized households (World Bank, 2020; Largo et al., 2021b). Nonetheless, its implementation was a "necessary evil" and the most appropriate action given the situation in the provinces, HUCs, and ICCs at that particular time.

IATF-EID Resolutions and Memos

The IATF-EID passed resolutions and memos to serve as recommendations for COVID-19 preventive courses of action, management practices, and healthcare behavior for provinces, HUCs, and ICCs in support of the quarantine protocols. It is evident, however, that most of these dealt only with community quarantine classifications of areas based on epidemic risk level, economic, social, and security considerations (IATF-EID, 2020; IATF-EID, 2021). The contents are similar except for the dates of the imposition of the quarantine classifications. Apart from providing instructions on staying at home and maintaining social distancing, and implementing school closures and the shift to distance learning, these resolutions and memos appear to be silent about measures that could minimize the negative impact of these safety restrictions imposed on children and youth. Anticipating the difficulties that the youth might experience given these restrictions, such as the adverse consequences of prolonged home confinement with restricted mobility and social interaction, would have been important. Measures to alleviate such negative impact may help to mitigate subsequent consequences that could manifest later in their adulthood.

Evidence-based policy frameworks are necessary to help the government determine what strategies worked for the youth sector, as well as those which were inefficient in achieving expected outcomes, to achieve a better and sustainable future. Hence, apart from the absolute safety restrictions, the IATF needs to heighten the role of government agencies by requiring them to craft target-specific policies beneficial to stakeholders. For example, what recommendations can the Department of Education (DepEd) and Commission on Higher Education (CHED) provide to continue students' learning process and not rely only on modules and online setup? Further, LGUs need to continue their support to the youth sector and sustain efforts beyond the COVID-19 pandemic to adapt to what may now be the new normal.

Consequences of Imposed Safety Measures

The social milieu of an individual determines one's experience of a healthy life and well-being. More precisely, children and young people are among the most vulnerable population affected by the pandemic. Studies show that the safety restrictions that were imposed during the pandemic have affected children of all ages. These include, but are not limited to, COVID-19 infection, daily routines, play interruptions, anxiety, emotional stress, poor nutrition, change in dietary habits, the experience of maltreatment or child abuse, exposure to inappropriate content from online platforms for distance learning, and limited access to healthcare services (UNSDG, 2020; Moore et al., 2020; OECD, 2020; Largo et al., 2021a; Largo et al., 2021b). In particular, lockdown measures have also restricted adolescents' access to sexual and reproductive health information and services (UNICEF, 2021; Groenewald et al., 2022). Although home confinement and social isolation orders have significantly protected them from acquiring the virus, the demand for an enabling environment that promotes good health and well-being is compromised, thus affecting their physical, mental, and social development.

Promotion of Good Health and Well-Being through Play and Games. Across cultures, it is seen that play and games are beneficial to all. Physical activities provide opportunities to be with family and peers, help build interpersonal relationships, develop creative abilities, and better decision-making and coping skills. In particular, play is functional for the enculturation and socialization of children and young people because it prepares them for adult life. Related studies **(**Kourti et al., 2021; Moore et al., 2020; OECD, 2020a; OAHPP, 2020) show how home quarantine has compromised the play requirements of children and youth.

Children with Disabilities Need for Face-to-Face Services. The United Nations report (UNSDG, 2020) highlights the need of children with disabilities, particularly those from poor households, for face-to-face health, education, and protection services. The imposition of lockdowns has confined them to their homes and exposed them to neglect and lack of special care. Children with disabilities need therapeutic support to develop communication and social-emotional skills that will enable them to cope better (OECD, 2020b). The absence of proper care for children with special needs further increases their risk profile.

Shift to Distance Learning. Temporary school closures or shutdowns of educational institutions were imposed worldwide at the height of the pandemic as one of the many ways to maintain social distancing (WHO, 2022). In the Philippines, classes were suspended in all parts of the country following Proclamation No. 922 on March 8, 2020 (Atienza, 2021). Consequently, due to the rising number of confirmed cases, DepEd and CHED recommended flexible distance learning modalities (printed or digitized) through online and offline platforms to mitigate education loss and ensure learning continuity despite the pandemic. Over 28 million Filipino students across academic levels complied with quarantine measures by staying at home (UNESCO, 2020).

Evidence shows that online learning posed several challenges for school children and young people, particularly those in remote areas and poor households. It includes, but is not limited to, unstable internet connections, poor access to learning resources and devices, regular power interruptions, inadequate teacher capacity, vague learning content, the additional workload for students, overloaded lesson activities, lack of environments conducive to learning at home, and lack of peer interaction and interpersonal relationships in online learning (Joaquin et al., 2020; Edge & Loegering, 2000; Gamage et

al., 2020). In another study, Segre et al. (2021) ascertained that children experienced difficulty focusing during online lessons compared with onsite classes. The children reported that online learning is more tiring and that they struggled to adjust.

REFERENCES:

Atienza, M. E. (2021). *The Philippines a year under lockdown: Continuing executive dominance, threats to democracy, and unclear pandemic response. VerfBlog.* Retrieved from https://verfassungsblog.de/the-philippines-a-year-under-lockdown

Edge, W. D. & Loegering, J.P. (2000). Distance education: expanding learning opportunities. *Wildlife Soc. Bull*, *28*, 522–533. DOI:10.2307/3783598

Edrada, E., Lopez, E., Villarama, J.B., Salva Villarama, E., Dagoc, B., Smith, C., Sayo, A.R., Verona, J., Trifalgar-Arches, J., Lazaro, J., Balinas, E. G.,Telan, E.F., Roy, L., Galon, M., Florida, C.H., Ukawa, T., Villanueva, A.M., Saito, N., Nepomuceno, J.R., … Solante, R. (2020). First COVID-19 Infections in the Philippines: A Case Report. *Tropical Medicine and Health 48*:21. doi: 10.1186/s41182-020-00203-0

Gamage, D., Perera, I., & Fernando, S. (2020). MOOCs lack interactivity and collaborativeness: Evaluating MOOC platforms. *Int. J. Eng. Ped.10*:94. https://doi.org/10.3991/ijep.v10i2.11886

Groenewald, C., Isaacs, N., & Isaacs, D. (2022). Adolescent sexual and reproductive health during the COVID-19 pandemic: A mini review. *Frontiers in Reproductive Health*, *4-2022.* Retrieved from https://doi.org/10.3389/frph.2022.794477

Inter-Agency Task Force for the Management of Infectious Diseases (IATF-EID). (2020). *IATF-EID Recommendations Relative to the Management of the COVID-19 Situation*. Republic of the Philippines. Retrieved from https://iatf.doh.gov.ph/iatf-resolutions/.

Inter-Agency Task Force for the Management of Infectious Diseases (IATF-EID). (2021). *IATF-EID Recommendations Relative to the Management of the COVID-19 Situation*. Republic of the Philippines. Retrieved from https://iatf.doh.gov.ph/iatf-resolutions/.

Joaquin, J. J., Biana Hazel T., & Dacela, M.A. (2020, October 22). The Philippine higher education sector in the time of COVID-19. *Frontiers in Education, Vol. 5-2020*. https://doi.org/10.3389/feduc.2020.576371

Kourti, A., Stavridou, A., Panagouli, E., Psaltopoulou, T., Tsolia, M., Sergentanis, T.N., Tsitsika, A. (2021). Play behaviors in children during the COVID-19 pandemic: A review of the literature. *Children*, *8*(8), 706. Retrieved from https://doi.org/10.3390/children8080706

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P. (2021a). Ensuring the safety and welfare of Filipino children in the Covid-19 pandemic and the new normal. In UNFPA-OPS Policy Notes Series No. 7. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P.

(2021b). The impact of Covid-19 on households with children: Findings from the longitudinal cohort study on the Filipino child. In UNFPA-OPS Policy Notes Series No. 8. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php

Moore, S., Faulkner, G., Rhodes, R., Brussoni, M., Chulak-Bozzer, T., Ferguson, L., Mitra, R., O'Reilly, N., Spence, J., Vanderloo, L.,Tremblay, M. (2020, July 6). Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: A national survey. *International Journal of Behavioral Nutrition and Physical Activity, 17*:85. doi: 10.1186/s12966-020-00987-8

Ontario Agency for Health Protection and Promotion (OAHPP). (2020). Negative impacts of community-based public health measures during a pandemic (COVID-19) on children and families. Toronto, ON: Queen's Printer for Ontario.

Organization for Economic Co-operation and Development (OECD). (2020a, June 11) Youth and COVID-19: Response, Recovery and Resilience: Contributing to a Global Effort. Retrieved from https://www.oecd.org/coronavirus/policy-responses/youth-and-covid-19-response-recovery-and-resilience-c40e61c6/#section-d1e113

Organization for Economic Co-operation and Development (OECD). (2020b, August 11). Combatting COVID-19's Effect on Children. Retrieved from https://www.oecd.org/coronavirus/policy-responses/youth-and-covid-19-response-recovery-and-resilience-c40e61c6/

Segre, G., Campi, R., Scarpellini, F., Clavenna, A., Zanetti, M., Cartabia, M. & Bonati, M. (2021, May 13). Interviewing children: The impact of the COVID-19 quarantine on children's perceived psychological distress and changes in routine. *BMC Pediatrics 21*:231. Retrieved from https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-021-02704-1

United Nations Children's Fund (UNICEF). (2021). Impact of COVID-19: Adolescent Wellbeing and Mental Health. UNICEF Laos. Retrieved from https://www.unicef.org

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2020). Education: from School Closure to Recovery. Paris: UNESCO. Retrieved from https://en.unesco.org/covid19/education response

United Nations Sustainable Development Group (UNSDG). (2020). Policy Brief: The Impact of COVID-19 on Children. Retrieved from https://unsdg.un.org/resources/policy-brief-impact-covid-19-children

World Bank. 2020. Impacts of COVID-19 on Households in the Philippines: Results from the Philippines

COVID-19 Households Survey conducted in August 2020. Retrieved from https://pubdocs.worldbank.org/en/546181605520156388/Results-from-the-Philippines-COVID19-Households-Survey-conducted-in-August-2020.pdf.

World Health Organization (WHO). (2022). Health Emergency Dashboard. World Health Organization (COVID-19) Homepage. Retrieved from https://covid19.who.int/region/wpro/country/ph

Chapter 2

SDG 1. Eradicating Poverty amidst the COVID-19 Pandemic: Assessing Progress in Filipino Households with Adolescents

Chapter 2

SDG1. Eradicating Poverty amidst the COVID-19 Pandemic: Assessing Progress in Filipino Households with Adolescents

Jan Lorenzo G. Alegado[3] and Francisco M. Largo[4]

1. Background

Foremost in the agenda of the Sustainable Development Goals (SDG) is ending poverty in all its forms everywhere. To achieve this goal, several targets were developed to ensure that multifaceted global poverty will be eliminated. These targets include the following: eradication of extreme poverty; reduction in the proportion, by at least half, of men, women, and children of all ages living in poverty; implementation of nationally appropriate social protection systems and measures for all; ensuring that all men and women have equal rights to economic resources, access to basic services, ownership and control over land and other forms of property; building the resilience of the poor and reducing their exposure to disasters and shocks; ensuring the significant mobilization of resources; and lastly, creation of sound policy frameworks at the national, regional, and global levels (United Nations, n.d.).

According to the latest United Nations report on SDGs, the accomplishments in reducing poverty in the past four years were eroded by the COVID-19 pandemic. World events such as the war between Ukraine and Russia have also further derailed the progress in the fight against poverty due to soaring price levels. By 2022 estimates, around 657–676 million people across the globe are now living in extreme poverty from about 581 million before the pandemic. Likewise, social protection programs that were implemented across the globe by various governments in response to the pandemic were highly uneven. As reported, only 46.9% of the global population was effectively covered by social protection instruments of different countries. Lastly, the negative impacts of the pandemic were much worse for low-income countries, pushing back poverty reduction targets by eight to nine years (United Nations, 2022).

Table 2.1 shows the movements in select SDG 1 targets being tracked by the Philippine Statistics Authority (PSA). The first three targets refer to individual Filipinos who live below poverty line. Based on the latest estimate, the country still lags behind by about 7 percentage points in its target to reduce the number of people living below the national poverty line. The poverty rate in rural areas is considerably higher relative to urban areas. The rural disadvantage persisted in 2018 despite a huge drop of about 10 percentage points from 2015. In terms of the proportion of households with access to improved water supply, the 2020 estimates show that the country still has to ensure access for the remaining 12.3% of households before it reaches full coverage by 2030. Likewise, there is still much work to be done to increase the number of Filipino households with owned or owner-like possession of housing units especially that the estimate slightly dropped from the baseline as of 2020. Lastly, among the targets identified, 100% household access to sanitary facilities is most likely to be achieved by 2030.

[3] Asst. Professor, College of Social Sciences, University of the Philippines, Cebu City; Email: jgalegado@up.edu.ph
[4] Asst. Professor, Department of Economics, University of San Carlos, Cebu City; Email: fmlargo@usc.edu.ph

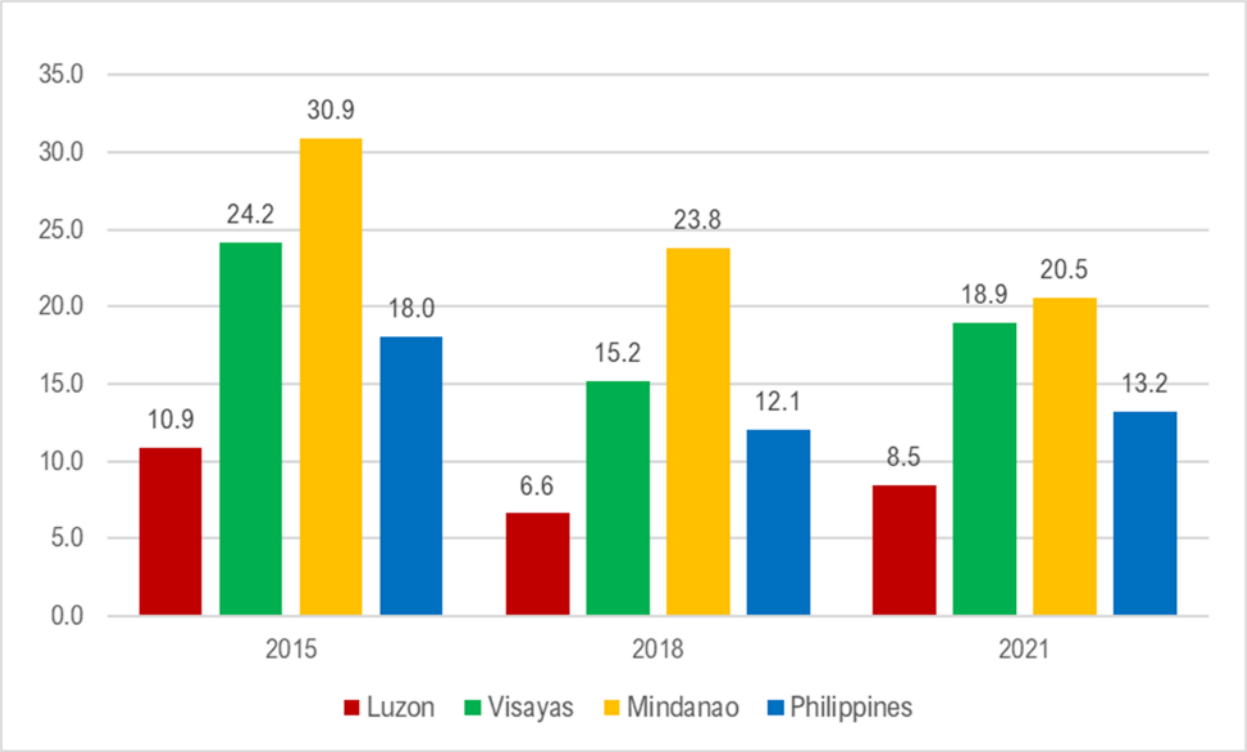
Table 2.1. Select Target Indicators for SDG 1, Philippines

Goals/Targets/Indicators	Baseline (Year)	Latest (Year)	Target (Year)
Proportion of population living below the national poverty line	23.5 (2015)	18.1 (2021)	10.8 (2030)
Proportion of population living below the national poverty line, by urban areas	13.2 (2015)	9.8 (2018)	5.8 (2030)
Proportion of population living below the national poverty line, by rural areas	34.0 (2015)	24.5 (2018)	15.3 (2030)
Proportion of families with access to improved water supply	83.2 (2016)	87.7 (2020)	≈100.0 (2030)
Proportion of population living in households with access to sanitary facility	91.9 (2016)	95.3 (2020)	≈100.0 (2030)
Proportion of families with owned or owner-like possession of house and lot	61.0 (2016)	59.8 (2020)	≈100.0 (2030)

Source: PSA (2022a)

Figure 2.1 shows the poverty rates among Filipino households based on the Family Income and Expenditure Surveys (FIES) for the last three rounds, i.e., 2015, 2018, and 2021 (PSA, 2022b). The FIES defines poverty rate as the proportion of Filipino households with five members whose incomes are insufficient to meet the basic food and non-food needs on a monthly basis. Across the island groups, Mindanao had the highest recorded poverty rates across the three periods. On the other hand, Luzon reported the lowest poverty rates among households. Improvements in poverty rates were observed in 2018. However, at the height of the pandemic, these improvements were significantly diminished across the country except in Mindanao where there was a significant decrease of poverty incidence from 23.8% in 2018 to 20.5% in 2021. In 2015, at the national level, 18% of Filipino households were considered income poor (Figure 2.1), while about 23.5% of the country's population was living below poverty threshold (see Table 2.1). In 2018, both household and population poverty rates significantly decreased to 12.1% (Figure 2.1) and 16.7% (not shown in Table 2.1), respectively. However, in 2021, when the country was still battling against the COVID-19 pandemic, poverty rates among households and among population slightly increased to 13.2% (Figure 2.1) and 18.1% (Table 2.1), respectively. Moreover, the same report from the PSA showed that Mindanao has the highest poverty rates in the country across the three survey periods. Lastly, similar trends in poverty rates are observed in both household and population data (PSA, 2022b).

Figure 2.1. Poverty Rates among Households in the Philippines: 2015, 2018, and 2021*



*Preliminary results from the 2021 Family Income and Expenditure Survey (PSA, 2022b). Significantly different between 2015 and 2018 and between 2018 and 2021 at $p<0.10$

In a report published by the PSA and the United Nations Children's Fund (UNICEF) in 2015, poverty rates among families with children were more than 30 percent from 2003 until 2009. Moreover, the level of poverty was found to be highest among households with more than seven members. With respect to the area of residence, poverty rates among families with children were higher among rural residents (PSA-UNICEF, 2015). More recently, the PSA also published an infographic report on child poverty in the country for 2018. The report showed that male-headed households with children were considerably poorer (at 25.5%) than female-headed households (at 14.2%) (PSA, 2021). While recent research illustrated the socio-economic advantage of male-headed households (Wednt & Victora, 2022), PSA revealed that female-headed households were better off since they receive more overseas remittances compared to male-headed households, and that female household heads tend to be more educated and spend less on food than their male counterparts (PSA, 2011).

2. Findings from the Longitudinal Cohort Study on the Filipino Child (LCSFC)

The LCSFC sample is representative of Filipinos from the country's three main island groups of Luzon, Visayas, and Mindanao who were age 10 in 2016 (at baseline). The LCSFC also oversampled marginalized children [specifically from indigenous peoples (IP) and households with disabilities] (OPS, 2018). This section reports on LCSFC data on household-level socio-economic variables collected from five survey waves, from 2016 (Wave 1) to 2021 (Wave 5, when the cohort was age 15). These variables approximate standard SDG 1 indicators thus illustrating how Filipino households with young adolescents have fared in this goal since the start of the SDG agenda implementation. The survey waves represent data covering

the pre-pandemic (up until Wave 4, in the first quarter of 2020), early pandemic (Wave 4a in the last quarter of 2020) and later pandemic (Wave 5, in 2021) periods.

2.1. *Poverty Rates among LCSFC Households*

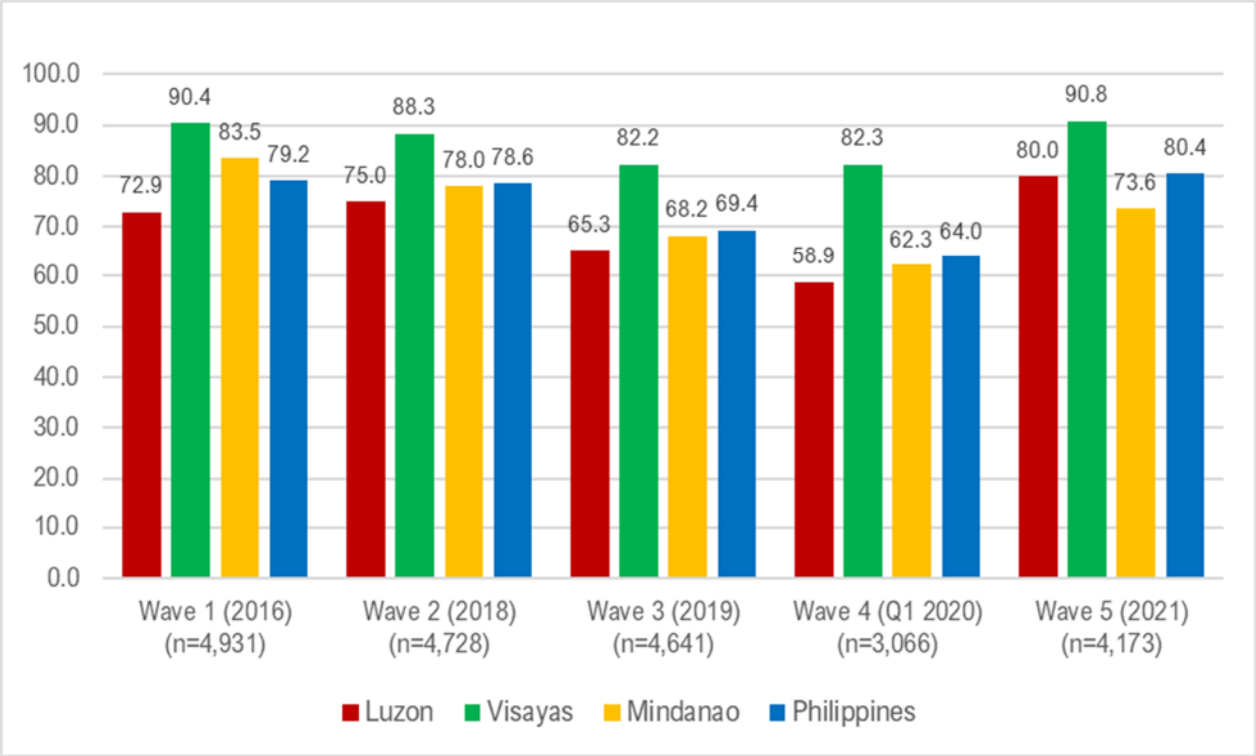
The LCSFC collects data on total cash income that the household receives in a poor month as well as in a good month. Acknowledging distinct limitations in using gross income estimates compared to those used in the FIES, these LCSFC variables are used to situate where the study households fall in terms of national poverty lines. Using estimated incomes in both poor and good months illustrate the proportion of the sample living below the poverty line given a range of income capacities.

In determining whether the study households are living in poverty or not, this report uses the national income thresholds published every three years by the PSA as reference. The poverty thresholds for a household with five members were ₱9,452, ₱10,727, and ₱12,030 for 2015, 2018 and 2021 respectively (PSA, 2019; PSA, 2022c). Since the average household size in the LCSFC is around six members across waves (see SDG 1 section in Appendix Tables), the income thresholds for each period were adjusted accordingly. Wave 1 was conducted in 2016 and for this wave, the 2015 national income threshold was used adjusted for a family of six which amounted to ₱11,342. For Wave 2 (2018) through Wave 4 (2020), the 2018 income threshold was used. For these waves, the adjusted poverty line was estimated at ₱12,872. Lastly, for Wave 5 (2021), the adjusted income threshold was about ₱14,436 using the 2021 poverty estimate.

When compared to the PSA and FIES estimates, poverty rates in the LCSFC are higher given that these are households with children, including marginalized children, and that gross income values estimated by the household respondents were used. Furthermore, close to half of the baseline sample are conditional cash transfer program beneficiaries for which being poor is a criterion. Figures 2.2 and 2.3 show the proportion of households whose incomes in a poor month fall below the poverty threshold for 2016 with a family of six members. Figure 2.2 shows that prior to the pandemic (Waves 1-4), there was a downward trend in terms of households falling below the poverty line, nationally as well as across the island groups. However, there was an uptick during the pandemic (Wave 5) indicating that a huge proportion of the households (80.4%) experienced being poor around that time.

Across the waves, the poverty rate is consistently and significantly higher in the Visayas sample relative to that in Luzon and in Mindanao. This is somewhat conflicting with the findings from the national survey of PSA in which the highest poverty rate was consistently seen in Mindanao (PSA, 2022b). This could be attributed to the fact that there were significantly more rural sample barangays in the Visayas compared to those in Mindanao or Luzon (about 64%, 46%, and 40% respectively in Wave 1; see SDG1 section, Appendix Tables) and poverty rates in rural areas are higher compared to urban areas as shown in Figure 2.3. Meanwhile, Luzon consistently had the lowest proportion of households that are considered poor except during the pandemic when Luzon had a higher rate than Mindanao which posted the lowest percentage of households living below the poverty line (Figure 2.2).

Figure 2.2. Proportion of Households with Income (Poor Month) Below Poverty Line by Island Group (Waves 1-5)

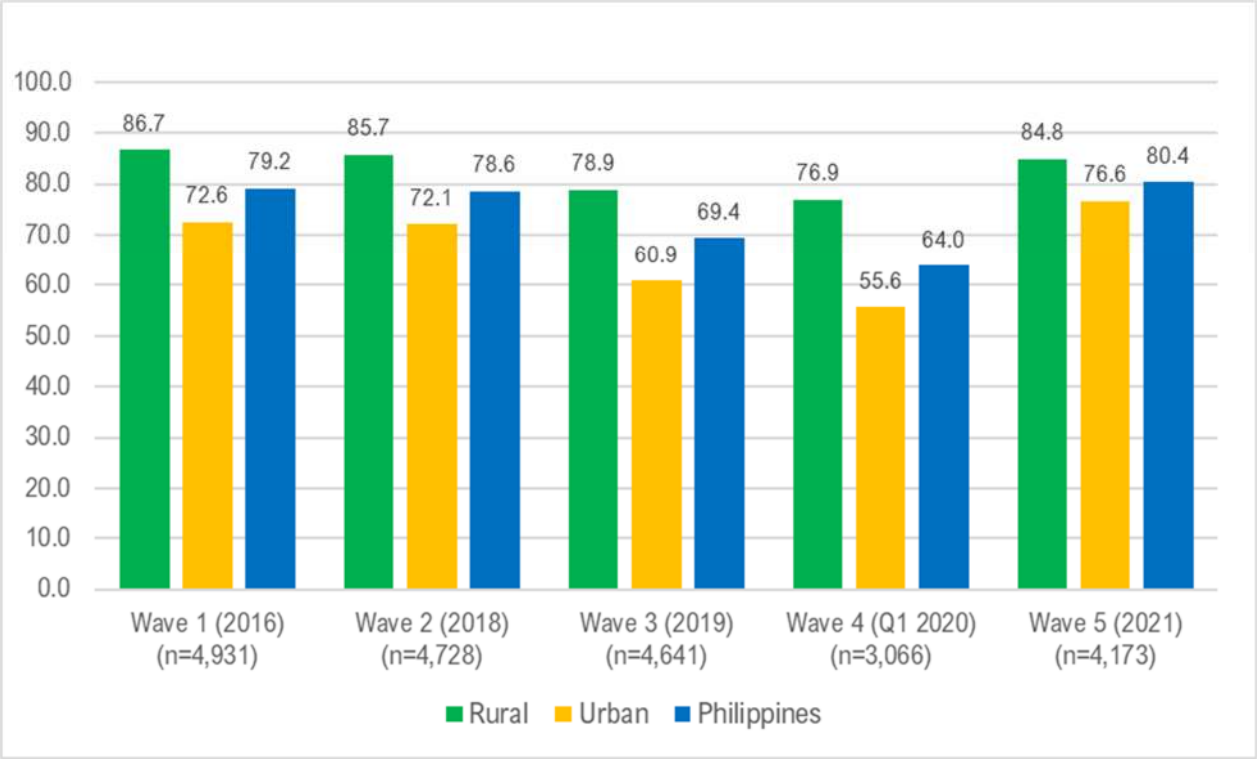


Note: Luzon, Visayas, and Mindanao are significantly different from each other in each wave at p<0.01.

Figure 2.3 compares poverty rates (using income on a poor month) between urban and rural households. The proportion of households living below the poverty line is consistently and significantly higher in rural areas relative to urban areas. The differential wage rates between agricultural and non-agricultural work can help explain the disparity between these areas since there is a relatively higher percentage of agricultural workers in rural than urban areas (PSA, 2022d). It is important to note that poverty rates were on a downward trend from Waves 1 to 4, particularly in urban areas thus widening the rural-urban poverty gap. When the pandemic hit the country (Wave 5), poverty rates substantially increased, manifesting the negative effects of COVID-19 on household income.[5] The 2021 (Wave 5) poverty rate in urban areas was even higher than in 2016 (Wave 1), which likely reflects findings that the impact of the pandemic on employment was more severe among households in urban than in rural areas (Recio et al., 2020; Reyes et al., 2020).

[5] Proportions of households whose incomes have fallen below poverty line were significantly different between Wave 4 (71.4%) and Wave 5 (82.4%) at p<0.001 based on linear combinations of estimators.

Figure 2.3. Proportion of Households with Income (Poor Month) Below Poverty Line by Urban/Rural Residence (Waves 1-5)

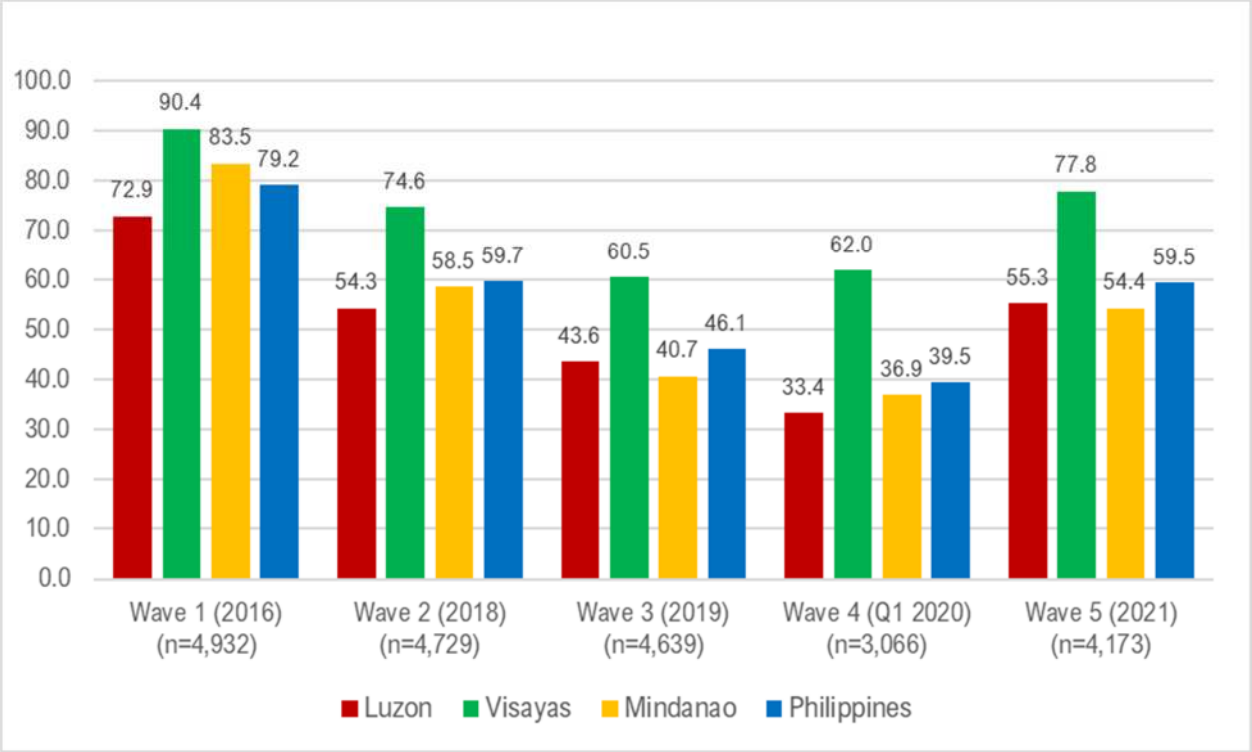


Note: Rural and urban areas are significantly different from each other in each wave at $p<0.01$.

Figures 2.4-2.5 below show the poverty estimates based on the household incomes in a good month. In Figure 2.4, poverty levels are still highest in the Visayas across waves, even in higher income earning months. Similar to the trend seen during poor months, a downward trend in the proportion of households living below the poverty line was observed prior to the pandemic or from Waves 1 to 4 across the country. However, the proportions increased across the island groups between Waves 4 (immediately prior to the pandemic) and 5 (during the pandemic). Even with higher income as basis, it is apparent that more than half of the study households (except in Waves 3 and 4) across the country still suffered from extreme poverty based on the adjusted poverty thresholds for each wave. The results shown for Wave 5 are indicative of the negative impacts of the pandemic especially for households living in the Visayas.

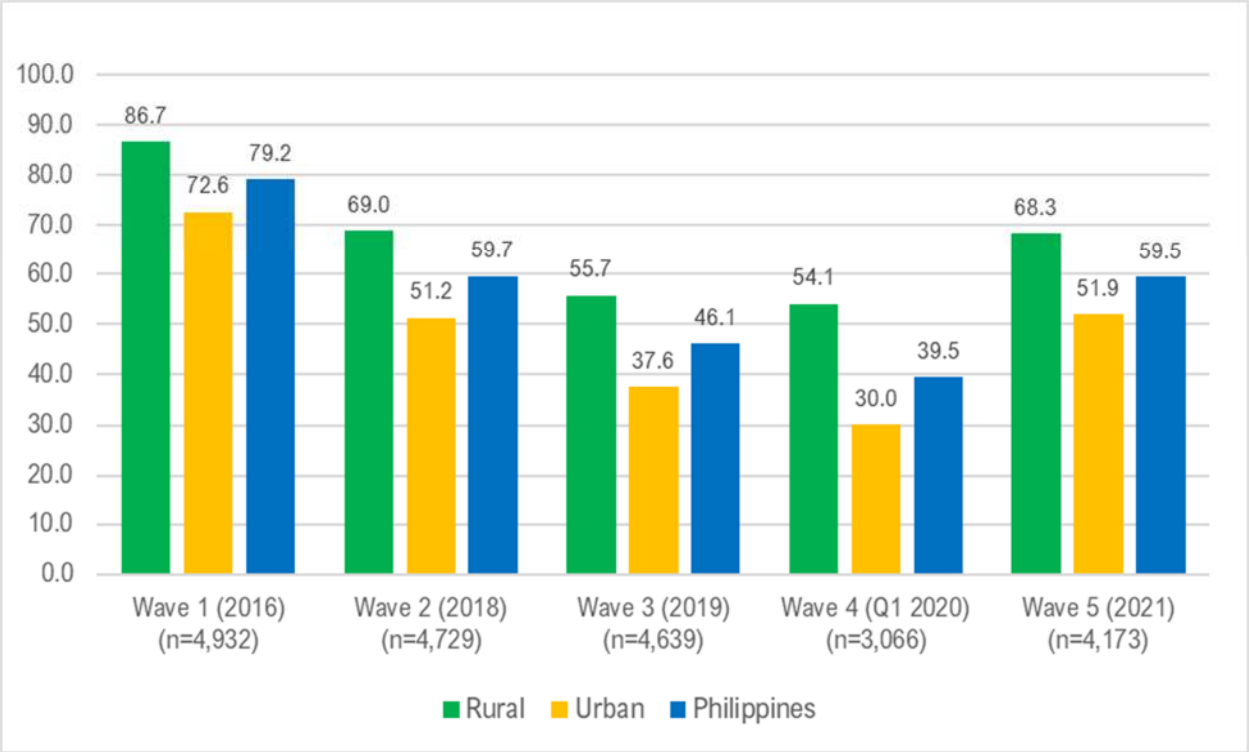
Figure 2.5 shows the proportion of households living in urban and rural areas whose incomes in a good month fall below the poverty line. Just as reported during poor months, the proportion of households that is considered poor is consistently higher among rural areas across waves. At the national level, a decreasing trend in the proportion of poor households can be observed until Wave 4. Despite using the income data in a good month, the proportions of poor households, whether in rural or urban areas, still increased during the pandemic compared to 2020 values.

Figure 2.4. Proportion of Households with Income (Good Month) Below Poverty Line by Island Group (Waves 1-5)



Note: Luzon, Visayas, and Mindanao are significantly different from each other in each wave at p<0.01.

Figure 2.5. Proportion of Households with Income (Good Month) Below Poverty Line by Urban/Rural Residence (Waves 1-5)



Note: Rural and urban areas are significantly different from each other in each wave at p<0.01.

2.2. *Other Measures of Household Socio-economic Status*

Table 2.2 shows that significantly more households in Luzon have access to improved sanitary facilities[6] compared to those in the Visayas or Mindanao. Compared with the national data in 2020 presented in Table 2.1 above, the proportions of LCSFC households with access to sanitary facilities in the early part of 2020 was slightly lower.

With respect to improved water access[7] (Table 2.3), except in Wave 3, there were no significant differences across waves by major island groups. However, compared to the national data, the proportions of households with improved water access are relatively higher across waves in the LCSFC.

[6] Defined as hygienically designed facilities that prevent contact with human excreta (WHO/UNICEF JMP, 2018).
[7] Based on safe water access defined in WHO/UNICEF JMP (2018)

Table 2.2. Proportion of Households with Improved Sanitary Facilities (Waves 1-5)

Wave	Luzon	Visayas	Mindanao	Philippines
Wave 1 (2016) (n=4,950)	94.8**	90.0	86.0	91.6
Wave 2 (2018) (n=4,733)	95.6**	91.7	87.7	92.7
Wave 3 (2019) (n=4,648)	97.9***	92.1	88.7	94.3
Wave 4 (Q1 2020) (n=3,066)	97.4***	93.3	88.3	94.3
Wave 5 (2021) (n=4,175)	99.2***	95.5	90.1	96.1

***, ** significantly different at p<0.01 and p<0.05, respectively

Table 2.3. Proportion of Households with Improved Water Access (Waves 1-5)

Wave	Luzon	Visayas	Mindanao	Philippines
Wave 1 (2016) (n=4,951)	97.5	95.2	95.1	96.4
Wave 2 (2018) (n=4,732)	98.0	95.5	96.6	97.1
Wave 3 (2019) (n=4,647)	98.9**	95.6	95.7	97.4
Wave 4 (Q1 2020) (n=3,066)	99.0	97.1	96.2	97.9
Wave 5 (2021) (n=4,175)	99.2	98.3	99.0	99.0

***, ** significantly different at p<0.01 and p<0.05, respectively

Table 2.4 shows the proportion of LCSFC households that owned or had owner-like possession of housing units and land on which their houses are built. Except in Wave 1, there were no significant differences in this variable among households from all the major island groups. Compared to the national data presented in Table 2.1 above, the average proportions of LCSFC households who owned houses/lots were lower across waves, reflective of the fact that the study sample represent households with children/adolescents and are of relatively lower socio-economic status.

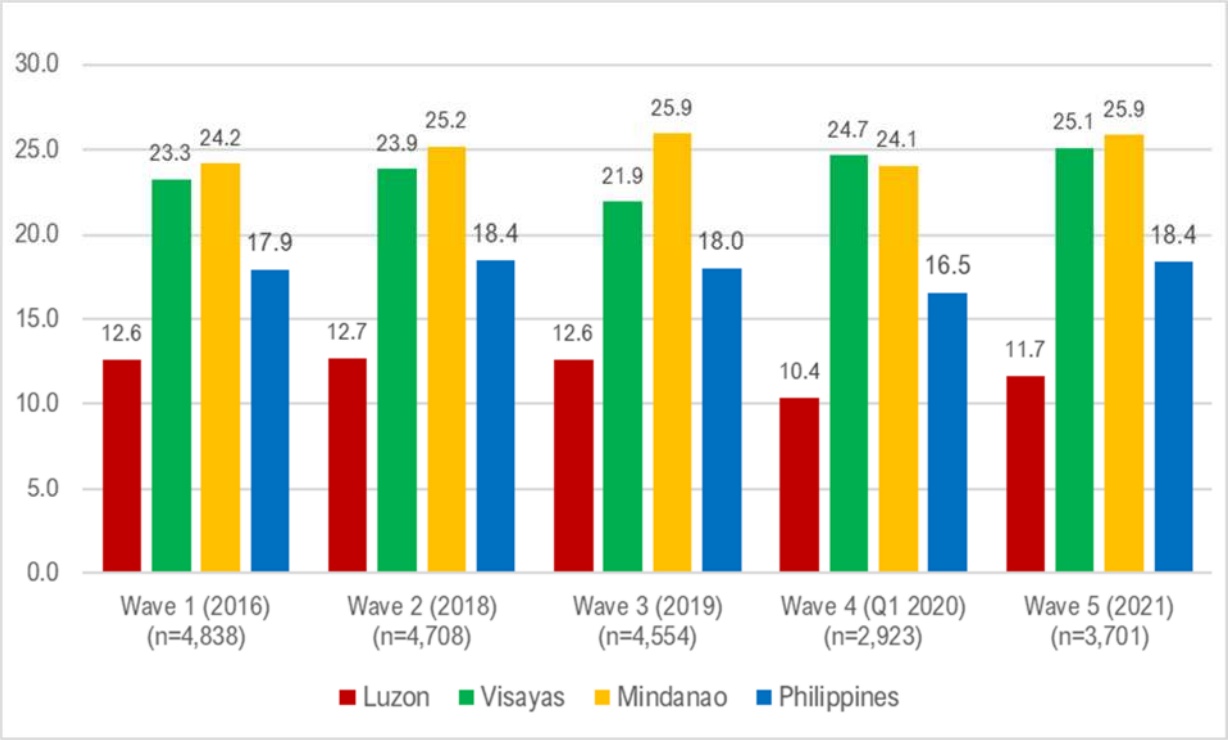
Table 2.4. Proportion of Households with Owned/Owner-like Possession of House & Lot (Waves 1-5)

Wave	Luzon	Visayas	Mindanao	Philippines
Wave 1 (2016) (n=4,946)	38.6**	35.8	46.0	40.0
Wave 2 (2018) (n=4,733)	40.3	39.1	42.6	40.7
Wave 3 (2019) (n=4,642)	44.6	44.1	42.1	43.8
Wave 4 (Q1 2020) (n=3,066)	43.8	40.3	48.2	44.3
Wave 5 (2021) (n=4,175)	44.2	41.2	46.5	44.2

***, ** significantly different at p<0.01 and p<0.05, respectively

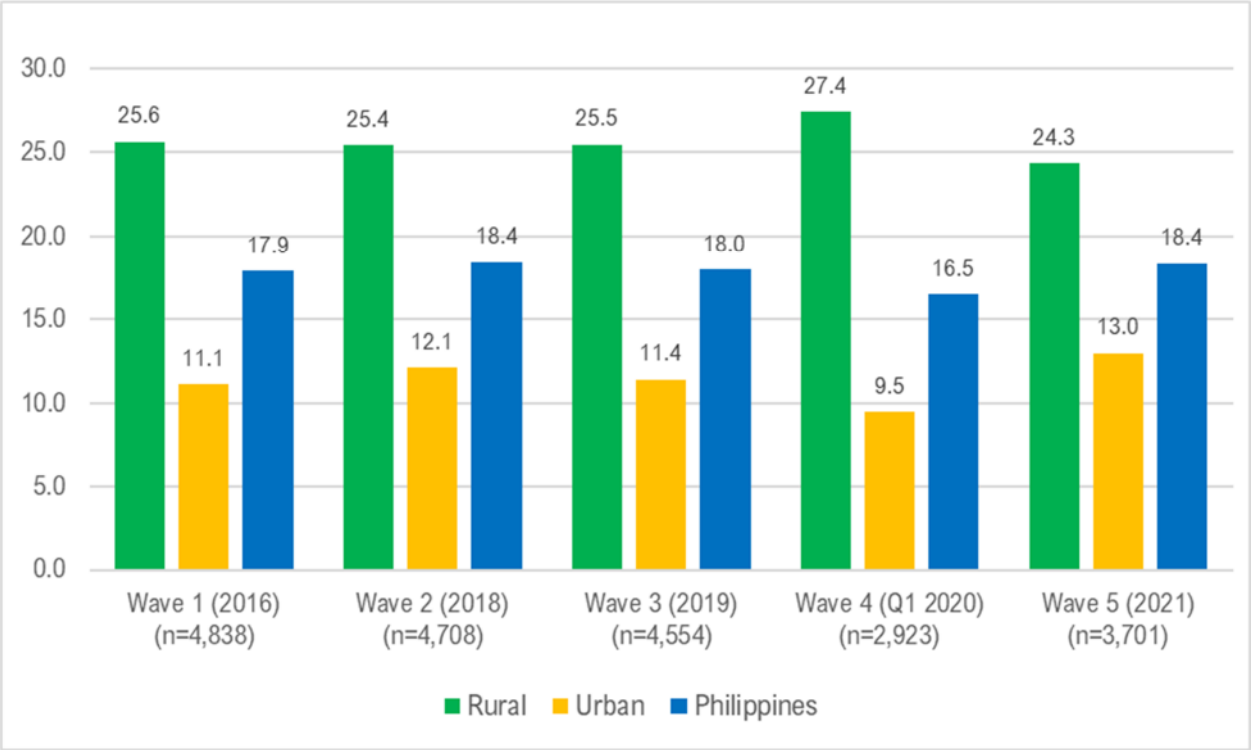
The data described in Tables 2.2 to 2.4, along with other socio-economic measures of wealth, were used to calculate the LCSFC wealth index scores (see variable documentation in Appendix Tables). Across the waves, households in the Visayas and Mindanao appeared to have the poorest families in terms of wealth compared to Luzon (Figure 2.6). Consistent with poverty rate trends earlier discussed, rural households are more likely to be classified in the poorest quintile than their urban counterparts (Figure 2.7). These results have relevant policy implications with respect to poverty reduction programs by the government given that the more vulnerable households with children/adolescents are mostly found in Visayas and Mindanao, and in rural areas.

Figure 2.6. Proportion of Households in the Poorest Wealth Index Quintile by Island Group



Note: Luzon, Visayas, and Mindanao are significantly different from each other in each wave at p<0.01.

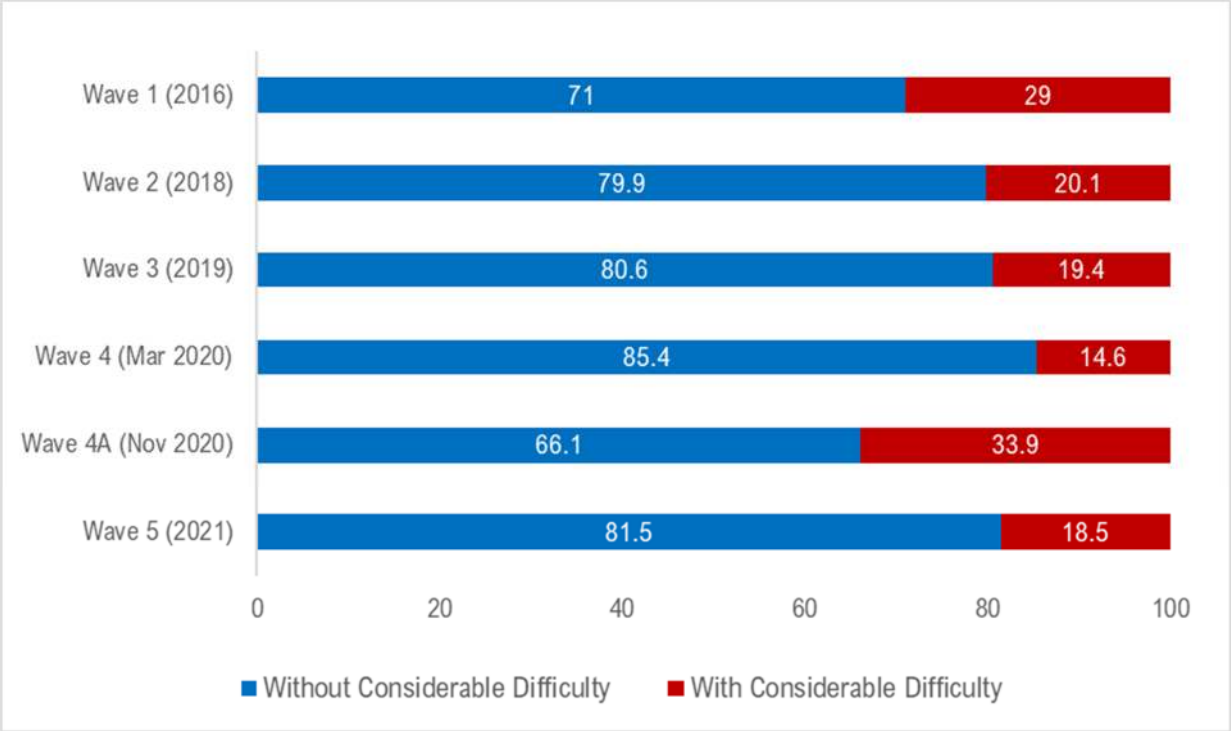
Figure 2.7. Proportion of Households in the Poorest Wealth Index Quintile by Urban/Rural Residence



Note: Luzon, Visayas, and Mindanao are significantly different from each other in each wave at p<0.01.

Another indicative measure of household socio-economic status is having sufficient income to cover expenses. Figure 2.8 indicates that in the pre-pandemic period (from 2016 to early 2020), the percentage of households reporting to have considerable difficulty in meeting expenses appear to be on a downward trend. However, during the early phase of the pandemic (Wave 4a), the proportion having considerable difficulty more than doubled compared to the previous wave indicating the adverse socioeconomic impact of the pandemic on households. According to the survey conducted by the World Bank in December 2020, 41% of Filipino households reported having income losses, be it a decrease in income or no income at all, compared to the pre-pandemic period. Likewise, the same survey also indicated that about 25% of household heads remained out of work even when the economy began to return to normal settings (World Bank, 2020). As community restrictions began to be gradually lifted and most economic activities having resumed in 2021 (Wave 5), the proportion of households with considerable difficulty in meeting expenses dropped to 18.5%. While this indicates a significant decline from 33.9% in the early pandemic wave, this rate is still higher than in Wave 4 or immediately prior to the start of the pandemic.

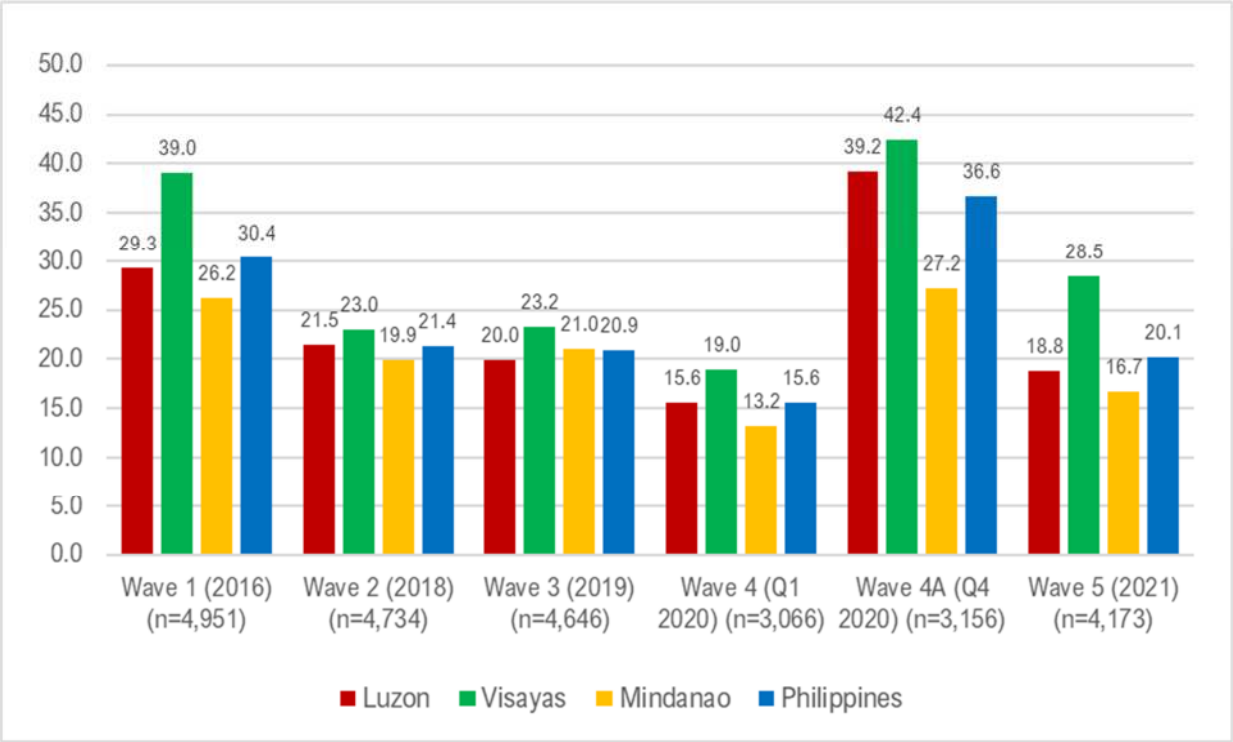
Figure 2.8. Proportion of Households with Considerable Difficulty in Meeting Expenses



Note: Sample includes those who participated in all surveys (n = 2,061); unweighted proportions are significantly different between waves at p<0.01 (except between Waves 2 and 3); test for significance is based on linear combination of estimators.

With respect to the island groups, Visayas has the highest proportion of households that experienced considerable difficulty in meeting expenses across waves (Figure 2.9). Mindanao appeared to generally have the lowest proportion of households that had considerable difficulty in meeting expenses. This also coincides with the findings of Cho and Johnson (2022) where the percentage of households that experienced income decline during the pandemic was generally lower among the regions in Mindanao. This may help explain the relatively lower proportion of households that experienced considerable difficulty in meeting their expenses. In addition, in the LCSFC, Mindanao has the highest proportion of households that are recipients of the *Pantawid Pamilyang Pilipino* Program (4Ps) program (refer to Section 2.3 below) and all 4Ps beneficiaries were automatically covered in the Social Amelioration Program and were also likely to receive financial assistance from the government (DSWD Memorandum Circular No. 4, 2020). This illustrates the protective function of 4Ps against economic shocks such as the pandemic for poorer households.

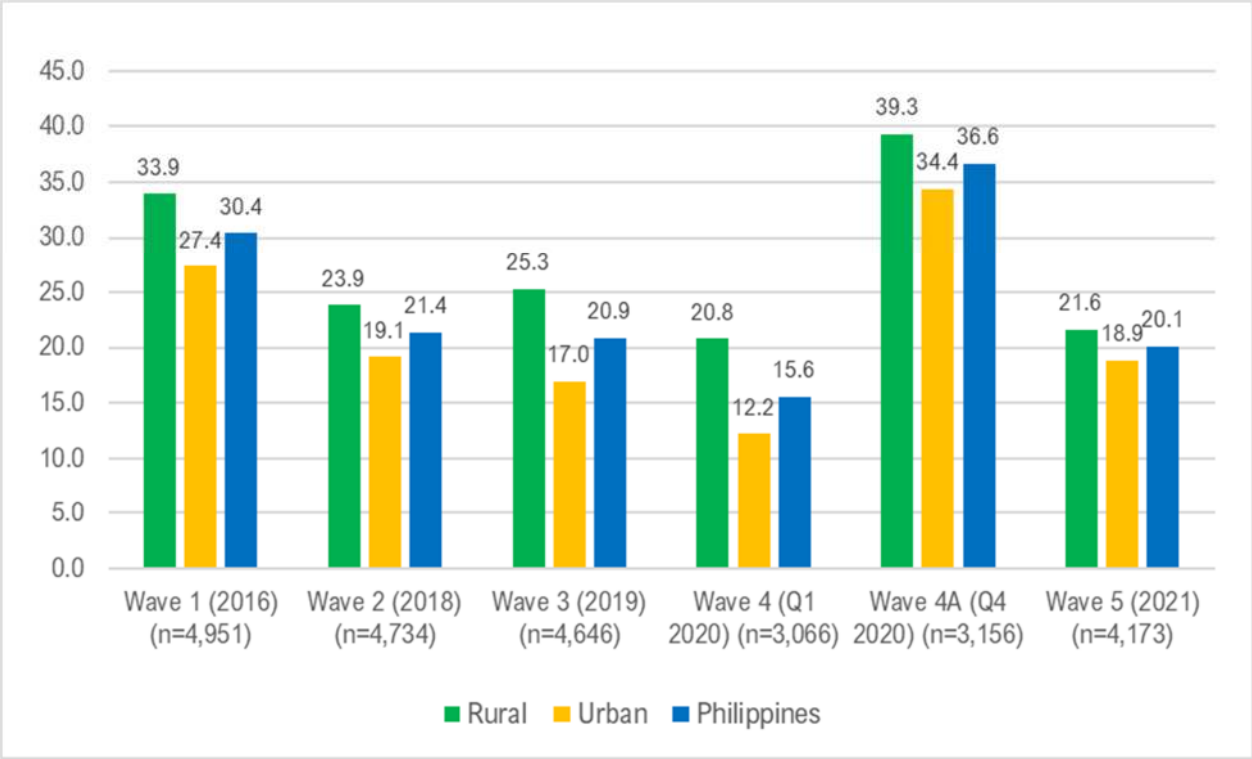
Figure 2.9. Proportion of Households with Considerable Difficulty in Meeting Expenses by Island Group



Note: Test for significant differences in weighted proportions based on Pearson's chi-squared test of independence; Visayas is significantly higher than Luzon and Mindanao ($p<0.01$) in Waves 1, 4A, and 5.

Consistent with the rural/urban socioeconomic disparity earlier discussed, the proportion of those households that had difficulty in meeting expenses is higher among rural areas compared to that in urban areas (Figure 2.10). Significant improvements in handling expenses can be observed from Waves 1 to 4, but in the early stage of the pandemic (Wave 4a), the proportions having considerable difficulty in both urban and rural areas significantly increased. In the later stage of the pandemic (Wave 5), the proportions having considerable difficulty substantially decreased as economic activities started to resume. However, at this point, there is no significant difference between households from rural and urban areas suggesting that the negative impacts of the pandemic cut across strata.

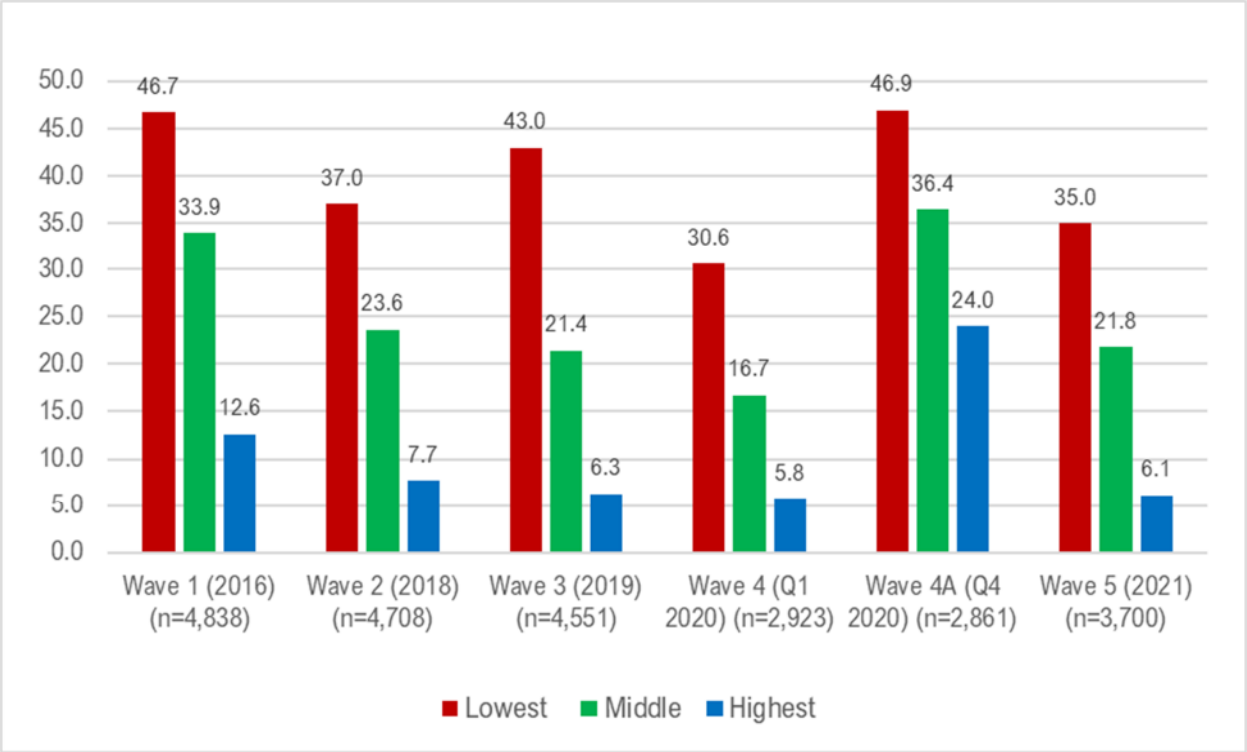
Figure 2.10. Proportion of Households with Considerable Difficulty in Meeting Expenses by Urban/Rural Residence



Note: Test for significant differences in weighted proportions based on Pearson's chi-squared test of independence. Rural area is significantly higher than urban area in Waves 1, 3, 4 ($p<0.01$), in Wave 2 ($p<0.05$), and in Wave 4A ($p<0.1$) only.

When stratified by wealth index quintiles (Figure 2.11) from Wave 1 until 5, there were significantly more households belonging to the lowest quintile that had difficulty in meeting expenses as opposed to those from the middle and the highest quintiles. During the early phase of the pandemic (Wave 4A), there was a significant increase in the proportion of households that had considerable difficulty in meeting expenses across the wealth index quintiles. However, in the succeeding wave, these proportions went down most notably for those in the highest quintile, with rates comparable to the pre-pandemic period.

Figure 2.11. Proportion of Households with Considerable Difficulty in Meeting Expenses by Wealth Index Quintiles



Note: Test for significant differences in weighted proportions based on Pearson's chi-squared test of independence.

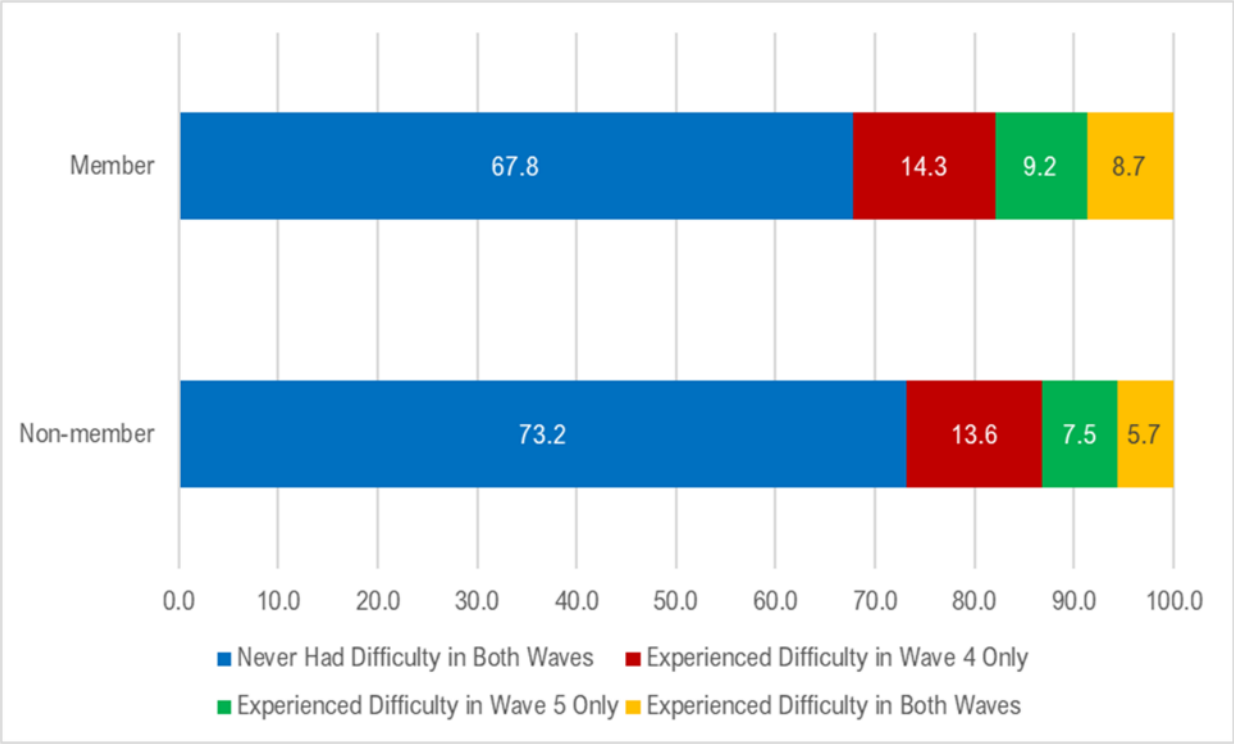
2.3. *Conditional Cash Transfer Program*

Another key target to achieve SDG 1 is the implementation of nationally appropriate social protection systems for the marginalized sectors of society. Among the more widely studied social programs is the conditional cash transfer in which the government provides cash to the poor in exchange for some conditions such as enrollment of children and maternal healthcare. In the Philippines, the conditional cash transfer program is called *Pantawid Pamilyang Pilipino* Program (4Ps), which was passed into law in 2018 through Republic Act No. 11310. Defined as "the national poverty reduction strategy and a human capital investment program that provides conditional cash transfer to poor households for a maximum period of seven (7) years," the 4Ps aims to promote health, nutrition, and education of the beneficiaries throughout their lives (Republic Act No. 11310, 2018). One of the requirements to be eligible for the 4Ps is that a household, aside from being classified as poor, should "have members who are aged zero (0) to eighteen (18) years old" (Republic Act No. 11310, 2018). According to Orbeta et al. (2021), the 4Ps program has achieved significant impacts on the general welfare of households such as in health and education outcomes for children and pregnant women as well as on the households' income and food security.

Figure 2.12 compares LCSFC households enrolled as well as not enrolled in the 4Ps program in Wave 1 and how they later fared in terms of poverty rates and level of difficulty in meeting expenses in Wave 4 (pre-pandemic) and Wave 5 (later pandemic). The purpose of this comparison is to show whether membership in 4Ps was able to provide households with some amount of protection in terms of their meeting

expenses, particularly during the pandemic. Controlling for other socio-demographic characteristics, being a 4Ps member is positively associated with considerable difficulty in meeting household needs (results not shown)[8]. This is consistent with what was reported by Melad et al. (2020) where 4Ps beneficiaries across the country were also likely to report difficulties in meeting their household expenses. The results shown in Figure 2.12 indicate that, regardless of 4Ps membership, households experienced difficulty in meeting expenses during the pandemic. While 4Ps households appeared to be more disadvantaged than non4Ps households in terms of sufficiency of income in meeting expenses, the differences in proportions between both groups in various categories of experiencing difficulty only ranged from 0.7% (difficulty in Wave 4 only) to 3% (difficulty in both waves). This may be interpreted as 4Ps membership providing some level of protection against the negative shock of rising cost of living or diminishing income, particularly in a crisis such as the pandemic. Otherwise, the gaps in experiencing difficulty would have been much wider between both groups.

Figure 2.12. Considerable Difficulty in Meeting Expenses in Waves 4 and 5 in 4Ps and Non4Ps Households*



* 4Ps membership is defined here as enrolled in the program in Wave 1 (2016). Significant differences (at $p<0.01$) in weighted proportions between 4Ps and non4Ps were observed based on Pearson's chi-squared test of independence.

[8] Based on a multinomial logistic regression model, relative to never having any considerable difficulty in meeting expenses, being a 4Ps member was more likely to report experiencing considerable difficulty than nonmembers. Significant at $p<0.01$.

3. Summary

This chapter tracks SDG GOAL 1 milestones among Filipino households with young adolescents, represented by the LCSFC sample, in the first few years of the SDG implementation. Household poverty rates across survey waves in the LCSFC are higher than what has been reported in the FIES, due to differences in income estimates and the fact that the LCSFC sample represents households with children/adolescents, which are relatively poorer compared to other households. The FIES data show that Mindanao has the highest poverty rate in the country while in the LCSFC data, households in the Visayas appear more disadvantaged than those in Mindanao. This disparity may be attributed to the fact that the LCSFC Visayas sample has a higher proportion of households in rural areas than those in Mindanao and Luzon, and as pointed out in this chapter, rural households are more prone to poverty than those in urban areas. From these results, it appears imperative to focus efforts in improving poverty rates among households with young adolescents, particularly those in Mindanao and Visayas, as well as those in rural areas.

In the context of COVID-19 pandemic, its negative impact has been widespread, even eroding some of the gains in the fight against poverty. The downward trend in poverty rates observed in the LCSFC from Waves 1 to 4, indicative of improvements in income levels, was reversed during the pandemic (Wave 5) in both urban and rural areas and across the country. In terms of the households' ability to meet expenses given their household income, there was a significant increase in the proportion of those who encountered considerable difficulty during the early phase of the pandemic. The government is urged to ensure that all qualified indigent households especially those with children, from the rural areas, and from Visayas and Mindanao are included in all its poverty reduction and social protection programs. The World Bank (2020) reported that in December of 2020, social safety nets of the government were insufficient as the pandemic lasted for several months. Hence, government support to various social protection programs must be boosted to create more significant impacts among the targeted households. This also calls for any policies regarding poverty alleviation and social protection to be evidence-based to minimize efficiency losses as the Philippine economy continues to deal with the lingering effects of the COVID-19 pandemic.

REFERENCES:

Cho, Y. & Johnson, D. (2022). COVID-19 and social assistance in the Philippines: Lessons for future resilience. The World Bank. https://bit.ly/48Lhvf1

DSWD Memorandum Circular No. 4 (2020). *Social Amelioration Program*. Department of Social Welfare and Development. https://www.dswd.gov.ph/issuances/MCs/MC_2020-004.pdf

Melad, K.A.M., Araos, N.V.V., & Orbeta, A.C. (2020). Giving cash to the poor: A study of *Pantawid Pamilya* cash grants generosity, frequency, and modality. P*hilippine Institute for Development Studies Discussion Paper Series No*. *2020-59*. https://hdl.handle.net/11540/13042

Orbeta, A.C., Melad, K.A.M., and Araos, N.V.V. (2021). Reassessing the impact of the *Pantawid Pamilyang Pilipino* Program: Results of the Third Wave Impact Evaluation. P*hilippine Institute for Development Studies Discussion Paper Series No*. *2021-05*. https://hdl.handle.net/11540/13173

PSA (2011). *Female-Headed Families Have More Income Than Male-Headed Families: Based from the Final Results of the 2009 Family Income and Expenditure Survey*. Philippine Statistics Authority. https://psa.gov.ph/content/female-headed-families-have-more-income-male-headed-families-based-final-results-2009-family

PSA (2019). *Proportion of poor Filipinos was estimated at 16.6 percent in 2018*. Philippine Statistics Authority Press Release No. 2019-209. https://psa.gov.ph/system/files/Press%20Release_2018FY.pdf

PSA (2021). Child poverty in the Philippines. *Philippines Statistics Authority Infographics*. https://psa.gov.ph/sites/default/files/infographics/Child%2520Poverty%2520Infographics.pdf

PSA (2022a). *Goal 1: No Poverty*. Philippine Statistics Authority SDG Watch. https://psa.gov.ph/sdg/Philippines/baselinedata/1%20No%20Poverty

PSA (2022b). Table 13. Poverty incidence among families and population in Luzon, Visayas, and Mindanao: 2015, 2018, 2021. *Philippine Statistics Authority Official Poverty Statistics of the Philippines: Preliminary 2021 Full Year*. https://psa.gov.ph/sites/default/files/Preliminary%202021%20Full%20Year%20Poverty%20Statistics%20Publication_15Aug2022_1.pdf

PSA (2022c). *Proportion of poor Filipinos was recorded at 18.1 percent in 2021*. Philippine Statistics Authority Press Release No. 2022-350. https://psa.gov.ph/content/proportion-poor-filipinos-was-recorded-181-percent-2021#:~:text=Based%20on%20the%20Preliminary%20Results,was%20recorded%20at%2018.1%20percent

PSA (2022d). *Wage differentials in major industries and occupations in 2020*. Philippine Statistics Authority LABSTAT Updates, 26(3). https://psa.gov.ph/sites/default/files/1-%28ons-cleared%29_LABSTAT%20Updates%20-%20OWS%202020%20Wage%20Differentials_csa_rev_aam_mcv_ONS_rev_ONSF-signed.pdf

PSA-UNICEF (2015). *Child poverty in the Philippines*. Philippine Statistics Authority and the United Nations Children's Fund. https://www.unicef.org/philippines/media/461/file/Child%20Poverty%20in%20the%20Philippines.pdf

Recio, R.B., Lata, L.N., and Chatterjee, I. (2020). Rising inequalities, deepening divides: Urban citizenship in the time of COVID-19. *Geographical Research*, *59*(4): 500-513. https://doi.org/10.1111/1745-5871.12495

Republic Act No. 11310 (2018). An Act Institutionalizing the *Pantawid Pamilyang Pilipino* Program (4Ps). https://www.officialgazette.gov.ph/downloads/2019/04apr/20190417-RA-11310-RRD.pdf

Reyes, C.M., Asis, R.D., Arboneda, A.A., and Vargas, A.R.P. (2020). Mitigating the impact of COVID-19 pandemic on poverty. *Philippine Institute for Development Studies Discussion Paper Series No. 2020-55*. http://hdl.handle.net/11540/13038

United Nations (n.d.). Goal 1: End poverty in all its forms everywhere. *Sustainable Development Goals*. https://www.un.org/sustainabledevelopment/poverty/

United Nations (2022). *The Sustainable Development Goals Report 2022*. https://unstats.un.org/sdgs/report/2022/The-Sustainable-Development-Goals-Report-2022.pdf

USC-Office of Population Studies Foundation, Inc. (OPS). (2018). *Longitudinal Cohort Study on the Filipino Child. Baseline Survey Technical Report*. OPS Report Series No. 2. Retrieved from https://www.opsusc.org/paper_series.php.

Wendt, A., & Victora, C., (2022, April 7). *Are Children in Female-headed Households at a Disadvantage?* Partnership for Maternal, Newborn, & Child Health. https://pmnch.who.int/news-and-events/news/item/07-04-2022-are-children-in-female-headed-households-at-a-disadvantage

WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (WHO/UNICEF JMP) (2018). JMP methodology. 2017 update & SDG baselines. https://washdata.org/sites/default/files/documents/reports/2018-04/JMP-2017-update-methodology.pdf

World Bank (2020). *Impacts of COVID-19 on households in the Philippines*. The World Bank. https://thedocs.worldbank.org/en/doc/ab24c2a718fb53a344c5942d236b2fe6-0070062021/original/Philippines-COVID-19-High-Frequency-Survey-Household-Results-Slides.pdf

Chapter 3

SDG 2. Tracking Food Insecurity and Undernutrition in Filipino Adolescents

Chapter 3

SDG 2. Tracking Food Insecurity and Undernutrition in Filipino Adolescents

Francisco M. Largo[9] and Jan Lorenzo G. Alegado[10]

1. Background of SDG 2 (Zero Hunger)

Sustainable Development Goal 2 (SDG2) aims to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. To this end, a set of eight targets with corresponding indicators of success have been set for this goal (United Nations, 2017). The intent is for targets to be more specific statements of overall goals and for indicators to be measures of success in achieving the targets.

The Longitudinal Cohort Study on the Filipino Child (LCSFC) is designed to collect data on a nationally representative sample of Filipinos from age 10 (2016 Baseline) to age 24 (2030 Endline). This chapter reports on data from surveys completed from 2016 to 2021, covering the lives of the cohort from ages 10 thru 15. The LCSFC collects household- and individual (cohort)-level data that contribute to the measurement of success in achieving two out of the eight SDG2 targets: 1) Target 2.1: Universal Access to Safe and Nutritious Food and 2) Target 2.2: End All Forms of Malnutrition. For these targets, data are available from the LCSFC to indicate achievement in three indicators: 1) Indicator 2.1.2: Prevalence of Food Insecurity, 2) Indicator 2.2.1 Prevalence of Childhood Stunting, and 3) Indicator 2.2.2 Prevalence of Childhood Malnutrition.

Indicator 2.1.2 calls for the elimination of moderate and severe food insecurity by 2030 as its end goal. These food insecurity categories are based on the Food Insecurity Experience Scale (FIES) (United Nations, 2017). The LCSFC collects FIES data at each survey, and this chapter presents data on the cohort's household food insecurity status from ages 10 to 15. This enables the tracking of this metric at a time when the LCSFC cohort were in the midst of acquiring key human capital that will determine future life trajectories. The LCSFC appears to be the only Philippine study with longitudinal FIES data, allowing comparability of results with global trends. The Food and Nutrition Research Institute (FNRI) uses the Household Food Insecurity Access Scale (FIAS) and only began implementing the FIES in their Expanded National Nutrition Survey in 2019 (DOST-FNRI, 2020).

Indicators 2.2.1 and 2.2.2 specifically tracks progress of nutritional status of children under age 5 (FAO, IFAD, UNICEF, WFP, & WHO, 2023). The LCSFC monitors nutritional status of the cohort from age 10 through 24, thus assessing the persistence of malnutrition beyond early childhood, from adolescence through early adulthood. This presents the opportunity to link these measures with current and future outcomes of interest such as in the areas of health, education, and economic status. Two policy notes previously produced by the LCSFC Policy Notes Team point to these associations for concurrent education and health outcomes (Largo et al., 2020; Largo et al. 2019).

[9] Asst. Professor, Department of Economics, University of San Carlos, Cebu City; Email: fmlargo@usc.edu.ph

[10] Asst. Professor, College of Social Sciences, University of the Philippines, Cebu City; Email: jgalegado@up.edu.ph

Current reports on the state of these targets and indicators reveal that considerable work needs to be done globally and nationally. The Food and Agriculture Organization (FAO et al., 2023) reports that the prevalence of moderate and severe food insecurity has increased globally during the period 2015-2022. Moderate food insecurity prevalence increased from 14.1 % in 2015 to 18.3% in 2022. Severe food insecurity prevalence also heightened from 7.6% in 2015 to 11.3% in 2022. African countries had double the global prevalence rate of severe food insecurity in 2022. Latin America and the Caribbean are the only groups of countries which exceeded the global rate for both moderate and severe food insecurity in 2022 (24.9% and 12.6%, respectively). Asian countries have generally lower food insecurity prevalence rates with the exception of South Asian countries. The Philippines reported an increase in moderate or severe household food insecurity, using FIAS data, from 41.6% in 2018 to 48.6% in 2019. The corresponding FIES data for 2019 was 44.2% (DOST-FNRI, 2020). These rates are well above the average for Southeast Asian and Asian countries for 2019 (at 14.5 % and 21.2%, respectively) (FAO et al., 2023).

World trends on stunting for children under 5 show a decline in prevalence rates from 26.2% in 2012 to 22.3% in 2022 (FAO et al., 2023). The wasting prevalence has also decreased globally over the same time period from 7.5% to 6.8%. Despite these decreasing trends, achieving the 2030 final targets of 13.5% and 3% for stunting and wasting, respectively, continues to be a challenge. In the Philippines, stunting rates for children under 5 have fallen from 33.4% in 2015 to 28.8% in 2019. The wasting prevalence for the same age group has fallen from 7.1% in 2015 to 5.8% in 2019 (World Bank, 2021). The Philippine government's 2022 Pace of Progress Report (PSA, 2022) shows that much work still needs to be done in reaching our targets for these indicators. For instance, the prevalence rate for wasting actually regressed in 2019 since it was at 5.6% in 2018. The World Bank (2021) points out that very little progress has been made for these indicators since 2008. The COVID-19 pandemic is only expected to worsen the results for these indicators both at the global and national levels.

As mentioned, the LCSFC provides important context to the progress of these indicators, particularly during the crucial period of adolescence when human capital development is underway. The LCSFC food insecurity data discussed in this chapter cover the pre-pandemic period [Wave 1 (2016; the cohort at age 10), Wave 2 (2018; age 11), Wave 3 (2019; age 12) and Wave 4 (first quarter of 2020; age 13) and the pandemic [Wave 5 (2021; age 15)]. The results illustrate how a crisis of such magnitude as the pandemic has affected select SDG2 targets. The LCSFC undernutrition data reported here cover the pre-pandemic period only since no face-to-face data collection (thus, no anthropometric measures collected) were allowed during the pandemic. The findings on overnutrition and risk of cardiovascular disease in the LCSFC cohort are reported in Chapter 4.

2. **Findings from the Longitudinal Cohort Study on the Filipino Child**

2.1. *Food Insecurity*

The LCSFC measures household food insecurity at each survey round using the FIES developed by the Food and Agricultural Organization (Ballard et al., 2013; Cafiero et al., 2018). The main respondent in this module is the cohort participant's mother or main caregiver (if the mother is absent) and responses are treated as reflecting the household's experience given that food security measures the experience of one or more household members. The scale is based on a block of eight questions listed in the order of conceptual progression of food insecurity severity (Table 3.1).

Table 3.1. Food Insecurity Experience Scale Survey Module Questions

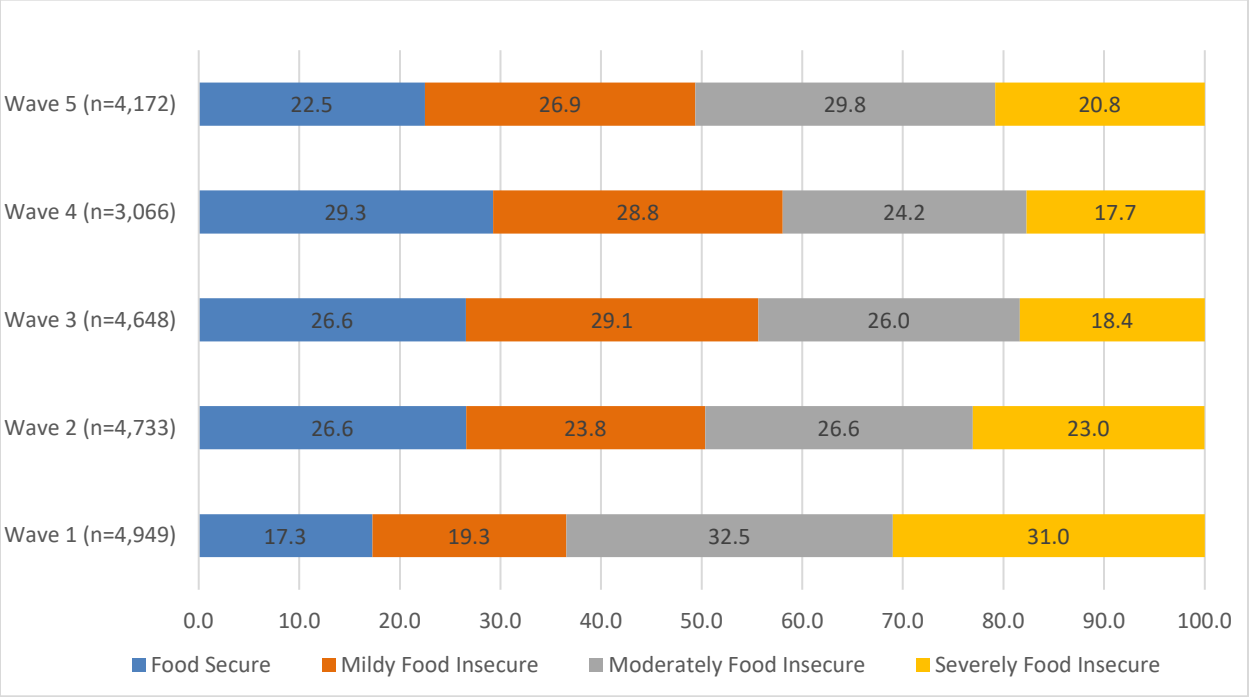
Questions on Household Experience for the Past 12 Months	Severity Progression
Mild Food Insecurity (FI) items: 1. You were worried you would not have enough food to eat? 2. You were unable to eat healthy and nutritious food? 3. You ate only a few kinds of foods?	Adequate access but worry about future access Compromising on quality and variety of food
Moderate FI: 4. You had to skip a meal? 5. You ate less than you thought you should? 6. Your household ran out of food?	Reducing quantity of food, skipping meals
Severe FI: 7. You were hungry but did not eat? 8. You went without eating for a whole day?	Experiencing hunger

The module tracks the household food insecurity experience in a sequential process along a spectrum. The scale score assigned to the household is computed as follows:

1. Not Food Insecure: Answered no to all eight questions
2. Mildly Food Insecure: Answered yes to at least one MILD item, but no to all the rest of the items
3. Moderately Food Insecure: Answered yes to at least one MODERATE item; any answer in the MILD items but no to all SEVERE items)
4. Severely Food Insecure: Answered yes to at least one SEVERE item, any answer in the MILD and MODERATE items)

Figure 3.1 shows that the proportions of moderately or severely food insecure households have decreased from Waves 1-4 (pre-pandemic period). However, a significant increase in these categories is observed in Wave 5 (pandemic period). The combined values for moderate and severe food insecurity in the LCSFC (50.6%) is much higher than the FNRI estimate of 44.2% using FIES for this category (DOST-FNRI, 2020).

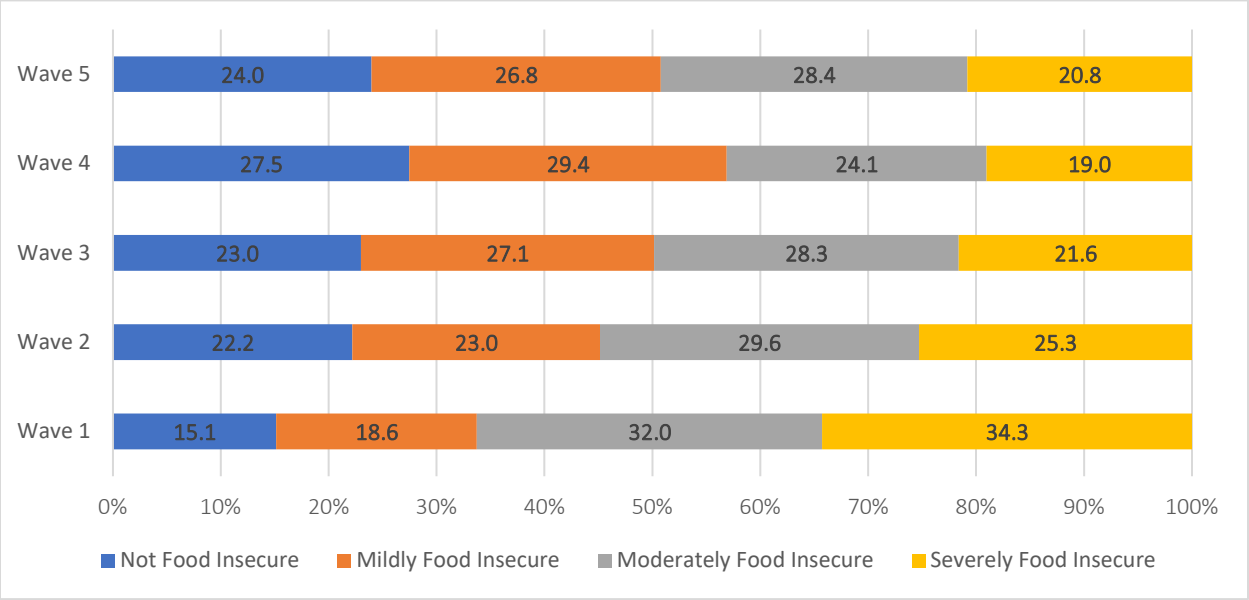
Figure 3.1. Household Food Insecurity Categories across Waves 1-5



Note: Results are weighted proportions for each wave.

The true trend in food insecurity, using a sample of households present in every wave (n=2,060), is shown in Figure 3.2. The unweighted proportions of households in each category, estimated using a sample with complete data, slightly vary in magnitude from the weighted proportions using the full sample for each wave (Figure 3.1). However, the downward trend from Waves 1-4 and the uptick in Wave 5 is still evident. An interim phone survey at the onset of the pandemic (Wave 4a, in the last quarter of 2020; results not shown in Figure 3.2) showed an even larger increase in the proportion of households with moderate food insecurity (at 31%) than what was seen in Wave 5. The proportion of households classified as severely food insecure increased between the early and later pandemic waves (17% in Wave 4a vs 21% in Wave 5).

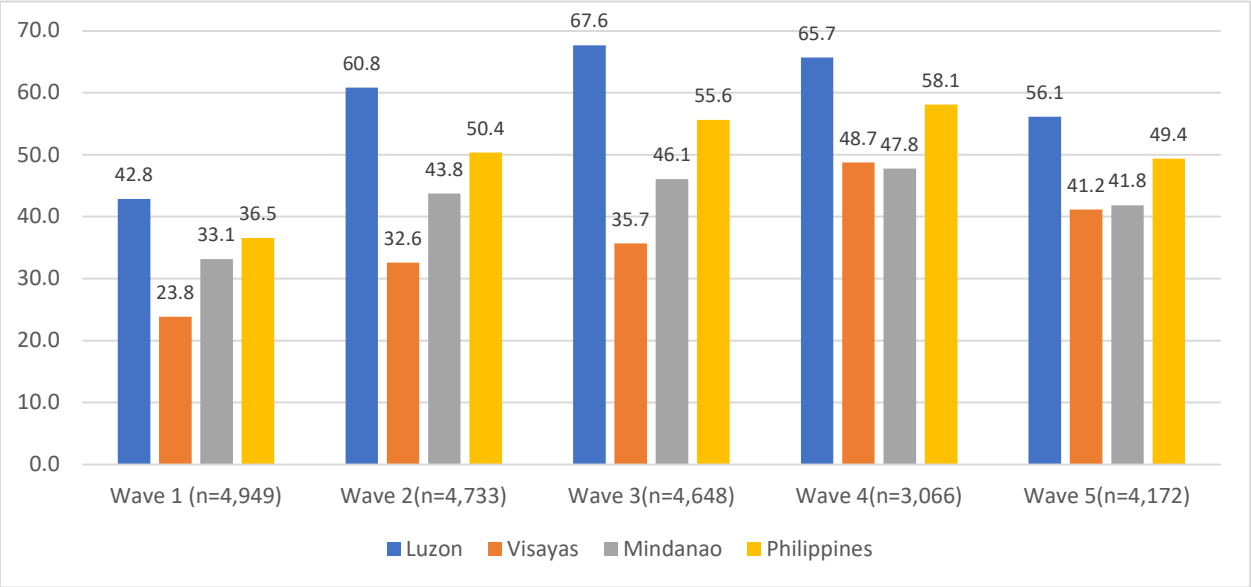
Figure 3.2. Household Food Insecurity Categories across Waves (Complete Sample Across Waves n=2,060)



Note: Results are unweighted proportions for each wave.

Figure 3.3 shows the proportions of households classified as food secure (either food secure or mildly food insecure) across waves and island groups. The differences in proportions across island groups at each wave are statistically significant. Results indicate that a greater proportion of households in Luzon tend to be food secure compared to those in Mindanao and Visayas. Households in the Visayas were the least food secure, with rates even lower than the national average. The data on food secure households across island groups show the same pattern seen in Figure 3.1, where an increasing trend was seen from Waves 1-4 followed by a decrease in Wave 5.

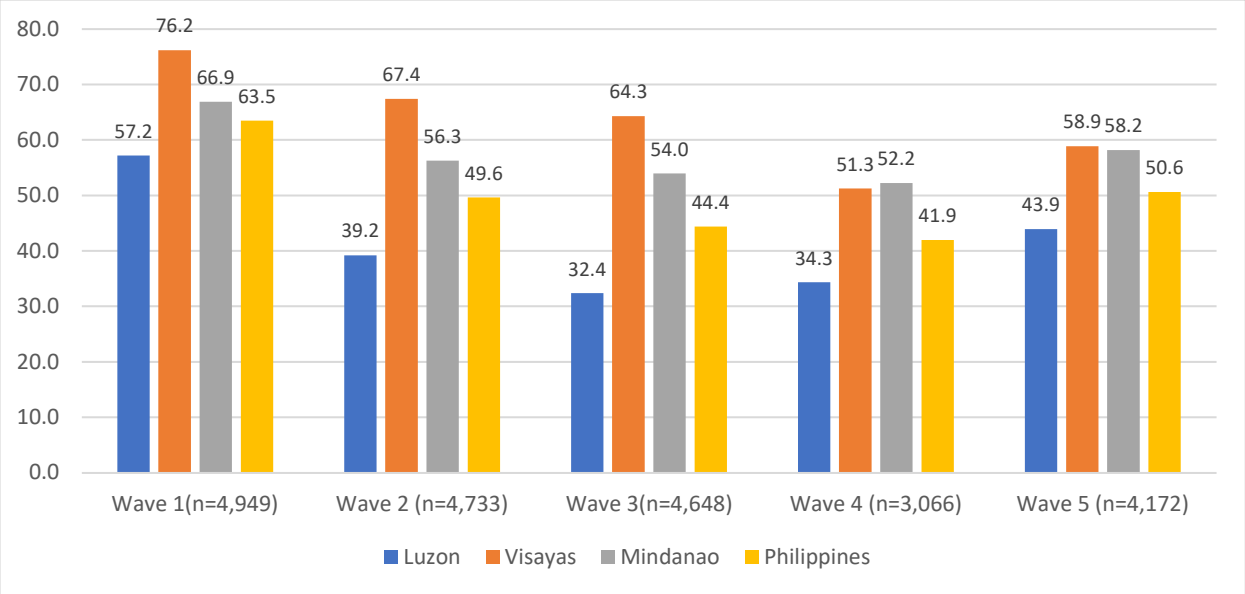
Figure 3.3. Proportions of Households Classified as Food Secure or Mildly Food Insecure by Island Group and Wave



***Weighted proportions significantly different across island groups at p<0.01

Households that face the more serious forms of food insecurity (either moderately or severely food insecure) are differentiated by wave and island groups in Figure 3.4. The general trend in this category across island groups is also similar to that seen in Figure 3.1, where the proportions of households classified as having more serious forms of food insecurity declined from Waves 1 to 4, then showed an increase in Wave 5.

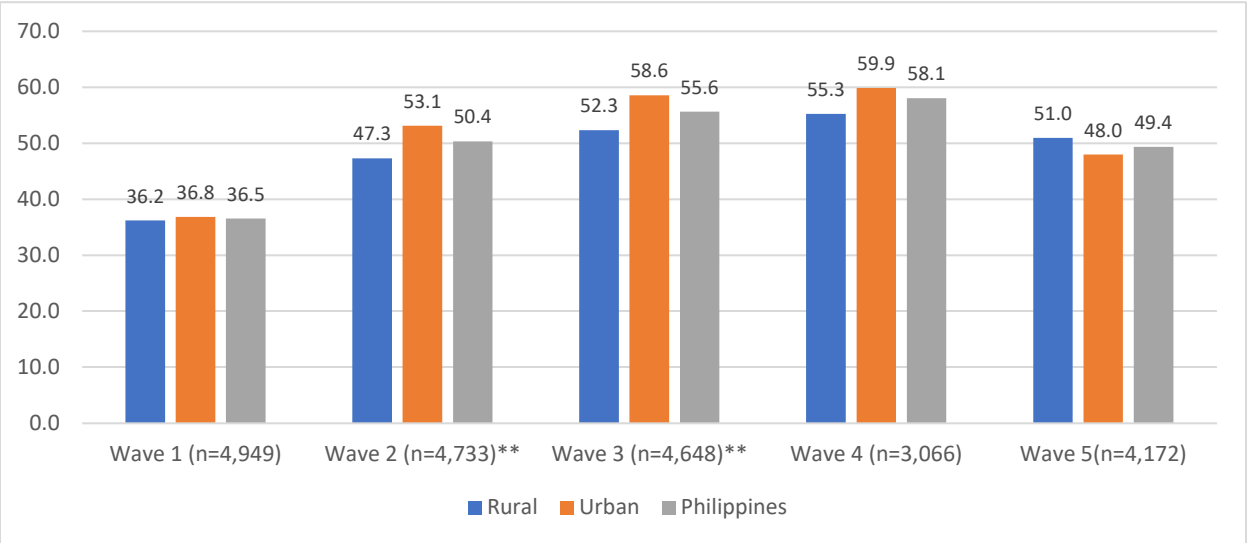
Figure 3.4. Proportions of Households Classified as Moderately or Severely Food Insecure by Island Group and Wave



***Weighted proportions significantly different across island groups at p<0.01

Figure 3.5 shows the proportions of food secure households (classified as either food secure or mildly food insecure) across urban and rural areas, and across waves. Significant differences are observed between strata for food secure households from Waves 2-5. For these waves, food secure households were more prevalent in urban areas across waves. In both urban and rural areas, the increasing trend from Waves 1-4 was reversed in Wave 5.

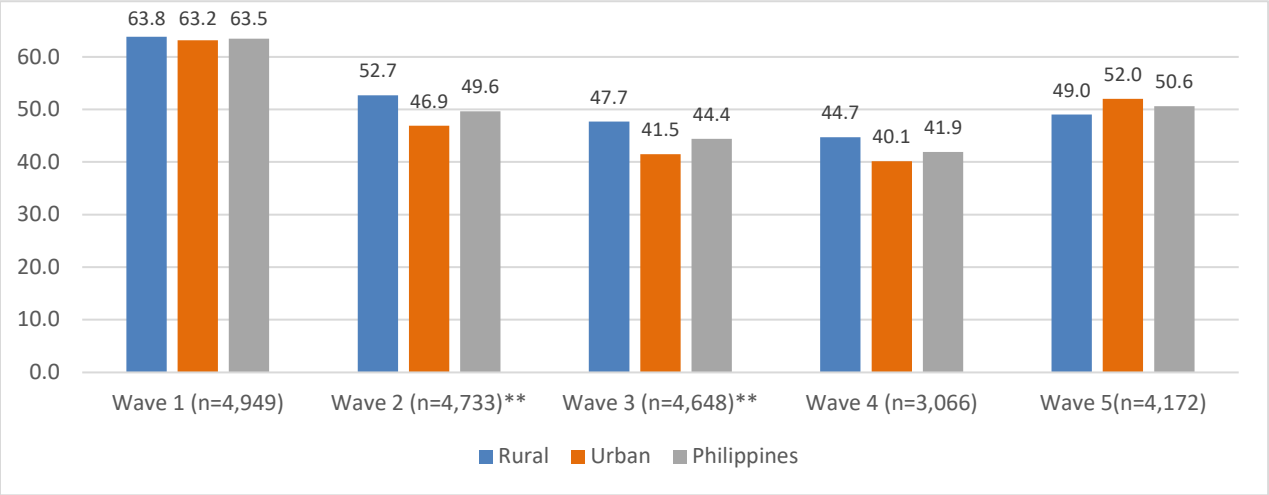
Figure 3.5. Proportions of Households Classified as Food Secure or Mildly Food Insecure by Urban/Rural Residence and Wave



****Weighted proportions significantly different between urban/rural strata at p<0.05

We see the differentiation across urban and rural areas for the more serious categories of food insecurity in Figure 3.6. Rural households had higher rates across waves. The decreasing trend for both urban and rural households from Waves 1-4 was reversed in Wave 5.

Figure 3.6. Proportions of Households with Moderate or Severe Food Insecurity by Urban/Rural Residence and Wave

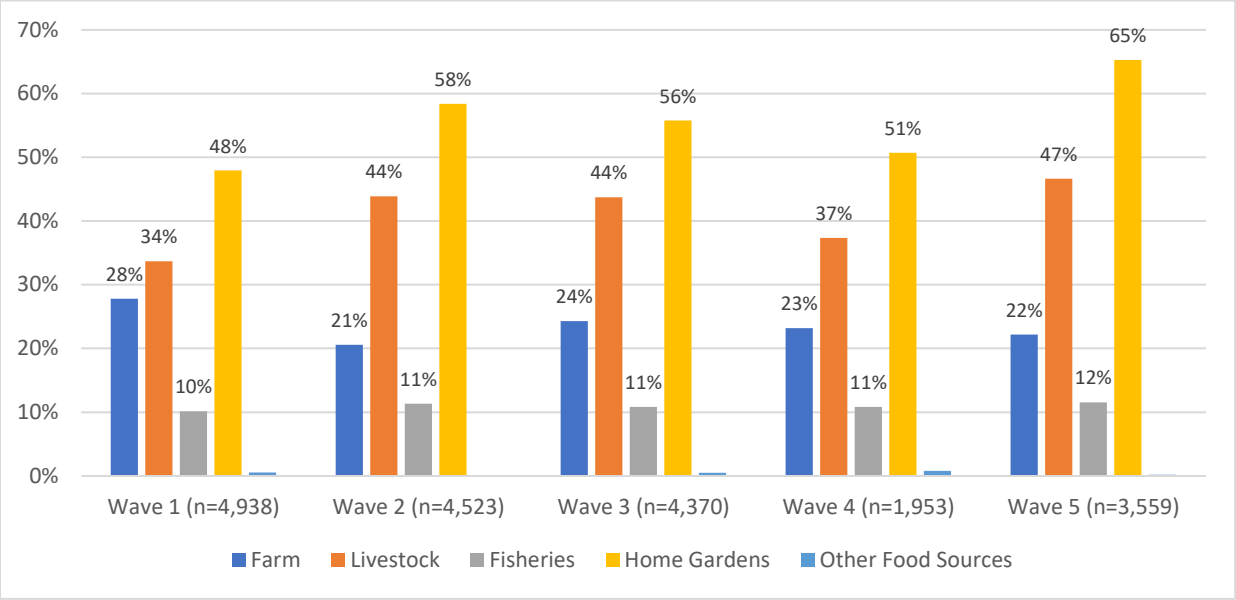


****Weighted proportions significantly different between urban/rural strata at p<0.05**

The above results illustrate how the increasing momentum in food security gains, achieved prior to the last quarter of 2020 (Waves 1-4), was disrupted by the COVID-19 pandemic. The Food and Agriculture Organization's High Level Panel of Experts on Food Security and Nutrition (FAO-HLPE, 2020) outlined the immediate and long term disruptions in food systems that would account for this on a global scale. Kim et al. (2020) emphasized the effects of lock downs for countries in Asia and the Pacific on both demand and supply sides. Angeles-Agdeppa et al. (2022) reported the results of a rapid assessment using a phone survey towards the end of 2020 and showed that the proportion of households with moderate and severe insecurity has increased to 62% of sampled households compared to 40% the year before in the 2019 Expanded National Nutrition Survey. An interim LCSFC phone survey conducted around the same period showed that 51% of households interviewed had moderate or severe food insecurity.

In the LCSFC, average weekly food expenditures amounted to PhP1,550 in Waves 2 and 3, which increased to Php1,750 in the period immediately before the pandemic (Wave 4). By Wave 5, in the midst of the pandemic, this value reverted to PhP1,570 per week. Given the setback due to lockdowns on both purchasing power and access to food supplies, households may have resorted to supplementing their regular food sources with other sources. Figure 3.7 reveals a sharp increase in the use of home gardens during the pandemic compared to prior periods.

Figure 3.7. Proportions of Households Using Supplemental Food Sources by Wave and Source*

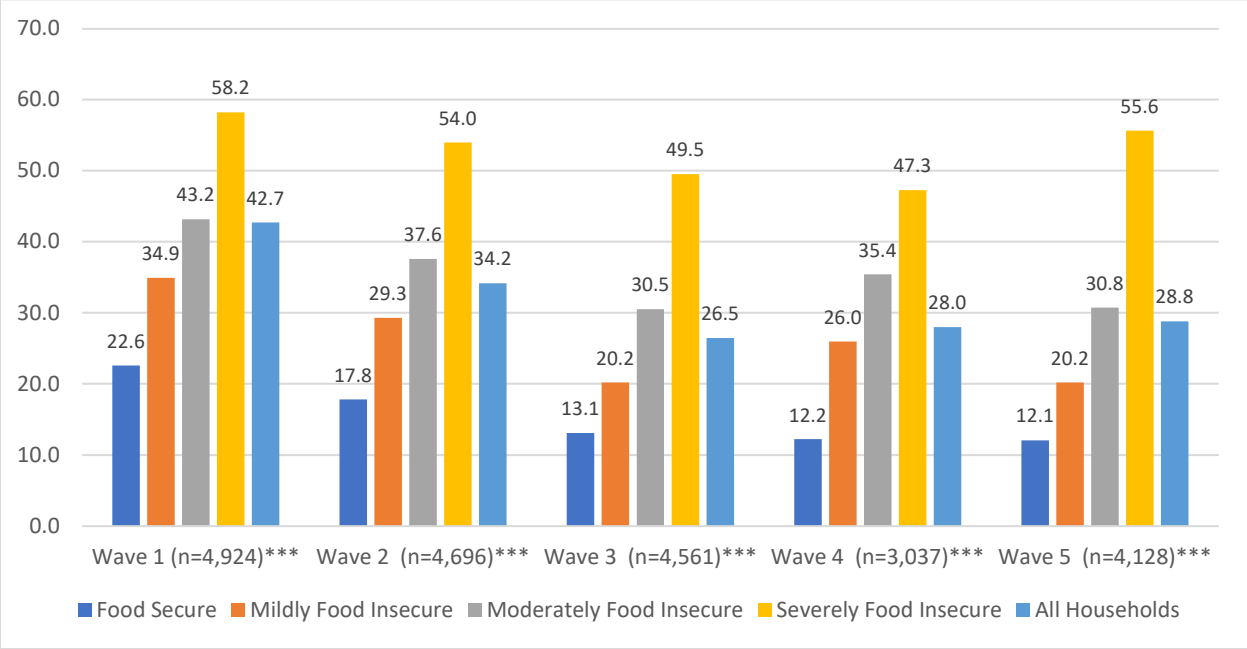


*Weighted proportions per Wave

A Policy Note based on LCSFC findings had previously suggested that community gardens would be a recommended focus of policy action to help households deal with limited food access caused by the COVID-19 pandemic (Largo et al., 2021). The same Policy Note also pointed out that modifications in food preparation and consumption (e.g., cooking food instead of purchasing from commercial food sellers, limiting food consumption) appeared to be an important coping mechanism among households during this period. In the pre-pandemic surveys, the commonly reported household coping mechanisms were obtaining goods on credit or taking on additional work for extra income. Unfortunately, these schemes were not available during the pandemic given the widespread economic dislocation. Policymakers must be cognizant of such household situations to ensure more effective policies that truly help families survive in times of crisis. It is also important to note that when schools closed during the pandemic, children in food insecure households were deprived access to an important targeted initiative that is the School Based Feeding Program (SBFP) of the Department of Education (DepEd) especially in its initial period. Subsequent adjustments were made by DepEd to account for pandemic conditions (DepEd, 2020). As the SBFP was already saddled with difficulties in achieving desired outcomes (Tabunda et al, 2016), it remains to be seen if these adjustments were implemented in a manner to offset any new difficulties.

The extent to which household food insecurity affects the youngest members of the family would depend on coping mechanisms resorted to, such as prioritizing children's serving portions over those of adults. At each survey round, the LCSFC also collects data on experiences of hunger among the cohort participants, to assess whether or not household food insecurity corresponds to child hunger. Figure 3.8 shows data on child hunger (cohort participants experiencing hunger in the previous 6 months) by household food insecurity category across waves.

Figure 3.8. Reported Child Hunger by Wave and Household Food Insecurity Category.



*** Weighted proportions are significantly different across Food Insecurity categories per Wave at p<0.01

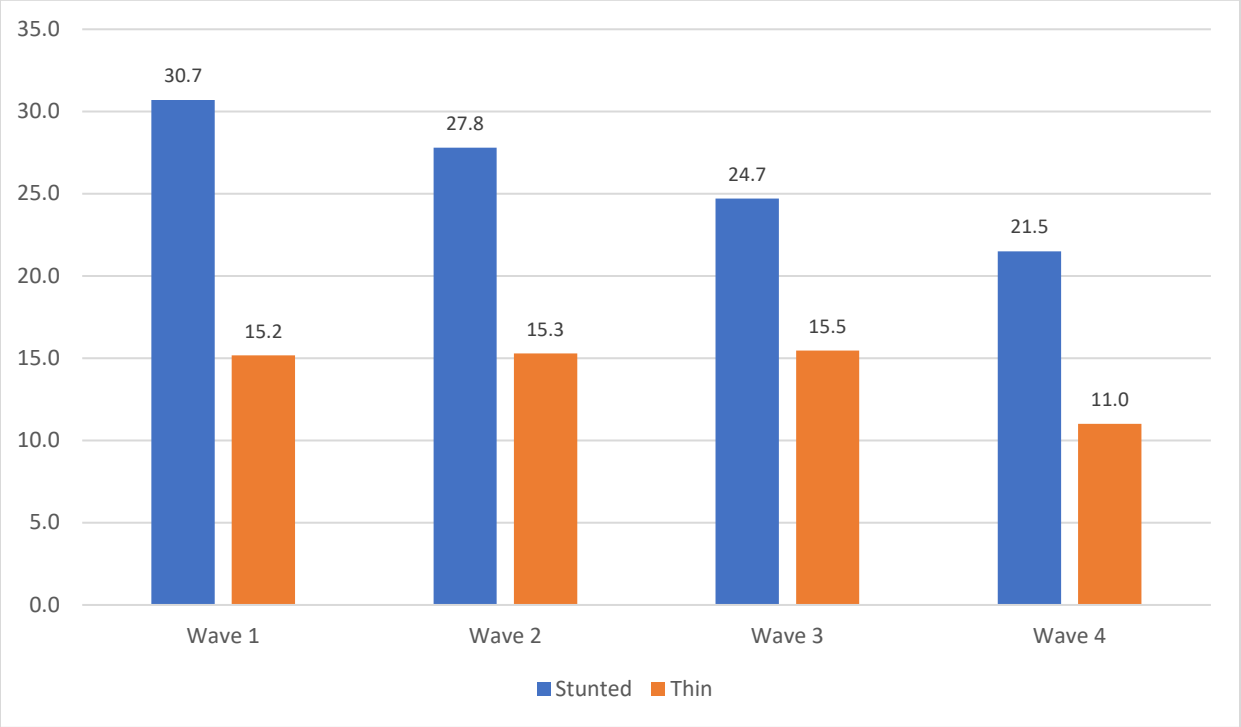
The proportion of households with cohort participants reporting child hunger decreased from Waves 1 to 3 (ages 10 through 12) and increased in Waves 4 and 5 (ages 13 and 15). Within each wave, households that are moderately and severely food insecure had the highest proportions experiencing child hunger. Those in severely food insecure households exceeded the average for the nation by significant margins for every wave. The decreasing proportion of children experiencing hunger for severely food insecure household across the first four non-pandemic waves was also reversed in Wave 5.

2.2. Undernutrition: Stunting and Wasting

Childhood undernutrition remains a concern for the Philippines. A previous Policy Note (Largo et al., 2019) on the initial results of the LCSFC discussed the implications of undernutrition at age 10 on education outcomes. Stunting, meaning being short relative to a reference standard for a given age, continues to be a problem in the country. About a third of Filipino children under age 5 are stunted (FNRI, 2013) and are vulnerable to health and cognitive development risks associated with stunting. Persistent stunting beyond age 5 may also indicate that households and the children themselves continue to be exposed to health resource deficiencies (Stewart et al., 2013). Wasting or being thin based on WHO child growth standards (WHO, 2017) results from inadequate nutrition or disease in the current period. Wasting is associated with higher childhood mortality risk (Khara and Dolan, 2014). The underlying causes of wasting in childhood as well as critical interventions and timely treatment have been identified (WHO, 2014).

Figure 3.9 shows the prevalence of stunting and wasting[11] among the LCSFC cohort across waves. Stunting rates in the LCSFC cohort show a declining trend, from 31% at age 10 to 22% at age 13. The prevalence of wasting, defined here as having a body mass index below the reference standard for a given age, was steady at about 15% from ages 10-12 (Waves 1-3) then dropped to 11% at age 13 (Wave 4). The stunting and wasting trajectories at these ages are confirmed to be the true trend in a sample with complete data across all four waves (Figure 3.10).

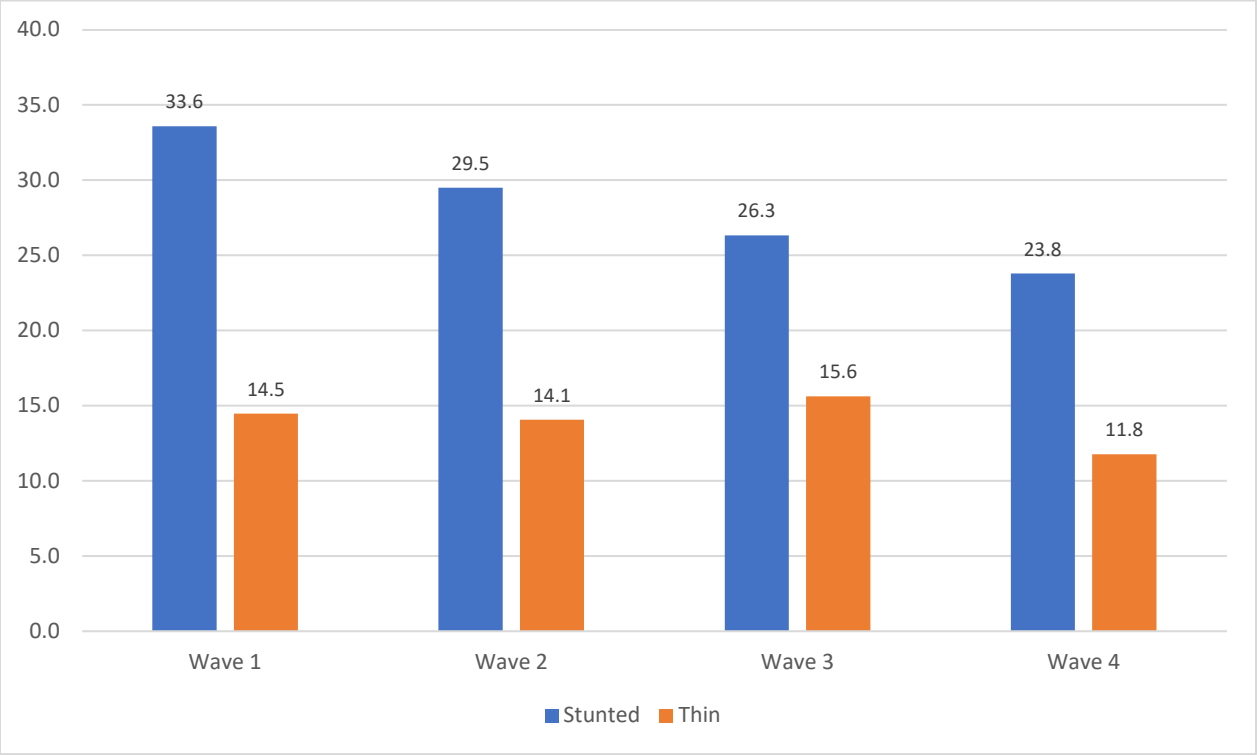
Figure 3.9. Prevalence of Undernutrition in the LCSFC Waves 1-4, Ages 10-13*



* Weighted proportions per Wave;

[11] Stunting and Wasting classified using the 2007 WHO Reference Standards (https://www.who.int/growthref/en/): Stunted: height-for age <-2 standard deviations (SD); Wasting: BMI-for-age <-2SD

Figure 3.10. Prevalence of Undernutrition in the LCSFC Waves 1-4, Ages 10-13 (Complete Sample across Waves, n=2,739) *

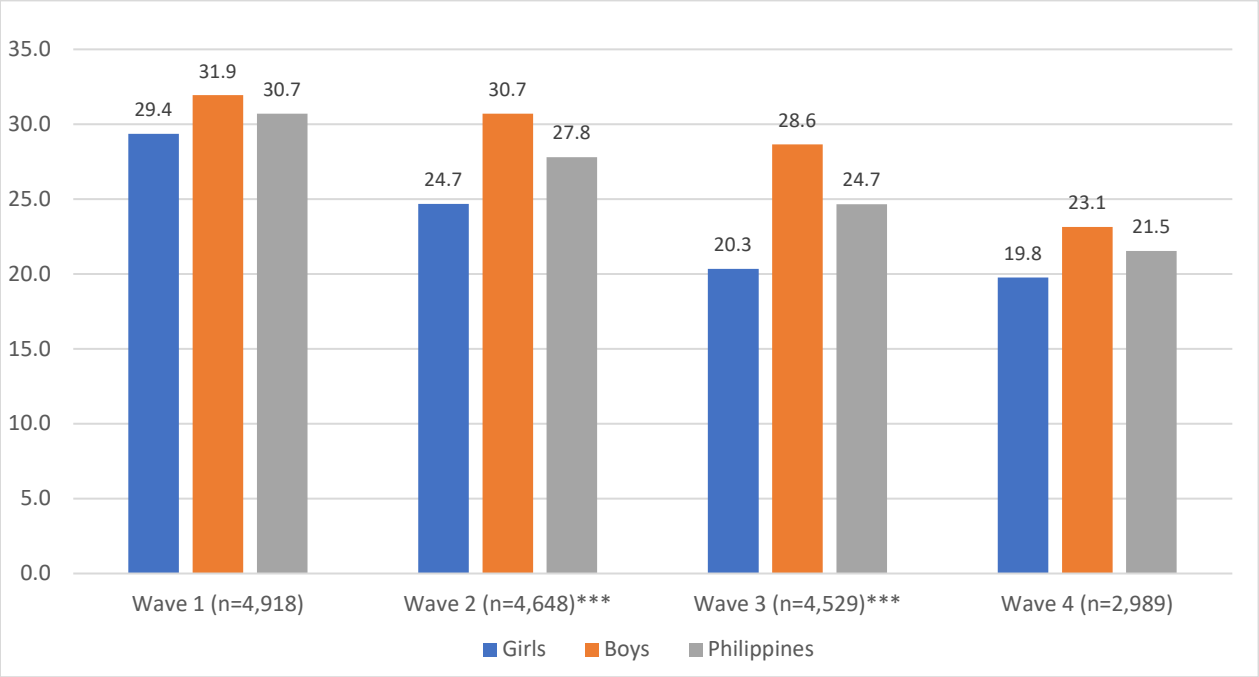


* Unweighted proportions

Figure 3.11 compares the prevalence of stunting by sex across waves. Stunting rates were higher for boys than girls across waves, particularly significant in Waves 2 and 3 or at ages 11 and 12. The decreasing trend in stunting prevalence, more pronounced among boys between Waves 3 and 4 (ages 12-13), may be attributed to adolescent growth spurts (Moodie et al., 2020).

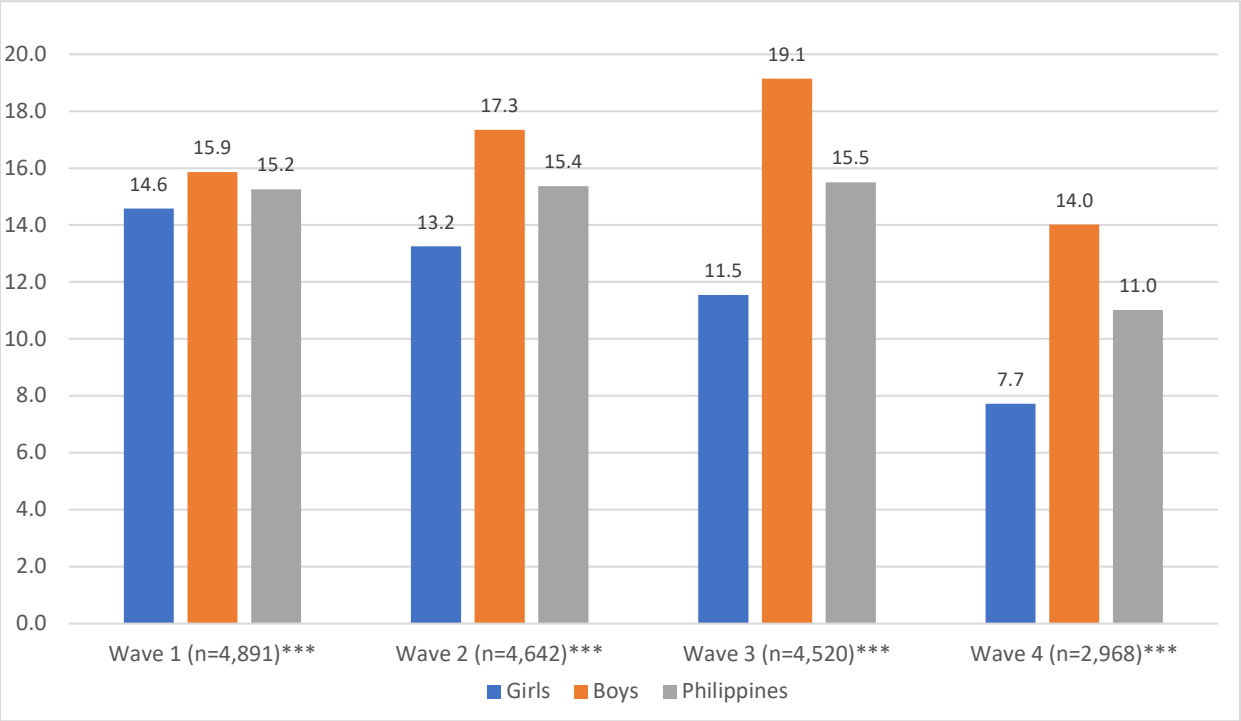
The prevalence of wasting was also found to be higher for boys across all four waves. As show in Figure 3.12, the sex difference increasingly widened starting at age 11 (Wave 2). The increasing trend in wasting for boys from Waves 1-3 was reversed in Wave 4.

Figure 3.11. Stunting Prevalence across Waves by Sex



***Weighted proportions significantly different between sex in Waves 2 and 3 at p<0.01

Figure 3.12. Wasting Prevalence across Waves by Sex

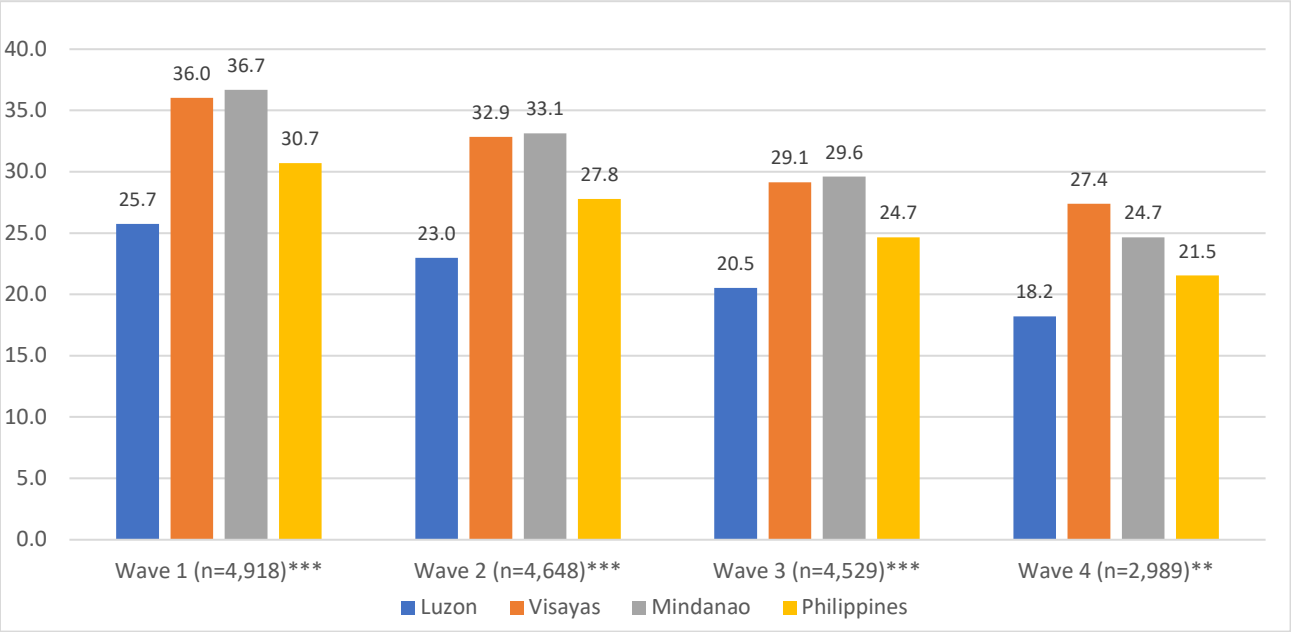


*** Weighted proportions significantly different between sex across waves at p<0.01

When comparing stunting rates across island groups, the advantage of those based in Luzon versus those in Visayas or Mindanao is evident (Figure 3.13). This advantage is not seen with wasting (Figure 3.14) as those in Luzon have higher rates than in other island groups in Waves 2 and 3. In most waves, cohort participants from Mindanao had higher rates in wasting compared to the national average.

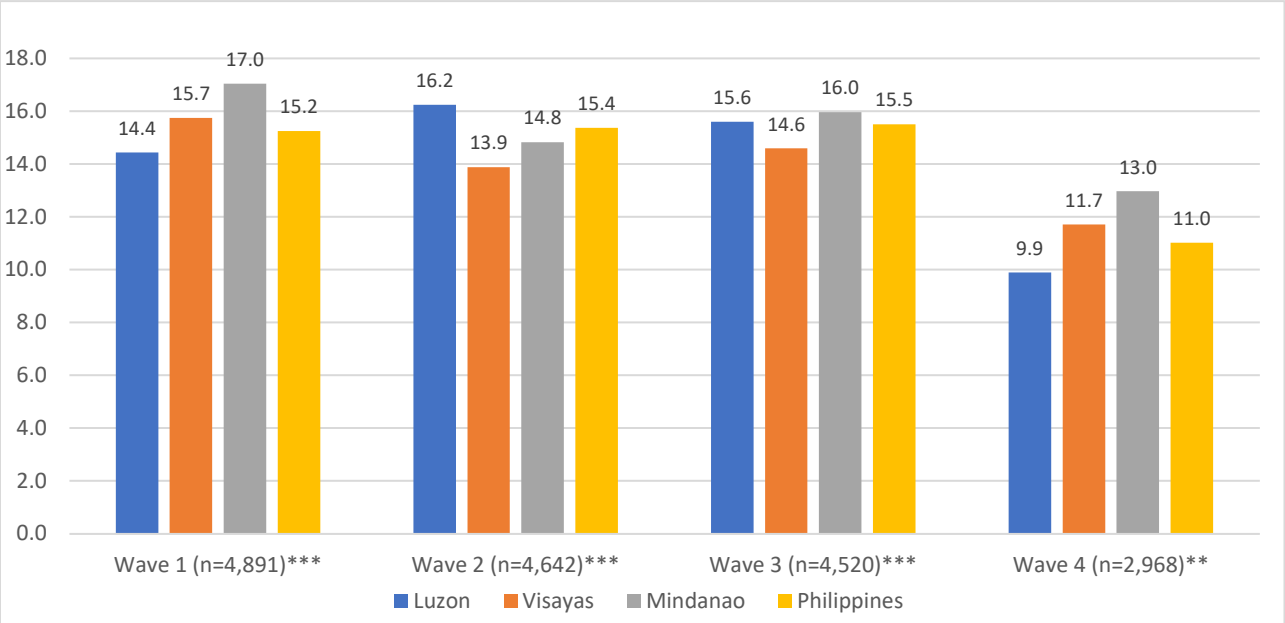
The cohort in rural areas appear to be consistently disadvantaged when it comes to undernutrition relative to their urban counterparts (Figure 3.15 and Figure 3.16).

Figure 3.13. Stunting Prevalence across Waves by Island Group



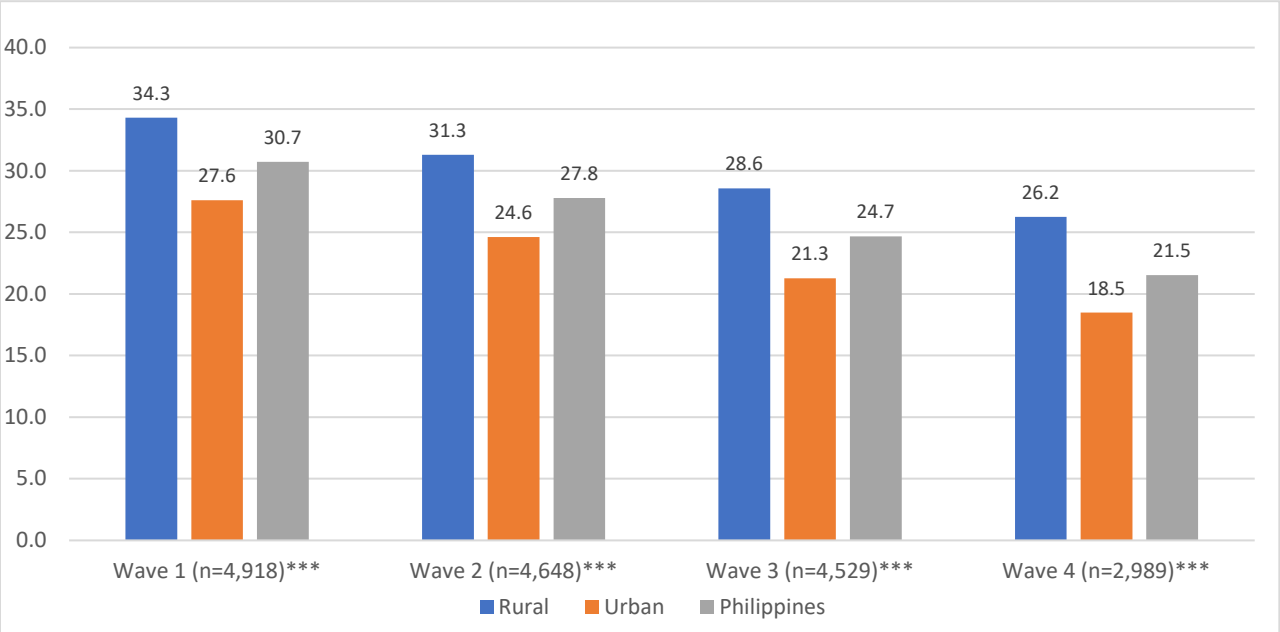
*** Weighted proportions significantly different across island groups, by wave at p<0.01

Figure 3.14. Wasting Prevalence across Waves by Island Group



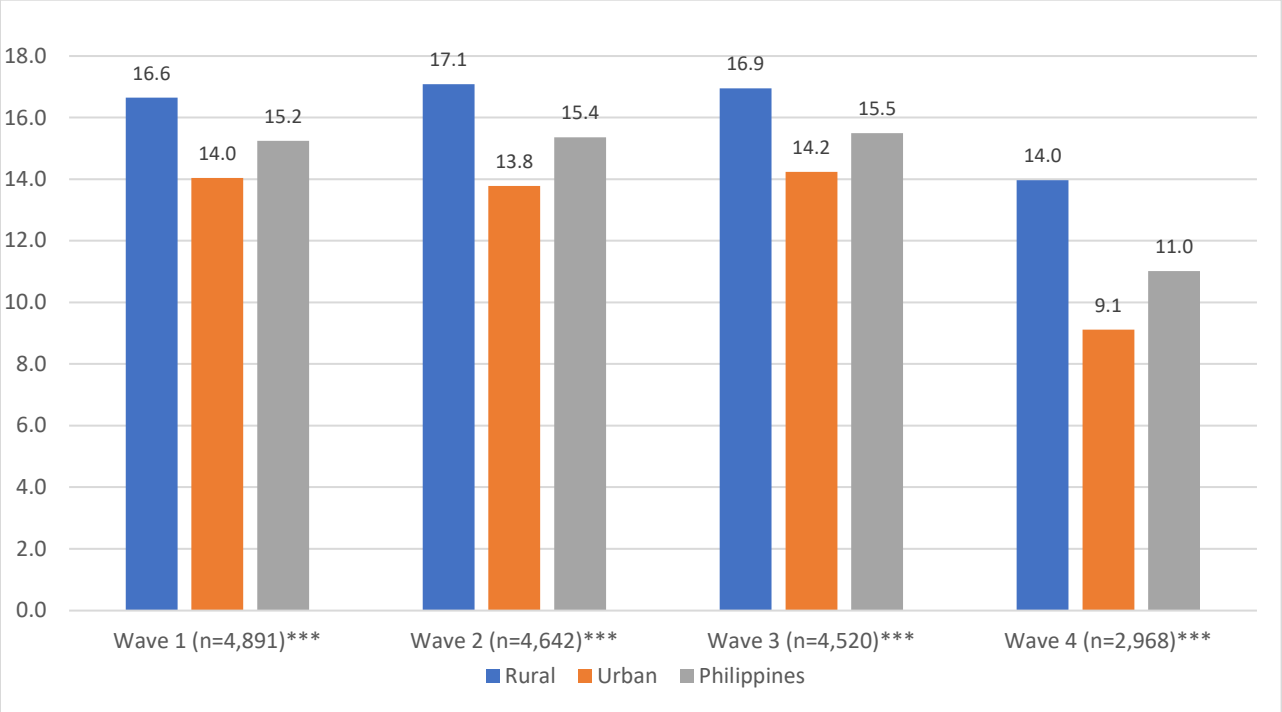
*** Weighted proportions significantly different across island groups, by wave at p<0.01

Figure 3.15. Stunting Prevalence across Waves by Urban/Rural Residence



*** Weighted proportions significantly different between urban/rural strata at p<0.01

Figure 3.16. Wasting Prevalence across Waves by Urban/Rural Residence



*** Weighted proportions significantly different between urban/rural strata at p<0.01

3. Summary and Conclusions

The LCSFC is able to help track the achievement of Sustainable Development Goal 2 in Filipino households with adolescent members by providing data on three indicators: Household food insecurity, stunting and wasting.

Household food insecurity in the LCSFC is relatively high compared to other countries in Southeast Asia and Asia. A declining trend in rates of moderate or severe food insecurity was observed in the pre-pandemic survey rounds (Waves 1-4) which was reversed in the pandemic period (Wave 5). Visayas households appeared to be the most vulnerable in terms of the more serious forms of food insecurity. This is consistent with the reported income poverty being more pronounced in this island group as discussed in Chapter 2 (SDG 1) of this report. Households in Luzon had the lowest prevalence of moderate or severe food insecurity across waves. Rates of moderate and severe food insecurity were higher in rural households. This was consistent across waves even as a declining trend was noted in rural households up to Wave 4 with a reversal in rates in Wave 5 during the pandemic. Higher proportions of child hunger were seen in households with severe food insecurity, further stressing the gravity of the food insecurity situation.

Undernutrition in the form of wasting and stunting in this cohort, from age 10 thru 13, remain concerning, despite declining rates in stunting by age 13. The prevalence rates in wasting have not declined appreciably. Boys had higher rates in both stunting and wasting across waves. Those in Mindanao consistently exceeded the national prevalence rates for stunting across waves. This is also true for wasting in most waves. The cohort from Luzon had the lowest stunting rates across waves. Stunting rates were consistently higher across waves among those in rural areas. Among the key LCSFC findings is that undernutrition is significantly associated with poor schooling outcomes (Largo et al. 2019). This highlights the importance of policies addressing the nutrition welfare of vulnerable populations such as young adolescents, as both forms of human capital acquisition have been compromised.

REFERENCES:

Angeles-Agdeppa, I., Javier, C. A., Duante, C., & Maniego, M. L. (2022). Impacts of COVID-19 pandemic on household food security and access to social protection programs in the Philippines: findings from a telephone Rapid Nutrition Assessment survey. *Food and Nutrition Bulletin*, *43*(2), 213–231. https://doi.org/10.1177/03795721221078363

Ballard, T. (2013). *The Food Insecurity Experience Scale: Development of a Global Standard for Monitoring Hunger Worldwide*. Rome.

Cafiero, C., Viviani, S., & Nord, M. (2018). Food security measurement in a global context: The food insecurity experience scale. *Measurement*, *116*, 146–152. https://doi.org/10.1016/j.measurement.2017.10.065

Department of Education (DepEd). 2020. Operational Guidelines on the Implementation of the School Based Feeding Program Sy 2020-2021. Retrieved from: https://www.deped.gov.ph/wp-content/uploads/2020/09/DO_s2020_023.pdf

Department of Science and Technology-Food and Nutrition Research Institute (DOST-FNRI). (2020). Expanded National Nutrition Survey 2019 Results: Food Security Status of Filipino Households. Retrieved from: http://enutrition.fnri.dost.gov.ph/site/uploads/2019%20ENNS%20Results%20DisseminationHousehold%20Food%20Security%20%20Status.pdf

FAO, IFAD, UNICEF, WFP and WHO. (2023). The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum. Rome, FAO. doi: https://doi.org/10.4060/cc3017en

Food and Agriculture Organization High Level Panel of Experts (FAO-HLPE). 2020. Impacts Of COVID-19 On Food Security And Nutrition: Developing Effective Policy Responses To Address The Hunger And Malnutrition Pandemic. Rome. https://doi.org/10.4060/cb1000en

Food and Nutrition Research Institute (FNRI). Department of Science and Technology. (2013). *8th National Nutrition Survey*. Manila, Philippines: DOST.

Khara, T. & Dolan, C. (2014). *Technical Briefing Paper: Associations Between Wasting and Stunting, Policy, Programming and Research Implications.* Oxford: Emergency Nutrition Network. Retrieved from: http://www.ennonline. net/waststuntreview2014

Kim, K. (2020, July 17). *Food Security in Asia and the Pacific amid the COVID-19 Pandemic*. Asian Development Bank. https://www.adb.org/publications/food-security-asia-pacific-covid-19

Largo, F.M., Bacungan, C.C., Alegado, J.L.G., Borja, J.B., Mayol, N.L., Bechayda, S.A.,Bautista, C.A.P., Herrin, A.N. (2019). *Mitigating the effects of undernutrition on schooling performance among 10-year-old children: What can be done?* Longitudinal Cohort Study on the Filipino Child. UNFPA-OPS Policy Notes Series No. 1. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P. (2020). *Food insecurity is associated with poor outcomes in Filipino children.* Longitudinal Cohort Study on the Filipino Child. UNFPA-OPS Policy Notes Series No. 6. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php.

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P. (2021). The Impact of Covid-19 on Households with Children. Findings from the Longitudinal Cohort Study on the Filipino Child, UNFPA-OPS Policy Notes Series_No. 8. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php.

Moodie, J. L., Campisi, S. C., Salena, K., Wheatley, M., Vandermorris, A., & Bhutta, Z. A. (2020). Timing of Pubertal Milestones in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. *Advances in nutrition (Bethesda, Md.)*, *11*(4), 951–959. https://doi.org/10.1093/advances/nmaa007

Philippine Statistics Authority (PSA). (2022). *The Philippine Sustainable Development Goals 2022 Pace of Progress.* Retrieved from: https://psa.gov.ph/system/files/2022%20SDG%20Pace%20of%20Progress%20Results%20Infographics_0.pdf

Stewart, C. P., Iannotti, L., Dewey, K. G., Michaelsen, K. F., & Onyango, A. W. (2013). Contextualising complementary feeding in a broader framework for stunting prevention. *Maternal and Child Nutrition*, *9*(S2), 27–45. https://doi.org/10.1111/mcn.12088

Tabunda, A.M., Albert, J.R., Angeles-Agdeppa, I. 2016. Results Of An Impact Evaluation Study On Deped's School-Based Feeding Program. Philippine Institute for Development Studies Discussion Paper No 2016-05. Retrieved from: https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1605.pdf

The World Bank. (2021). *Undernutrition in the Philippines: Scale, Scope, and Opportunities for Nutrition Programming.* Retrieved from: https://openknowledge.worldbank.org/bitstream/handle/10986/35530/9781464817014.pdf

United Nations. (2017). Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. Retrieved from: https://unstats.un.org/sdgs/indicators/indicators-list/

World Health Organization. (2014). *United Nations Children's Fund, and World Food Program. Global Nutrition Targets 2025: Wasting Policy Brief.* Geneva. Retrieved from: https://apps.who.int/iris/bitstream/handle/10665/149023/WHO_NMH_NHD_14.8_eng.pdf?ua=1

World Health Organization. (2017). *Guideline: Assessing and managing children at primary health-care facilities to prevent overweight and obesity in the context of the double burden of Malnutrition.* Updates for the Integrated Management of Childhood Illness (IMCI*).* Retrieved from: https://www.who.int/publications/i/item/9789241550123

Chapter 4

SDG 3. Ensuring Healthy Lives and Well-being in Filipino Adolescents

Chapter 4

SDG 3. Ensuring Healthy Lives and Well-being in Filipino Adolescents

Maria Fiscalina A. Nolasco[12] and Marjury E. Dino[13]

The Sustainable Development Goal 3 aspires to further improve on the significant achievements of the Millennium Development Goals agenda (United Nations, 2015) in reducing early mortality and morbidities that reduce quality of life. Among the targets are: (3.4) By 2030, reduce by one-third premature mortality from non-communicable diseases (NCD) through prevention and treatment, and promote mental health and well-being, (3.7) By 2030, ensure universal access to sexual and reproductive health (SRH) care services, including family planning information and education, and the integration of reproductive health in national strategies and programs, and (3.8) Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable medicines and vaccines for all (United Nations, 2017).

A. Morbidity Profile, Disability, Health Behaviors and Sexual Reproductive Health of Filipino Adolescents

The LCSFC cohort, at ages 10-15, represents the population sector ideal for studying precursors to the conditions of health and well-being in adulthood that are aimed for by SDG3. This chapter reports on LCSFC data profiling the status of young adolescents in terms of their general health and health practices, risk of NCD, disability, SRH, mental health, and health care access. Understanding how adolescents are faring in these areas is critical because inadequately addressed issues during adolescence have repercussions on adult outcomes as well as in attaining other SDGs. For example, while the cohort adolescents are too young to reflect behaviors of the population generally at risk for NCD, the study provides valuable information on adolescent behaviors that represent precedents to NCD risks in adulthood. Modifiable behaviors such as smoking, tobacco use, physical inactivity, unhealthy diet, and drinking alcoholic beverages increase the risk of NCD (WHO, 2022). These can be prevented if mitigating measures are in place prior to reaching the more risk-prone adult years. Gaps in knowledge and practices could serve as bases for redirecting policies, resources, and strategies to achieve the SDG pledge of "no one left behind."

The LCSFC data also provide essential perspectives on the pre-sexual activity behaviors of adolescents today to help explain their SRH risk profiles in adulthood. To maintain good SRH among the young, they need access to accurate information and reproductive healthcare services of their choice that are safe, effective, affordable, and acceptable. The lack of SRH information and care makes adolescents vulnerable to human rights issues related to sexuality, marriage, child-bearing, and other risk-prone SRH events, all of which are likely to interfere with their ability to be on track with their schooling (UNFPA, 2022) and achieve their aspirations in life. As they experience physical and emotional maturation during adolescence, they begin to establish relationships and face decisions that have life-long effects on their

[12] Consultant, USC-Office of Population Studies Foundation, Inc., University of San Carlos-Talamban Campus, Cebu City. E-mail: fiscalina@yahoo.com

[13] Asst. Professor, Department of Anthropology, Sociology and History, University of San Carlos, Cebu City; Email: medino@usc.edu.ph

physical and mental health. The conditions in which people live can determine their health and well-being, thus, efforts that invest in adolescent SRH are worth pursuing. Among others, adolescent SRH information can delay the first pregnancy of young people, reduce maternal mortality among female adolescents in particular, improve the health and welfare of women and their children in general, and contributes to economic development and poverty reduction (UNFPA, 2022). Hence, in this report, areas for early intervention, that could begin in adolescence, are identified. It is hoped that LCSFC findings can provide information for the formulation of policies directed on the youth to help obtain specified targets for SDG3.

A.1 General Health Status

Pre-pandemic morbidity profile. The LCSFC collected morbidity information on household members in all waves, although in Wave 5 only an abbreviated version was administered and thus not reported here. It must be noted that the morbidity module was revised in Waves 3 and 4, and thus frequencies are best evaluated across categories within each wave; and more comparable between Waves 1 and 2, and between Waves 3 and 4. Only morbidity data from Waves 1-4 (2016-Q1 2020; pre-pandemic surveys) are reported here since an abbreviated morbidity module was administered in the Wave 5 (2021; phone survey). Table 4.1 shows the morbidity profile of the cohort for the four waves. Cough/colds, diarrhea, and fever/headache/vomiting (CCDF) are the common illnesses mentioned.

Morbidity patterns from ages 10-13 (pre-pandemic). Morbidity patterns over time were examined on a sample with complete data from Waves 1-4 (n=2,957) to have an idea of the proportion of the adolescents who were 'sickly' or more persistently sick from ages 10-13 (Table 4.2). About 77% were ever sick (in at least one wave) in the past six months. Overall, about half (56%) of this sample reported no illness at all or were sick only in one wave, and thus appeared to be relatively healthy at survey time. About 65% of the adolescents reported CCDF. Those from the Visayas and Mindanao appear to have fewer illness episodes and were less prone to CCDF than their Luzon peers. No significant differences in morbidity patterns were found between boys and girls.

Illness as reason for school absences. Across Waves 1-4, the proportions of adolescents reporting school absences (the past month prior to survey visit) were as follows: 58%, 56%, 53%, and 51% at ages 10, 11, 12, and 13, respectively (Table 4.3). Among those who were reported absent, the majority claimed illness as the reason for the absence (66%, 59%, 55%, and 52% at ages 10, 11, 12, and 13, respectively). Adolescents in rural barangays were more likely to be absent from classes due to illness than those in urban areas at ages 10, 11, and 12. More 12-year-old females reported absences due to illness than males.

Table 4.1. Morbidity Profile by Island Group and Sex across Waves[a]

Morbidity Profile	Wave 1 (age 10)	Wave 2 (age 11)	Wave 3 (age 12)	Wave 4 (age 13)
Ever sick in past 6 months	n=4,951	n=4,734	n=4,649	n=3,069
By island group:				
Luzon	34.3[b]	18.0	50.6	47.5
Visayas	24.4	21.3	49.9	42.3
Mindanao	24.9	19.7	45.9	49.0
By sex:				
Male	31.3[c]	19.6	49.0	48.1
Female	28.2	18.6	49.4	45.7
All	29.9	19.1	49.2	46.9
Number of illnesses reported				
0	70.1	80.9	50.8	53.1
1	24.5	17.2	33.3	29.4
>1	5.4	1.9	15.9	17.5
Mean±SE	0.36±0.02[d]	0.21±0.01	0.70±0.02	0.71±0.03[e]
Types of illness (multiple responses allowed)	n=1,355	n=958	n=2,332	n=1,426
Fever/headache/vomiting	11.6	18.3	58.9	47.4
Cough/colds	49.3	33.6	26.2	37.9
Diarrhea	12.9	17.8	12.0	10.9
Asthma	10.0	9.5	4.6	3.7
Physical injuries	8.0	7.5	4.5	5.8
Dengue	3.1	2.6	1.9	2.5
NCD	0.5	1.4	1.9	0.8
Other illnesses	23.6	19.9	31.1	38.8

a Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

b Significantly different at $p<0.05$ between Luzon and Visayas/Mindanao

c Significantly different at $p<0.05$ between sex

d Significantly higher in Luzon than Visayas/Mindanao at $p<0.05$

e Significantly higher in Luzon and Mindanao than Visayas at $p<0.05$

Table 4.2. Morbidity Pattern among Adolescents with Complete Data from Ages 10-13 (n=2,957)[a]

Morbidity Characteristics	Luzon	Visayas	Mindanao	Males	Females	All
Number of waves reported being sick in past 6 mos.[b]						
None	19.5	23.1	27.0	22.0	24.3	23.1
1	33.0	33.1	32.6	33.4	32.4	32.9
2-4	47.5	43.8	40.4	44.6	43.3	44.0
Mean±SD[b]	1.5±1.1	1.4±1.1	1.3±1.1	1.4±1.1	1.4±1.1	1.4±1.1
Number of waves reported being sick of cough, colds, diarrhea or fever in past 6 mos.[b]						
None	30.8	35.1	40.4	33.8	37.0	35.3
1	36.4	37.3	34.4	37.4	35.0	36.2
2-4	32.8	27.6	25.2	28.8	28.0	28.5
Mean±SD[b]	1.1±1.0	1.0±0.9	0.9±0.9	1.0±0.9	1.0±1.0	1.0±1.0

a Reported as unweighted proportions; stratified by Wave 1 island group, and by sex
b Mean values are significantly different between Luzon and Visayas/Mindanao at p<0.05

Table 4.3. Enrolled Adolescents who Claimed Illness as Reason for School Absences by Island group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10)		Wave 2 (age 11)		Wave 3 (age 12)		Wave 4 (age 13)	
	Reported absences (n=4,854)	Due to Illness (n=2,777)	Reported absences (n=4,638)	Due to Illness (n=2,493)	Reported absences (n=4,485)	Due to Illness (n=2,340)	Reported absences (2,915)	Due to Illness (n=1,479)
By island group:								
Luzon	58.1	65.0	55.3	61.2	51.4	53.1	49.2	52.0
Visayas	57.2	66.8	54.8	56.6	55.0	56.9	54.6	52.2
Mindanao	59.8	67.0	56.5	54.8	56.3	58.3	50.3	52.9
By stratum:								
Rural	55.2***	69.1**	52.7**	62.6***	50.6**	59.7**	49.7	54.3
Urban	61.1	63.4	58.0	55.1	55.9	51.7	50.9	50.9
By sex:								
Male	61.5***	65.5	60.4***	56.5	59.0***	52.0***	55.4***	50.5
Female	54.9	66.4	50.3	61.1	47.5	60.0	45.3	54.4
All	58.4	65.9	55.5	58.5	53.4	55.3	50.5	52.2

a Weighted results presented as percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence.
** Significantly different at p<0.05, *** at p<0.01

COVID-19 experience. The phone surveys conducted in the early pandemic period (Q4 2020; Wave 4a) and in 2021 (Wave 5) collected information on the households' COVID-19 experiences. In 2020, there

were 465 households (15% of those surveyed) with members who experienced COVID-19 symptoms, 118 of whom were the cohort adolescents. There were 39 of these adolescents who were tested for COVID-19 (some were asymptomatic) with two of them testing positive. In the later stage of the pandemic (Wave 5), there were 481 households (13% of surveyed) who reported having members tested for COVID-19 (regardless of symptoms) with 62 (1.7%) testing positive, 11 of whom were the cohort adolescents. There were 493 households (10% of surveyed) with members having COVID-19 symptoms but were not tested, 141 of whom were the adolescents. Chapter 5 provides additional details on their COVID-19 exposure.

In Wave 5, the adolescents were asked about their awareness of COVID-19 (Table 4.4). The overall prevalence of those who knew something about it is high, at 87%, and is particularly true for females (91%) and those in Mindanao (91%). When asked whether they know how to protect themselves from acquiring the virus, more females than males and more adolescents in urban than rural areas said so. There is no significant difference across island groups in this aspect. Given its effects on human health, awareness of COVID-19 is crucial and can contribute to promoting and adopting preventive measures.

Morbidity profile (non-COVID) during the pandemic. The surveys conducted during the pandemic used an abbreviated morbidity module given that these were done by phone. In Wave 4a there were 818 households (26% of households surveyed) with members who experienced morbidities other than COVID-19; of these 162 were the cohort adolescents (6% of the cohort). In Wave 5 there were 1,284 (34% of households surveyed) who had non-covid illnesses, of these 261 were the adolescents (7% of the cohort).

Table 4.4. Awareness of COVID-19 by Island Group, Urban/Rural Stratum, and Sex [a]

Categories	Wave 5 (age 15) n=4,148	
	Knew anything about COVID-19	**Knew how to protect oneself against COVID-19**
By island group:		
Luzon	87.0	99.3
Visayas	80.0	99.1
Mindanao	91.0***	99.7
By stratum:		
Rural	86.6	99.1
Urban	86.3	99.7**
By sex:		
Boy	82.6	99.0
Girl	90.7***	99.8***
All	86.5	99.4

a Weighted results presented as percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence.
** Significantly different at p<0.05, *** at p<0.01

Perceived health. The self-assessed health status data in five survey rounds reveal that adolescents across the island groups generally rated themselves as 'neither very unhealthy nor very healthy' (Table 4.5). Mindanao has the highest 'very healthy' self-assessment at ages 10 through 12 and 15 compared to Luzon and Visayas. At age 13, more adolescents from the Visayas, than those from Mindanao and Luzon,

described their overall health as ‘very healthy.’ On the other hand, more adolescents in Luzon reported being in a 'very unhealthy' condition than those in the Visayas and Mindanao. Males have higher 'very healthy' self-assessments than females at age 10 but at age 13 the results show the opposite. In the 2013 YAFS study (DRDF, 2013), young males than females are more likely to consider their overall health as healthy. Knowledge on perceived health is crucial as this may affect individual actions and decisions affecting health status.

Table 4.5. Perceived Health by Domain, Sex, and Urban/Rural Stratum (in %)[a]

Categories	Wave 1 (age 10) n=4,926			Wave 2 (age 11) n=4,697			Wave 3 (age 12) n=4,578			Wave 4 (age 13) n=3,050			Wave 5 (age 15) n=4,148		
	VU - very unhealthy N - neither VU/VH VH - very healthy			VU - very unhealthy N - neither VU/VH VH - very healthy			VU - very unhealthy N - neither VU/VH VH - very healthy			VU - very unhealthy N - neither VU/VH VH - very healthy			VU - very unhealthy N - neither VU/VH VH - very healthy		
	VU	N	VH	VU	N	VH	VU	N	VH	VU	N	VH	VU	N	VH
By island group: [b]															
Luzon	12.6	75.6	11.7	4.9	85.8	9.3	4.6	88.5	7.0	5.6	87.8	6.6	2.4	90.7	6.9
Visayas	4.8	70.6	24.7	4.1	79.7	16.2	3.2	80.4	16.4	2.9	75.1	22.0	2.1	83.8	14.1
Mindanao	6.0	61.2	32.8	3.1	69.3	27.6	3.7	72.5	23.8	1.8	81.0	17.2	1.3	71.6	27.1
By stratum:															
Rural	9.7	69.8	20.5	4.1	81.1	14.8	4.7	82.8	12.5	6.1	82.2	11.7	1.9	84.1	13.9
Urban	8.9	71.7	19.4	4.4	79.1	16.6	3.5	82.5	14.0	2.8	84.8	12.4	2.2	84.4	13.4
By sex: [c]															
Male	10.6	68.8	20.6	4.3	79.2	16.5	4.8	83.3	11.8	5.6	83.4	11.0	2.3	84.6	13.1
Female	7.9	72.9	19.1	4.2	80.9	14.8	3.2	81.9	14.9	2.5	84.1	13.3	1.7	83.9	14.3
All	9.3	70.8	19.9	4.3	80.0	15.7	4.1	82.6	13.3	4.1	83.7	12.1	2.1	84.3	13.7

a Weighted results presented as percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence

b Significantly different within domains at $p<0.01$ across five waves

c Significantly different at $p<0.05$ between sex in Waves 1 and 4

A.2 Dental Health

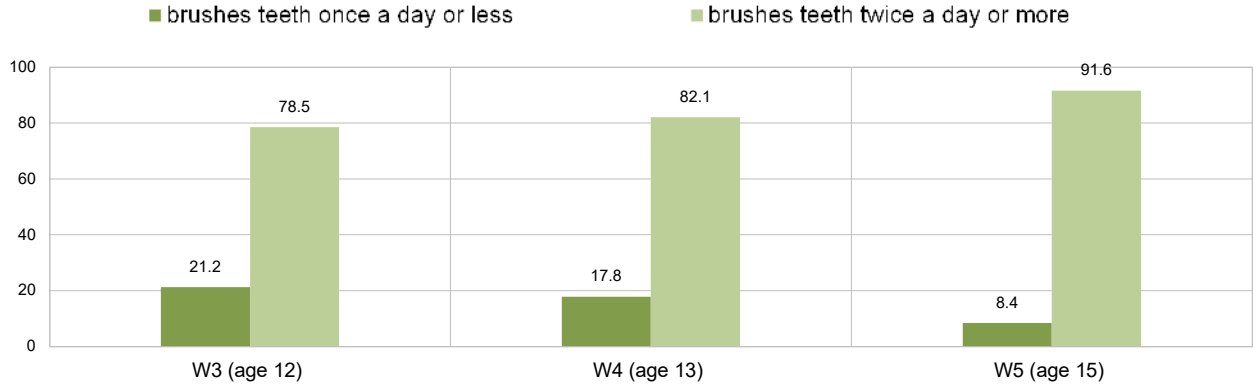
In Waves 3-5, the LCSFC collected data on the adolescents' dental health problems as reported by the mothers/caregivers and on the frequency of brushing teeth as reported by the adolescents' themselves.

.

Brushing teeth. The mean age when the adolescents reported to have started brushing their teeth was 3.3 years. Higher proportions of those in Luzon started brushing at age 3 or younger compared to those in the Visayas and Mindanao (68% in Luzon vs 49% and 50% in Visayas and Mindanao, respectively). Brushing teeth on typical days is significantly different across island groups; more 12- and 15-year-olds in Luzon than in the Visayas and more in the Visayas than in Mindanao brush their teeth more than once a day (Table 4.6). Those in the rural barangays brush their teeth more often at age 12 than those in urban areas. Across the three waves, female adolescents brush their teeth more often than boys. The topic is an essential aspect of the LSCFC because brushing teeth prevents dental problems such as tooth decay/cavities, gum problems, and diseases that impact an individual's oral health. It contributes to maintaining good health and well-being.

To establish the true trend in brushing teeth over time, data on 2,617 adolescents with complete data from Waves 3-5 were examined. Figure 4.1 shows that the proportion of those brushing their teeth twice a day or more significantly increased as the adolescents got older.

Figure 4.1. Trend in Brushing Teeth, Ages 12-15 (sample with complete data from Waves 3-5; n=2,617)*



*Presented as unweighted proportions at each wave. Category on not brushing teeth was omitted because of low values.

Table 4.6. Brushing Teeth by Island Group, Urban/Rural Stratum, and Sex, Waves 3-5[a]

Categories	Wave 3 (age 12) n=4,534			Wave 4 (age 13) n=3,079			Wave 5 (age 15) n=4,148		
	Does not brush teeth	Once a day or not daily	Twice a day or more	Does not brush teeth	Once a day or not daily	Twice a day or more	Does not brush teeth	Once a day or not daily	Twice a day or more
By island group:									
Luzon	0.1	15.5	84.5***	0.0	16.5	83.5	0.0	5.4	94.6**
Visayas	0.4	20.6	79.1	0.1	16.0	83.9	0.0	7.8	92.2
Mindanao	0.7	21.1	78.3	0.6	21.5	77.9	0.0	9.1	90.9
By stratum:									
Rural	0.4	15.0	84.7***	0.3	16.6	83.0	0.0	6.1	93.9
Urban	0.2	20.6	79.2	0.1	18.4	81.6	0.0	7.5	92.6
By sex:									
Male	0.4	25.1	74.5	0.2	23.9	76.0	0.0	9.5	90.5
Female	0.1	10.2	89.6***	0.2	10.9	88.9***	0.0	3.8	96.2***
All	0.3	18.0	81.7	0.2	17.7	81.2	0.0	6.8	93.2

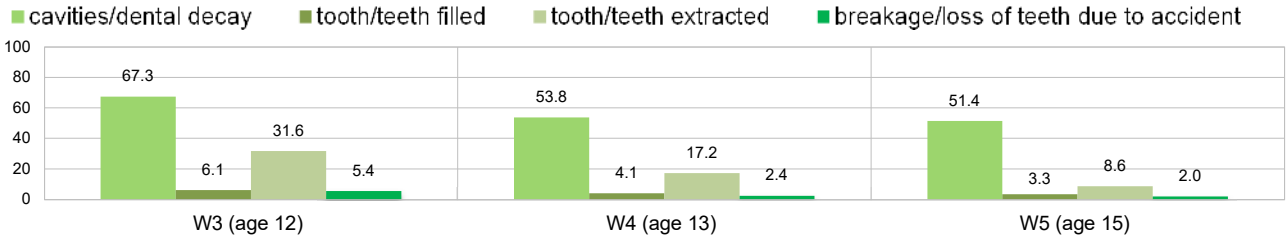
a Results presented as weighted percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence

** Significantly different at p<0.05, *** at p<0.01

Dental problems. Table 4.7 shows that the proportion of adolescents who reported dental problems is highest in Wave 3, at age 12. Having dental cavities or decay was the most common problem cited. Urban adolescents appeared to report more problems than their rural counterparts. A higher proportion of male adolescents reported tooth breakage or loss at age 12, and a higher proportion of females than males reported dental cavities/decay at age 13. At ages 12 and 13, lower proportions of adolescents from the Visayas and Mindanao underwent teeth fillings compared to those in Luzon. A higher proportion of adolescents in Luzon had their teeth extracted at age 12 compared to those from the other island groups. Tooth decay/cavities in children and adolescents, if left untreated, have serious health consequences such as poor nutrition, gum diseases, and the possibility of experiencing heart problems (CDC, 2022). Hence, good oral hygiene must start as early as childhood.

The trend in the occurrence of dental health problems from ages 12-15 (with complete data from Waves 3-5) is shown in Figure 4.2. The results show that the proportion of adolescents having cavities/dental decay appears to be decreasing over time.

Figure 4.2. With Dental Problems, Ages 12-15 (sample with complete data from Waves 3-5; n=2,617)*



*Presented as unweighted proportions at each wave.

Table 4.7. Adolescents with Dental problems by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 3 (age 12) n=4,660				Wave 4 (age 13) n=3,079				Wave 5 (age 15) n=4,195			
	cavities/ dental decay	tooth or teeth filled	tooth or teeth extracted	breakage or loss of teeth due to accident	cavities/ dental decay	tooth or teeth filled	tooth or teeth extracted	breakage or loss of teeth due to accident	cavities/ dental decay	tooth or teeth filled	tooth or teeth extracted	breakage or loss of teeth due to accident
By domain:												
Luzon	71.2	8.7***	38.2***	11.2***	52.8	7.9***	17.2	4.8***	48.1	2.9	7.5	4.9***
Visayas	62.5	5.6	30.9	3.7	52.5	4.0	19.9	1.6	48.9	3.2	9.1	0.7
Mindanao	72.1***	3.2	31.9	3.4	58.9	2.2	13.6	1.8	57.1***	1.5	9.6	0.2
By stratum:												
Rural	66.7	4.4	33.6	7.6	52.4	3.9	15.0	1.9	48.8	2.3	8.2	2.8
Urban	72.4***	8.6***	36.4	7.7	55.6	6.9**	17.9	4.5**	52.3	2.9	8.6	2.9
By sex:												
Male	69.6	6.7	36.5	9.1**	50.8	4.9	15.9	3.3	49.1	2.6	8.0	3.4
Female	69.8	6.5	33.6	6.1	58.1**	6.7	17.8	3.7	52.4	2.7	8.9	2.3
All	69.7	6.6	35.1	7.6	54.3	5.8	16.8	3.5	50.7	2.6	8.4	2.9

a Weighted results presented as percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence

** significantly different at p<0.05, *** at p<0.01

A.3 Non-communicable Disease (NCD) Risk Profile

Between Waves 1-4, there were 62 adolescents who were reported as having illnesses classified under NCD (which covers all chronic diseases including diabetes, heart disease, cancer, hypertension and kidney disorders). Of the 62, eight were reported having NCD more than once across the four waves and these are likely to be true cases. The potentially true NCD cases may be an undercount given that 11 of the incident or new cases in Wave 3 were not interviewed in Wave 4 because of truncated field operations due to the pandemic. There were seven incident NCD cases in Wave 4, and again these numbers would have been higher had data collection not been stopped. The rest were either misclassified or not reported in subsequent waves (for instance 24 cases were reported as NCD in Wave 3 but not in Wave 4). The LCSFC will continue tracking these NCD cases over time. These results provide an essential perspective on the early incidence of NCD among young people given its limited literature to date. Akseer et al. (2020) pointed out that behavioral and lifestyle risk factors contribute to the NCD burden among adolescents. Further, they reported that the incidence of NCD among 10-19-year-olds is primarily due to mental illnesses, with conduct disorder representing 8% of the total NCD burden. In the LCSFC we classified mental illness separately from NCD and this is reported in Chapter 6.

Overnutrition

High body mass index (BMI; weight/height^2) is a known NCD risk factor, even in the Philippines (WHO, 2019). Table 4.8 shows the distribution of adolescents by BMI-for-age category stratified by island group, sex and urban/rural strata from Waves 1-4 (no anthropometric measurements were obtained in the Wave 5 phone survey). Results reveal that the double burden of malnutrition is evident in this cohort as the prevalence of under- and overnutrition are of equal concern, as reported in the National Nutrition Surveys for the 10-19 age group (DOST-FNRI, 2016). It should be noted that while there were more categorized as wasted (severely thin or thin) than overweight or obese from ages 10-12, at age 13 both rates were at par with a gradual increase in the proportion of those who are overweight.

Luzon has higher proportions of overweight/obese adolescents than Visayas or Mindanao. The data also show rural/urban differences; at ages 10 through 13, urban adolescents are more likely to be overweight or obese than those in rural areas. When stratified by sex, male adolescents are more likely to be overweight at ages 10 and 11 than females, but the reverse is noticeable among 12-year-olds. At age 13, an equal proportion of adolescents of both sexes are overweight. Consistently higher proportions were obese among males than females across the four waves.

Table 4. 8. BMI Category by Island Group, Rural/Urban Stratum and by Sex, Waves 1-4[a]

BMI Category	Wave 1 (age 10) *** n=4,891 L = Luzon V = Visayas M = Mindanao				Wave 2 (age 11) *** n=4,642 L = Luzon V = Visayas M = Mindanao				Wave 3 (age 12) *** n=4,520 L = Luzon V = Visayas M = Mindanao				Wave 4 (age 13) ** n=2,968 L = Luzon V = Visayas M = Mindanao			
	L	**V**	**M**	**All**	**L**	**V**	**M**	**All**	**L**	**V**	**M**	**All**	**L**	**V**	**M**	**All**
Sev. thin	3.7	3.9	4.1	3.9	3.7	3.2	3.0	3.4	4.6	3.3	2.8	3.9	2.9	3.5	2.6	2.9
Thin	10.7	11.1	12.9	11.4	12.6	10.7	11.8	12.0	11.0	11.3	13.2	11.6	7.0	8.2	10.4	8.1
Normal	71.1	77.8	77.0	74.0	70.6	76.5	77.8	73.8	71.7	76.8	76.9	74.1	76.2	78.7	79.3	77.5
Overwt	8.4	4.1	3.2	6.2	9.1	5.6	4.9	7.2	8.8	5.8	4.3	7.0	10.3	5.9	5.0	8.1
Obese	6.1	3.1	2.8	4.6	4.1	4.0	2.5	3.7	3.9	2.8	2.9	3.4	3.7	3.7	2.7	3.4
By rural-urban stratum:																
	Rural	Urban		Total	Rural	Urban		Total	Rural	Urban		Total	Rural	Urban		Total
Sev. thin	3.7	4.0		3.9	3.3	3.4		3.4	4.4	3.4		3.9	4.3	2.0		2.9
Thin	12.9	10.1		11.4	13.8	10.4		12.0	12.5	10.9		11.6	9.7	7.1		8.1
Normal	76.2	72.1		74.0	75.0	72.7		73.8	75.9	72.4		74.1	78.4	76.8		77.5
Overwt	4.0	8.1		6.2	5.3	8.9		7.2	4.3	9.4		7.0	4.9	10.2		8.1
Obese	3.2	5.8		4.6	2.6	4.7		3.7	2.8	4.0		3.4	2.7	3.9		3.4
By sex:																
	Male	Female		Total	Male	Female		Total	Male	Female		Total	Male	Female		Total
Sev. thin	4.5	3.2		3.9	4.1	2.6		3.4	4.8	2.8		3.9	4.2	1.5		2.9
Thin	11.4	11.4		11.4	13.2	10.7		12.0	14.3	8.7		11.6	9.8	6.3		8.1
Normal	71.2	77.0		74.0	70.8	77.0		73.8	70.3	78.2		74.1	73.6	81.7		77.5
Overwt	6.6	5.7		6.2	7.3	7.1		7.2	6.6	7.4		7.0	8.1	8.1		8.1
Obese	6.3	2.7		4.6	4.6	2.7		3.7	3.9	2.9		3.4	4.3	2.5		3.4

[a] Results presented as weighted percentages. BMI categories were based on the 2007 WHO Reference Standards (https://www.who.int/growthref/en/): Severely thin: <-3 standard deviation (SD), Thin: -3SD to <-2SD, Normal: -2SD to 1SD, Overweight: >+1SD to +2SD, Obese: >+2SD.

Significantly different at p<0.05, * at p<0.01. Test for significant differences in proportions was based on the Pearson chi-square test for independence

A.4 Disability

This section discusses the adolescents' disability profile as reported by their mothers/caregivers and from the adolescents' responses to the modified version of the Washington Group Short Set of Questions. The latter was a module administered to the adolescents starting at age 12 which assesses their functional limitations on seeing, hearing, walking, remembering or concentrating, and engaging in self-care activities.

Disability profile. Table 4.9 summarizes the types of disability by reported age of onset across waves. It shows that most of the reported disabilities occurred before Wave 1 (between ages 0 to 9), with 2.8% or 136 adolescents having some form of disability. Between Waves 1 and 2 (ages 9 to 10), about 0.6% or 30 adolescents were reported to have any form of disability, with more females than males. The same sex disparity is observed at older ages. At each wave the mother/caregiver is asked about household members with disability (including the cohort adolescents) at the time of survey, thus not distinguishing incident vs pre-existing disabilities. Most of the disabilities reported after baseline were visual and hearing impairments and are more likely to be incident cases. The most common assistive device reported is eyeglasses. Other assistive devices mentioned include a wheelchair, brace, and hearing aid.

Longitudinal disability profile. We examined the disability trend over time among 1,480 adolescents with complete data on disability for all four waves. In this subsample, 47 adolescents had a disability occurring before Wave 1 (between ages 0-9), while another five had a disability occurring between Waves 1 and 2 (between ages 9-10). Twelve adolescents had a disability between Waves 2 and 3 and Waves 3 and 4. Most of the disabilities after baseline were visual and hearing impairments.

Functional limitations. Table 4.10 presents the results of the Washington Group Short Set of Questions to determine the conditions that tend to affect the adolescent's performance or ability to perform certain day-to-day activities. It indicates the challenges faced by adolescents with regard to five functions: difficulty in seeing (with or without glasses), hearing (with or without hearing aids), walking or climbing steps, remembering or concentrating, and engaging in self-care activities. A few adolescents wear eyeglasses, with decreasing proportions over time, from 3% at age 12 to 2.5% at age 13, with more females than males wearing eyeglasses in the two survey rounds. Among those not wearing eyeglasses, the proportion of females having some difficulty in seeing is higher than among males. Similarly, difficulty in seeing even with eyeglasses is significantly higher among females than males at age 13. Based on the reported levels of difficulty, more than 60% of the adolescents experienced no difficulty in all functions. The proportion of adolescents who can perform at least one function with limitations has slightly increased, from 32.9% in Wave 3 to 33.7% in Wave 4. However, the proportion of those who can perform at least one function with a lot of difficulty or can't do at all decreased from 2.1% to 1.4% in Waves 3 and 4, respectively.

Table 4.9. Adolescents with Disability and Types of Disability by Age of Onset and Sex [a]

Types of Disability	at baseline before W1 (ages 0-9) n=4,951				between W1 – W2 (ages 9-10) n=4,735				between W2 – W3 (ages 11-12) n=4,663				between W3 – W4 (ages 12-13) n=3,089			
	Boy	**Girl**	**All**	**%**	**Boy**	**Girl**	**All**	**%**	**Boy**	**Girl**	**All**	**%**	**Boy**	**Girl**	**All**	**%**
With disability	70	66	136	2.8	9	21	30	0.6 **	19	33	52	1.1 **	8	36	44	1.4 ***
Types of disability			n=136				n=30				n=52				n=44	
Visual	19	25	44	32.4	3	12	15	50.0	10	27	37	71.2	5	28	33	75.0
Hearing	12	8	20	14.7	4	7	11	36.7	6	3	9	17.3	2	6	8	18.2
Speech	13	7	20	14.7	1	0	1	3.3	-	-	-	-	0	1	1	2.3
Physical/orthopedic	8	7	15	11.0	0	1	1	3.3	1	0	1	1.9	1	0	1	2.3
Intellectual	7	7	14	10.3	1	0	1	3.3	-	-	-	-	-	-	-	-
Psychiatric	-	-	-	-	-	-	-	-	0	1	1	1.9	-	-	-	-
Multiple disabilities	11	12	23	17.0	0	1	1	3.3	2	2	4	7.7	0	1	1	2.3

[a] Results presented as percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence
Significantly different at p<0.05, * at p<0.01

Table 4.10. Washington Group Short Questionnaire Results by Sex [a,b]

Washington Group Short Questions	Wave 3 (age 12)			Wave 4 (age 13)		
	Males (n=2,297)	Females (n=2,277)	All (n=4,574)	Males (n=1,549)	Females (n=1,500)	All (n=4,564)
Wears glasses	1.7	4.3	3.0 ***	1.2	3.9	2.5 ***
If not wearing glasses: with difficulty seeing?			***			***
No difficulty	96.2	92.4	94.4	93.7	89.6	91.7
With some difficulty	3.5	7.2	5.3	6.1	10.3	8.1
A lot of difficulty	0.2	0.4	0.3	0.2	0.1	0.2
Cannot see at all	0.0	0.0	0.0	0.0	0.0	0.0
If not wearing hearing aids: with difficulty hearing?						
No difficulty	97.0	96.8	96.9	97.1	95.0	96.1
With some difficulty	2.7	3.0	2.8	2.9	4.5	3.7
A lot of difficulty	0.3	0.2	0.3	0.0	0.1	0.1
Cannot hear at all	0.0	0.0	0.0	0.0	0.3	0.2
Assessing Level of Disability						
With difficulty seeing even with glasses?						**
No difficulty	69.8	64.3	65.9	60.8	41.0	45.9
With some difficulty	30.3	31.7	31.3	33.6	58.7	52.5
A lot of difficulty	0.0	4.0	2.9	5.5	0.3	1.6
Cannot see at all	0.0	0.0	0.0	0.0	0.0	0.0
With difficulty hearing even w/ hearing aids?						
No difficulty	100.0	0.0	100.0	68.6	68.3	68.4
With some difficulty	0.0	0.0	0.0	31.4	31.7	31.6
A lot of difficulty	0.0	0.0	0.0	0.0	0.0	0.0
Cannot hear at all	0.0	0.0	0.0	0.0	0.0	0.0
With difficulty walking or climbing steps?						
No difficulty	97.2	97.1	97.1	98.4	98.3	98.4
With some difficulty	2.6	2.6	2.6	1.5	1.6	1.6
A lot of difficulty	0.2	0.3	0.2	0.1	0.1	0.1
Cannot walk or climb at all	0.0	0.1	0.1	0.0	0.0	0.0
With difficulty remembering or concentrating?						
No difficulty	72.0	71.9	72.0	73.7	71.4	72.6
With some difficulty	26.3	26.9	26.6	25.1	27.7	26.4
A lot of difficulty	1.7	1.1	1.4	1.2	0.8	1.0
Can't remember/concentrate at all	0.0	0.1	0.1	0.0	0.0	0.0
Have difficulty in self-care activities?						
No difficulty	98.6	99.1	98.9	99.3	99.8	99.5
With some difficulty	1.0	0.7	0.8	0.7	0.2	0.4
A lot of difficulty	0.3	0.2	0.3	0.1	0.0	0.0
Cannot engage in self-care at all	0.1	0.0	0.1	0.0	0.0	0.0
Overall Level of Difficulty (all functions)						
No difficulty in all	66.4	63.0	64.8	67.3	62.4	64.9
With at least one done with some difficulty	31.0	34.9	32.9	31.1	36.5	33.7
With at least one done with a lot of difficulty/can't do at all	2.6	2.1	2.1	1.6	1.2	1.4

[a] Results presented as percentages. Test for significant differences in weighted proportions was based on the Pearson chi-square test for independence

[b] Washington Group Short Questionnaire (https://www.washingtongroup-disability.com/question-sets/)

Significantly different at p<0.05, * at p<0.01

A.5 Health Behaviors

A.5.1 Handwashing

Washing hands with soap. The mean frequency of washing hands with soap on a typical day increased from three times in Wave 1 to almost four times a day in Wave 5, during the pandemic (Table 4.11). At ages 10 and 11, adolescents in the Visayas, appeared to wash their hands with soap more often than those in Luzon and Mindanao. By age 15, those from Mindanao have caught up with their Visayas peers. When stratified by rural/urban stratum, the mean frequency of handwashing is higher among index children in the rural than urban areas at ages 10 and 12. Female adolescents wash their hands with soap more often than the males.

Washing hands with soap is a positive health behavior that helps prevent infectious diseases. Largo et al. (2021) pointed out that hand washing with soap before eating meals is a common practice among the LCSFC sample. A cause for concern, however, is that they are less likely to wash their hands after using the toilet or when their hands are dirty, implying an urgent need for policy action that emphasizes behavior modification campaigns targeting young people.

Table 4.11. Mean Frequency of Daily Handwashing with Soap by Island Group, Urban/Rural Stratum, and Sex [a]

Categories	Wave 1 (age 10) n=4,925	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Island Group					
Luzon	2.9 ***	2.8 ***	2.7 ***	2.9 ***	2.9 ***
Visayas	4.1	4.7	3.7	3.3	4.1
Mindanao	2.8	2.9	3.6	3.1	4.3
Stratum					
Rural	3.2 **	3.5	3.2 **	3.1	3.8
Urban	3.0	3.0	3.0	2.9	3.8
Sex					
Male	3.0	3.1	2.9	2.9	3.6
Female	3.2	3.4 ***	3.3 ***	3.2 ***	4.1 ***
Overall Mean	3.1	3.2	3.1	3.0	3.8

a Results presented as weighted means. Test for significant differences in means was based on the adjusted Wald test

** Significantly different at p<0.05, *** at p<0.01

A.5.2 Diet Diversity and Nutrient Supplementation

Diet diversity. At each survey round (except during the phone surveys), the LCSFC adolescents are asked about what they ate and drank the previous day upon, from the time they woke up until they went to sleep at night. This Diet Diversity module aims to assess the quality of their diet. The adolescents' food intake was categorized into to nine food groups. Those consuming less than four groups were considered as having low diet diversity scores (DDS) or have an inadequate diet. This chapter reports on DDS data from Waves 1 through 3 (Table 4.12). About half of the adolescents had low DDS across the three waves. Those in Mindanao appeared to have poorer diet quality than those in Luzon and the Visayas, across the three waves. At age 12, males were more likely to have an inadequate diet compared to the females.

Table 4.12. Adolescents with Low Diet Diversity Scores by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,950	Wave 2 (age 11) n=4,704	Wave 3 (age 12) n=4,639
Island Group			
Luzon	55.9 **	56.2 ***	53.9 **
Visayas	50.5	49.4	54.7
Mindanao	57.8	59.1	59.8
Stratum			
Rural	53.2	53.4	55.6
Urban	57.2	57.6	55.8
Sex			
Male	54.1	57.3	57.7 **
Female	56.7	53.8	53.5
All	55.4	55.6	55.7

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Vitamin/Food Supplements. In Waves 3 to 5 the mothers/caregivers were asked whether the cohort adolescents were taking vitamins/food supplements regularly (daily or at least once a week). Table 4.13 shows that the proportion of adolescents taking supplements increased to about 35% in Wave 5 from about 27% in Wave 1. At age 15 (Wave 5) there were more supplement takers in Luzon, followed by those in the Visayas then in Mindanao. Higher levels are reported for 12- and 15-year-olds in urban barangays than in rural areas. At age 12, more males than females took vitamins or food supplements.

Table 4.13. Adolescents Taking Vitamin/food supplements by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 3 (age 12) n=4,662	Wave 4 (age 13) n=3,076	Wave 5 (age 15) n=4,192
Island Group			
Luzon	28.2	22.2	37.4 **
Visayas	28.8	24.9	33.0
Mindanao	22.5	22.6	30.6
Stratum			
Rural	24.9	20.0	31.6
Urban	28.5 **	24.6	37.5 **
Sex			
Male	29.3 ***	23.6	34.4
Female	24.1	21.9	35.1
All	26.8	22.8	34.7

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

A.5.3 Morbidity Risk Exposures

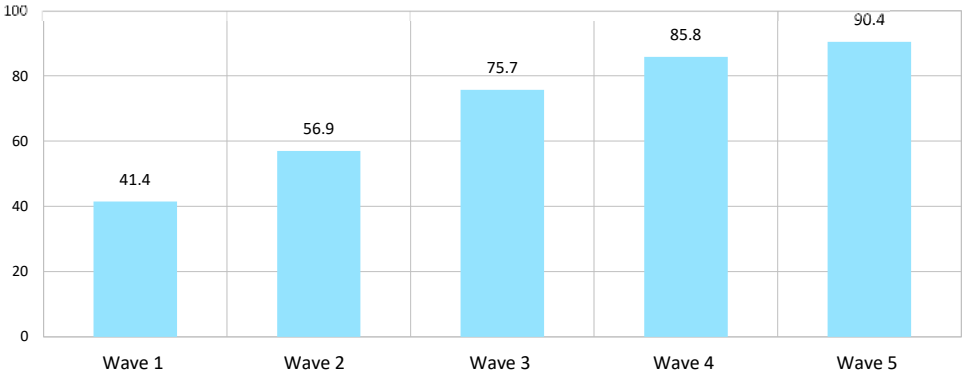
This section discusses practices and risk behaviors that potentially increase adolescents' vulnerabilities to becoming sick and unhealthy, thus, hindering opportunities for education and gainful work in their adult years. Morbidity risk behaviors such as unhealthy social media/internet practices, cigarette smoking, and consumption of alcoholic beverages are discussed in this section.

Social Media and Internet Exposure

Computer/social media literacy has become an essential part of adolescent social context in recent years. Hence, understanding the extent of their exposure to this media is crucial. Although exposure to social media can help adolescents in their communicating and social networking skills, it also raises concerns regarding their vulnerabilities to unhealthy conditions. Across the five waves, the levels of internet usage among the adolescents increased from 41% in Wave 1 at age 10 to an overwhelming 90% in Wave 5 at age 15 (Figure 4.3). These findings imply that as they grow older, using the internet is vital to adolescents. The high proportion of internet users in Wave 5 is also presumed to be associated with the shift to online classes and the stay-at-home order imposed on young people during the COVID-19 pandemic. Differences in internet usage by island group, rural/urban stratum, and sex are evident in Table 4.14. Those in Luzon consistently have higher reported levels than those in the Visayas and Mindanao at ages 10 through 15, and a consistently higher proportion among those in urban than rural barangays. At age 10, more males

than females were using the Internet. However, the data in the succeeding rounds, at ages 12 through 15, show the opposite.

Figure 4.3. Adolescents Using the Internet, Waves 1-5*



*Presented as weighted proportions at each wave.

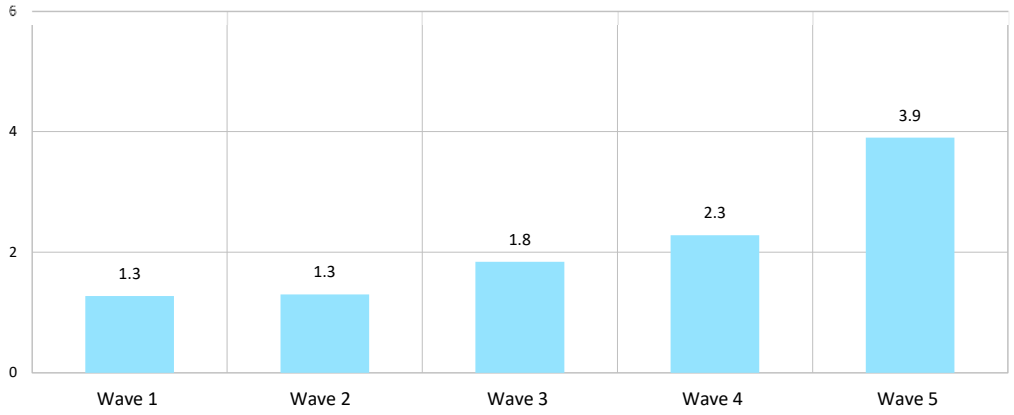
Table 4.14. Adolescents Using the Internet by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,927	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Island Group					
Luzon	47.9 ***	64.8 ***	81.8 ***	91.7 ***	94.3 ***
Visayas	31.4	49.3	69.7	78.2	88.4
Mindanao	35.9	47.8	67.6	78.3	84.0
Stratum					
Rural	20.2	35.8	58.7	73.1	85.6
Urban	59.8 ***	76.0 ***	90.5 ***	94.0 ***	94.6 ***
Sex					
Male	44.2 **	56.3	73.6	83.7	87.5
Female	38.4	57.6	77.9 **	88.2 **	93.6 ***

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence
Significantly different at p<0.05, * at p<0.01

Average time spent online. Figure 4.4 shows an increase in time spent online on a typical day from 1.3 hours at age 10 to 3.9 hours at age 15 among internet users. In Table 4.15, we see that 11-year-olds in Luzon (1.5 or 90 minutes) spend more time online than the Visayas (1.2 or 72 minutes) and a higher level for the Visayas than Mindanao (1 hour or 60 minutes). Differences by rural/urban stratum are evident at ages 12 through 15, with urban adolescents spending more time online than in rural settings. Only at age 10 is sex significantly associated with time spent online, with more males staying online longer (1.4 or 84 minutes) than females (1.1 or 66 minutes).

Figure 4.4. Average Time (in Hours) Spent Online on a Typical Day, Waves 1-5*



*Presented as weighted mean hours at each wave

Table 4.15. Average Time (in Hours) Spent Online on a Typical Day by Island Group, Urban/Rural Stratum, and Sex [a]

Categories	Wave 1 (age 10) n=4,927	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Island group					
Luzon	1.3	1.5 ***	2.0 ***	2.5	4.5
Visayas	1.1	1.2	1.7	1.9	3.3
Mindanao	1.2	1.0	1.6	1.9	3.1
Stratum					
Rural	1.2	1.3	1.7	2.0	3.3
Urban	1.3	1.3	1.9 ***	2.4 **	4.4 ***
Sex					
Male	1.4 ***	1.4	1.9	2.3	3.8
Female	1.1	1.2	1.8	2.3	4.0

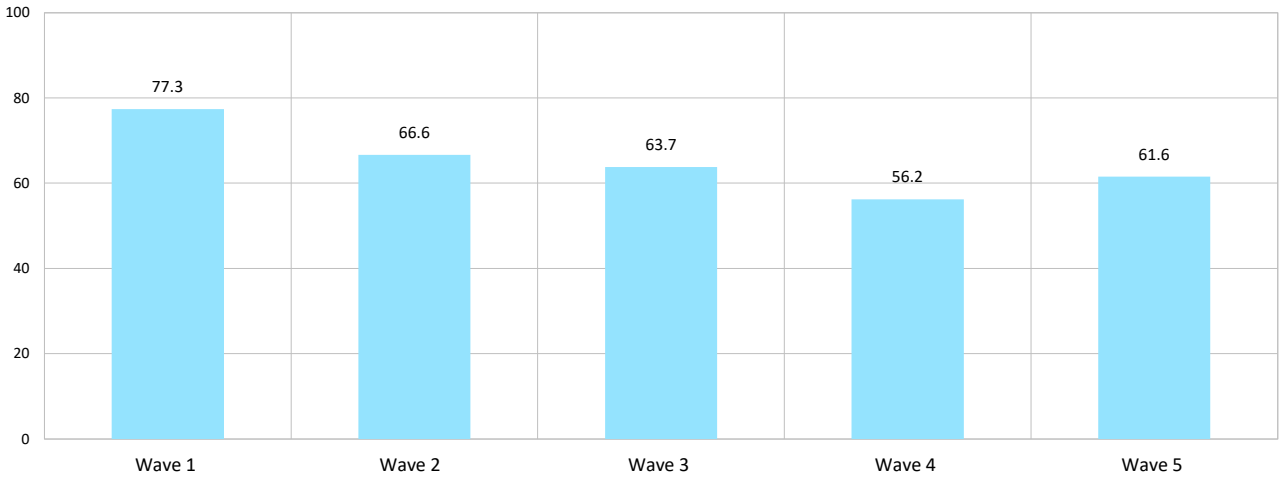
[a] Results presented as weighted means. Test for significant differences in means was based on the adjusted Wald test

Significantly different at p<0.05, * at p<0.01

Playing online games. The proportion of adolescents playing games online slightly decreased, from 77% at age 10 to about 62% at age 15 (Figure 4.5), presumably because online games are no longer as appealing to them as when they were younger. It is possible too that as they grow older, online games no longer create a common ground for them to make friends or establish relationships compared to other activities such as chatting online. Across island groups, there is a higher proportion among 15-year-olds in Luzon who play games online than those in Mindanao and the Visayas (Table 4.16). More males than females, and more urban than rural adolescents played games online from ages 10 through 15. The average time

spent playing games online on a typical day increased from 1.2 hours at age 10 to 2.1 hours at age 15 (Figure 4.6).

Figure 4.5. Adolescents Playing Online Games, Waves 1-5*



*Presented as weighted proportions at each wave

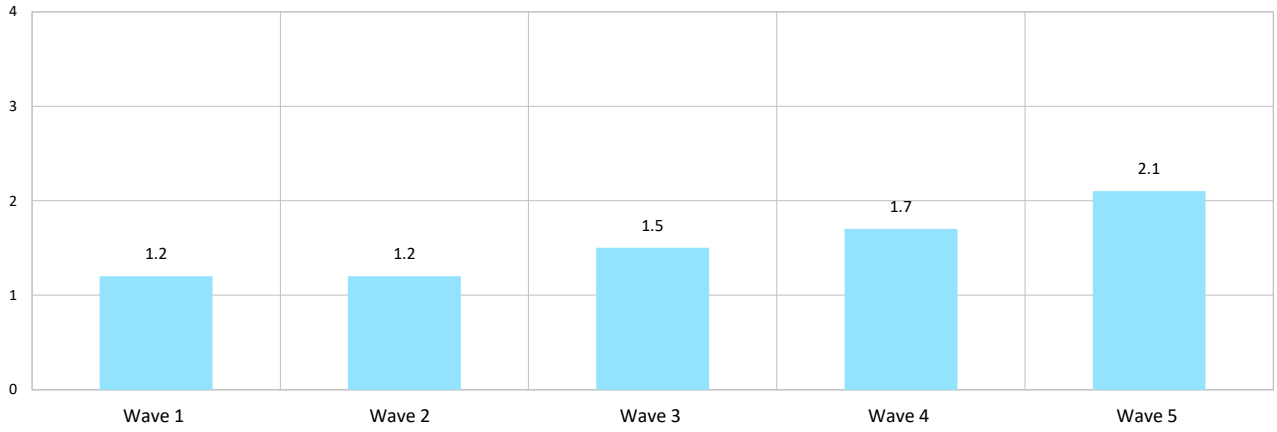
Table 4.16. Adolescents Playing Online Games by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,927	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Island group					
Luzon	76.7	65.0	64.4	57.1	65.5 ***
Visayas	72.7	75.6 ***	62.7	56.0	56.2
Mindanao	82.1 **	63.9	63.0	54.1	56.6
Stratum					
Rural	65.3	53.8	51.6	42.5	51.9
Urban	80.9 ***	72.1 ***	70.7 ***	63.1 ***	69.0 ***
Sex					
Male	89.1 ***	85.8 ***	84.0 ***	78.3 ***	80.1 ***
Female	62.5	46.6	43.0	33.5	42.1

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

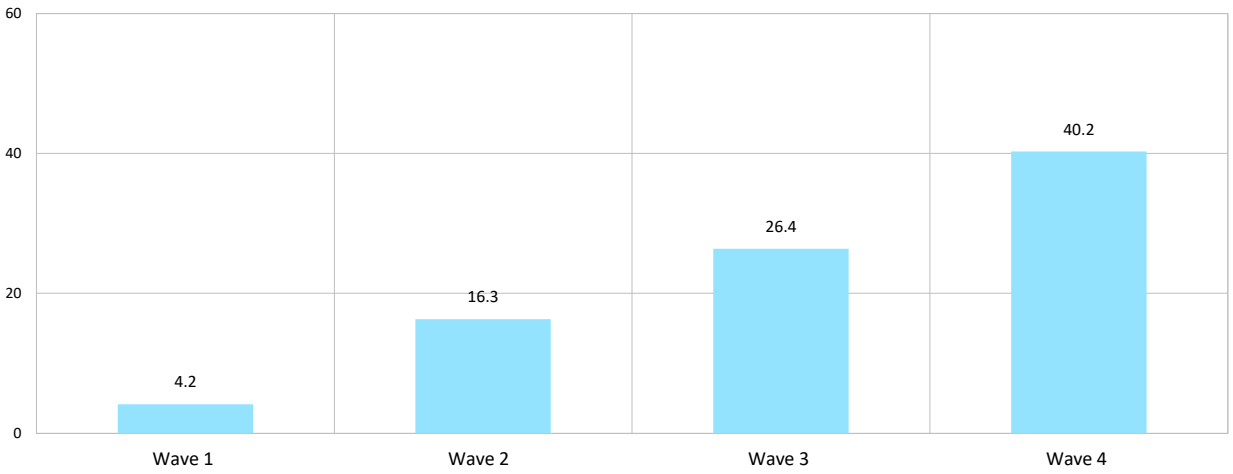
Figure 4.6. Average Time (in Hours) Spent Playing Online Games on a Typical Day, Waves 1-5*



*Presented as weighted mean hours at each wave

Chatting with strangers. Figure 4.7 and Table 4.17 present data on chatting online with strangers, as reported by the adolescents in four survey rounds. From a low of 4% at age 10, the proportion increased dramatically to 40% at age 13, indicating that chatting with strangers becomes an appealing activity among young people as they grow older. This behavior is not significantly different across island groups. At ages 10 through 12, more urban than rural adolescents chat with strangers online. At ages 11 and 12, significantly more males than females do so.

Figure 4.7. Adolescents Chatting with Strangers, Waves 1-4*



*Presented as weighted proportions at each wave

Table 4. 17. Adolescents Chatting with Strangers Online by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,932	Wave 2 (age 11) n=4,692	Wave 3 (age 12) n=4,609	Wave 4 (age 13) n=3,043
Island Group				
Luzon	4.61	16.8	25.4	40.6
Visayas	4.95	16.0	25.1	34.8
Mindanao	2.65	15.6	29.4	43.5
Stratum				
Rural	2.9	11.3	21.6	38.2
Urban	5.2 ***	20.8 ***	30.5 ***	41.6
Sex				
Male	4.5	20.8 ***	29.8 ***	40.4
Female	3.8	11.5	22.7	40.1

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

***Significantly different at p<0.01

Data on internet/social media behaviors reported in this section indicate that adolescents are prone to experiencing risky situations online, particularly among male adolescents and those living in Luzon and urban areas. This calls for a need to strengthen policies and interventions that protect their rights. The potential for cyberbullying, meeting online predators who exploit children and adolescents for sexual purposes, acquiring incorrect information about adolescent concerns, and invasion of privacy or personal information is most likely to occur if children and adolescents are not given proper guidance and protection. These potentially risky situations present a health risk that can worsen over time.

Smoking Cigarettes and Drinking Alcoholic Beverages

Smoking. Smoking is among the risky behaviors highlighted in this section because of its immediate and long-term impacts on health. Only a few adolescents reported to be currently smoking cigarettes across Waves 1-4, with higher proportions among males (Table 4.18). The rates appeared to have decreased from 4% at age 10 to 2% at age 13. Although this is a positive development, smoking in any form is a health threat and should not be encouraged. At age 10, a higher proportion among adolescents in the Visayas reported to be currently smoking.

Have close friends who smoke. The proportions of adolescents who reported having friends who smoke increased from about 17% at age 10 to 25% at age 13 (Table 4.19). Across the four waves, more males than females reported to have friends who smoke. In a separate analysis, those reporting currently smoking were more likely to have more close friends who also smoked.

Table 4.18. Adolescents Reported to be Currently Smoking by Island Group and Urban/Rural Stratum[a]

Categories	Wave 1 (age 10) n=4,932	Wave 2 (age 11) n=4,692	Wave 3 (age 12) n=4,609	Wave 4 (age 13) n=3,043
Island Group				
Luzon	3.5 **	2.0	1.4	2.0
Visayas	7.6	2.1	2.3	1.6
Mindanao	3.6	3.8	2.2	2.5
Stratum				
Rural	4.1	2.3	1.9	2.6
Urban	4.6	2.7	1.6	1.7
Sex				
Male	5.5 **	3.7 ***	2.7 ***	3.6 ***
Female	3.0	1.3	0.8	0.4
All	4.3	2.5	1.8	2.1

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence.
Significantly different at p<0.05, * at p<0.01

Table 4.19. Adolescents with Friends Who Smoked by Island Group, Urban/Rural Stratum, and Sex [a]

Categories	Wave 1 (age 10) n=4,932	Wave 2 (age 11) n=4,692	Wave 3 (age 12) n=4,609	Wave 4 (age 13) n=3,043
Island Group				
Luzon	17.5 **	17.3	19.0	25.4
Visayas	18.3	19.4	17.8	22.3
Mindanao	13.3	19.7	16.2	24.5
Stratum				
Rural	16.5	18.0	17.7	22.6
Urban	16.6	18.7	18.3	25.9
Sex				
Male	21.9 ***	24.5 ***	24.1 ***	30.3 ***
Female	10.7	11.8	11.3	18.6
All	16.5	18.4	18.0	24.6

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence
Significantly different at p<0.05, * at p<0.01

Drinking alcoholic beverages. Consumption of alcoholic beverages, particularly during adolescence, is another risky behavior that potentially impinges on young people's health. The proportion of those who reported currently drinking alcoholic beverages increased from almost 5% in Wave 1 to a little over 8% in Wave 5 (Table 4.20). At age 10, more adolescents in the Visayas did so than those in Luzon and Mindanao. More 10-year-olds reported currently drinking alcoholic beverages in rural than urban barangays. However, at age 11, the data show the opposite. Males were more likely to manifest this behavior, with proportions increasing from about 6% at age 10 to 10% at age 13.

Table 4.20. Adolescents Reported to be Currently Drinking Alcoholic Beverages by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,932	Wave 2 (age 11) n=4,692	Wave 3 (age 12) n=4,609	Wave 4 (age 13) n=3,043
Island Group				
Luzon	3.9 ***	6.0	4.5	9.0
Visayas	7.1	5.6	5.7	9.1
Mindanao	4.0	5.6	3.9	5.5
Stratum				
Rural	5.4 **	4.2	4.4	6.4
Urban	3.8	7.3 ***	4.7	9.2
Sex				
Male	5.9 ***	8.3 ***	6.2 ***	10.0 **
Female	3.2	3.2	2.8	6.1
All	4.6	5.8	4.6	8.1

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Smoking and drinking are modifiable behaviors that increase the risk of NCD (WHO, 2022; Akseer et al., 2020). If ignored or left on their own, young adolescents who have tried these behaviors will likely persist to do so in adulthood. Hence there is a need to strengthen evidence-based policy advocacy to influence decision-makers to prioritize interventions for young people who smoke and drink alcoholic beverages.

A.6 Sexual and Reproductive Health (SRH) and Family Planning (FP) Awareness

This section looks at selected LCSFC variables that represent adolescents' awareness and exposure to information on puberty, family planning, and reproductive health from ages 10-15. It also describes their reported sexual behaviors and gender-related concerns using data obtained in Wave 4 at age 13 when the LCSFC began studying these topics. Results are compared across island groups, urban/rural residence, and sex to see which groups are more likely to be exposed to vulnerabilities.

Awareness of Puberty, FP and SRH

Information about puberty. Table 4.21 shows increasing proportions of adolescents receiving information about puberty, from 43% at age 10 to an encouraging 72% at ages 13 and 15, indicating that as they get deeper into their pubertal transition, they get more information about puberty. There is a significant difference across domains, with more adolescents in Luzon receiving information on puberty at ages 10 and 11 than in the Visayas and Mindanao. In Wave 5, more 15-year-olds in the Visayas received information than those in Luzon and Mindanao. At ages 10 through 13, those in the urban areas are more likely to receive information on puberty. Females are more likely to report receiving such information than males in all five waves. Knowing more about the pubertal process can help young adolescents understand the subsequent physical and emotional changes that they undergo during this period.

Table 4.21. Received Information About Puberty, by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 1 (age 10) n=4,927	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Island Group					
Luzon	47.6 ***	57.2 **	66.6	71.8	69.3 **
Visayas	38.0	55.3	67.2	72.2	77.2
Mindanao	39.0	48.1	62.6	70.4	71.7
Stratum					
Rural	38.9	51.1	62.8	67.5	71.3
Urban	47.3 ***	57.7 ***	68.2 **	74.1 **	71.7
Sex					
Male	41.2	49.5	57.1	61.2	58.7
Female	45.8 **	60.0 ***	74.9 ***	82.7 ***	85.9 ***
All	43.4	54.5	65.7	71.5	71.5

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Sources of information on puberty. Mothers were the most cited source of information on puberty across the five waves, particularly at ages 13 (70%) and 15 (74%) (Table 4.22). It is likewise important to note that at age 10, about the same proportion of adolescents reported obtaining information from teachers as from their mothers. As they got older, family members and peers/neighbors provided information more than teachers. Fathers were increasingly mentioned as an information source as the adolescents got older.

Table 4.22. Sources of Information on Puberty across Waves[a]

Sources of Information	Wave 1 (age 10) n=4,927	Wave 2 (age 11) n=4,698	Wave 3 (age 12) n=4,578	Wave 4 (age 13) n=3,050	Wave 5 (age 15) n=4,148
Mother	15.5	30.8	42.2	69.9	74.3
Father	2.8	8.0	9.7	17.1	19.0
Teacher	16.5	11.5	6.8	15.3	8.0
Other family members	6.4	14.1	20.3	17.2	27.4
Peers/neighbors	6.4	10.8	10.9	18.1	12.4

[a] Results presented as weighted percentages.

Knowledge about FP. When asked whether they know anything about FP, the proportions who said yes were highest at ages 13 and 15 at about 20% compared to 8% at age 10 (Table 4.23). More Luzon adolescents reported knowledge of FP than those in Visayas and Mindanao, particularly at older ages. Likewise among urban than rural adolescents. More female than male adolescents reported FP knowledge at ages 10, 13, and 15. However, when asked to explain what they know about FP their responses were more on target at older ages (see SDG3 Section of the Appendix Tables for a tabulation of their responses). Awareness of family planning must start in the adolescent years because it can help young people understand their unique needs and guide them in their choices and decisions about sexuality and marriage.

Table 4.23. Knowledge about FP by domain, stratum, and sex[a]

Categories	Wave 1 (age 10) n=4,926	Wave 2 (age 11) n=4,697	Wave 3 (age 12) n=4,557	Wave 4 (age 13) n=3,039	Wave 5 (age 15) n=4,128
Island Group					
Luzon	7.8	20.2	16.4 ***	21.7 **	22.8 ***
Visayas	8.4	18.1	10.8	14.1	16.6
Mindanao	8.0	16.2	13.3	20.6	20.1
Stratum					
Rural	6.9	16.3	11.5	15.1	17.2
Urban	8.9	20.8 ***	17.0 ***	23.1 ***	24.1 ***
Sex					
Male	6.4	17.3	12.9	16.7	18.1
Female	9.7 ***	20.2	16.1	23.6 ***	24.0 ***
All	8.0	18.7	14.5	20.0	20.9

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Knowledge about SRH. Just as with FP, knowledge about SRH increased as the adolescents got older, from about 10% at age 10 to 26% at age 13 (Table 4.24). Significant differences were also observed across island groups in the earlier waves. In addition, urban adolescents are more likely to be aware of SRH than those in rural barangays at ages 10 and 13. Across the four waves, females consistently registered higher levels than males. Similar to what was observed with FP, their understanding of what the term "reproductive health" means also improved as they got older (see SDG3 Section of the Appendix Tables for a tabulation of their responses). Awareness of SRH and its elements, including FP, equips adolescents with information that serves as a protective mechanism against adolescent pregnancy and promotes responsible sexual behaviors. Ultimately, this ensures their chances for higher education, better employment opportunities, and improved health in their adult years.

Table 4.24. Knowledge about SRH by Island Group, Urban/Rural Stratum, and Sex [a]

Categories	Wave 1 (age 10) n=4,926	Wave 2 (age 11) n=4,697	Wave 3 (age 12) n=4,561	Wave 4 (age 13) n=3,039
Island Group				
Luzon	11.8 ***	12.9 **	16.0 ***	24.5
Visayas	9.9	18.4	23.1	22.2
Mindanao	7.1	13.8	15.9	29.9
Stratum				
Rural	7.8	13.3	16.5	22.1
Urban	12.2***	15.2	18.2	27.6 **
Sex				
Male	7.8	11.5	12.7	22.4
Female	12.8***	17.2 ***	22.4 ***	28.7 **
All	10.2	14.3	17.4	25.5

[a] Results presented as weighted percentages. Question on SRH knowledge not asked in Wave 5. Test for significant differences in proportions was based on the Pearson chi-square test for independence
Significantly different at p<0.05, * at p<0.01

Comprehensive Sexuality Education (CSE). In July 2018, the Department of Education released the guidelines in implementing CSE in all schools (DepEd, 2018). The CSE is a "curriculum-based process of teaching and learning about cognitive, emotional, physical and social aspects of sexuality." It aims to integrate these aspects in subjects such as Music, Arts, Physical Education and Health (MAPEH), Araling Panlipunan, Edukasyon sa Pagpapakatao (ESP), and Science and Personal Development. Starting in Wave 2 (February to April, 2018), the LCSFC asked the cohort adolescents in which subjects in school were FP and SRH discussed.

When asked whether there are subjects in school in which FP and reproductive health topics, including pregnancy, are discussed, the majority answered yes, with higher proportions noted in later waves (Table 4.25). Adolescents from Luzon, those from urban areas, and who were females were more likely to report discussing these topics in school.

Science was the most commonly mentioned subject in which FP and reproductive health topics are discussed, particularly in Wave 2 when CSE was newly implemented. Over time, increasing proportions of adolescents have reported discussing these topics in subjects other than science. It is thus encouraging to note the CSE framework being implemented across grade levels and subjects as this is a way of promoting the rights of students to accurate information on health, sexuality, and gender.

Table 4.25. Discussed FP and reproductive health in School Subjects, by Island Group, Urban/Rural Stratum, and Sex[a]

Categories	Wave 2 (age 11) n=4,697	Wave 3 (age 12) n=4,558	Wave 4 (age 13) n=3,039	Wave 5 (age 15) n=4,128
Island Group				
Luzon	76.0 ***	82.7 ***	87.8 ***	84.3 ***
Visayas	56.4	59.4	67.8	72.7
Mindanao	49.0	58.8	72.0	67.9
Stratum				
Rural	61.6	67.9	76.2	74.7
Urban	67.3**	75.2 **	82.7 **	80.2 **
Sex				
Male	61.0	69.2	76.1	73.7
Female	68.5 ***	74.6 ***	84.5 ***	82.1 ***
All	64.6	71.8	80.1	77.6

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Reported Sexual Behaviors

In Waves 1-3, when the cohort adolescents were 10-12 years old, the survey only included questions on pre-sexual activity behaviors. It was only in Wave 4, at age 13, when more direct questions on sexual activity were asked of the adolescents. These questions were asked through self-administered questionnaires.

Experienced more than kissing. This question captures experiences that are more intimate than kissing, such as petting. Table 4.26 shows that fewer adolescents admitted having more than kissed at age 13 than at age 10. More males than females, and more adolescents from the Visayas and Mindanao than in Luzon reported this behavior.

Ever had a boyfriend/girlfriend. This question was asked in Wave 2 at age 11. More males across the waves, and more urban adolescents at ages 12 and 13 answered yes to this question (Table 4.26).

Having friends with boy/girlfriends. As the adolescents grew older, higher proportions reported having friends with boy/girlfriends (Table 4.26).

Table 4.26. Pre-sexual Activities, by Island Group, Urban/Rural Stratum, and Sex across Waves[a]

Categories	Wave 1 (age 10) n=4,819	Wave 2 (age 11) n=4,631	Wave 3 (age 12) n=4,564	Wave 4 (age 13) n=3,016
Experienced more than kissing				
Island Group				
Luzon	2.0 ***	3.0	2.3	1.2 ***
Visayas	10.5	5.0	3.5	3.9
Mindanao	6.0	5.2	4.2	2.3
Stratum				
Rural	5.5	4.6	3.0	2.4
Urban	4.1	3.5	3.1	1.7
Sex				
Male	5.5 ***	5.7 ***	4.3 ***	3.3 ***
Female	3.8	2.2	1.7	0.6
All	4.7	4.0	3.1	2.0
Ever had boyfriend/girlfriend				
Island Group				
Luzon		9.2	12.5	24.0
Visayas		9.8	11.8	19.1
Mindanao		9.7	12.7	22.2
Stratum				
Rural		9.1	10.7	17.2
Urban		9.9	13.9 **	26.1 ***
Sex				
Male		14.4 ***	16.5 ***	27.1 ***
Female		4.2	7.9	17.8
All		9.5	12.4	22.6
Have friends with boy/girlfriends				
Island Group				
Luzon	24.9	34.7	49.7	64.6
Visayas	33.6 ***	38.1	48.6	58.0
Mindanao	27.5	36.1	47.5	61.0
Stratum				
Rural	24.4	30.5	46.7	57.4
Urban	29.9 **	40.5	50.9	65.8 ***
Sex				
Male	30.6 ***	37.2	49.0	61.2
Female	23.7	34.2	48.8	63.9
All	27.3	35.8	48.9	62.5

[a] Results presented as weighted percentages. Test for significant differences in proportions was based on the Pearson chi-square test for independence

Significantly different at p<0.05, * at p<0.01

Sexual Behaviors. There were 84 adolescents at age 13 who reported having experienced sexual intercourse, the majority of whom were males (Table 4.27). There was no significant difference in age at first sex between males and females, and across domains (not shown). For the majority, the first sexual experience was with someone of the same age. Among those who reported ever having sex, more males than females have friends who had also experienced sex (not shown).

First sexual partner. Table 4.28 reveals that acquaintances and friends were among the most cited first sexual partners, followed by boy/girlfriends. It is alarming to note that there were those whose first sexual experiences were with a family member or a stranger.

Results from these self-reported data imply a need to strengthen values education on sexuality-related concerns among young people and ensure that they continue to receive correct information on sexuality and reproductive health to enable them to manage themselves in a time of difficulty or crisis. Providing young people with proper SRH information is necessary in attaining SDG 3.

Table 4.27. Reported Sexual Behaviors at Age 13 (n=3,043)[a]

Ever had sex	Males	Females	All	%
Ever had sex ***	73	11	84	2.8
Ever had sex with males ***	37	5	42	1.4
Ever had sex with females ***	52	9	61	2.0
Ever had sex with both males/females ***	16	3	19	0.6
Mean Age at first sex	11.7	12.5	11.8	
Age of first sexual partner:				
Younger than cohort adolescent	15	0	15	17.9
Same age	44	10	54	64.3
Older	14	1	15	17.9

[a] Unweighted results. Test for significant differences was based on the Pearson chi-square test for independence
***Significantly different at p<0.01

Table 4.28. First Sexual Partners at Age 13 (n=3,043) [a]

Relationship	Males	Females	All	%
Boyfriend	10	3	13	15.5
Girlfriend	14	0	14	16.7
Friend/"Barkada"	15	2	17	20.2
Acquaintance	16	3	19	22.6
Family member	12	2	14	16.7
Stranger	6	1	7	8.3
Total	73	11	84	100.0

[a] Unweighted results. Test for significant differences in unweighted proportions was based on the Pearson chi-square test for independence

Summary

This chapter provides a comprehensive analysis of the LCSFC cohort aged 10-15, providing valuable insights into the health status of young females and males. We examined critical health dimensions, including general health and health practices, risk of NCD, overnutrition, diet diversity and nutrient supplementation, disability, morbidity risk exposures, and awareness of SRH and FP.

Key findings from the LCSFC that pose health risks and, thus, need policy actions include: (i) dental cavities affect more than half of the adolescents (policies related to dental health promotion); (ii) the increasing number of overweight/obese adolescents (policies related to NCD risk monitoring and healthy diet and physical activity promotion); (iii) the rise in alcohol consumption as adolescents get older (policies related to improving awareness of underage drinking risks; (iv) presence of disabilities and functional limitations, particularly visual impairments and unmet needs (policies related to early intervention, accessibility, and support); and (v) incident cases of visual and hearing impairments (policies related to early detection, intervention, and support).

In the aspect of adolescent sexual health and education, key findings from the LCSFC that need policy actions include: (i) adolescents, including a significant number of males, reported experiencing sexual intercourse by age 13 (policies related to addressing early sexual initiation among adolescents); (ii) family members, strangers, or mere acquaintances were the first sexual partners for some adolescents (policies related to promoting safe and responsible sexual behavior education); (iii) more than half of those who initiated early sexual activity had partners who were also adolescents (policies related to educating young adolescents about responsible sexual behavior from an early age); and (iv) not all adolescents have received comprehensive sexuality education in school (policies related to effective implementation of comprehensive sexuality education to equip adolescents with the necessary information and skills to protect themselves from unsafe sexual encounters).

The data obtained in this analysis are crucial due to their implications for the overall well-being of young females and males. Neglected challenges during this critical stage of life can lead to long-term consequences that may hinder the achievement of SDGs. Taking proactive steps to address these during adolescence can act as a protective shield against future health risks in adulthood. Identifying gaps in knowledge and practices serves as a foundation for redirecting policies, allocating resources, and formulating effective strategies tailored to the needs of the young. Our commitment to the SDG hinges on our ability to bridge these gaps and prioritize the health and well-being of young females and males.

In conclusion, this chapter underscores the importance of understanding and addressing the multifaceted aspects of young adolescents' health. Through the LCSFC data-driven insights, governments and civil society can implement measures to prevent adverse health outcomes, empower young females and males, and advance the global agenda of leaving 'no one behind.'

REFERENCES:

Akseer, N., Mehta, S., Wigle, J. *et al.* (2020). Non-communicable diseases among adolescents: Current status, determinants, interventions and policies. *BMC Public Health* 20, 1908. Retrieved from https://doi.org/10.1186/s12889-020-09988-5.

Centers for Disease Control and Prevention. (2022). Oral health conditions. Retrieved from https://www.cdc.gov/oralhealth/conditions.

Demographic Research and Development Foundation, Inc. (DRDF). (2013). 2013 Young Adult Fertility and Sexuality Study. Retrieved from https://www.drdf.org.ph/yafs4.

Department of Education (DepEd). (2018). DepEd Order 31 series of 2018. Policy Guidelines on the Implementation of the Comprehensive Sexuality Education. Retrieved from https://www.deped.gov.ph/wp-content/uploads/2018/07/DO s2018 031-1.pdf.

Department of Science and Technology - Food and Nutrition Research Institute (DOST-FNRI). (2016). Philippine Nutrition Facts and Figures 2015: Anthropometric Survey. FNRI Bldg., DOST Compound, Gen. Santos Avenue, Bicutan, Taguig City, Metro Manila, Philippines.

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P. (2021). Ensuring the Safety and Welfare of Filipino Children in the COVID-19 Pandemic and the New Normal, UNFPA-OPS Policy Notes Series_No. 7. USC-Office of Population Studies Foundation, Inc. Retrieved from https://www.opsusc.org/paper_series.php.

United Nations. (2015). The Millennium Development Goals Report 2015. New York, New York: Department of Economic and Social Affairs.

United Nations. (2017). Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. Retrieved from: https://unstats.un.org/sdgs/indicators/indicators-list/

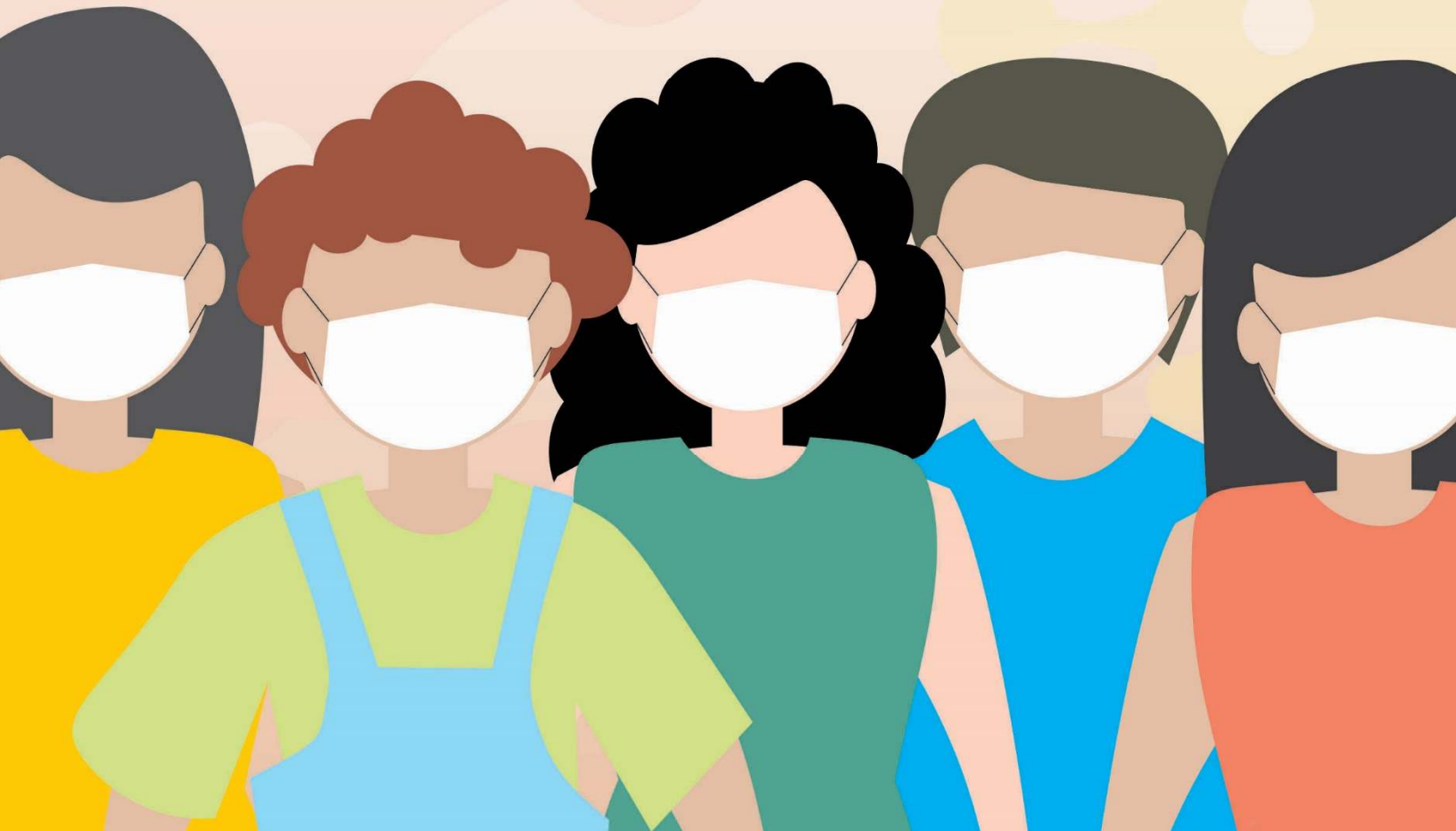
United Nations Population Fund. (2022). Adolescent sexual and reproductive health. Retrieved from https://www.unfpa.org/resources/adolescent-sexual-and-reproductive-health.

World Health Organization. (2019). Prevention and Control of Noncommunicable Diseases in the Philippines. Geneva: WHO.

World Health Organization. (2022). Noncommunicable diseases. Retrieved from https://www.who.int/newsroom/fact-sheets/detail/noncommunicable-diseases.

Chapter 5

SDG 3. Health Care Access and Utilization among Households with Adolescents



Chapter 5

SDG 3. Health Care Access and Utilization among Households with Adolescents

Francisco M. Largo[14] and Jan Lorenzo G. Alegado[15]

Access to health care facilities has been shown to affect health outcomes in both developing (Karra et al., 2017) and developed country (Kelly et al., 2016) settings. The Department of Health in the Philippines reported that access to primary health care facilities is particularly limited in the Philippines with 50% of the population not having access to primary health care facilities within 30 minutes of travel from the residence (DOH, 2020).

The United Nations Sustainable Development Goal 3 which aims "to ensure healthy lives and promote well-being for all at all ages" includes addressing health care access in a global framework of cooperation (United Nations, 2015). Target 3.8 under SDG 3 aims to "achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all." Indicator 3.8.1 measures the coverage of essential health care services while Indicator 3.8.2 looks at the proportion of population with large household expenditures on health as a share of total household expenditure on income. Both indicators combined measure the ability of households and individuals to use health care services without the ruinous effects of large out of pocket expenditures. Progress on this SDG target has been uneven prior to the pandemic but improving on the average at a global level in terms of universal health coverage (United Nations, 2022). Health care, however, continued to be mostly borne out of pocket which can be catastrophic for a significant number of households which are already pushed into extreme poverty due to spending on health care.

The Philippine government's targets for this area are outlined in its document of commitments (PSA, 2022a). Target 3.8 keeps true to the aim of universal health care coverage from the measured baseline of 91% in 2016 to 100% in 2030. The government aims to achieve this either through universal health insurance or coverage by the public health system. The target for out of pocket is a slight lowering of the baseline measure from 45% to 43.5% by 2030. These targets are marked as "on track" by the government's progress tracker (PSA, 2022b), although Ulep (2021) still pointed out the low uptake of essential health services. This low uptake is likely due to a confluence of factors including demand and supply side factors. Ulep (2021) also showed that health care utilization has been further negatively affected by the pandemic.

The Longitudinal Cohort Study on the Filipino Child (LCSFC) provides another source of data to track the progress among households with adolescents with regard to SDG3. This chapter reports on various aspects of health care access and utilization, including national social health insurance coverage, using LCSFC data collected from 2016 to 2021. The LCSFC survey rounds covered in this chapter include those done prior to the pandemic (Wave 1 in 2016, Wave 2 in 2018, Wave 3 in 2019 and Wave 4 in Q1 of 2020),

[14] Asst. Professor, Department of Economics, University of San Carlos, Cebu City; Email: fmlargo@usc.edu.ph

[15] Asst. Professor, College of Social Sciences, University of the Philippines, Cebu City; Email: jgalegado@up.edu.ph

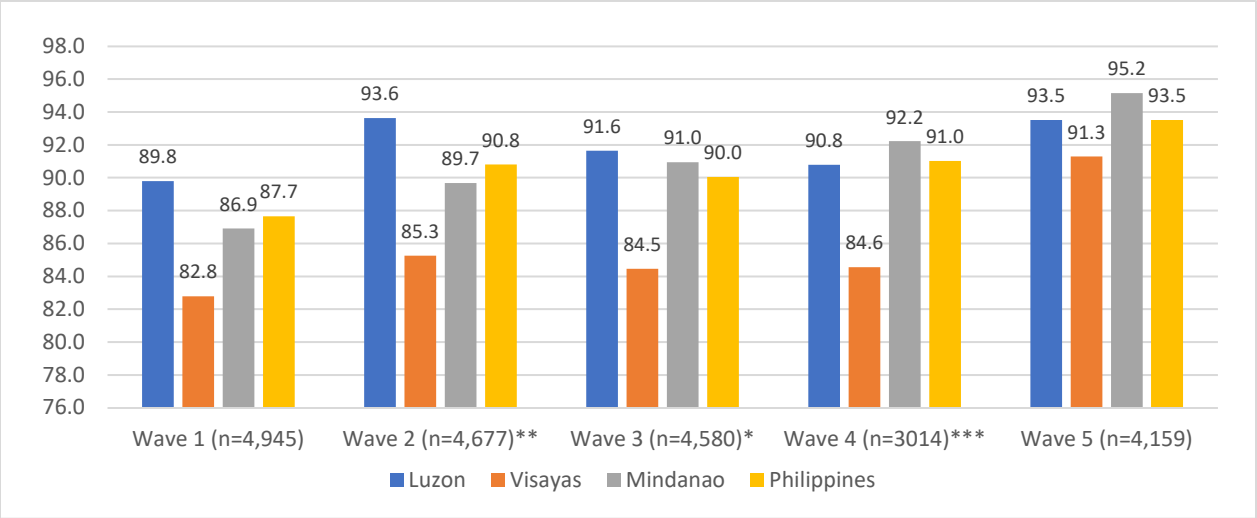
during the early stage of the pandemic (Wave 4A in Q4 of 2020) and the later part of the pandemic (Wave 5 in 2021). With such data, this chapter also includes a discussion on the impact of the pandemic on the variables of interest.

A. Health Care Facility Proximity and Utilization

Barangay Health Station (BHS)

The BHS is the first level of the public health system under the supervision of the respective City or Municipal Health Offices tasked with basic health services and health promotion. The Department of Health reports that only one half of all Philippine barangays have at least one BHS as of 2019 (DOH, 2020). The LCSFC households appear to have near universal access to a BHS within their own barangay (Figure 5.1). Households without a BHS in their barangay reported the nearest one to be in another barangay in the same municipality or city.

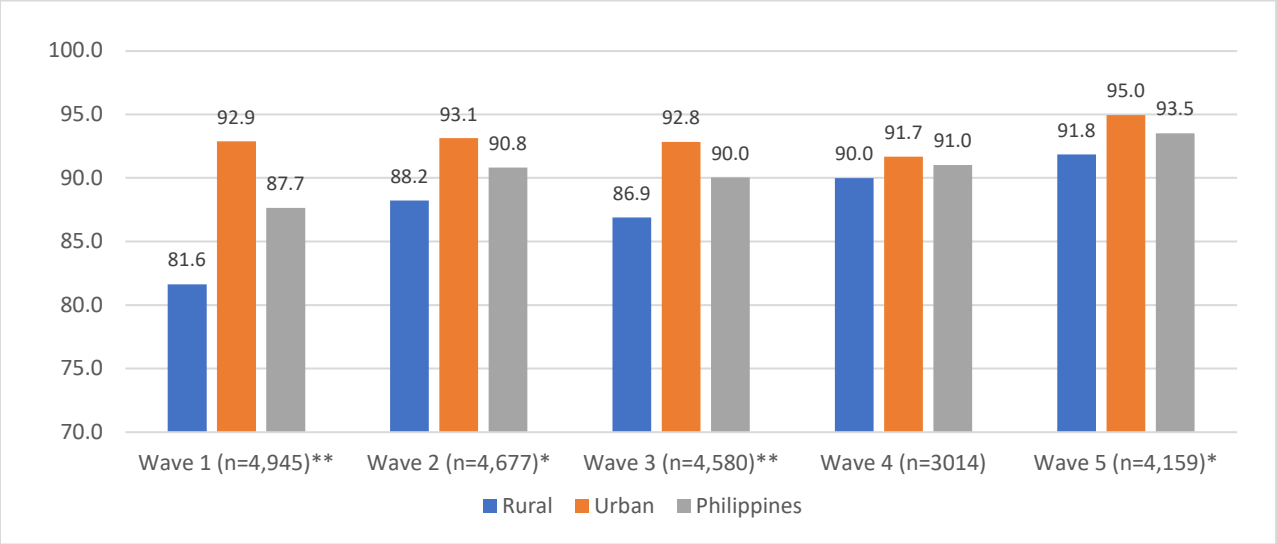
Figure 5.1. Proportion of Households with a BHS Located in Barangay by Wave and Island Group[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

Visayas households has the least access to a BHS located within their barangay compared to those in Luzon and Mindanao which showed proportions that were closer to the national average for the sample households. Figure 5.2 shows that rural households are less likely to report having a BHS within their own barangay than urban households, but the rural-urban gap decreased in later waves.

Figure 5.2. Proportion of Households with a BHS Located in Barangay by Wave and Urban/Rural Stratum[#]

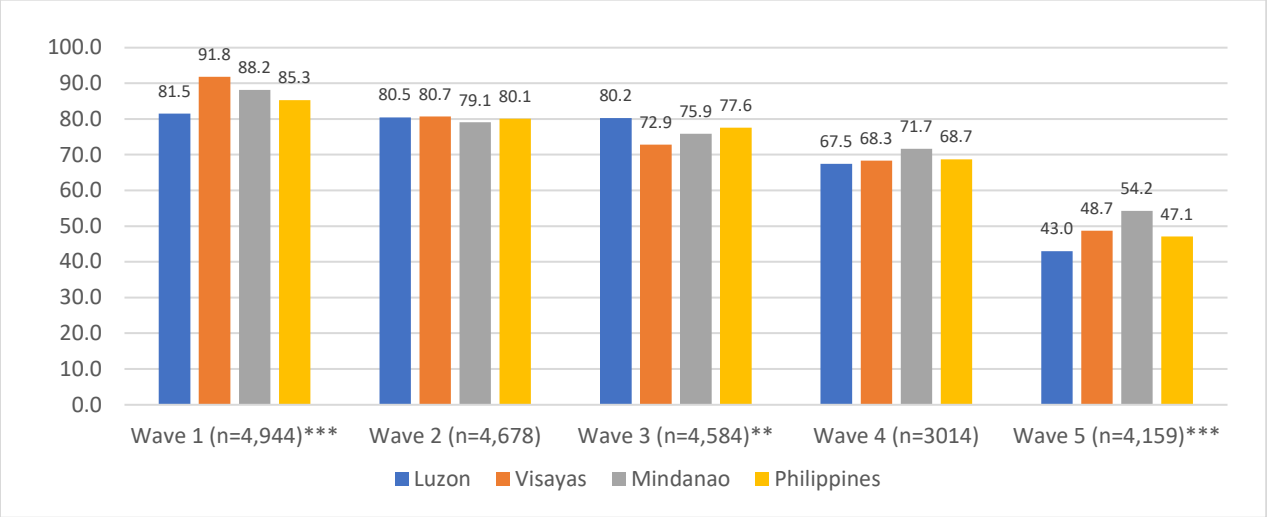


[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

Respondents were also asked if any household member sought care from a BHS in the 12 months prior to the survey visit. Figure 5.3 shows a declining trend in household BHS utilization across waves particularly in Wave 5 during the pandemic. The decline is largest for those in Luzon, home of major urban epicenters of pandemic cases (WHO, 2020).

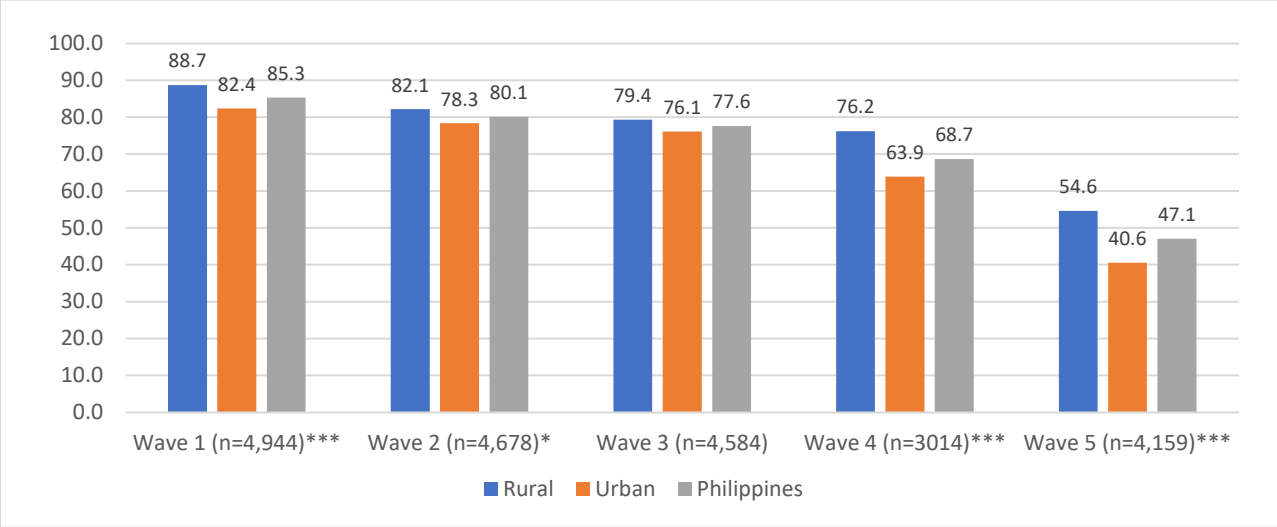
In Figure 5.4, it is seen that urban households used BHS services to a slightly lesser extent and typically below the national average. The significant differences are greatest for Waves 4 and 5. When only households with complete data in all five waves are accounted for (Figure 5.5), illustrating the true trend in BHS utilization over time, the decline in use of the BHS mirrors that of the full sample shown in Figure 5.2. As shown in Figure 5.5, utilization of barangay health stations in the preceding 12 months prior to the survey period went from 88% in Wave 1 to 72% in Wave 4 before precipitously dropping to 46% in Wave 5.

Figure 5.3. Proportions of Households Seeking Care from BHS by Wave and Island Group[#]



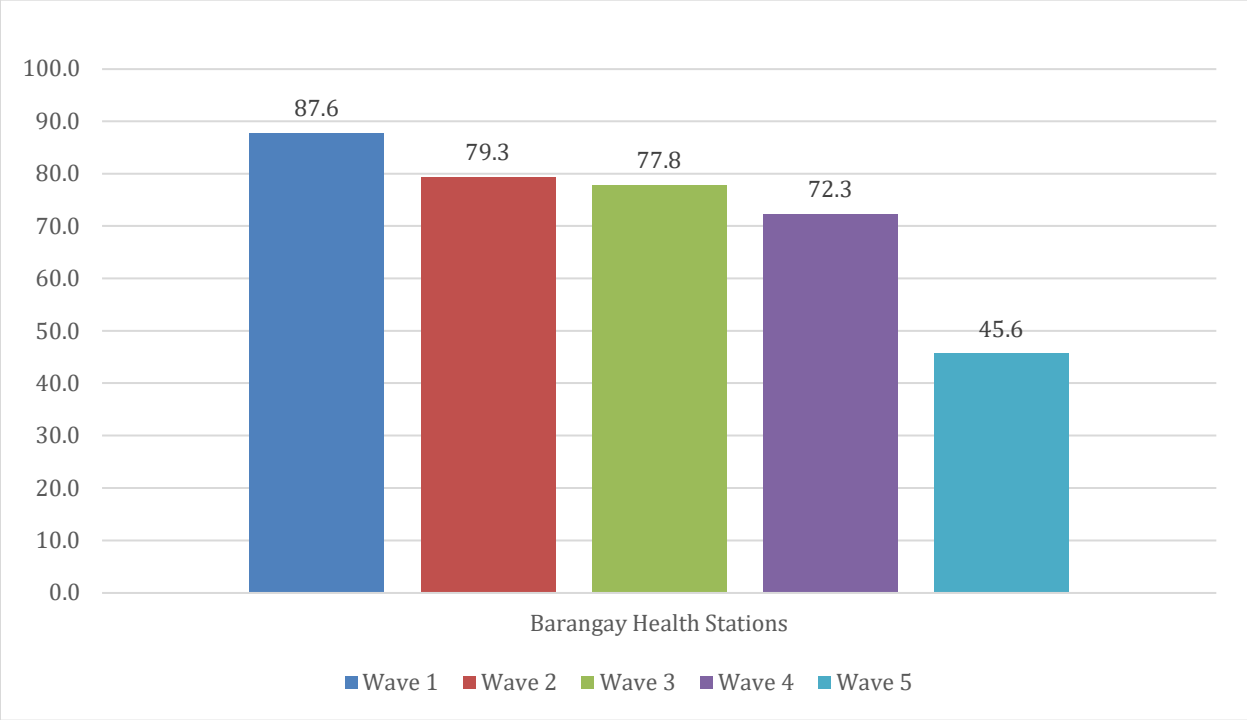
[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

Figure 5.4. Proportions of Households Seeking Care from BHS by Wave and Urban/Rural Stratum[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

Figure 5.5. Proportions of Households Seeking Care from BHS by Wave (n=,1668)[#]



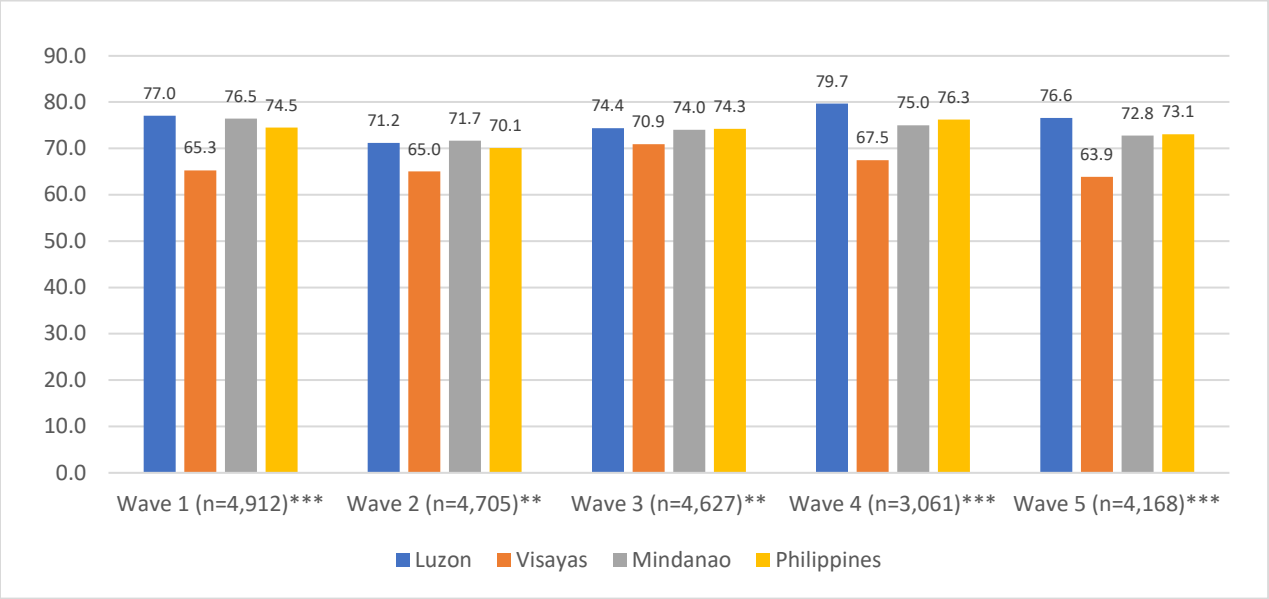
[#]Unweighted proportions per wave

Government Hospitals

The next level in the network of health care providers operated by local government units (LGU) are the government hospitals which include regional and specialty hospitals. Access to these facilities is necessary for cases beyond the purview of primary health care providers. In the LCSFC, almost all of the households reported having a government hospital either within the municipality/city (see Figure 5.6) or in another municipality/city within the same province. Overall, nearly three fourths of households surveyed have access to public hospitals within the same municipality or city, with those from the Visayas consistently having the lowest proportions across the island groups.

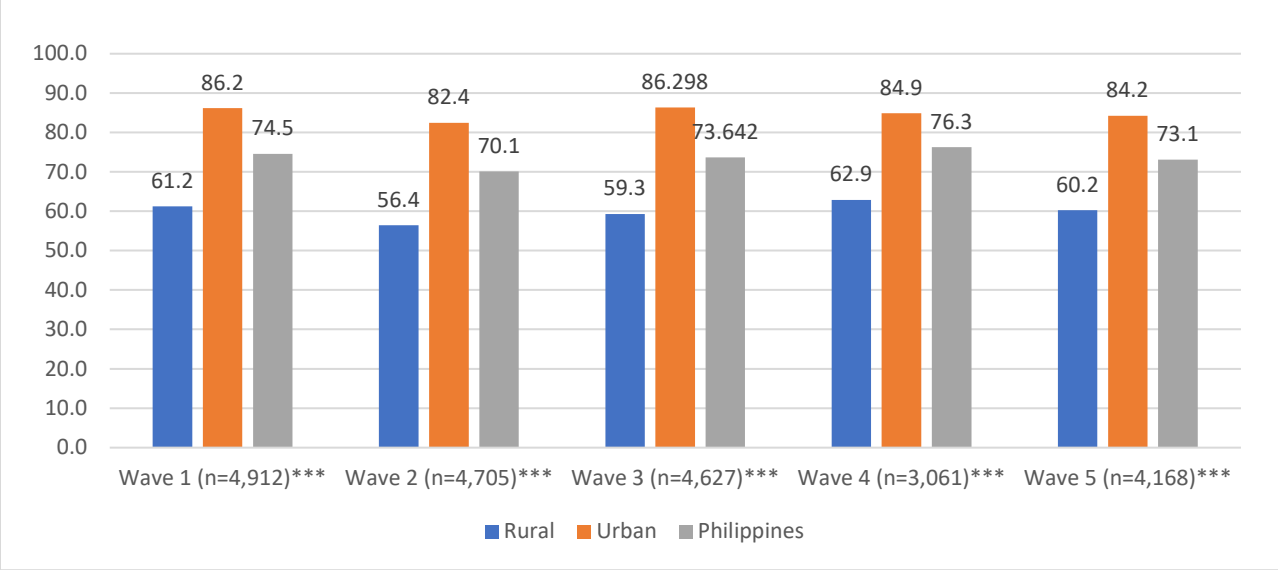
Proximity to a public hospital is also differentiated by stratum with urban households clearly having greater access on the average to a public hospital within the city or municipality (Figure 5.7). This is persistent across waves.

Figure 5.6. Proportions of Households Reporting Presence of Government Hospital in the Same Municipality/City by Island Group and Wave[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

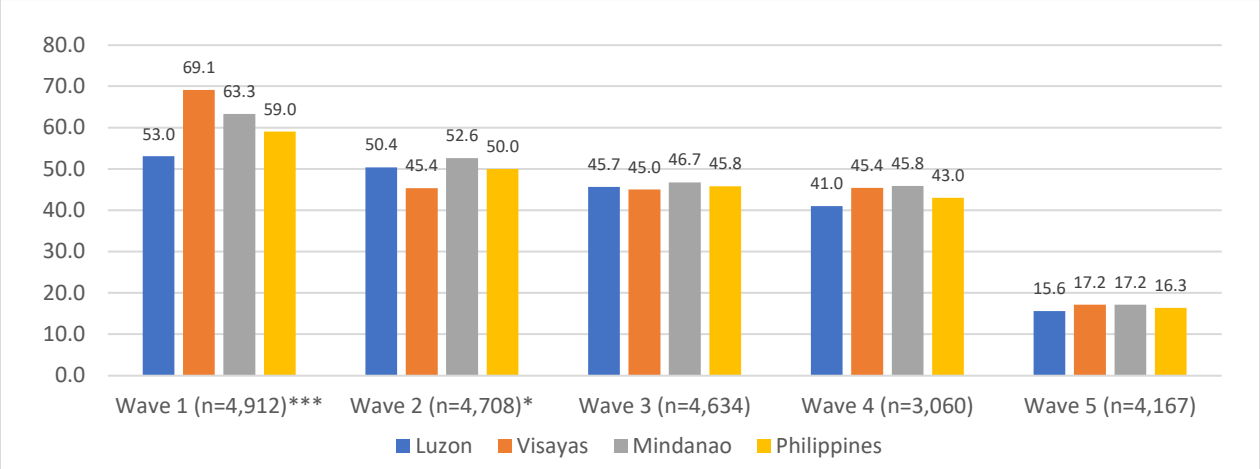
Figure 5.7. Proportions of Households Reporting Presence of Government Hospital in the Same Municipality/City by Wave and Urban/Rural Stratum[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

Seeking health care from government hospitals (in the past 12 months prior to the survey period) across the five waves showed a declining trend in all households even before the pandemic (Figure 5. 8). From nearly 60% in Wave 1 (2016) to about 46% in Wave 4 (Q1 2020). Similar to what was observed with BHS, a sharp drop in utilization was also seen during the pandemic (Wave 5 in 2021). No strong differentiation across island groups is observed except in Wave 1 where Visayas and Mindanao households had higher proportions.

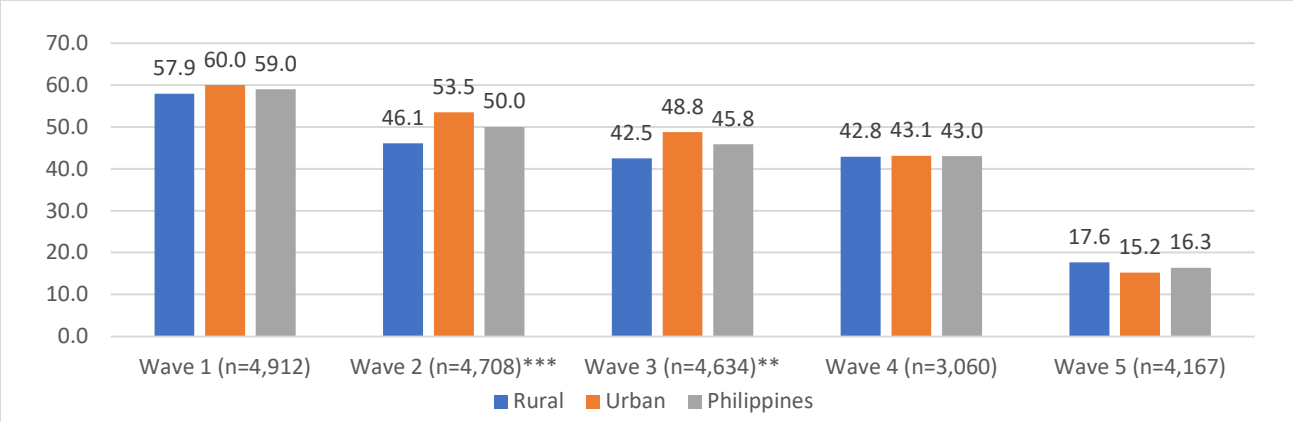
Figure 5.8. Proportions of Households Seeking Care from Government Hospital within the Same Municipality/City by Wave and Island Group[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

While there was a noted differentiation between public hospital proximity across urban and rural households, the differences are slightly less pronounced when it comes to take up of public hospital services (Figure 5.9).

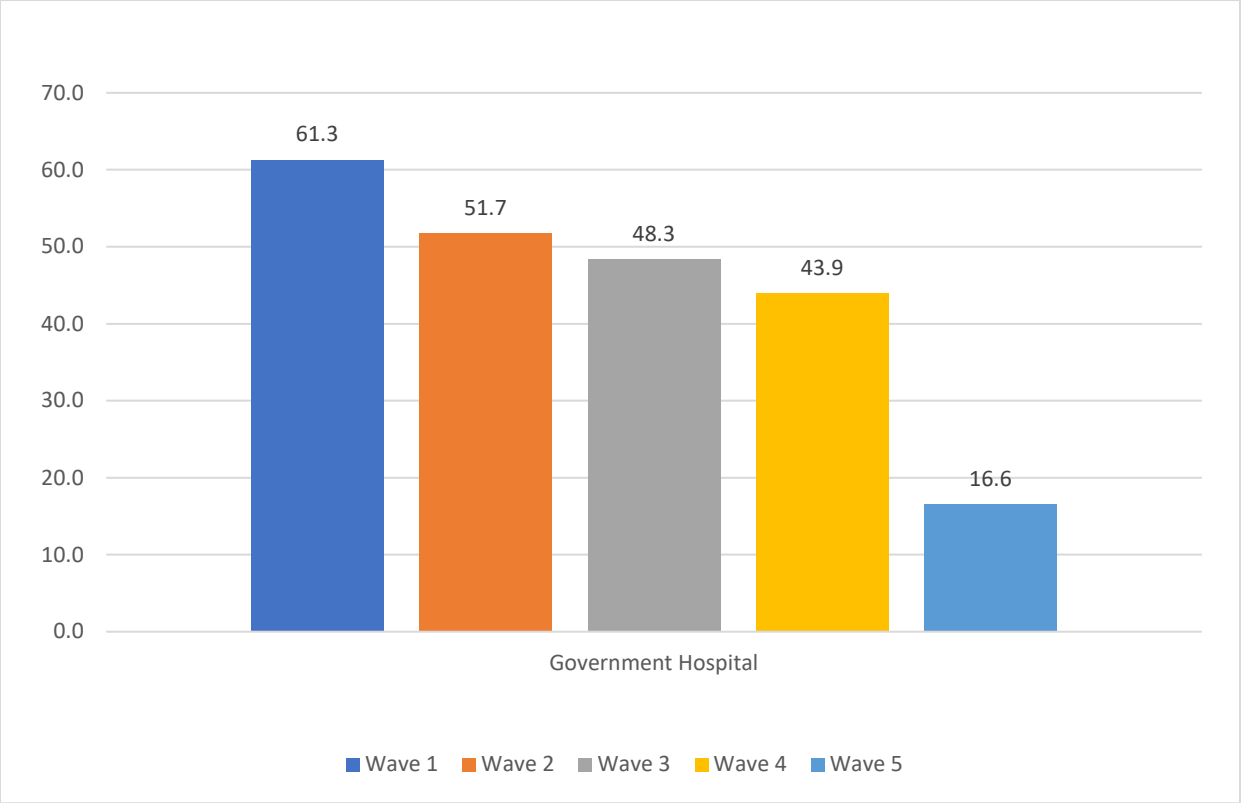
Figure 5.9. Proportions of Households Seeking Care from Government Hospital within the Same Municipality/City by Wave and Urban/Rural Stratum[#]



[#]Weighted proportions per wave
*Significantly different at p<0.10,**at p<0 .05, ***at p<0.01

This downtrend in utilization of public hospital services is persistent with the use of household data from households present across all waves. Figure 5.10 shows this downward trend for this sample.

Figure 5.10. Proportions of Households Seeking Care from Government Hospitals by Wave (n=1,668)[#]

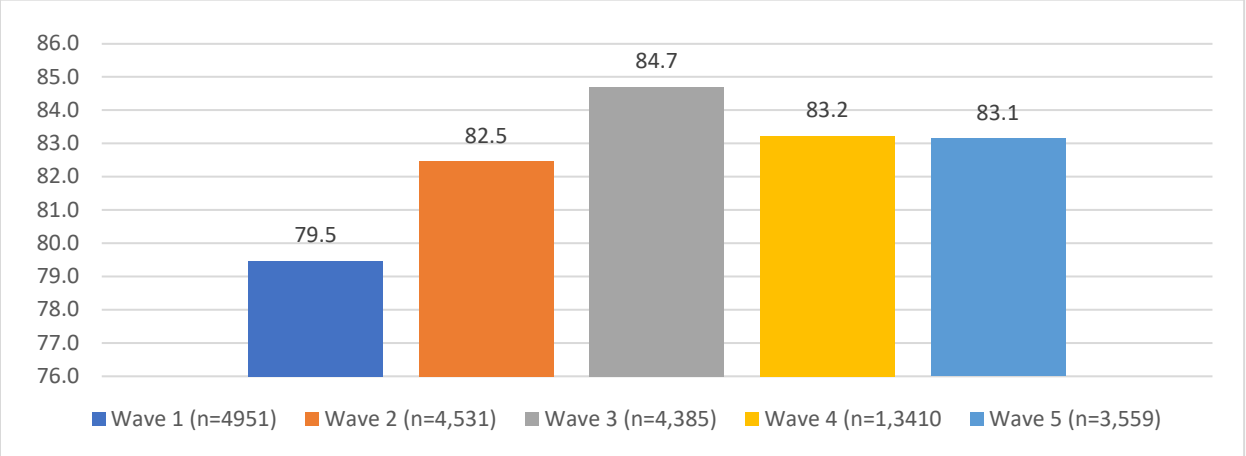


[#]Unweighted proportions per wave

B. Philippine Health Insurance Corporation (PhilHealth) Membership

Membership in social health insurance is the second indicator for this SDG target. The Philippine government end target for this indicator is 100% coverage. PhilHealth is the national level social health insurance program. Other government agencies and local government units may offer other forms of health insurance benefits. Figure 5.11 shows the coverage of PhilHealth membership for LCSFC households across waves. This is measured as a positive response to the question if whether the father or mother is a member. As can be seen, PhilHealth membership has hovered slightly above or below the 80% mark across the five waves. This, however, is lower than the baseline measure of 91% reported in 2016 for all households in the entire country (PSA, 2022b). This could indicate that LCSFC households, representing those with adolescent members, lag behind the national average in this regard. No differentiation across island groups, and between urban and rural households were found for PhilHealth coverage.

Figure 5.11. Proportions of Households Reporting PhilHealth Membership Across Waves[#]



[#]Weighted proportions across waves

C. Impact of the Pandemic on Health Care Seeking Behavior

The COVID-19 Pandemic has caused substantial impacts on the well-being of populations around the world. Aside from disruptions to the economies due to policy responses centered on limiting personal interactions, there is the fear that additional effects will be felt through the reduction of health care utilization due to various aspects related to the pandemic. Health care seeking behavior during the pandemic is conceptually hampered not only by mobility restrictions and higher costs of care due to precautionary measures but also by the fear of contracting COVID-19 in a health care setting. The resulting decrease in health care utilization would worsen health care outcomes in the absence of any offsetting change.

The reduction in health care utilization globally is borne out by the systematic review of Moynihan et.al (2021) of studies on health care trends around the globe in the early period of the pandemic (up to May 2020). They found a 37% reduction in over-all utilization with significant declines in health facility visits (42% reduction), admissions (28%), diagnostics (31%) and therapeutics (30%). They also point to important differences in health care sub-categories with the possible implication that reduced utilization may be more pronounced for less severe diseases. This points to the possibility of identifying excess care as well as missed essential care with long term implications. It would also be reasonable to point out that the predicament for hard pressed health care systems in low to middle income countries may be worse. While Xu et.al (2021) has pointed to an offsetting increase in teleconsultations for a large health service provider in the United States, these adjustments may be less possible for countries with substantially lower quality telecommunications and power infrastructures and populations with limited access to them as is likely the case for developing countries. What is more, developing countries may already suffer from low levels of health care utilization. Further reductions only aggravate already low levels of utilization and associated poor outcomes. Xiao et.al (2021) found significant reductions across China in the early stages of the pandemic. Rezapour et.al (2022) also saw similar declines in utilization in primary health care for Iran. Ahmed et.al (2022) showed reductions from 18 low and low middle income countries and indicated the possible negative effects on maternal and child health outcomes.

In the case of the Philippines, Ulep (2021) used national social health insurance claims and data from government facility reports to estimate the reductions in health care utilization and the losses in well being from such reductions. Substantial lowering in admissions claims was reported for high burden diseases (47%), with high incidence noted for indigent members, and pediatric cases (70%). Consultations with rural health units show a decline in patient visits for under 5 pediatric cases, patients over 65, hypertensive cases, and visits under the tuberculosis treatment program TB DOTS. This paper notes that the Philippines already suffered from low utilization of basic health services even prior to the pandemic. These subsequent reductions due to the pandemic will lead to even further losses and these are estimated in this paper as well.

Health care seeking behavior may be seen as a result of household decision making for its members involving the demand for health care under various constraints and the supply of health care from various providers. Reduced utilization can then be rooted to changes in the demand and supply side factors. As also pointed by Ulep (2021), the likely factors affecting these drops in utilization include both reduced demand due to fear of contagion, higher costs of access, reduced purchasing power, and disruptions in supply. Data on these factors at the household level will contribute to understanding of the reductions in health care utilization.

The LCSFC presents an opportunity to look at household decision making especially as it pertains to households with adolescents. These households have the added burden of forming capabilities to determine life trajectories of these adolescents. Obtaining information on their behavior could present handles for policy action.

C.1 Health Care Utilization in the Pre-Pandemic Period

The LCSFC waves conducted prior to the pandemic collected data on household morbidity and health seeking behavior. This chapter examines these behaviors using data from survey rounds most proximate to the start of the pandemic (Wave 3 in 2019 and Wave 4 in Q1 2020), to more adequately represent pre-pandemic circumstances. As the nature of illness drives health seeking behavior, this is examined first. Table 5.1 presents the top 10 illnesses and symptom presentations experienced by households in Waves 3 and 4.

We see that virtually the same diseases and symptom presentations are cited by largest proportions of households for both waves except for Dengue which replaced communicable diseases in Wave 4. The top three morbidities (fever, cough/colds and diarrhea) also correspond to the most common diseases afflicting the cohort adolescents (see Chapter 4 of this report). For populations accustomed to such presentations, clear public health messages regarding disease gravity would need to be emphasized. Parsing or triage at the earliest point of contact for health consultations would also be advisable especially the earliest points of primary health care contact.

Table 5.1. Top Ten Reported Diseases/Symptoms by Households (HH), Waves 3 and 4[#]

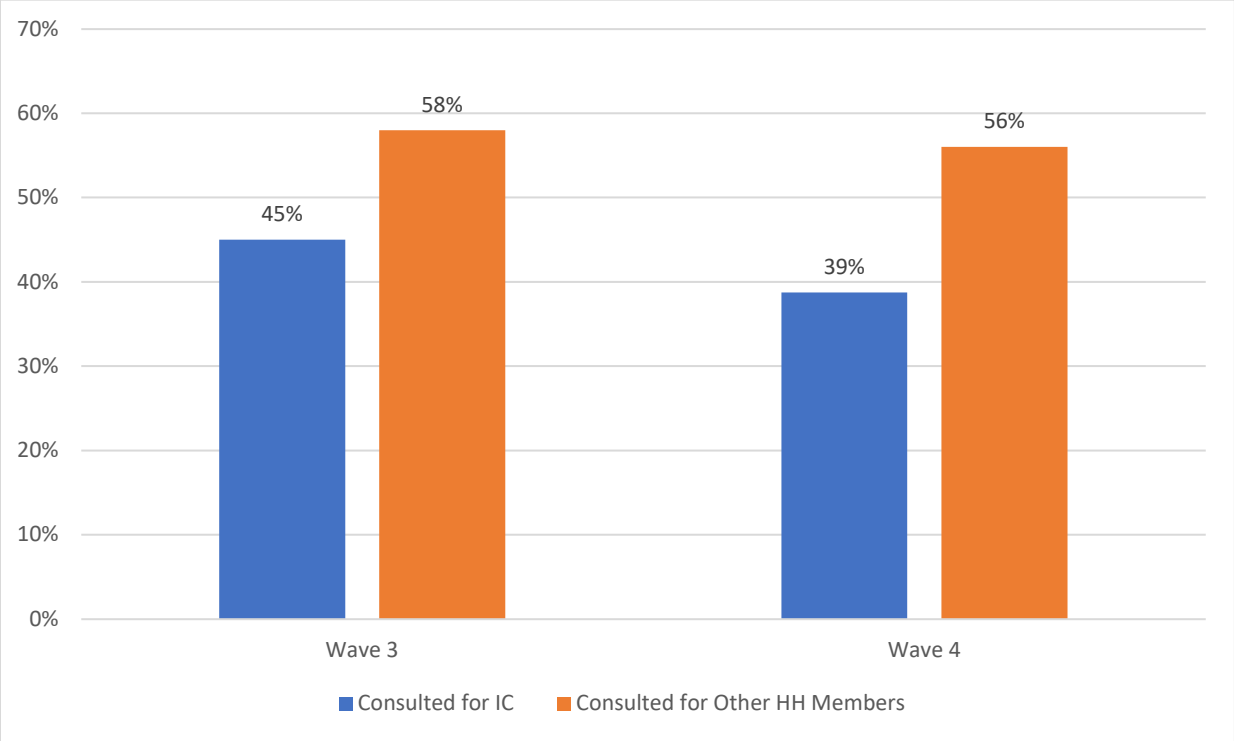
Conditions/Symptoms	Percentage of HH Reporting at least 1 incident in the Past 6 Months[#]	Mean Number of Household Members Afflicted in the Past 6 Months
WAVE 3 n=4,616		
Fever	56%	1.9
Cough/Cold	35%	1.8
Diarrhea	21%	1.5
Non-communicable Disease	18%	1.2
Asthma	13%	1.2
Female Reproductive Tract Diseases	9%	1.1
Injury	9%	1.1
Digestive System Diseases	7%	1.1
Measles	4%	1.3
Communicable Diseases	5%	1.3
WAVE 4 n=3,066		
Fever	52%	1.9
Cough/Cold	40%	2.2
Diarrhea	19%	1.6
Non-communicable Disease	16%	1.2
Asthma	12%	1.3
Female Reproductive Tract Diseases	8%	1.2
Injury	9%	1.2
Digestive System Diseases	6%	1.1
Measles	5%	1.3
Dengue	3%	1.1

[#]Weighted proportions per Wave

Consultations with Health Care Practitioners

Households were queried if they consulted a health care practitioner for illnesses experienced by the cohort adolescents (referred to as index children or IC in all the Figures) as well as by any other household member. Figure 5.12 shows that, for both waves, health care was sought less for illnesses experienced by the cohort adolescents compared to illnesses afflicting other family members. A possible reason for this is that the illnesses experienced by the adolescents may be less severe (as reported in Chapter 4) than those affecting other household members. We can also see that the proportion of households seeking health care for household members declined in Wave 4. Given the relatively unchanged set of morbidities between Waves 3 and 4, other factors such as the fact that Wave 4 was conducted in the period where initial cases of COVID-19 were seen (Jan-March 2020) would have to be considered to explain this decline.

Figure 5.12. Proportions of Households That Consulted a Health Care Practitioner for Illnesses[#]

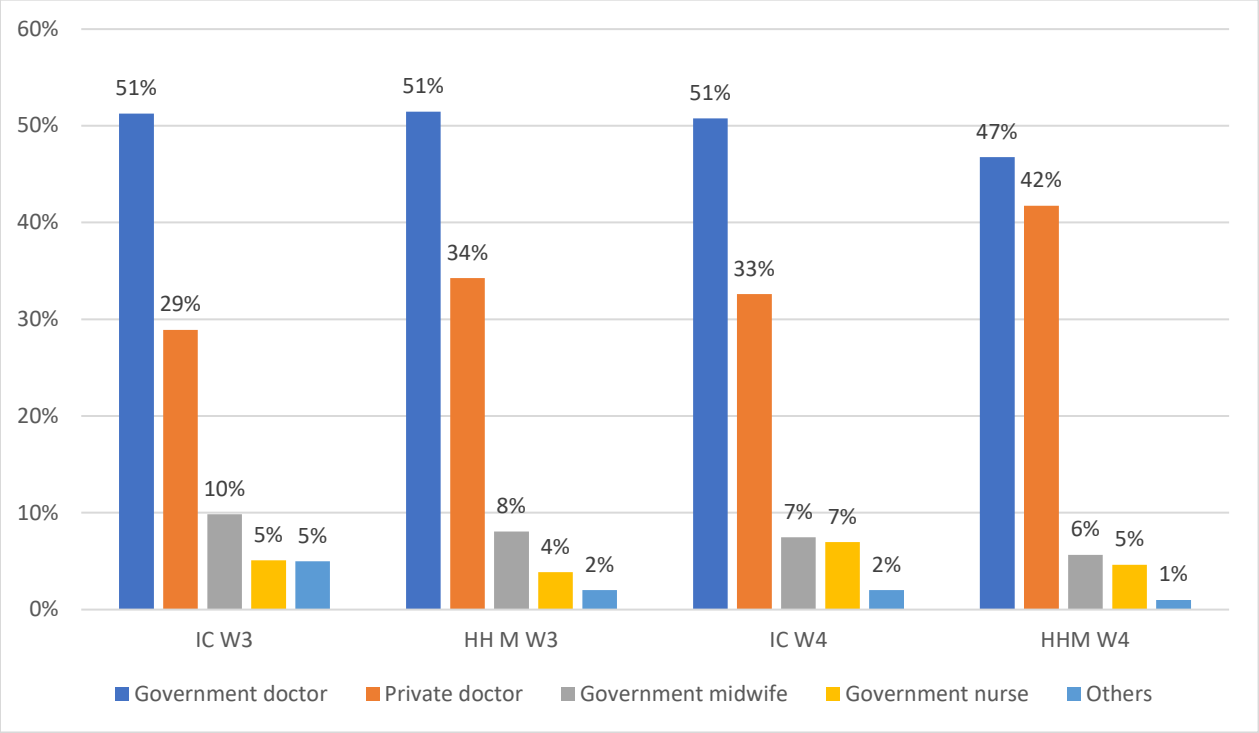


[#] IC refers to the LCSFC index children or the cohort adolescents; Weighted proportions per Wave

In Wave 3, the consultation rate for the cohort adolescents was higher for Luzon (50%) vs Visayas (40%) and Mindanao (37%); no such difference was observed for other household members. There was no significant urban/rural difference as well. This same pattern was seen in Wave 4, for instance, consultation rates for adolescents continued to be significantly higher for Luzon (45%) compared to Visayas (32%) and Mindanao (30%).

Figure 5.13 shows the types of health care practitioners mainly consulted. Government doctors are consistently consulted more across waves and type of household member involved, followed by private doctors. Among these households, reliance on government practitioners is still the norm for those who consult health care professionals.

Figure 5.13. Health Care Practitioners Consulted for Illness, Waves 3 and 4[#]

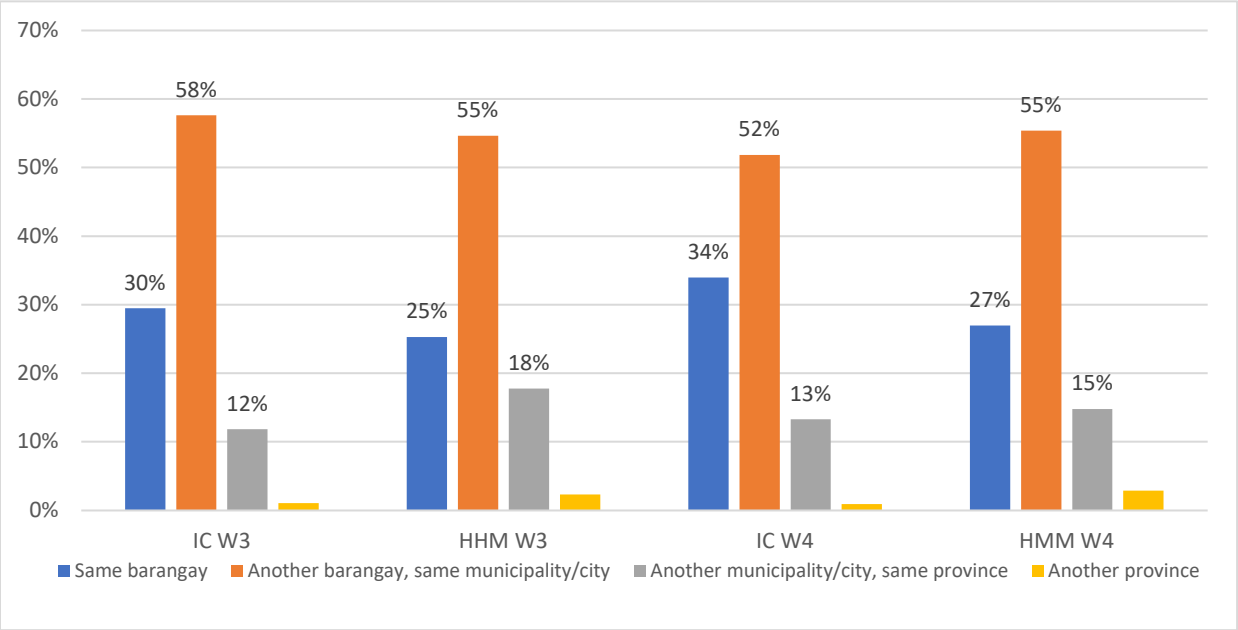


[#] IC refers to the LCSFC index children or the cohort adolescents; HHM=household members other than the cohort adolescents

For Wave 3, private doctors are approached more for urban (36%) than rural (22%) adolescents, a substantial difference in relative magnitudes. For these consultattions, government midwives were also more preferred in rural (16%) vs urban (3%) areas. For other household members, private doctors were more likely to be consulted by urban households compared to those in rural areas (41% vs 21%, respectively). Just as with adolescent consultations, government midwives were sought more in rural areas (12%) vs urban (4%) areas. Similar patterns were observed in Wave 4. Private doctors are consulted more for adolescent illnesses in urban than rural areas (40% vs 23%, respectively). Government nurses and midwives are consulted more in rural areas (11% and 15%, respectively) than in urban areas (4% and 2%, respectively). For other household member consultations. private doctors are consulted more for urban areas than urban areas (47% and 33%, respectively). Government nurses and midwives were similarly preferred in rural areas (7% and 11%, respectively) compared to those in urban areas (both at 3%).

Figure 5.14 shows the locations of the health care practitioners consulted. These patterns may indicate the proximity of health care practitioners and the preference of the consulting patient for proximate practitioners. Slightly more than half of healthcare practitioners consulted were in the same city or municipality but in another barangay. This is the case for both adolescent and other household member consultations. For Waves 3 and 4 there also appears to be a slightly higher tendency for adolescent consultations to be done within the same barangay compared to consultations of other household members.

Figure 5.14. Locations of Health Care Practitioners Consulted, Waves 3 and 4[#]

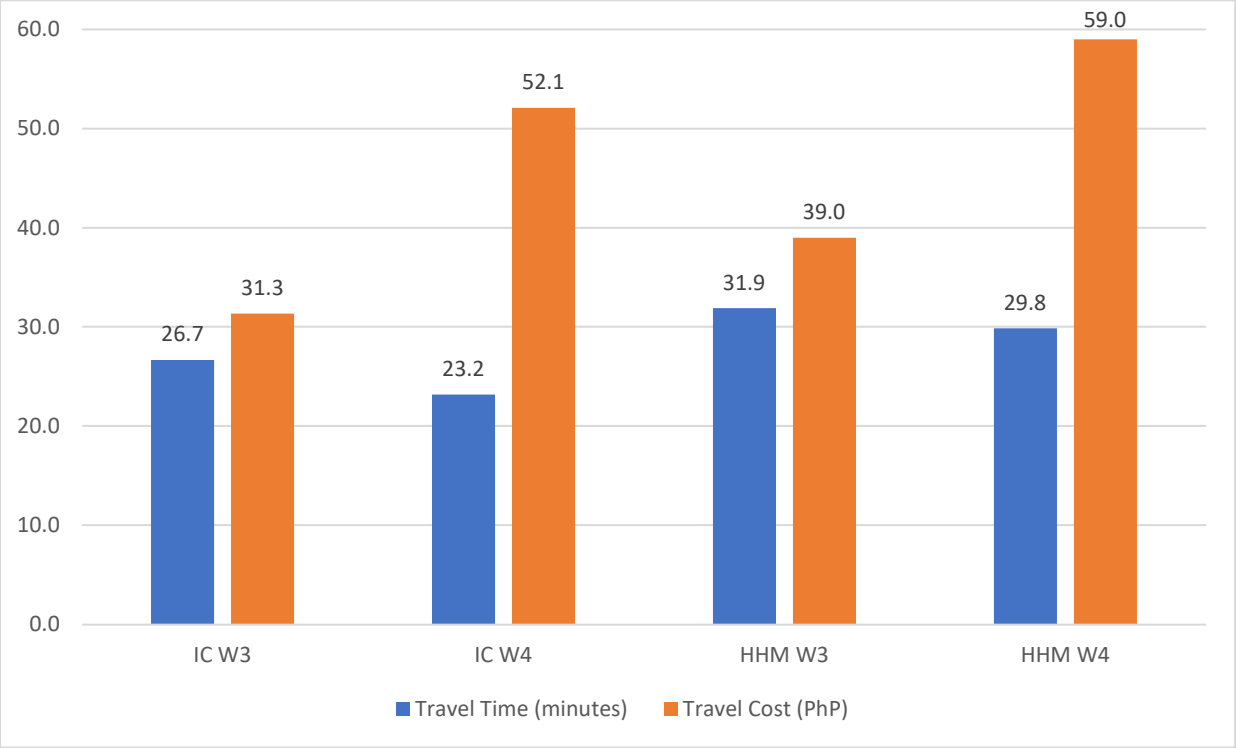


[#] IC refers to the LCSFC index children or the cohort adolescents; HHM=household members other than the cohort adolescents

Travel costs, explicit and implicit (costs as indicated by travel time to destination) have been shown to significantly affect health care utilization especially when other costs are nominally low or zero (El Omari and Karasneh, 2021). Figure 5.15 shows the mean travel times (in minutes) and costs in pesos for those seeking health care in Waves 3 and 4. In Wave 4, while travel time decreased compared to time spent in Wave 3, a substantial increase in mean travel cost was observed. These could help explain the lower rate of health care consultations in Wave 4. For all types of consultations, mean travel time and travel costs are lower for those living in urban areas. Mean travel cost for all types of consultations was substantially higher in the Visayas than in Luzon and Mindanao.

.

Figure 5.15. Travel Time and Cost of Travel to Health Care Practitioner Consulted, Waves 3 and 4[#]

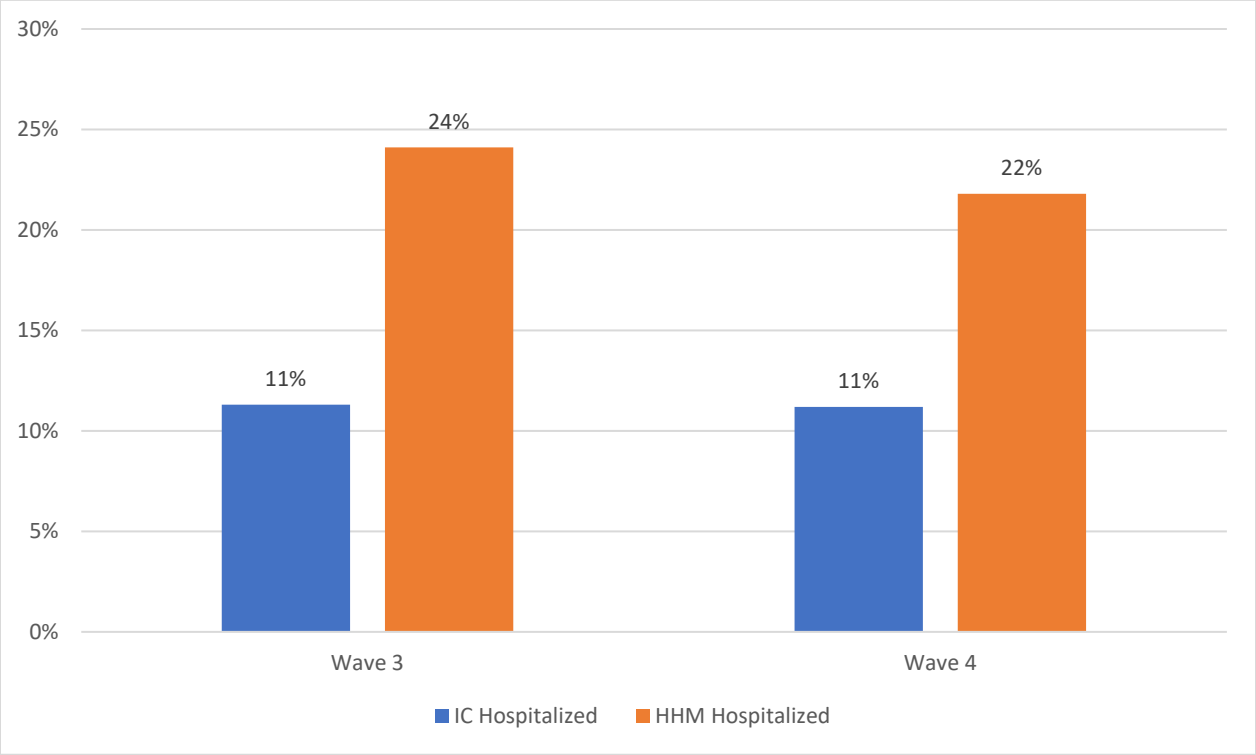


[#] IC refers to the LCSFC index children or the cohort adolescents; HHM=household members other than the cohort adolescents

Hospitalizations

Hospitalization data show little variation between Waves 3 and 4. Figure 5.16 shows the rates of hospitalization for illnesses in the 6 month period prior to survey visit.

Figure 5.16. Proportions of Households Reporting Hospitalization of Sick Members, Waves 3 and 4[#]



[#] IC refers to the LCSFC index children or the cohort adolescents; HHM=household members other than the cohort adolescents

For Wave 3, there is a significant difference in hospitalization rates for cohort adolescents across island groups. The rate for Mindanao (17%) is much higher compared to Visayas (10%) and Luzon (10%). There is no significant difference across rural and urban areas for index children. For other household members, a similar differentiation by island group is observed with Mindanao households reporting a higher hospitalization rate on the average (30%) compared to those in Visayas (23%) and Luzon (22%). No variation is observed as well between urban and rural areas for other household members. For Wave 4, the only significant difference observed is that of hospitalization rates for other household members across urban and rural areas. For this group of household members, urban area rates of hospitalization (19%) are lower than that for rural areas (26%).

In Table 5.2, we see the forms of financing used for hospitalization episodes prior to the pandemic, and type of household member affected. Paying out of pocket remains a major form of financing both on its own and in conjunction with PhilHealth coverage. Where national health insurance is intended to have universal coverage, we see in the table that coverage is still uneven across household members and waves of data collection.

For Wave 3 household member hospitalizations, the proportion who rely solely on PhilHealth is much less in Luzon (20%) than in the Visayas (45%) and Mindanao (48%). LGU financing is higher for the Visayas (7%) compared to Luzon (3%) and Mindanao (5%). Personal funding is much higher for Luzon (35%) compared to Visayas (15%) and Mindanao (11%). Personal funding with PhilHealth is lower for Visayas households (29%) compared to Luzon (34%) and Mindanao (30%).

For Wave 3 adolescent hospitalizations, PhilHealth only financing was much higher (57%) in rural areas compared to urban areas (21%). LGU financing is higher in urban areas (5%) compared to rural areas (1%). Personal financing is also significantly higher in urban areas (23%) versus rural areas (6%). Joint financing with PhilHealth and personal finances is higher for urban areas (46%) compared to rural areas (31%).

For Wave 4, there were no significant differences across island groups and urban/rural areas for hospitalization financing for adolescents and other household members. PhilHealth only financing is much lower in Luzon with higher proportions financing hospitalizations with private insurance (6%), personal funds (21%) and other government agencies (5%). Visayas households rely more on PhilHealth only financing (48%) with markedly lower incidence of personal fund use only (5%). Mindanao households have the highest proportion of LGU financing (12%) and the lowest level of joint personal and PhilHealth financing (25%).

Table 5.2. Financing for Hospitalization Episodes, Wave 3 and 4[#]

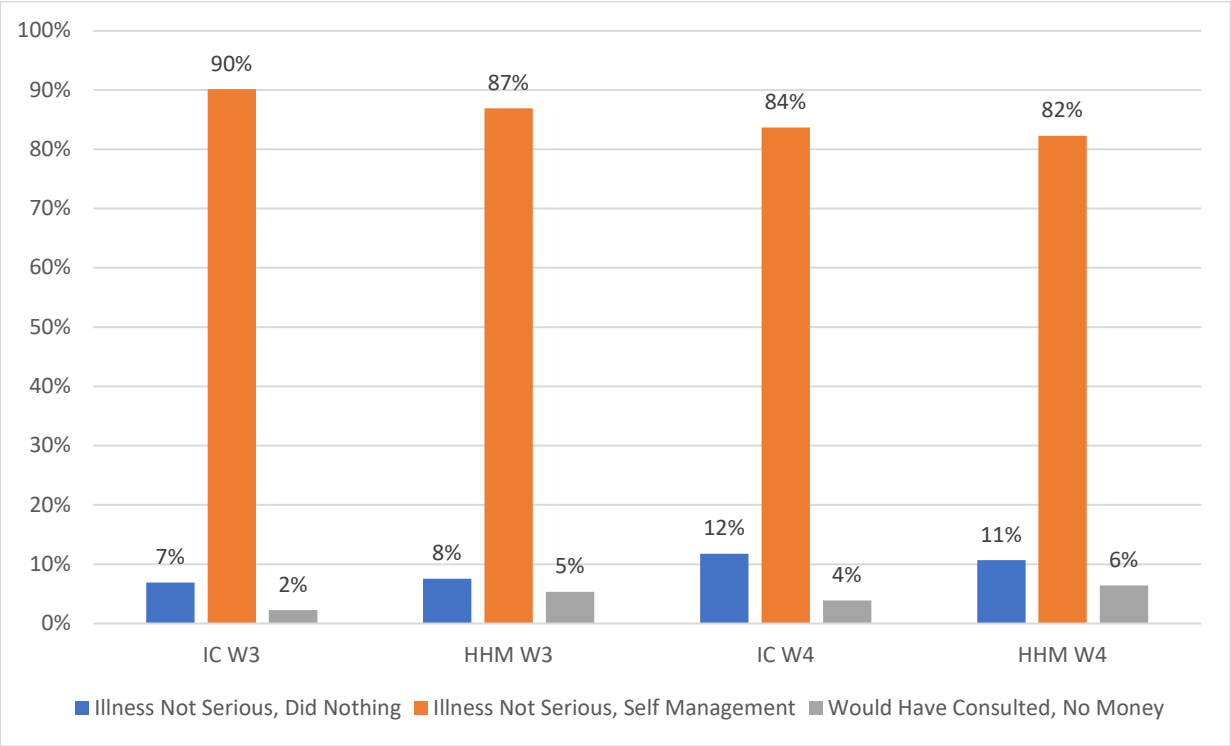
Financing for Hospitalization	Wave 3		Wave 4	
	Index Children (%)	Other Household Members (%)	Index Children (%)	Other Household Members (%)
Don't Know	-	0.3	-	0.5
Donations/sponsorship (private persons)	0.8	1.2	-	-
HMO	0.9	1.6	4.7	3.5
LGU health program	3.0	4.2	6.1	6.2
Other government agencies (DSWD, PCSO)	1.1	1.2	3.1	3.2
Personal cash only	13.6	23.6	11.5	16.9
PhilHealth and personal cash	37.7	31.8	14.9	30.8
PhilHealth and HMO	0.7	0.6	0.8	0.9
PhilHealth and LGU health program	1.8	2.1	1.1	0.1
PhilHealth only	40.5	33.2	57.8	37.8
Total	100.0	100.0	100.0	100.0
PhilHeath Coverage (alone or with other forms of finance)	80.7	67.8	74.6	69.7
Personal Financing (payment involved personal money)	51.3	55.5	26.5	47.7

[#] IC refers to the LCSFC index children or the cohort adolescents

Non-Consultations

For those that did not consult health care practitioners for their illnesses, Figure 5.17 shows the answers provided for both cohort adolescents and other household members across Waves 3 and 4. There is an extremely high tendency for self-management among these households based on an underlying judgement that the illness is not serious enough to warrant consultation with a health care practitioner. For consultations involving other household members, 25% of households in the Visayas chose to do nothing, compared to less than 10% for Luzon and Mindanao. This also lowered the proportion that did self- management for Visayas households to 70%. Households in Mindanao had a markedly higher proportion (10%) saying that having no money for consultations was the problem. This is double the proportion for the Visayas and Luzon for this wave.

Figure 5.17. Reasons for Not Consulting a Health Care Practitioner, Waves 3 and 4[#]



[#] IC refers to the LCSFC index children or the cohort adolescents; HHM=household members other than the cohort adolescents

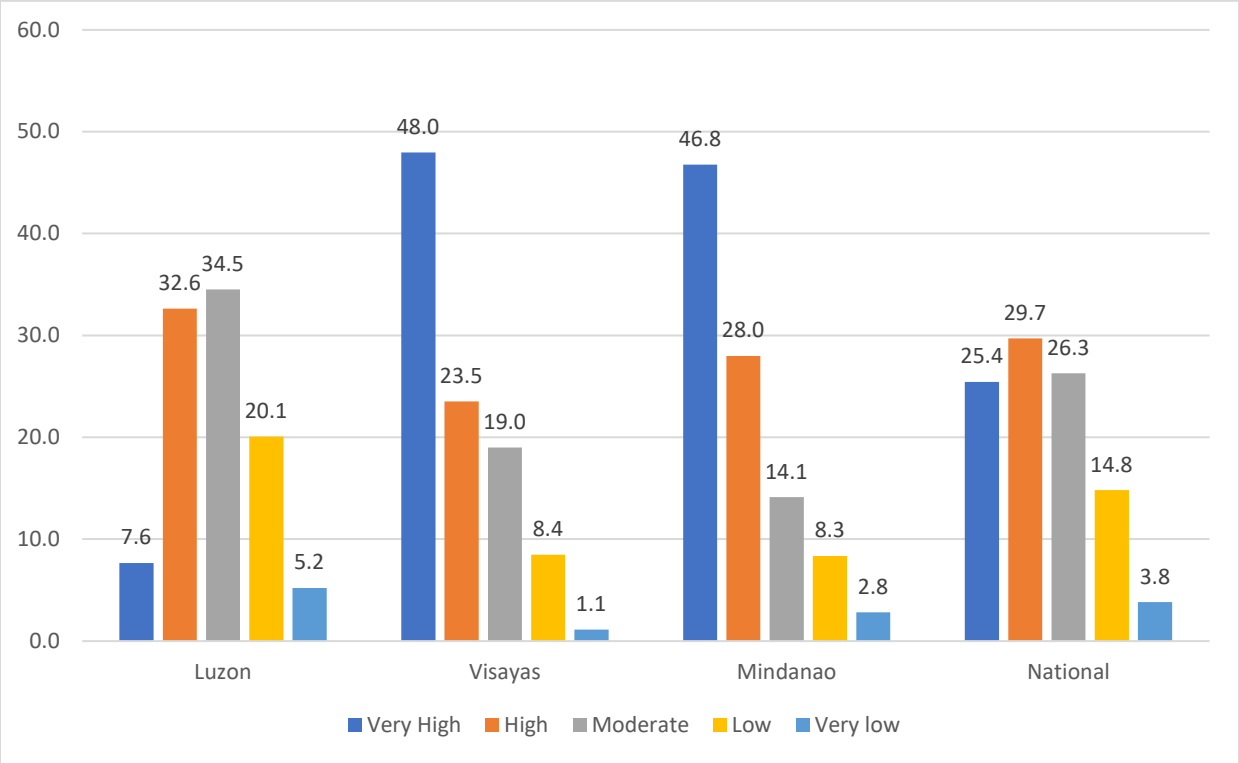
C.2 Health Care Utilization during the Pandemic Period

The LCSFC conducted a brief phone survey in November 2020 (Wave 4A) to touch base on the cohort on how they were faring during the pandemic. Towards the end of November 2020, confirmed COVID-19 cases had increased to 422, 915, the bulk of which was coming from the National Capital Region (NCR) and Calabarzon (WHO, 2020). For the whole of November 2020, quarantine classifications ranged from Modified General Community Quarantine to General Community Quarantine, the two lowest and least restrictive categories at that time (IATF, 2020).

Health care utilization during the pandemic was examined considering both demand and supply side factors. Demand side factors include the preference for health care contingent primarily on the perception of the gravity of the illness and the fear of contagion, constraints on utilization indicated by household purchasing power and the costs of accessing health care in terms of travel and time, and perceptions of supply side disruptions in health care services.

The perception of COVID-19 as a threat to health at that time would affect health care utilization in several ways. For one, the graver the perception of the health threat, especially among those experiencing symptoms, the higher the likelihood of utilization. However, fear of contagion could also dampen the desire to seek care. Figure 5.18 shows the levels of threat perception by island group. These observed differences are statistically significant ($p<0.01$). It is worth noting that the Luzon households would appear to perceive COVID-19 as less of a health threat compared to households from Mindanao and Visayas when at this time 65% of confirmed cases came from the NCR and Calabarzon (WHO, 2020). There is no significant difference in terms of health threat perception of COVID-19 between urban and rural areas for this survey.

Figure 5.18. Perception of COVID-19 as a Health Threat by Island Group[#], Wave 4A Phone Survey[##]



[#]Significantly different across domains $p<0.01$ [##]Weighted proportions per Wave

The household's source of information regarding COVID-19 could play an important part in forming perceptions of the disease as a threat, and consequently influence health care seeking decisions. Table 5.3 shows the various sources of information for the households and the source on which they relied most.

Table 5.3. Sources of Information on COVID-19, Wave 4A Phone Survey[#]

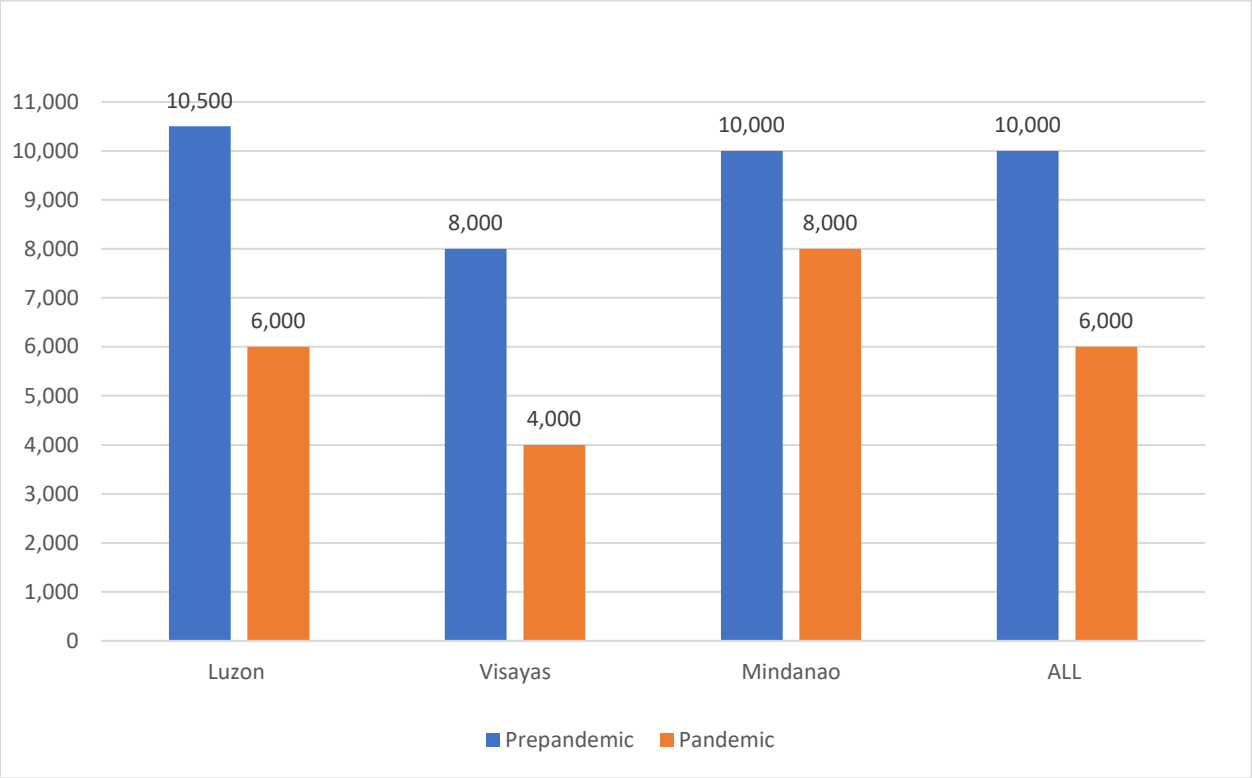
Source	Cited as Source of Information[##]	Source of Information Most Relied On
TV	86	64
Radio	38	10
Newspapers/magazines	2	0
Health personnel	5	2
Family/relatives/friends	15	2
Online, Facebook	44	11
Online, YouTube	5	1
Online, Other social media sites	4	1
Government officials (local/national)	22	9

[#]Weighted proportions (% of households) [##] Question allowed for multiple responses

Information from television shows was the most cited source and also considered the most reliable. The online social media platform Facebook was cited next but had a lower reliability rating. Radio was rated similarly. Government officials also ranked low in terms of reliability.

As the pandemic response centered around lockdowns to minimize personal interaction, the consequent reduction in economic activity affected household incomes. Estimates of income elasticity for healthcare tend to show that health care is a normal good but a necessity, with utilization increasing little in relation to changes in income (Acemoglu et.al 2013). Large reductions in household income are likely to significantly reduce health care utilization. The survey also asked the respondents to estimate their average household monthly incomes before the pandemic (before March 2020) and during the pandemic (since March 2020). Figure 5.19 shows the median peso difference between both income amounts, stratified by island group. An overall income reduction of 40% was calculated, with households in the Visayas (50%) and Luzon (43%) experiencing the most reduction, compared to those in Mindanao (20%). Another indicator of reduced purchasing power is the household's ease or difficulty in meeting expenses. Data shown in Figures 2.8 and 2.9 of Chapter 2 reveal that the proportion of households expressing difficulty in meeting expenses doubled between the pre-pandemic survey (Wave 4, Q1 2020) and the early pandemic round (Wave 4A, Q2 2020).

Figure 5.19. Changes in Median Household Monthly Income between Pre-Pandemic and Pandemic Periods, Wave 4A Phone Survey



Household Experiences with COVID-19 Symptoms and Consequent Health Care Utilization

Fifteen percent of households experienced COVID-19-like symptoms of which cough, colds, and fever were the most common and were cited by 61%, 49%, and 33 % of these households, respectively. It is worth noting that these symptoms were also cited in pre-pandemic survey rounds as the most common symptom presentations of illnesses. About 22% of the cohort adolescents were among those reported experiencing COVID-19-like symptoms (only 2% were tested for the virus). A higher proportion of households in Mindanao (20%) reported experiencing symptoms compared to Luzon and Visayas (both 13%). The corresponding rate in urban areas (20%) is double that of rural areas (10%). On the average, two household members were afflicted with COVID-19-like symptoms in the reference period. There is a low incidence of testing for COVID-19 reported for this survey.

For households that experienced COVID-19-like symptoms, 30% consulted a health care practitioner. This rate is lower compared to pre-pandemic rates reported for Waves 3 and 4 (see Figure 5.12). More households in Luzon (40%) sought health care for these COVID-19-like symptoms compared to the Visayas (23%) and Mindanao (19%). The health care practitioners consulted were predominantly employed in government institutions (63%) with the remainder from the private sector. This is consistent with pre-pandemic division among private and public sector practitioners. Common means of reaching the health care facility were walking (27%), tricycles (20%), private motorcycles (18%), private vehicles, and government vehicles (both 8%). About 9% of the households conducted the consultation by phone or online, a rather small proportion given that 80% of the households in Wave 4A had access to the internet,

and in Wave 4 more than 90% owned a cellphone. Only four households reported having household members hospitalized for COVID-19.

Among the reasons cited for not seeking health care for COVID-19-like symptoms were self-medication/management (66%), fear of contracting the virus (21%), fear of COVID-19 diagnosis being confirmed (4%), and lack of finances (1%). About 12% of the households did nothing to address these symptoms. The penchant for self-medication/management due to perceived lightness of symptoms was also observed in the pre-pandemic survey rounds.

Household Experiences with Non-COVID-19 Illnesses and Health Care Utilization

Given that worldwide and Philippine trends had pointed to lower health care utilization for non-COVID-19 cases, as previously discussed, verifying this trend with the Wave 4A data would be helpful. About 26% of the households surveyed in Wave 4A reported having household members with non-COVID-19 illnesses. Of these households, 44% consulted a health care practitioner. This rate is lower than the rate generally reported for consultations in pre-pandemic times (Figure 5.12). Households in the Visayas had a higher rate of consultations for non-COVID-19 illnesses (55%) compared to those in Luzon (44%) and Mindanao (38%). Government practitioners were the most consulted (54%) followed by private practitioners (40%). A small portion consulted traditional healers (4%). No significant difference was found for these rates across island groups and urban/rural stratum. The dominant modes of travelling to these health care practitioners were tricycles (26%), walking (16%), private motorcycles (16%), private vehicles (14%), and government vehicles (7%). Three percent of households with non-COVID-19 illnesses consulted through the telephone or the internet.

Policy Implications

These LCSFC findings point to important implications for policy action. Firstly, the need for coherent messaging is seen to be crucial given certain findings. Communication channels are important in this regard. TV had the highest citation as a source of information. This media channel had the highest trust rating among respondents and must be utilized efficiently and intensively going forward if present trends continue. However, there are indications of the increasing importance of internet channels which at the time of the survey still had low trust levels. Proper attention must be given to the internet as a source of public health information that is coherent, reliable, and understandable. The finding that low threat perception was prevalent in Luzon during the time that it accounted for the bulk of cases points to a communications gap that could have been better handled. The added fear of contagion in health care facilities could also be properly addressed by communications interventions emphasizing the observance of health care protocols in such facilities.

Health care utilization rates in the form of visits to a health care practitioner for illnesses had a decreasing trend for the cohort adolescents and a relatively stable rate for other household members in the pre-pandemic waves. As the policy literature for the Philippines bemoans the low levels of utilization even prior to the pandemic, this does not bode well even without the pandemic. The uneven utilization in favor of Luzon households also points to a prerogative for offsetting action that prioritizes the Visayas and Mindanao. The reduction in health care utilization rates for both COVID19 and non- COVID 19 cases during the early pandemic only provides more evidence of impending welfare losses from postponed or under-utilized health care systems as estimated in Ulep (2021). Setting public health system features that will offset or mitigate these reductions can be pro-actively set up. As public health practitioners remain the

primary health care providers consulted at the instance of disease, ensuring availability of health human resources in the public sector remains essential. Where feasible, public health practitioners can be complemented by investments in complementary capital such as an online or phone-based consultation system. This will address both the normal period difficulties in health access due to the lack of facilities in the proximate area of the potential patient. The fact that in the pre-pandemic waves, consultations within the barangay only accounted for a third or less of consultations points to travel over distances that might be prohibitive and discourage access even when health care is nominally free at government facilities as argued by El Omari and Karasneh (2021). Access to laboratories and other diagnostic procedures should also be ideally offered in strategic locations to balance scale and access considerations.

To have such large proportions of households engaging in self-management of illness requires a further look into the determinants of this behavior. Health care is notoriously insensitive to price and income for indigent patients in developing countries such that preferences and non-monetary constraints, such as time costs of waiting and travel, could be ultimately behind the reason why sick people self-medicate. However, when there is room to encourage health care utilization as would be appropriate where adverse preferences and non-monetary constraints are minimal or not binding, the uneven coverage of national social health insurance is a gap that needs to be addressed. This would happen as universal health care financing ramps up and becomes fully implemented. Both purchasing power and time costs have been adversely affected by the pandemic, particularly by safety measures implemented in response to the pandemic. LCSFC results showing that walking or riding a tricycle were the common forms of travelling to consultations indicate the heightening of travel restrictions during the pandemic. The use of tricycles is notable as it provides a mix of low passenger density transport for hire with sufficient flexibility in routes. However, during the pandemic, there was some confusion as to whether this form of transportation would be allowed to operate. The same confusion was seen in whether taxi cabs would be allowed. Taxi cabs also offer the higher convenience and low density use with sufficient safeguards possible (like opening windows). There was also a debate on whether private motorcycles would be allowed to carry multiple passengers.

Mitigating the impending losses due to heightened morbidity and mortality and building resilience and flexibility would be the order of subsequent policy response. Understanding the drivers of health care utilization in greater detail will help inform these initiatives especially for households with children and adolescents.

REFERENCES:

Acemoglu, D, Finkelstein, A, Notowidigdo M. 2013. Income and Health Spending: Evidence from Oil Price Shocks. Review of Economics and Statistics. Vol. 95(4). Retrieved from: https://economics.mit.edu/sites/default/files/publications/Income%20and%20Health%20Spending%20-%20Evidence%20from%20Oil%20Pri.pdf

Ahmed ,T.,Roberton, P., Vergeer, P., Hansen, P., Peters, M., Ofosu, A., Mwansambo, C., Nzelu, C., Sanford, C., Wesseh, C., Smart, F., Alfred, J., Diabate, M., Baye, M., Yansane, M., Wendrad, N., Mohamud, N., Mbaka, P., Yuma, S., Ndiaye, Y., Sadat, H., Uddin, H., Kiarie, H., Tsihory, R., Mwinnyaa, G., Rusatira, J., Fernandez, R., Muhoza,P., Baral, P., Drouard, S., Hashemi, T., Friedman,J., Shapira, G. 2022. Healthcare utilization and maternal and child mortality during the COVID-19 pandemic in 18 low- and middle-income countries: An interrupted time-series analysis with mathematical modeling of administrative data. PLOS Medicine 19(8): e1004070. https://doi.org/10.1371/journal.pmed.1004070

Department of Health (DOH). 2020. Philippine Health Facility Development Plan 2020-2040. Accessed at:https://doh.gov.ph/sites/default/files/publications/DOH_PHILIPPINE%20HEALTH%20FACILITY%20DEVELOPMENT%20PLAN%202020_2040_0.pdf

El Omari, S. and Karasneh, M. 2021. Social health insurance in the Philippines: do the poor really benefit? Journal of Economics and Finance (2021) 45:171–187. Retrieved from: https://doi.org/10.1007/s12197-020-09525-5

Inter-Agency Task Force for the Management of Emerging Infectious Disease (IATF). 2020. Resolution No. 81. Retrieved from: https://www.officialgazette.gov.ph/downloads/2020/10oct/20201026-IATF-Resolution-81-RRD.pdf

Karra M., Fink G. and Canning D. 2017. A multi-country study of health facility access, service utilization, and child health outcomes. *International Journal of Epidemiology, 46*(3), 817–826. pmid:27185809. Retrieved from: https://doi.org/10.1093/ije/dyw062

Kelly C., Hulme, C., Farragher, T. and Clarke, G. 2016. Are differences in travel time or distance to healthcare for adults in global north countries associated with an impact on health outcomes? A systematic review. BMJ Open 2016;6:e013059. Retrieved from: 10.1136/bmjopen-2016-013059

Moynihan R, Sanders S, Michaleff ZA, Scott AM, Clark J, **To EJ**, Jones M, Kitchener E, Fox M, Johansson M, Lang E, Duggan A, Scott I, Albarqouni L. 2021. Impact of COVID-19 pandemic on utilisation of healthcare services: a systematic review *BMJ Open* 2021;**11:**e045343. Retrieved from: 10.1136/bmjopen-2020-045343

Philippine Statistics Authority (PSA). 2022a. SDG Watch Philippines: Goal 3. Accessed at: https://psa.gov.ph/sdg/Philippines/baselinedata/3%20Good%20Health%20 and%20Well-being

_____. 2022b. The Philippine Sustainable Development Goals Pace of Progress Report 2022. Accessed at: https://psa.gov.ph/system/files/2022%20SDG%20Pace%20of%20Progress%20Results%20Infographics_0.pdf

Rezapour, R., Dorosti, A.A., Farahbakhsh, M., Azami-Agdash, S.,Iranzad, I. 2022. The impact of the COVID-19 pandemic on primary health care utilization: an experience from Iran. *BMC Health Serv Res* 22, 404. Retrieved from: https://doi.org/10.1186/s12913-022-07753-5

Ulep, V. 2021. Examining The Health Impacts Of The COVID-19 Pandemic In The Philippines. Retrieved from: https://serp-p.pids.gov.ph/avmaterial/public/view?slug=examining-the-health-impacts-of-the-covid-19-pandemic-in-the-philippines

United Nations. 2022. The Sustainable Development Goals Report 2022. Retrieved from: https://unstats.un.org/sdgs/report/2022/The-Sustainable-Development-Goals-Report-2022.pdf

United Nations. 2015. Transforming Our World: The 2030 Agenda for Sustainable Development. Retrieved from: https://sdgs.un.org/sites/default/files/publications/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

World Health Organization (WHO). 2020. COVID-19 in the Philippines Situation Report 63. https://www.who.int/philippines/internal-publications-detail/covid-19-in-the-philippines-situation-report-63

Xiao, H., Dai, X., Wagenaar, B.,Liu F., Augusto, O., Guo Y., Unger, J. 2021. The impact of the COVID-19 pandemic on health services utilization in China: Time-series analyses for 2016–2020. The Lancet Regional Health - Western Pacific Volume 9, April 2021, 100122. Retrieved from: https://doi.org/10.1016/j.lanwpc.2021.100122

Xu S, Glenn S, Sy L, Qian L, Hong V, Ryan DS, Jacobsen S. 2021. Impact of the COVID-19 Pandemic on Health Care Utilization in a Large Integrated Health Care System: Retrospective Cohort Study J Med Internet Res 2021;23(4):e26558. Retrieved from: https:// doi: 10.2196/26558

Chapter 6

SDG 3. Tracking Filipino Adolescents' Mental Health Status and Access to Care Before and During the COVID-19 Pandemic

Chapter 6

SDG 3. Tracking Filipino Adolescents' Mental Health Status and Access to Care Before and During the COVID-19 Pandemic

Delia E. Belleza[16] and Judith B. Borja[17]

Introduction

The World Health Organization refers to mental health as a "state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community" (WHO, 2022). It is an integral part of health and is crucial in determining quality of life and productivity. In recent years, even prior to the pandemic, there has been a growing concern over mental health trends globally, particularly among the adolescents. It is estimated that one in seven adolescents (10–19-year-olds) experience adverse mental health conditions (WHO, 2021), with depression and anxiety as the two most common mental health concerns among young people.

In the Philippines, the mental health of adolescents is of great concern. The Global School-Based Student Health Survey 2019 Fact Sheet on the Philippines (WHO, n.d.) revealed that the percentage of adolescents (ages 13-17) who seriously considered attempting suicide increased from 11.6% in 2015 to 23.1% in 2019. Those who attempted suicide were about 16.8% in 2015 and in 2019 it rose to 24.3%. Results from the recently concluded Young Adult Fertility Survey (UPPI, 2021) likewise show increasing trends in suicide ideation and suicide attempts among Filipino adolescents in the last decade.

The COVID-19 pandemic, which started in 2020, has led to a significant increase in the prevalence of these mental health conditions globally (WHO, 2022), with younger people more affected psychologically than adults (Hechanova et al., 2022; Tee et al., 2020; Malolos et al., 2021). The imposed safety restrictions, i.e., community lockdowns, home confinements of vulnerable populations including children and adolescents, and limited social interactions may have fostered a sense of social isolation among the youth. These conditions contributed to higher psychological distress (Aknin et al., 2022) and mental health issues (Fancourt et al., 2021). Added to this, the curriculum shift to online learning may have also led to adverse mental health consequences (Alibudbud, 2021). Aside from being deprived of the usual interactions with classmates and teachers, students had to deal with technological demands and information overload on their own without much peer support (Magsambol, 2020; Adonis, 2021).

Goal 3 of the United Nations Sustainable Development Goals includes mental health which acknowledges its important role in achieving the targets for health and well-being. This chapter describes the mental health status of Filipino adolescents and their access to mental health care before and during the COVID-19 pandemic using data from the Longitudinal Cohort Study on the Filipino Child (LCSFC).

[16] Professor, Department of Psychology, University of San Carlos, Cebu City; Email: debelleza@usc.edu.ph

[17] Consultant-Investigator, USC-Office of Population Studies Foundation, Inc., University of San Carlos, Cebu City; Email:judithborja@gmail.com

Measures

The Child Behavior Checklist (CBCL) and Youth Self Report (YSR), designed to be administered to parents and adolescents aged 11-18 respectively, were administered to assess mental health outcomes among the LCSFC cohort. These parallel instruments are part of the Achenbach System of Empirically Based Assessment (ASEBA) forms that measure competencies, adaptive functioning, and problem behaviors (Achenbach and Rescorla, 2001). This chapter focuses on CBCL and YSR items that constitute depressive and anxiety problem scales as defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM) (APA, 2013). The mental health status of the LCSFC cohort adolescents was measured starting at age 11 (Wave 2 conducted in 2018). In this wave the full CBCL questionnaire was administered to the cohort's mothers or primary caregivers. At age 13 (Wave 4 in Q1 2020), the YSR was administered to the cohort themselves. In the phone survey conducted in the early stage of the pandemic (Wave 4a in Q4 2020; cohort at age 14), with the mothers/caregivers as respondents, only specific CBCL items related to the DSM-oriented anxiety problem scales were asked. In the phone survey in the later part of the pandemic (Wave 5 in 2021; cohort at age 15), the YSR was again administered to the cohort adolescents. These measures capture the cohort's mental health status pre-pandemic (Waves 2 and 4) and during the pandemic (Waves 4a and 5).

Both the CBCL and YSR consist of 112 questionnaire items related to behavioral, emotional, social, and thought problems experienced by the adolescents within the past six months. The response categories and their numeric equivalents for each item range from "Not True" (scored as 0), "Somewhat/Sometimes True" (score:1), to "Very/Often True" (score: 2). When summed up, higher scores correspond to more severe mental health problems.

The DSM-oriented depression and anxiety problem scale items for YSR are listed in Table 6.1. Parallel items (from the perspective of mothers/caregivers) were used for CBCL. The items in these scales have been rated to be very consistent with DSM criteria for disorders (Achenbach, 2013). The numeric values for all responses in each scale were summed up to determine the respective depression and anxiety problem composite scores. These scores were further categorized into depression/anxiety severity levels: normal, borderline, and clinical range based on cut-off t-scores specific to age and sex defined by the Achenbach norming system.

Borderline range implies that scores are high enough to be of concern, signifying potential problematic behaviors, but not so high as to indicate clinical symptoms. While clinical range indicates the presence of clinical symptoms of the behavior. In the Achenbach scoring system, males have lower cut-off scores than females for severe categories in certain DSM scales, or that it takes a lower mean score for males to be classified as clinical or borderline compared to females.

Table 6.1. DSM-Oriented Problem Scale Items

Depressive Problems	Anxiety Problems
There is very little that I enjoy	*I'm too dependent on adults*
I cry a lot	*I am afraid of certain animals, situations, or places, other than school*
I deliberately try to hurt or kill myself	*I am afraid of going to school*
I don't eat as well as I should	*I am afraid I might think or do something bad*
I feel worthless or inferior	*I am nervous or tense*
I feel too guilty	*I have nightmares*
I feel overtired without good reason	*I am too fearful or anxious*
I sleep less than most kids	*I am self-conscious or easily embarrassed*
I sleep more than most kids during day and/or night	*I worry a lot*
I think about killing myself	
I have trouble sleeping	
I don't have much energy	
I am unhappy, sad, or depressed	

Results

This section presents the DSM-oriented depressive and anxiety problem scale results for all applicable waves, stratified by sex, island group (Luzon, Visayas and Mindanao), and urban/rural residence. Comparing CBCL against YSR results presents the limitation of comparing scores derived from different respondents. Studies have shown variations in cross-informant agreement between parents' and adolescents' reports (Rescorla et al., 2013; Wang et al., 2014; Mbekou et al., 2015). Assessments may also vary at different ages. Congruence analysis on ratings done by mothers/caregivers versus adolescents is currently being done by the LCSFC team.

Depressive Problem Scale

The depressive problem scale scores were obtained in Wave 2 (age 11), Wave 4 (age 13) and Wave 5 (age 15). Table 6.2 shows the summary of the scores across the three waves and stratifications. Mean scores significantly increased between Wave 2 and Wave 4; these plateaued between Wave 4 (immediate pre-pandemic period) and Wave 5 (later pandemic). This sharp increase in scores between Wave 2 and Wave 4 may be attributed to the following: a) differences in perspectives; in Wave 2, mothers/caregivers assessing adolescents to be less prone to depression compared to how the adolescents rated themselves in Waves 4, and b) true escalation of depressive symptoms due to the adolescents' transition into more mature pubertal stages (McGuire et al, 2019) starting in Wave 4 at age 13. This pubertal transition has been characterized as a period of volatile emotions as adolescents experience physiological and emotional changes.

Table 6.2. Depressive Problem Scale Scores*

Categories	Wave 2 (n=4,709)	Wave 4 (n=3,036)	Wave 5 (n=4,118)
Mean Score**	2.5 ± 0.1	4.5 ± 0.1	4.4 ± 0.1
By Sex			
Male	2.6± 0.1***	4.2±0.1****	3.9±0.1****
Female	2.4±0.1	4.8±0.2	4.9±0.1
By Island Group			
Luzon	2.4±0.1[a]	4.5±0.2	4.2±0.1
Visayas	2.7±0.1	4.2±0.1	4.6±0.1
Mindanao	2.6±0.1	4.6±0.2	4.5±0.1
By Stratum			
Urban	2.6±0.1	4.5±0.2	4.7±0.1****
Rural	2.4±0.1	4.5±0.2	3.9±0.1

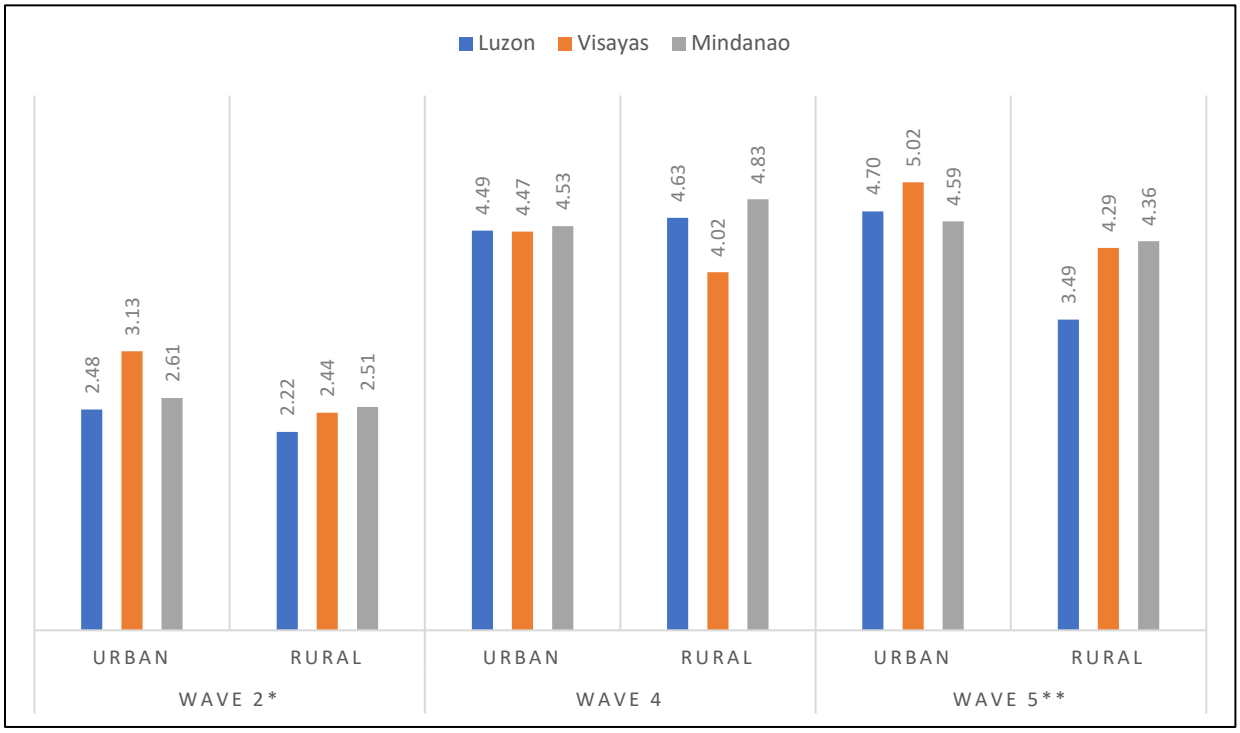
*Weighted results presented as mean ± standard error. Test for significant differences in means based on t-tests.
** Significant at: p<0.001 between Waves 2 and 4, and Waves 2 and 5 when means compared on a sample with complete data for all 3 waves (n=2,627); *** at p<0.05, **** at p<0.001, [a] at p<0.05 between Luzon and Visayas

Significant differences were also observed between males and females, with females having higher mean scores starting in Wave 4. This sex difference is consistent with reports from other studies (Campbell et al, 2021) and has been associated with differences in pubertal timing and experiences with females maturing earlier than males (Stumper and Alloy, 2021). Table 6.2 shows that in Wave 5, at age 15, the mean depressive problem score among the males decreased while this slightly increased among the females.

In terms of island groups, in Wave 2 the mean score in Luzon was lower than in Visayas and Mindanao but scores across island groups were not significantly different in later waves. The mean scores in the Visayas showed an increasing trend across waves unlike in Luzon and Mindanao where the mean scores slightly decreased by Wave 5. Urban adolescents had a significantly higher mean score than their rural peers at age 15. Mean scores among rural adolescents decreased to 3.94 in Wave 5 from 4.50 in Wave 4.

Figure 6.1 compares mean depressive problem scale scores between urban/rural adolescents within island groups. Results show that, except for Luzon and Mindanao in Wave 4, rural adolescents have lower mean scores than their urban counterparts. Across Luzon, Visayas and Mindanao, mean scores increased from Wave 2 to Wave 5 among urban adolescents while mean scores of those in the rural areas decreased in Wave 5 except in the Visayas.

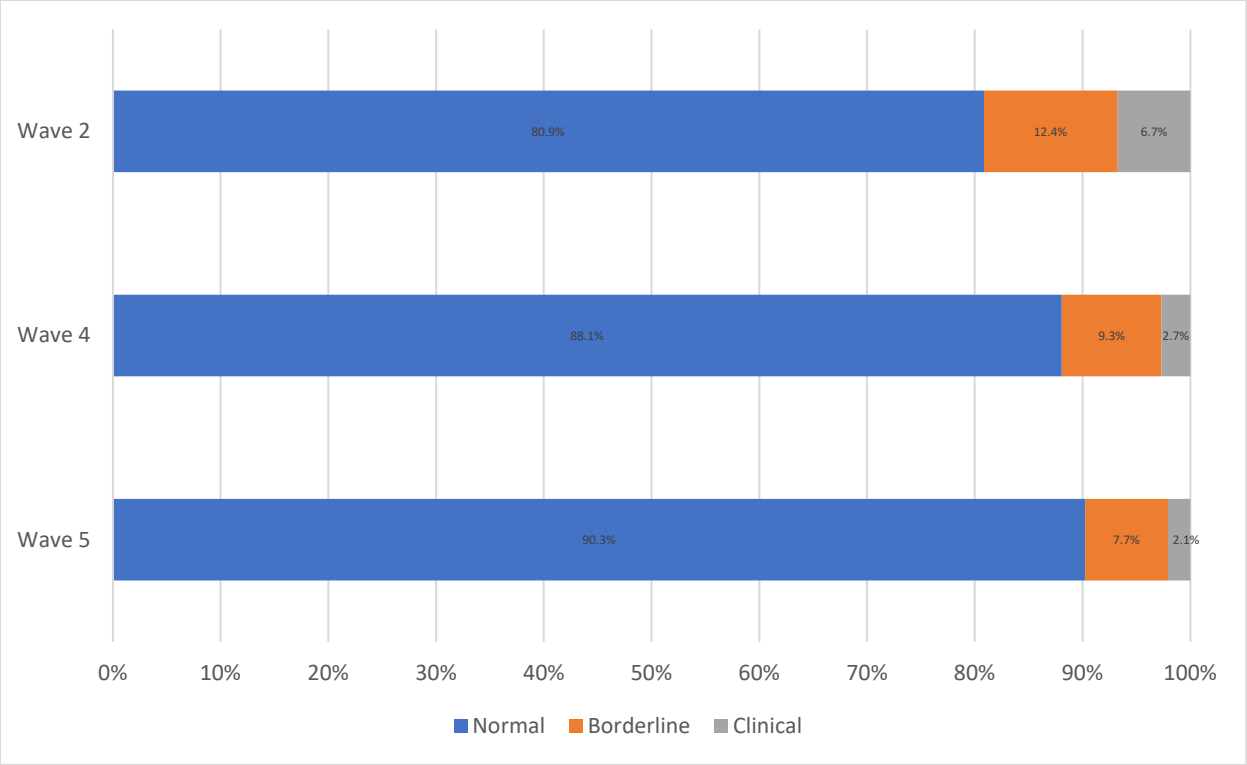
Figure 6.1. Depressive Problem Scale Mean Scores by Urban/Rural Stratum and Island Group



*Significant at p<.000 Visayas Urban/Rural
**Significant at p<.000 Luzon Urban/Rural, p<.007 Visayas Urban/Rural

Figure 6.2 shows the distribution across waves when scores are classified into three categories of severity in the depressive problem scale. This figure shows data on adolescents with complete data in all three waves and thus illustrates the true trend in levels of severity over time. The proportions classified as clinical or borderline significantly decreased between Waves 2 and 4, and those falling under normal range increased, reflective of the pattern seen in mean scores. The proportions classified as borderline or normal continued to significantly decrease between Waves 4 and 5. Thus, although there was an increase in mean scores as adolescents entered more mature pubertal stages (see Table 2), they were unlikely to be classified in the clinical range by ages 13 and 15.

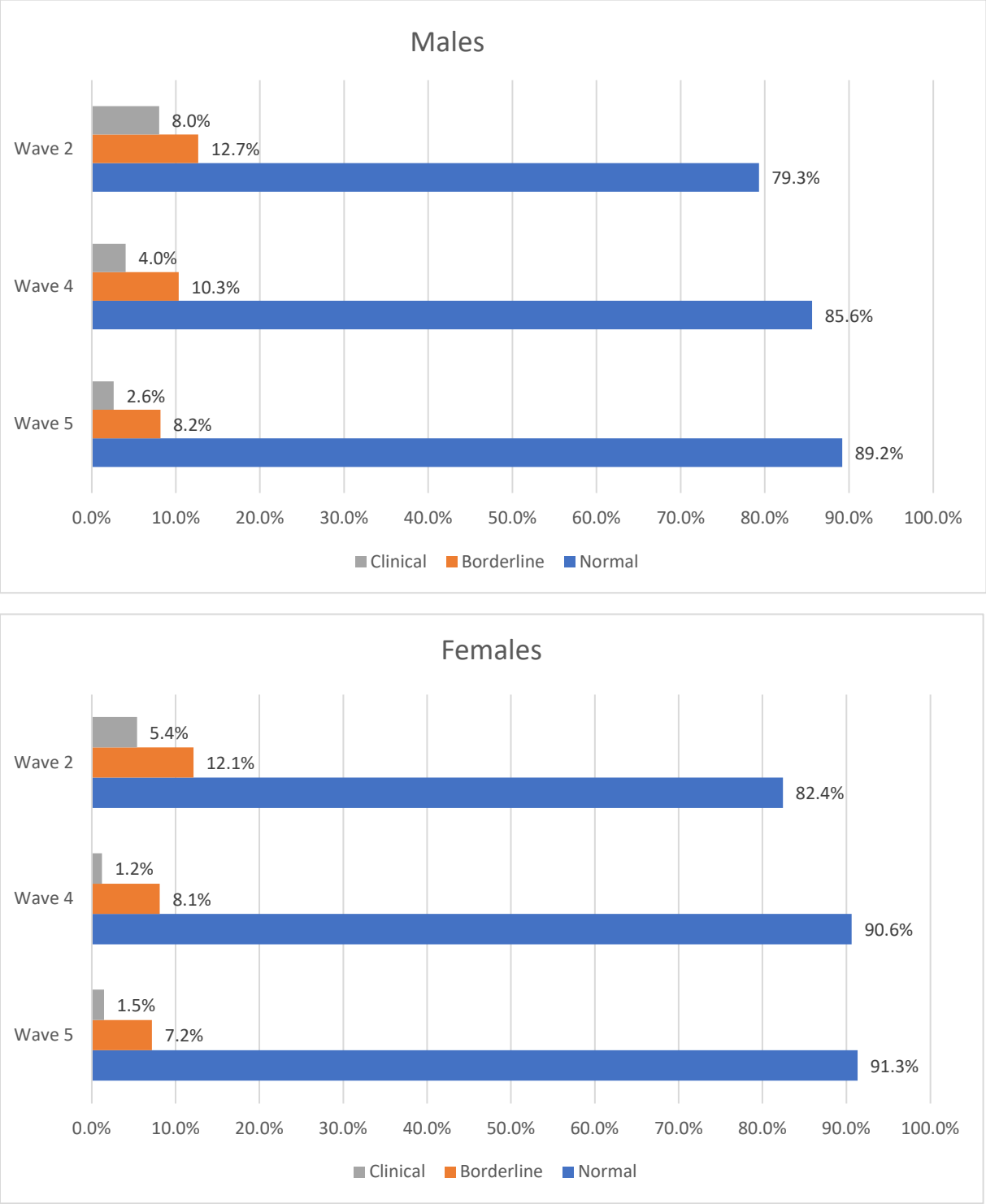
Figure 6.2. Depressive Problem Scale Categories by Wave (n=2,627)*



*Unweighted proportions across waves using sample with complete data. Except for the proportions in clinical range between Waves 4 and 5, the proportions in each category significantly changed over time (significant at $p<0.05$ based on chi-square tests of independence).

In terms of distribution by sex (Figure 6.3), the same decreasing trend over time is seen in the clinical and borderline ranges, and increasing trend in the normal range. Noticeable though is the relative high proportion of males than females who were classified in the clinical range, despite the decreasing trend in mean scores shown in Table 6.2. This is partly explained by the fact that males have lower cut-off scores than females for both the clinical and borderline ranges particularly with YSR.

Figure 6.3. Depressive Problem Scale Categories Across Waves by Sex (n=2,627)*



*Unweighted proportions across waves stratified by sex using sample with complete data. Among females, the proportions in each category significantly changed between Waves 2 and 4 but not between Waves 4 and 5. Among males, except for proportions in borderline range between Waves 2 and 4, the proportions in each category significantly changed over time. Significant at $p<0.05$ based on chi-square tests of independence.

Anxiety Problem Scale

The DSM-oriented anxiety scale items were administered in four waves: Wave 2 (age 11), Wave 4 (age 13), Wave 4a (age 14) and Wave 5 (age 15). Table 6.3 shows the mean scores across the waves and stratifications. Anxiety problem scale mean scores significantly increased between age 11 and age 15, particularly between the early (Wave 4a) and later (Wave 5) stages of the pandemic.

Looking at the distribution by sex, female adolescents' anxiety mean scores were higher than the males at age 13 (Wave 4) and age 15 (Wave 5). This is consistent with the literature pointing to adolescent females being prone to mental health problems as compared to males (Campbell et al., 2021) Among the island groups, mean scores generally increased during the pandemic except for Luzon which showed a slight decrease between Waves 4 and Wave 4a. Adolescents from Visayas and Mindanao had significantly higher mean scores than those from Luzon, with the values in Mindanao slightly higher than in the Visayas. No significant differences were detected between urban/rural residence. There was no change in mean scores in Wave 4 (immediate pre-pandemic) and Wave 4a (early pandemic). However, values were higher in the later stages of the pandemic (Wave 5).

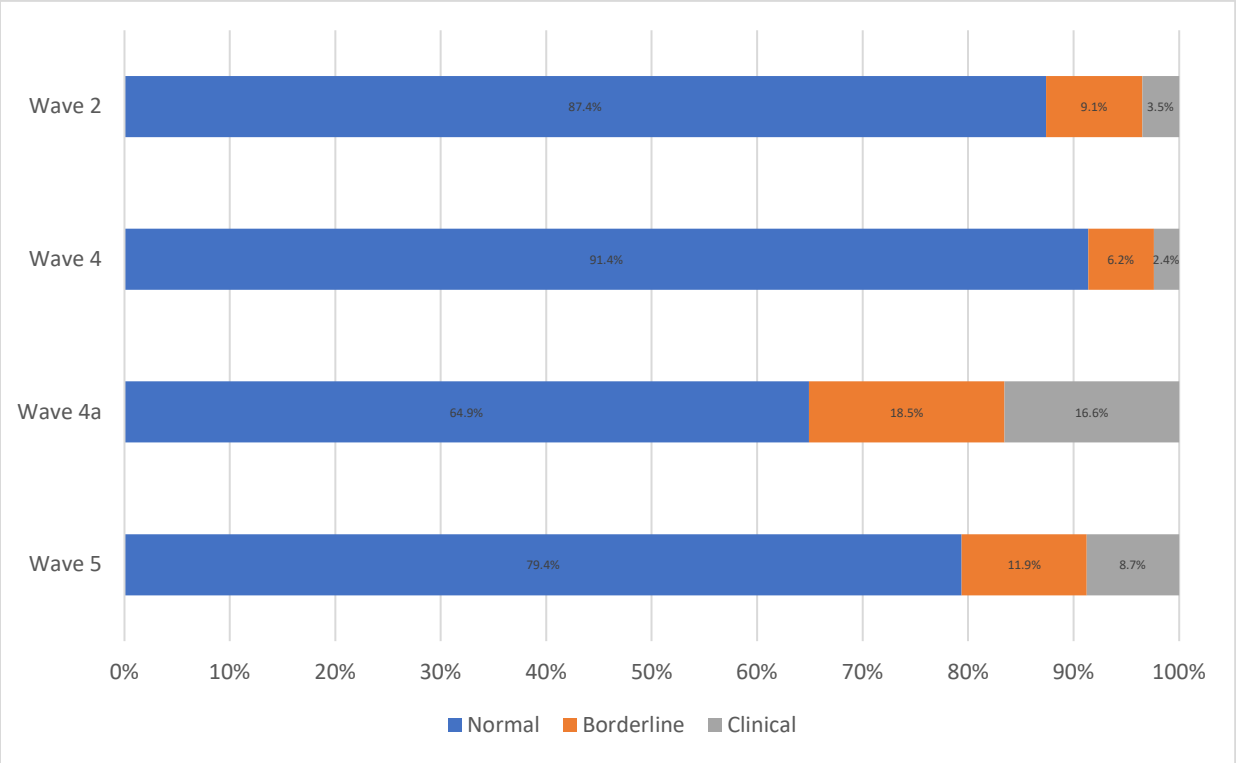
Table 6.3. Anxiety Problem Scale Mean Scores*

Categories	Wave 2 (n=4,714)	Wave 4 (n=3,036)	Wave 4a (n= 3,148)	Wave 5 (n=4,118)
Mean Score**	2.5±0.1	4.0±0.1	4.0±0.1	5.0±0.1
By Sex				
Male	2.6±0.1	3.7±0.1****	3.9±0.1	4.7±0.1****
Female	2.4±0.1	4.3±0.2	4.1±0.1	5.4±0.2
By Island Group				
Luzon	2.0±0.1[a,b]	3.4±0.1[a,b,c]	3.1±0.1[a,b]	3.6±0.1 [a,b,c]
Visayas	2.9±0.1	4.4±0.1	4.9±0.1	6.4±0.2
Mindanao	3.0±0.2	5.1±0.3	5.3±0.2	6.9±0.2
By Stratum				
Urban	2.6±0.1	3.9±0.2	3.9±0.1	5.1±0.2
Rural	2.4±0.1	4.1±0.2	4.1±0.1	4.9±0.2

*Weighted results presented as mean ± standard error. Test for significant differences in means based t-tests.
** Significant at: p<0.001 between Waves 2 and 4, Waves 2 and 4a, Waves 2 and 5, and Waves 4a and 5 when means compared on a sample with complete data for all 3 waves (n=2,047); *** at p<0.05, **** at p<0.001, at p<0.05
[a] between Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao

The anxiety problem scale scores were likewise categorized into normal, borderline, and clinical ranges. Figure 6.4 illustrates anxiety problem categories across the waves on a sample with complete data in all four waves, illustrating the true trend in levels of severity in this scale over time.

Figure 6.4. Anxiety Problem Scale Categories by Wave (n=2,047)

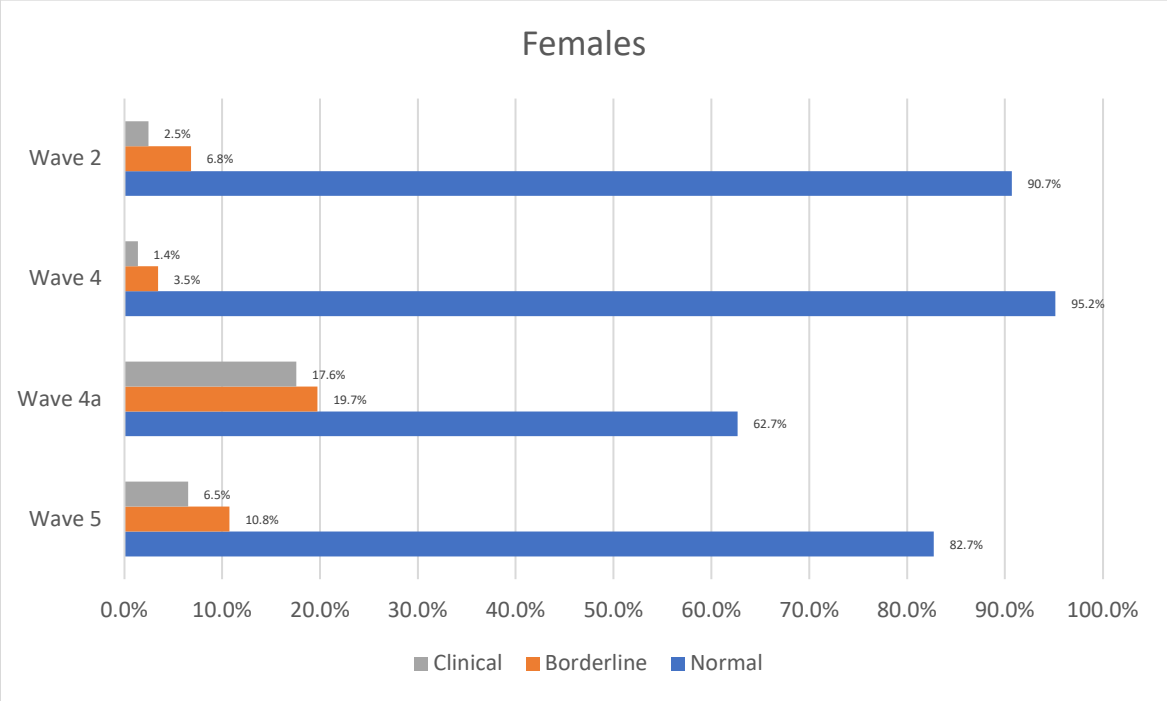


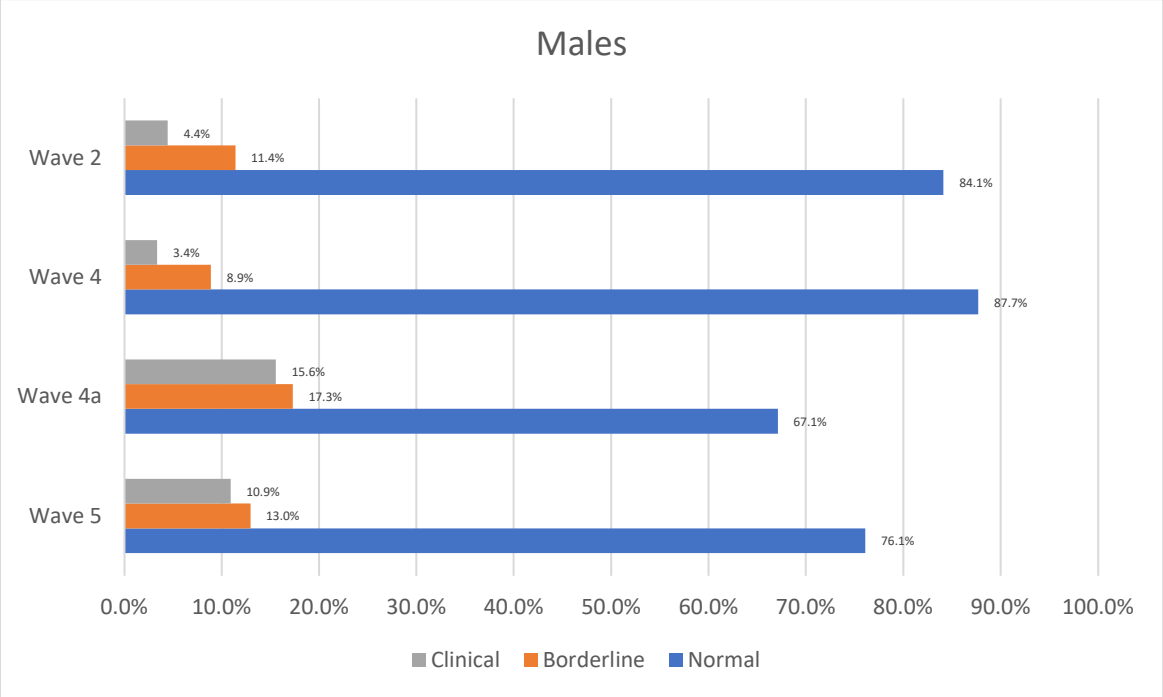
*Unweighted proportions across waves using sample with complete data. All the proportions in each category significantly changed over time (significant at $p<0.05$ based on chi-square tests of independence).

In the pre-pandemic period, the proportion of adolescents classified in the clinical range decreased to 2.4% in Wave 4 from 3.5% in Wave 2. However, by the early pandemic survey (Wave 4a), the proportion falling under this range sharply increased to 16.6%. In the later stage of the pandemic (Wave 5), the proportion decreased to 8.7% but was nevertheless higher than pre-pandemic values. The same pattern was observed with the borderline group. The decline in Wave 5 could be due to the adolescents' adaptation to the situation after having been exposed to the pandemic for a year.

The same trend was observed when comparing the distribution by sex (see Figure 6.5). Similar to the depressive problem scale results, higher proportions of males than females were classified as either clinical or borderline during the later stage of the pandemic or at age 15 despite males having significantly lower mean scores than females as shown in Table 6.3. Once again, this is explained by the fact that males have lower cut-off scores than females for severe categories.

Figure 6.5. Anxiety Problem Scale Categories Across Waves by Sex (n=2,047)*





*Unweighted proportions across waves stratified by sex using sample with complete data. Among females, except for those within clinical range between Waves 2 and 4, the proportions in each category significantly changed over time. Among males, except for proportions in clinical or borderline range between Waves 2 and 4, the proportions in each category significantly changed over time. Significant at $p<0.05$ based on chi-square tests of independence.

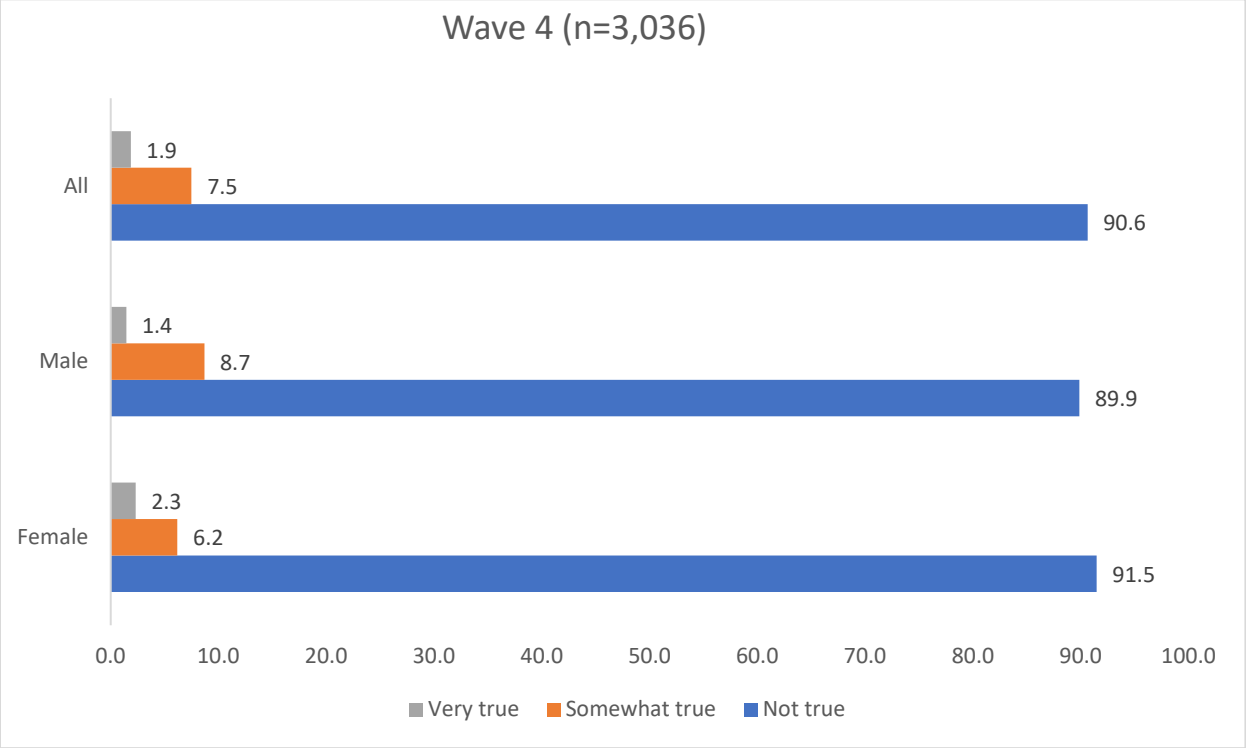
Suicide Attempt and Ideation

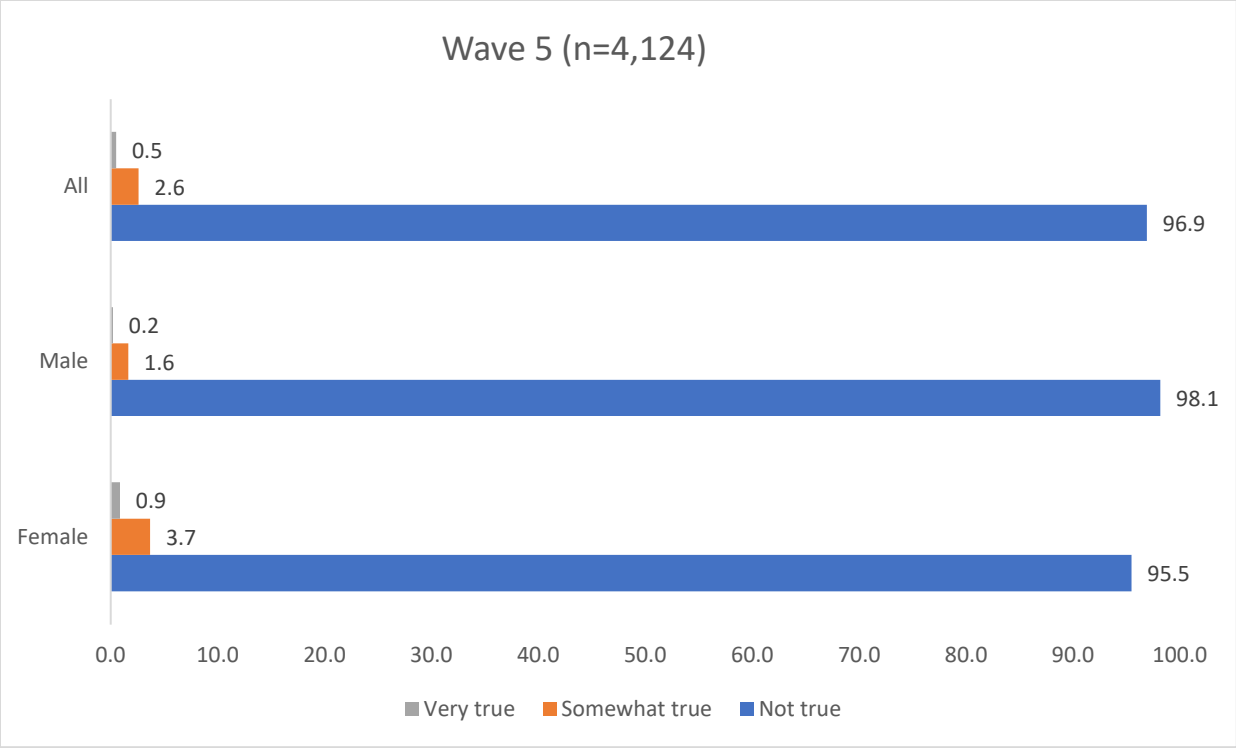
The adolescents' responses to the YSR item on suicide attempt *(I deliberately try to hurt or kill myself*) and suicide ideation (*I think about killing myself*) were also examined. Only YSR data were considered in this analysis to directly capture these constructs from the adolescents' perspectives rather than as perceived by mothers/caregivers using CBCL data.

Figure 6.6 shows how the adolescents responded to the suicide attempt question. At age 13 there were 60 adolescents (1.9%) who confirmed that this behavior was very true. At age 15, the corresponding number was narrowed down to 20 (0.5%). Of those with data in both waves, one persistently responded "Very true" in both waves.

The proportion of adolescents who responded as "Somewhat true" possibly indicating that they may have occasionally tried to hurt or kill themselves is higher in Wave 4 (age 13) at 7.5% than in Wave 5 (age 15), 2.6%. That is about 219 adolescents in Wave 4 versus 106 in Wave 5. For this question, significant differences in responses between males and females were only observed in Wave 5, with more females reporting greater inclinations to suicidal attempt. In contrast, in Wave 4 at age 13, there were more males than females who reported that they sometimes try to hurt or kill themselves although the sex difference was not significantly different in this wave.

Figure 6.6. Adolescent Responses to the Suicidal Attempt Question *"I deliberately try to hurt or kill myself"**

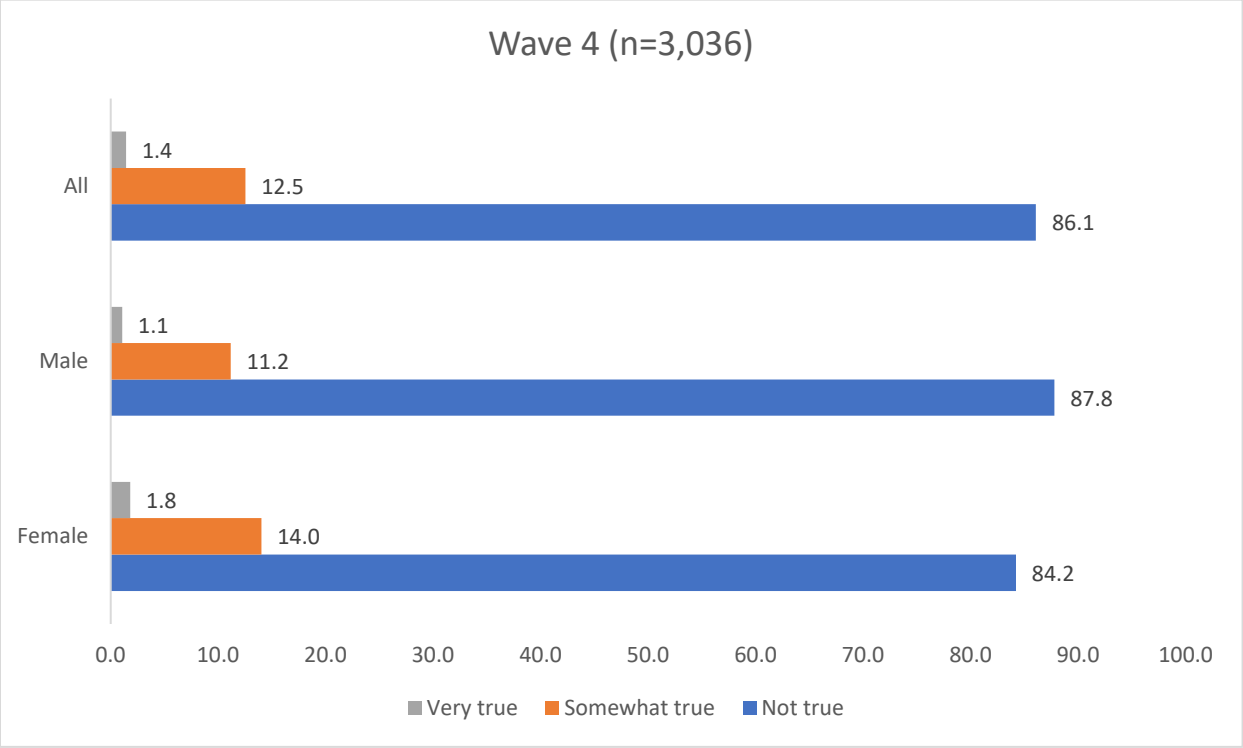


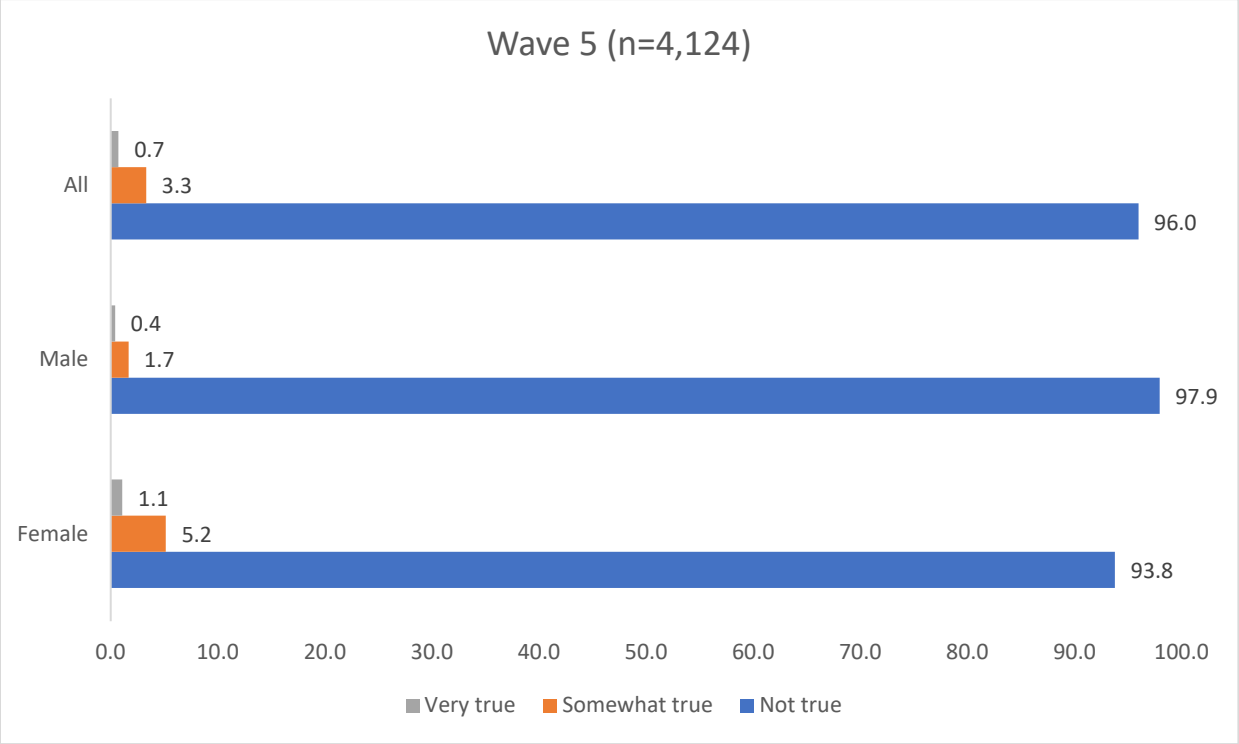


*Presented as weighted % stratified by sex in each wave; Significantly different by sex in Wave 5 at p<0.001 based on chi-square test of independence. In a sample with complete data for both waves (n=2,697), the proportions in each category significantly changed over time.

A similar trend can be seen in the responses to the question on suicide ideation (Figure 6.7). A higher proportion of adolescents either confirmed thinking about suicide or admitted that they sometimes think about suicide in Wave 4 (at age 13) than in Wave 5 (at age 15). There were significantly more females than males who were inclined to suicidal ideation in Wave 5 as well as in Wave 4 (although not significantly different).

Figure 6.7. Adolescent Responses to the Suicidal Ideation Question *"I think about killing myself"**





*Presented as weighted % stratified by sex in each wave; Significantly different by sex in Wave 5 at p<0.001 based on chi-square test of independence. In a sample with complete data for both waves (n=2,697), the proportions in each category significantly changed over time.

Although overall, suicide ideation and suicide attempts decreased in Wave 5, it is still of great concern that this is being considered by adolescents as young as age 13. Female adolescents generally appear to be more at risk than their male counterparts in terms of suicide ideation and suicide attempt.

Availability and Access to Mental Health Related Services

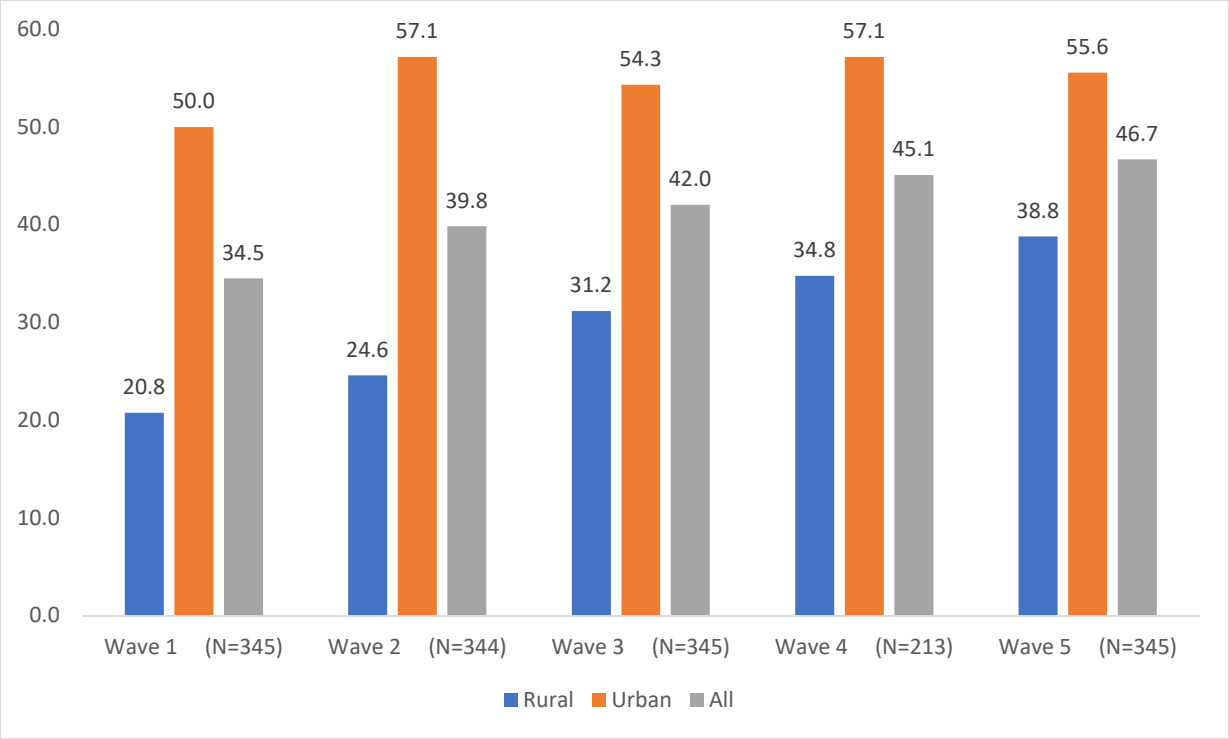
With the increasing concern regarding mental health problems, in 2018 the country signed to law the Mental Health Act (R.A. No. 11036). This promotes the delivery of mental health care services to the public especially at the local communities. The implementation of the law, however, is impeded by the limitations of the country in terms of resources (i.e., availability of trained mental health personnel and facilities, particularly at barangay levels).

The LCSFC collects community-level information at each wave and this section presents data on the availability of counseling services, adolescent clinics and mental health clinics in the barangays where cohort participants reside. Reported here are data from Waves 1 through 5 on the 345 barangays recruited at baseline. Due to the truncated data collection period for Wave 4 (as explained in the Introduction), only 213 barangays were visited for this wave and corresponding proportions may not be comparable to other waves. Data on new barangays where the cohort migrated to through the years are excluded.

Counseling Services

Figures 6.8 shows the proportion of barangays with facilities providing counseling services (for domestic violence, mental health and other concerns) from Waves 1-5 (2016-2021), stratified by urban/rural stratum. Availability of counseling service facilities in barangays significantly increased from 34.5% in 2017 (Wave 1) to 46.7% in 2021 (Wave 5). The most commonly mentioned facilities providing counseling were the barangay hall and the Violence Against Women and Children (VAWC) or Gender and Development (GAD) offices, implying that counseling are more likely sought for domestic violence. Having more of this type of service available in the barangay by 2021 is important. However, despite this development, these results also highlight the fact that in all the 345 barangays, there are still about more than half where these facilities are unavailable. For those who do not have such facilities in their barangay, the majority (about 80%) can access these services in neighboring barangays within the municipality. In terms of stratum (rural/urban) distribution, urban barangays have significantly more facilities for counseling services than rural barangays across all waves.

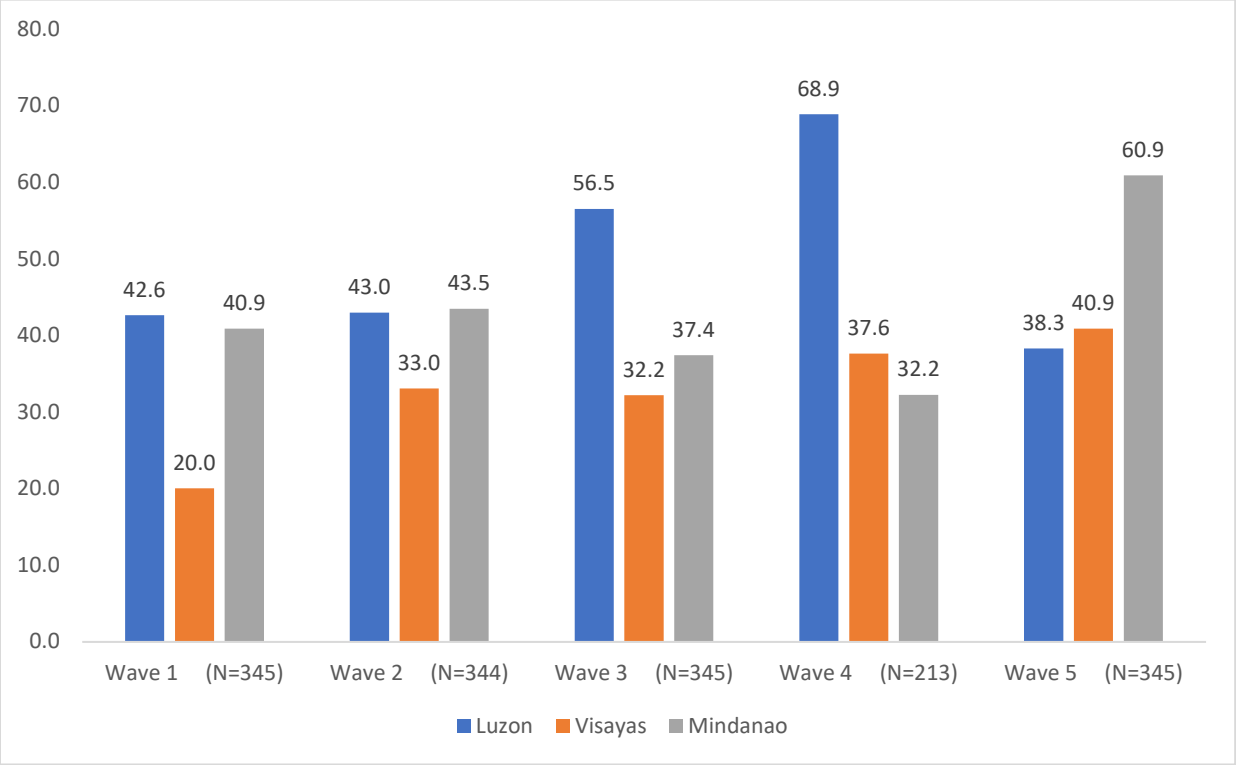
Figure 6.8. Percentage of Barangays with Counseling Services by Urban/Rural Stratum*



*Presented as %; significantly different at p<0.001 between urban and rural barangays in all waves

When looking at the distribution of counseling services in barangays by island group (Figure 6.9), the proportions across Luzon, Visayas and Mindanao varied over time. In most waves, the Visayas barangays appear to have the lowest rates compared to those in Luzon and Mindanao. It is noticeable that the proportion of Luzon barangays confirming the presence of counseling services increased from Wave 1 (2017) up to Wave 3 (2019) (the increase in Wave 4 should be interpreted with caution given the smaller sample size), then sharply declined in Wave 5. The unavailability of services may have been caused by closures of offices and restrictions imposed by the government during the pandemic. This is ironic because the pandemic brought about a wide range of mental health concerns, yet available counseling services in barangays decreased during the pandemic. This, however, is not the case for the Mindanao region where the rate increased from 37.4% in Wave 3 to 60.9% in Wave 5. As discussed in the Chapter 9, among the island groups, Mindanao appeared to be the least exposed to severe COVID-19 cases. Thus, with less pandemic-related disruption in barangay services, this could partly explain the rise in facilities providing counseling. Another possible explanation to the higher rate in Wave 5 is the increasing need in such services.

Figure 6.9. Percentage of Barangays with Counseling Services by Island Group*

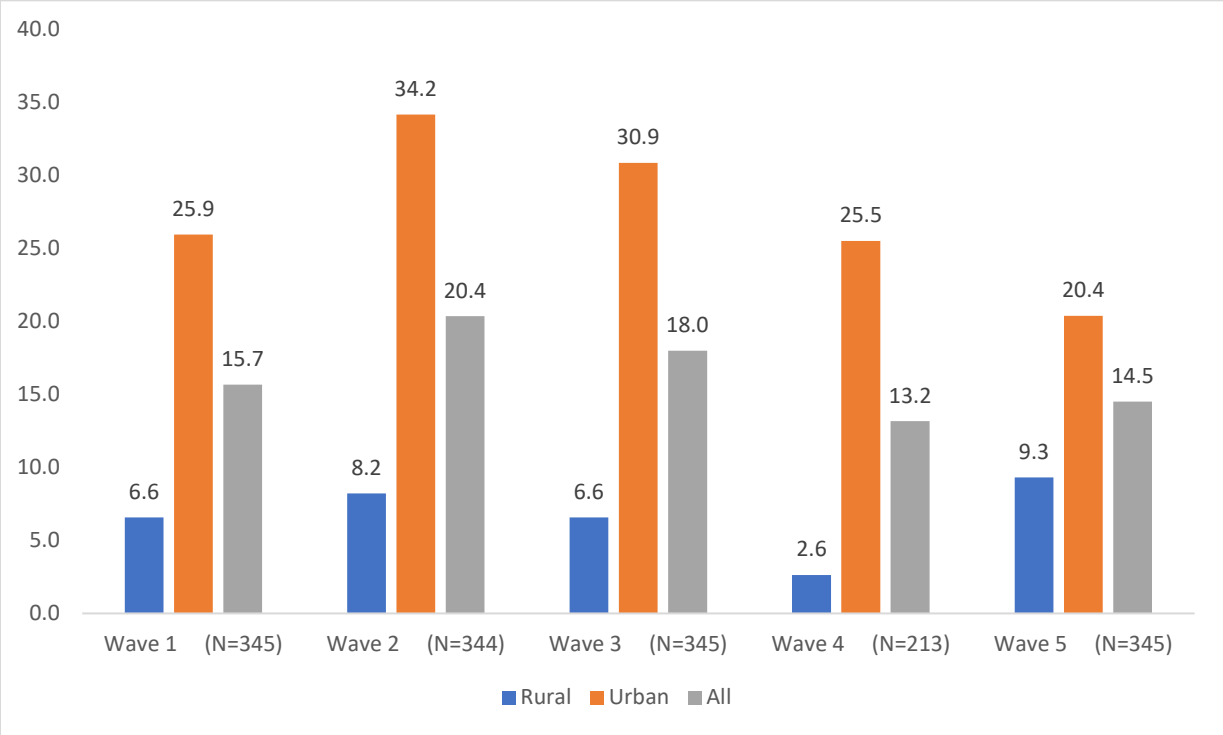


*Presented as %; significantly different at p<0.001 across island groups in all waves except in Wave 2

Adolescent Clinics

In terms of the availability of adolescent clinics, health facilities specializing in adolescent health or catering to adolescents, Figure 6.10 reveals that less than 21% among the 345 barangays have these facilities. The most common facilities mentioned were the barangay health centers or lying-in clinics. For those without these facilities for adolescents, the majority (75%-79%) reported having such service in another barangay within the municipality. Figure 6.10 also shows the significant contrast between urban and rural barangays with the former having more adolescent facilities than the latter.

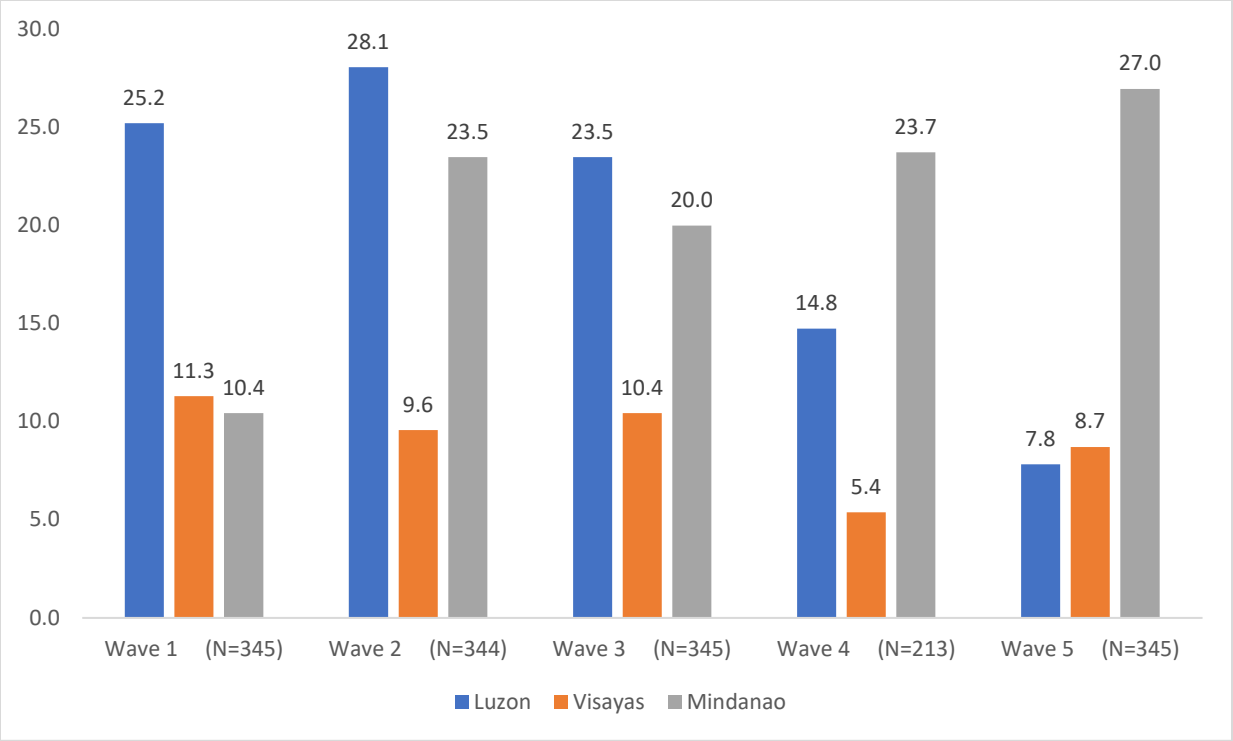
Figure 6.10. Percentage of Barangays with Adolescent Health Facilities by Urban/Rural Stratum*



*Presented as %; significantly different at p<0.01 between urban and rural barangays in all waves

In comparing the percentage of barangays with adolescent facilities across island groups (Figure 6.11), the highest rates were in Luzon from Waves 1 to 3, with Mindanao taking the lead by Wave 5. The rates in the Visayas remained low over time unlike that of Mindanao which doubled its rates between Waves 1 and 2 and remained high over time. The proportions with adolescent facilities decreased between Waves 3 and 5 in both Luzon and the Visayas but the reverse was observed in Mindanao.

Figure 6.11. Percentage of Barangays with Adolescent Health Facilities by Island Group*



*Presented as %; significantly different at p<0.05 across island groups in all waves.

Mental Health Clinics

In 2019 (Wave 3), after the Mental Health Act was signed into law, the LCSFC started to specifically ask about the availability of mental health clinics in barangays. From 2019 to 2021 there were only six to eight barangays reporting having such a facility through these years. Health centers and district hospitals were the facilities mentioned that provided mental health services. Most of these facilities were in urban areas and there were fewer in the Visayas than in Luzon or Mindanao. In Wave 5 (2021), Mindanao reported to have five barangays having a mental health clinic, The highest number so far since 2019.

As reflected in these LCSFC findings, the availability and accessibility of mental health care services remains a challenge despite the passing of the Mental Health Act into law in 2018. Although there is an increasing trend in the availability of counseling services in barangays, services specifically catering to adolescent health needs remain scarce, with less than 21% of the barangays in this study having such a facility. From these results, setting up of mental health clinics at the barangay level has yet to be fully implemented, particularly in rural areas.

Summary

As a developmental stage, adolescence has been characterized by rapid and dramatic changes physically, physiologically, socially, and emotionally. Behaviorally, it is associated with volatile emotions and sensitivity to social surroundings; which makes adolescents vulnerable to mental health issues (Stumper & Alloy, 2021; WHO, 2021).

This study was conducted at the time when adolescents were transitioning to the pubertal stage and when the COVID-19 pandemic happened. The aim of this chapter is to examine the impact of the COVID-19 pandemic on Filipino adolescents' mental health condition amidst their pubescence stage. Two mental outcomes were measured using the ASEBA DSM Oriented Scales, namely depression, and anxiety problems.

Results reveal that depressive problem symptoms significantly increased when adolescent respondents reached age 13, from Wave 2 to Wave 4. While a slight decrease in mean score was observed in the later stage of the pandemic (Wave 5) when adolescents were at age 15, this value is still higher than when they were age 11 (Wave 2). This may imply that depressive problem symptoms can be rather consequential to pubertal transition and less likely to be a response to the pandemic.

With regard to the anxiety problem symptoms, the scores increased from Wave 2 up to Wave 5, though this plateaued between Wave 4 and early pandemic (Wave 4a). However, the pandemic seems to exacerbate the levels of anxiety, as it significantly increased in Wave 5 (later pandemic); with adolescents in the Visayas and Mindanao having higher levels of anxiety compared to those in Luzon. Economic uncertainty, fear of contracting the COVID virus, concerns over when restrictions can be lifted, plus adapting to new learning environments that demand new technological skills, all or a combination of these factors may have contributed to the increasing levels of anxiety among adolescents.

The situation brought about by the pandemic (e.g., heightened restrictions and limited social interaction) appears to set off the prevalence of mental health concerns among Filipino adolescents. Amidst the demands of the adolescence period, the pandemic seems to exacerbate the already vulnerable state of young individuals undergoing pubertal transition. Not only were depressive and anxiety problem symptoms manifested, several of them have contemplated on committing suicide and a few actually attempted to do so.

Given how susceptible adolescents are to the changes happening to them during puberty, as well as to the uncertainties and fears caused by the pandemic, there is a need to intensify mental health programs directed at them not only at the national level but most especially in their local communities. Unfortunately, mental health services such as counselling facilities, adolescent, and mental health clinics, are not readily available within the barangay. There are substantial gaps in the delivery of mental health care services and a dearth of community-based mental health facilities (Lally et al., 2019). The number of available facilities is ill-equipped and so few to be able to cater to the mental health care needs of the adolescents. Compounding the problem is the severe shortage of mental health care specialists in the Philippines (WHO, 2020).

The following propositions are given. First, there is a need to set up gender- and age-sensitive mental health programs in schools given that males and females experience the various stages of adolescence quite differently; and more attention are likely needed by those undergoing pubertal transition when

mental health needs may be wide-ranging. Second, it is important to establish community-based mental health care services to reach a wider mass of adolescents. Exploring available resources in the community that may be tapped, such as empowering parents and other community members in administering psychological first-aid may be a more accessible way of filling in the gaps in government infrastructures Third, exploring alternative modes of delivery of services, other than face to face counselling, may be more effective with adolescents. Services offered online or through digital messaging may appeal more to adolescents as these provide them a greater sense of privacy. Fourth, promoting mental health care education among adolescents is another way of increasing their awareness of everyone's vulnerability to mental health-related problems and conveying to them a more positive view on seeking help.

Mental health is an essential part of the overall health and well-being of individuals. It is an integral component in achieving Sustainable Goal 3 because mental state matters in promoting human potential for people to productively contribute to their communities (Dybdahl & Lien, 2018). As the pandemic disrupted people's life trajectories, especially so for the youth, it is timely to reflect on the World Health Organization's view on mental health – "….to cope with the stresses of life, realize abilities, …work well, and contribute to their community." Indeed, these are the capabilities that the Filipino youth ought to have in order for the country to meet the SDG 3 targets by 2030.

REFERENCES:

Achenbach, T.M., & Rescorla, L.A. (2001). Manual for the ASEBA School-Age Forms and Profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

Achenbach, T.M. (2013). DSM Guide for the ASEBA. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

Adonis, M. (2021, April 12). Flaws aside, online learning takes toll on students' mental health. *Philippine Daily Inquirer*. https://newsinfo.inquirer.net/1417703/flaws-aside-online-learning-takes-toll-on-students-mental-health

Aknin, L.B., Andretti, B., Goldszmidt, R., Helliwell, J.F., Petherick, A., De Neve, J.E., Dunn, E.W, Fancourt, D., Goldberg, E., Jones, S.P., Karadag, O., Karam, E., Layard, R., Saxena, S., Thornton, E., Whillans, A., & Zaki, J. (2022).Policy stringency and mental health during the COVID-19 pandemic: a longitudinal analysis of data from 15 countries. Lancet Public Health; 7(5):e417-e426. doi: 10.1016/S2468-2667(22)00060-3. PMID: 35461592; PMCID: PMC9023007

Alibudbud, R. (2021). On online learning and mental health during the COVID-19 pandemic: Perspectives from the Philippines. Asian Journal of Psychiatry; 66:102867. doi: 10.1016/j.ajp.2021.102867. Epub 2021 Sep 22. PMID: 34600400; PMCID: PMC8457633

American Psychiatric Association (APA) (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Campbell, O.L.K., Bann, D., & Patalay, P. (2021). The gender gap in adolescent mental health: A cross-national investigation of 566,829 adolescents across 73 countries, SSM - Population Health, Volume 13, 100742, ISSN 2352-8273, https://doi.org/10.1016/j.ssmph.2021.100742

Dybdahl, R. & Lien, L. (2018). Mental health is an integral part of the sustainable development goals. Preventive Medicine and Community Health. 1. 10.15761/PMCH.1000104

Fancourt, D., Steptoe, A., & Bu, F. (2021). Trajectories of anxiety and depressive symptoms during enforced isolation due to COVID-19 in England: a longitudinal observational study. Lancet Psychiatry; 8(2):141-149. doi: 10.1016/S2215-0366(20)30482-X. PMID: 33308420; PMCID: PMC7820109

Hechanova, R., Valentin, A.P., & Alampay K.P. (2022). Age, COVID-19, and Mental Health in the Philippines: A multidimensional perspective. Asia-Pacific Social Science Review, Vol. 22, No. 1. De La Salle University: Philippines.

Lally, J., Tully, J., & Samaniego, R. (2019). Mental health services in the Philippines. BJPsych International; 16(3):62-64. doi: 10.1192/bji.2018.34. PMID: 31385955; PMCID: PMC6646843.

Magsambol, B. (2020, October 22). Students' Mental health issues during distance learning due to 'interplay of factors' – expert. *Rappler*. https://www.rappler.com/nation/students-mental-health-concerns-distance-learning-due-interplay-factors/

Malolos, G.Z.C., Baron, M.B.C., Apat, F.A.J., Sagsagat, H.A.A., Pasco, P.B.M., Aportadera, E.T.C.L., Tan, R.J.D., Gacutno-Evardone, A.J., & Lucero-Prisno, Iii D.E. (2021). Mental health and well-being of children in the Philippine setting during the COVID-19 pandemic. Health Promotion Perspectives, 11(3):267-270. doi: 10.34172/hpp.2021.34. PMID: 34660220; PMCID: PMC8501475.

Mbekou, V., Macneil, S., Gignac, M., & Renaud, J. (2015). Parent-youth agreement on self-reported competencies of youth with depressive and suicidal symptoms. *Canadian Journal of Psychiatry*. *60* (1): 55-60. PMID: 25886673; PMCID: PMC4345849

McGuire, T.C., McCormick, K.C., Koch, M.K., & Mendle, J. (2019). Pubertal Maturation and Trajectories of Depression During Early Adolescence. Frontiers in Psychology;10:1362. doi: 10.3389/fpsyg.2019.01362. PMID: 31244742; PMCID: PMC6582206.Olympia L K Campbell, O.L.K., Bann, D., & Patalay, P. (2021). The gender gap in adolescent mental health: A cross-national investigation of 566,829 adolescents across 73 countries, SSM - Population Health, Volume 13, 100742, ISSN 2352-8273, https://doi.org/10.1016/j.ssmph.2021.100742.

Republic Act Number (R.A. No.) 11036, Mental Health Act. Retrieved from https://www.officialgazette.gov.ph/downloads/2018/06jun/20180620-RA-11036-RRD.pdf

Rescorla, L. A., Ginzburg, S., Achenbach, T. M., Ivanova, M. Y., Almqvist, F., Begovac, I., Bilenberg, N., Bird, H., Chahed, M., Dobrean, A., Döpfner, M., Erol, N., Hannesdottir, H., Kanbayashi, Y., Lambert, M.C., Leung, P.W., Minaei, A.; Novik, T.S., Oh, K.J., Petot, D.,… Verhulst, F.C. (2013). Cross-informant agreement between parent-reported and adolescent self-reported problems in 25 societies. *Journal of Clinical Child and Adolescent Psychology. 42*(2): 262-73. doi: 10.1080/15374416.2012.717870. PMID: 23009025

Stumper, A., & Alloy, L.B. (2021). Associations Between Pubertal Stage and Depression: A Systematic Review of the Literature. Child Psychiatry and Human Development. doi: 10.1007/s10578-021-01244-0. PMID: 34529199.

Tee, M.L., Tee C.A., Anlacan, J.P., Aligam, K.J.G., Reyes, P.W.C., Kuruchittham, V., & Ho, R.C. (2020). Psychological impact of COVID-19 pandemic in the Philippines. Journal of Affective Disorders, 277:379-391. doi: 10.1016/j.jad.2020.08.043. PMID: 32861839; PMCID: PMC7444468.

University of the Philippines Population Institute (UPPI).Young Adult Fertility Survey. (2021). Pinoy youth in worse mental shape today, nationwide survey indicates. https://www.uppi.upd.edu.ph/news/2022/pinoy-youth-in-worse-mental-health-shape-today?fbclid=IwAR0Hk28IxmjpXzCPmcHWMLH7mw51rNaKUG37wnOUjxEEVFD1s0GbSVRBlbE

Wang, J., Liu, L., Wu, H., Yang, X., Wang, Y., & Wang, L. (2014). Agreement between parents and adolescents on emotional and behavioral problems and its associated factors among Chinese school adolescents: a cross-sectional study. BMC Psychiatry, 14:114. doi: 10.1186/1471-244X-14-114. PMID: 24735388; PMCID: PMC3991878

WHO Special Initiative Country Report -Philippines (WHO). (2020), https://www.who.int/docs/default-source/mental-health/special-initiative/who-special-initiative-country-report---philippines---2020.pdf?sfvrsn=4b4ec2ee_8

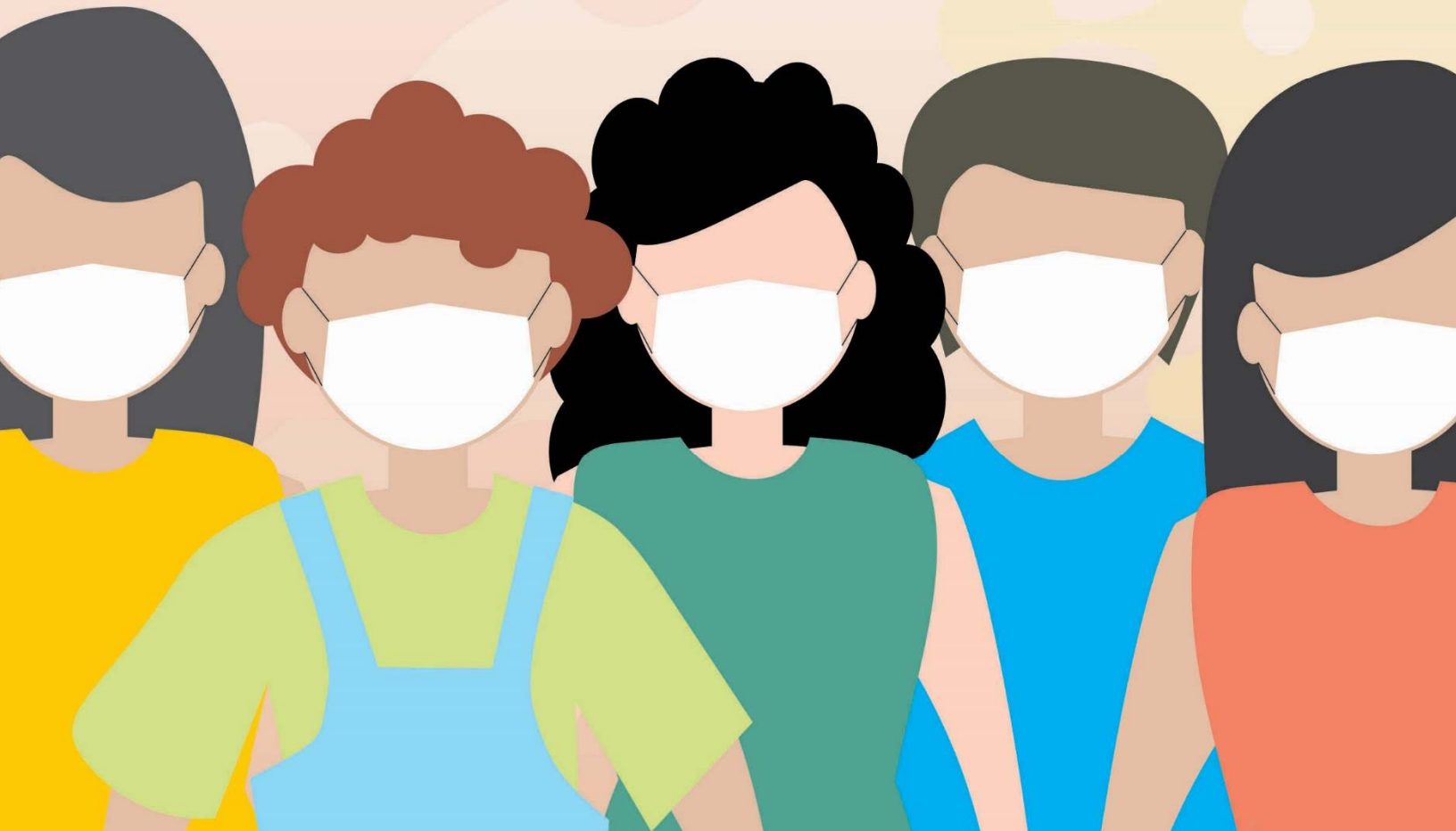
World Health Organization (WHO). (n.d). Global school-based student health survey.2019 Fact Sheet Philippines. Retrieved from https://www.who.int/publications/m/item/2019-gshs-fact-sheet-philippines.

World Health Organization (2021, November 17). Adolescent Mental Health. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

World Health Organization (2022, June 17). Mental Health: Strengthening Our Response. https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

Chapter 7

SDG 4. Disrupted Lives, Uneven Education Trajectory: How the Pandemic Affects the Achievement of SDG4



Chapter 7

SDG 4. Disrupted Lives, Uneven Education Trajectory: How the Pandemic Affects the Achievement of SDG4

Elma P. Laguna[18] and Maria Midea M. Kabamalan[19]

Introduction

As a signatory to the UN Sustainable Development Goals (SDG), the Philippines shares the global call to action to address the problems of poverty, protect the environment, and ensure that Filipinos everywhere can enjoy peace and prosperity (UN Philippines, n.d.) An important goal to guarantee human capital development is articulated in Goal 4.1 that "by 2030, all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes."

There have been considerable initiatives and investments in the education sector in the past several decades. These include the passage of Republic Act (RA) 10157, or the Kindergarten Education Act, in 2012, RA 10410, otherwise known as the Early Years Act of 2013, and the major educational reform on basic education, RA 10533 or the Enhanced Basic Education Act of 2013. Both RA 10157 and 10410 aim to ensure that Filipino children will have access to quality early childhood education and development, while the K-12 educational reform program does not only extend compulsory schooling to Grades 11 and 12, but it also makes secondary education compulsory. It was envisioned "to cut across the whole landscape of Philippine education and labor" (CHED, n.d.). For school year (SY) 2016-17, an estimated 1.5 million Filipino children attended Grade 11 and with four tracks to choose from: academic, technical-vocational, sports, or the arts (Geronimo, 2016). After two years, the first batch of K-12-equipped students entered the tertiary level of education and were expected to graduate in 2022.

When the World Health Organization declared the COVID-19 pandemic in March 2020, more than 1 billion learners around the globe were affected when schools were closed to control the spread of the coronavirus disease, forcing educational institutions to resort to emergency remote teaching (Agaton & Cueto, 2021; Alvarez, Jr., 2020; Barrot et al., 2021; Panagouli et al., 2021; Pitagan, 2021; Pokhrel & Chhetri, 2021; Rotas & Cahapay, 2020; Tria, 2020). In the Philippines, around 27 million students were affected by the school closures during the pandemic (De Vera & Adonis, 2021; Gutierrez, 2021; Yacub & Eadie, 2022). Three million children, youth, and adults did not enroll when schools closed in the country (Tadalan, 2021).

In response to the COVID-19 threat, the Department of Education (DepEd) implemented the Basic Educational-Learning Continuity Plan (BE-LCP) to ensure the safety of students and teachers and deliver quality education by utilizing various remote learning modalities (Agaton & Cueto, 2021; Tria, 2020). Hence, distance learning and blended learning became the new normal in the country amidst the global health crisis. Online distance learning requires students and teachers to have internet access because of synchronous classes; meanwhile, students access digital or hard copies of self-learning modules under modular distance learning (Agaton & Cueto, 2021). Blended learning is the mixture of self-learning

[18] Associate Professor, University of the Philippines Population Institute, Diliman, Quezon City; Email: eplaguna@up.edu.ph
[19] Professor, University of the Philippines Population Institute, Diliman, Quezon City; Email: mmkabamalan@up.edu.ph

modules, online learning, or the broadcasting of lessons through radios and televisions (Tria, 2020; Yacub & Eadie, 2022).

The Child Rights Network anticipated a 'learning and child development catastrophe' when schools closed because of the COVID-19 crisis (Santos, 2021). Many parents lost their jobs and businesses, affecting more than 250,000 Filipino students whose recourse was to transfer from private schools to public schools during the pandemic school year (Palis, 2022).

Due to its sudden implementation, the Asian Development Bank argued that remote learning in developing Asia had not worked well compared to face-to-face classes before the pandemic (ADB, 2021 p. 4). While young children are distracted at home due to a lack of a conducive learning environment, most students strive to learn using only mobile phones since most households in the region lack computers (Learning and Earning Losses, 2021). Thus, remote education contributes to the "wider learning gap" between students of different socioeconomic statuses due to the worsening digital divide (Agaton & Cueto, 2021; Alvarez, Jr., 2020; Dayagbil et al., 2021; Irwin et al., 2021; Panagouli et al., 2021) and other pressing issues in the country's educational system compounded by the coronavirus pandemic (Alvarez, Jr., 2020; De Vera & Adonis, 2021; Esteban, Jr. & Cruz, 2021; Gutierrez, 2021; Moralista & Oducado, 2020; Rotas & Cahapay, 2020; Tria, 2020). A World Bank report released this year cited the Philippines with the highest rate of learning poverty in the East Asia and Pacific region (Simeon, 2022).

With the pandemic worsening the education crisis in the country, achieving the UN SDG 4, which is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all," becomes more challenging. At the same time, it provides an opportunity to assess whether the different educational reforms have mitigated the impact of the pandemic on children's learning.

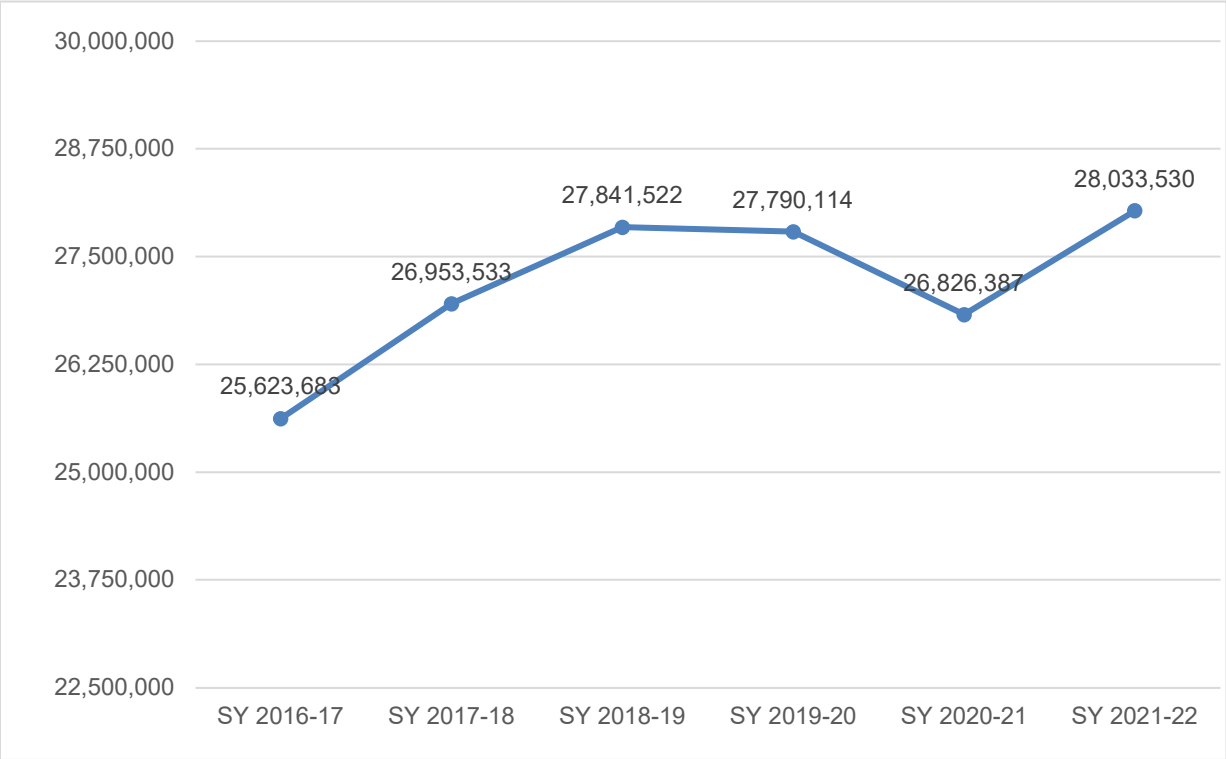
Data, Methods and SDG4 Indicators

This chapter focuses on the education trajectory of Filipino adolescents from Waves 1 – 4 (2016-Q1 2020) of the Longitudinal Cohort Study on the Filipino Child (LCSFC), which was the pre-pandemic period, and of Wave 4a (Q4 2020 supplemental survey) and Wave 5 (2021 phone survey), which cover the pandemic period. Specifically, the analysis will track the adolescents' progress in terms of being on track based on their completed grade level and age. Learning experiences during the pandemic will be explored by describing the kind of learning modality adopted, the difficulties and challenges they faced with the new learning modality, and the support system they have in order to navigate the new learning setup.

The State of Basic Education Before and During the Pandemic

Historical data from DepEd highlight a high level of school enrollment in basic education (from kindergarten to senior high, including alternative learning systems (ALS)). Based on the 2015 Census of Population, the total population of the age group 6-18 has reached 27,329,685. In SY 2016-2017, total enrollment in basic education and ALS was 25,623,683, or about 94 percent of the school-going age population in 2015. Enrollment increased to 27,841,523 by SY 2018-2019, although a slight drop was observed in SY 2019-2020 due to policy changes in the cut-off age of Kindergarten learners. During the pandemic, close to a million students did not enroll in SY 2020-2021, but by SY 2021-2022, the numbers have once again increased to 28 million enrollees (Department of Education, 2022). School attendance in the Philippines can be considered at par with other more developed countries; however, it continues to struggle to produce quality education for its learners (Orbeta & Paqueo, 2022).

Figure 7.1. Historical Data of Enrollment Including ALS: SY2016-17 to SY2021-22



Source: Department of Education, 2022. "Data Bits" in https://www.deped.gov.ph/wp-content/uploads/2022/08/5-Data-Bits-Enrollment-Data-May.pdf

The LCSFC baseline survey conducted in 2016 showed that among 4,931 10-year-old respondents, 98.4 percent were in school at the time of the survey, and the majority were enrolled in the public school system (96.4%). However, as early as age 10, 11.8 percent have already experienced repeating a grade (see SDG4 Section of the Appendix Tables).

Table 7.1. Percentage of 10-year-olds Enrolled in Public School and Experienced Repeating a Grade

	Luzon	Visayas	Mindanao	Total	n
% enrolled in public school	95.6	97.3	97.3	96.4	4,885
% ever repeated a grade	10.9	11.3	13.8	11.8	4,931

Data source: SDG4 Section of the Appendix Tables

Table 7.2 presents the percent distribution of learners per grade level completed in various waves. In Wave 1, when learners were age 10, the majority were in Grade 5 (63.1%) while close to a third were in Grade 4 (28.6%). At age 11, 63% progressed to Grade 6 and 28% to Grade 5. In Wave 3, when learners were 12 years old, 62% moved to Grade 7, 1 percentage point less than those who were in Grade 6 a year

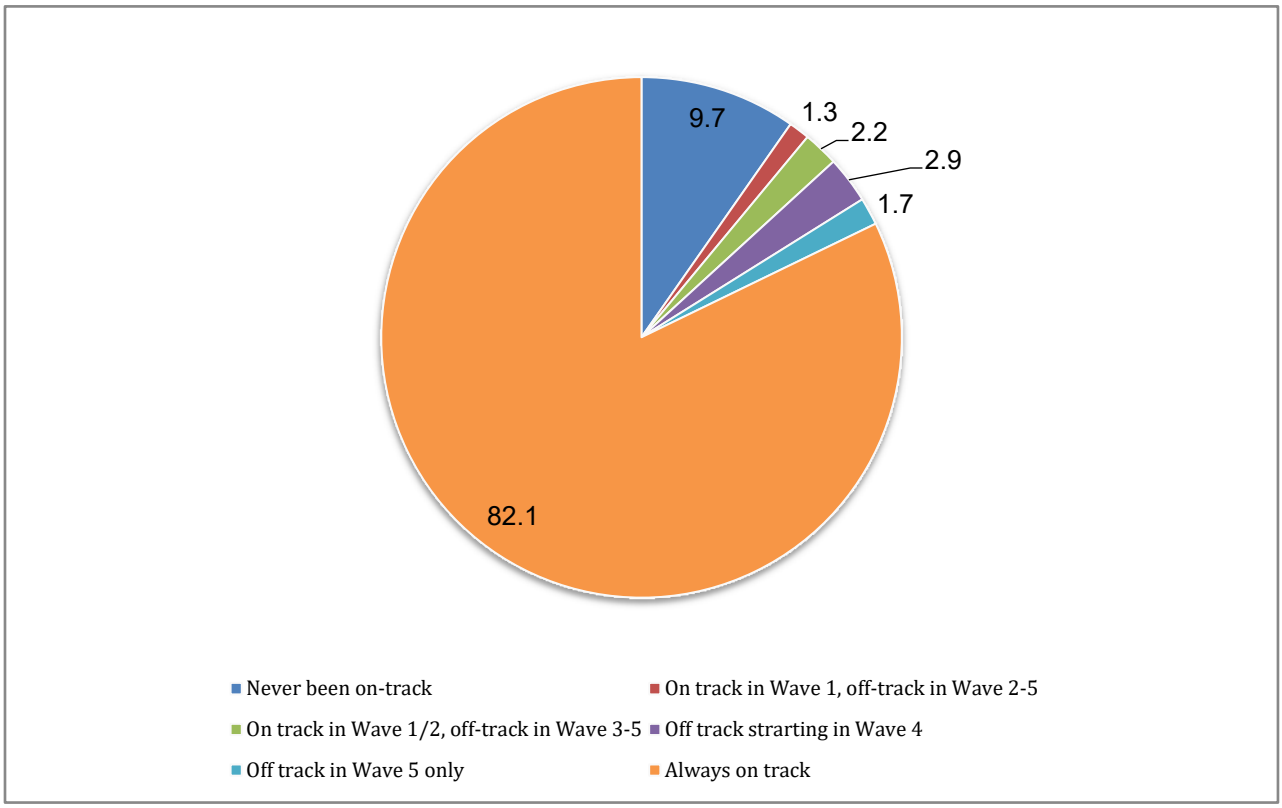
before. Similarly, the percentage of learners in Grade 6 increased to 28.7, from 28% who were in Grade 5 a year prior. During the first quarter of 2020, or at the start of the pandemic, the percentage of learners in Grade 8 was at 62.1%, from 62% of those who were in Grade 7 in 2019. During the last quarter of 2020, in Wave 5, the percentage of learners who moved on to Grade 9 dropped to 60%, while those in Grade 8 slightly increased to 29% from 28.5% in the previous year. The schedule of the school year was adjusted because of the pandemic. The SY 2020-21 was from October 2020 to July 2021, thus when Wave 5 was conducted from June to August of 2021, the children-respondents were still in the same grade levels 8/9 as the supplemental survey (Wave 4a) conducted in November 2020.

Table 7.2. Grade Progression of Learners (Waves 1-5)

	Wave 1 2016 (Age 10)	Wave 2 2018 (Age 11)	Wave 3 2019 (Age 12)	Wave 4 Q1 2020 (Age 13)	Wave 4a Q4 2020 (Age 14)	Wave 5 2021 (Age 15)
Below Grade 2/SPED	0.9	0.3	0.2	0.2	0.1	0.1
Grade 2	1.7	0.7	0.3	0.1	0.02	0.02
Grade 3	5.0	2.0	1.1	0.6	0.2	0.2
Grade 4	**28.6**	5.3	1.7	1.1	0.6	0.5
Grade 5	**63.1**	**28.0**	5.2	1.4	1.0	1.2
Grade 6	0.8	**63.0**	**28.7**	5.3	1.8	1.9
Grade 7		0.8	**62.0**	**28.5**	6.2	6.4
Grade 8			0.8	**62.1**	**29.1**	**29.0**
Grade 9				0.8	**60.0**	**60.0**

The true trend of being on-track across the five school years was assessed in a sample with complete data (n=4,545) (Figure 7.2). Being “on-track” means that the student is currently enrolled in the grade level appropriate for his/her age, and never missed a school year nor repeated a grade. At age 10, there is already a substantial percentage of learners (9.7%) who were not on-track, either because they started schooling late or they repeated a grade. Eighty-two percent of learners are consistently on-track from Waves 1-5. However, 1.3% were on track in Wave 1 but were off-track from Wave 2-5, 2.2% were on-track in Waves 1 and 2, but went off-track in Wave 3-5. At the beginning of the pandemic, 2.9% were off-track, from Wave 4 and another 1.7% went off-track beginning in Wave 5.

Figure 7.2. Classification of Learners Based on their Grade Progression Status: Waves 1 -5



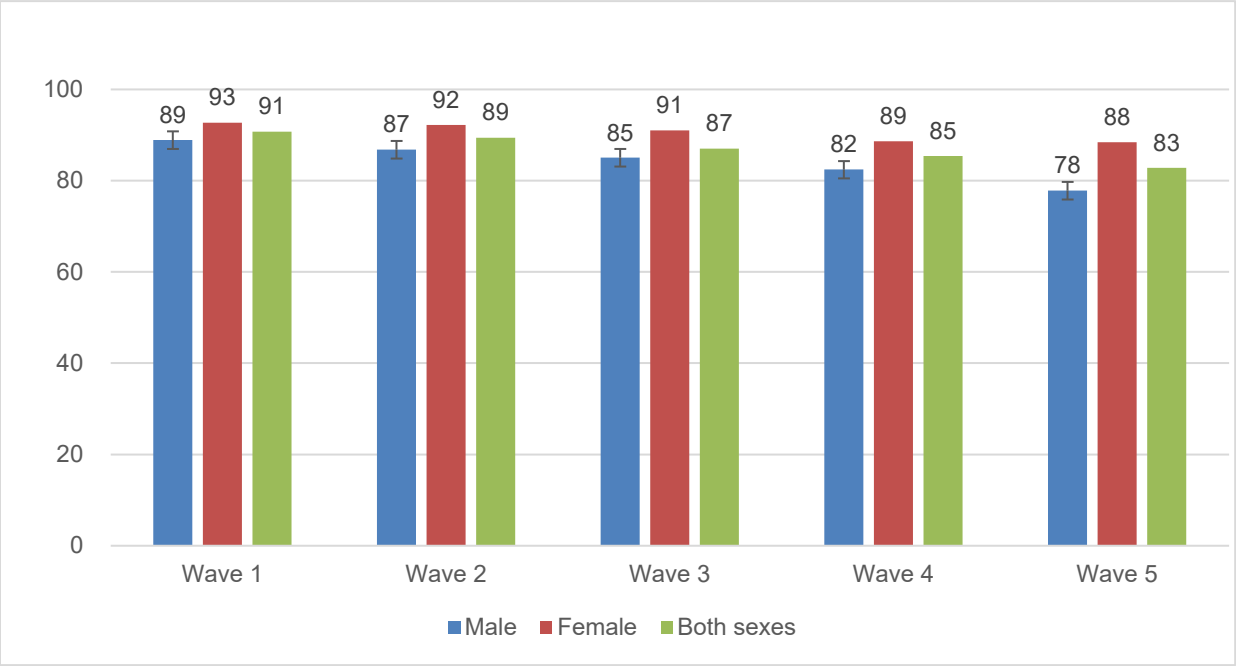
Since being on-track is a cumulative measure, i.e., once off-track, learners remain such in subsequent waves, there has been an observed declining percentage among the LCSFC cohort who are on-track at each wave, from 91% at baseline, to 85% at Wave 4, or shortly before the pandemic and 83% in Wave 5 (Figure 7.3).

Compared to male learners, more females are in age-appropriate grade levels across the 5 waves of the survey. More learners from households who are non-beneficiaries of the Pantawid Pamilyang Pilipino Program (4Ps), the country's conditional cash transfer program, are in age-appropriate grade levels compared to learners from 4Ps households. At baseline, 93% of non-4Ps learners were on-track while the corresponding percentage for 4Ps learners was 88%. The percentage declined in succeeding waves such that by Wave 5, 85% of non-4Ps learners were on-track compared to 80% among learners from 4Ps households.

When compared across island groups, Visayas has the highest percentage of on-track students, followed by Luzon and Mindanao (Figure 7.4).

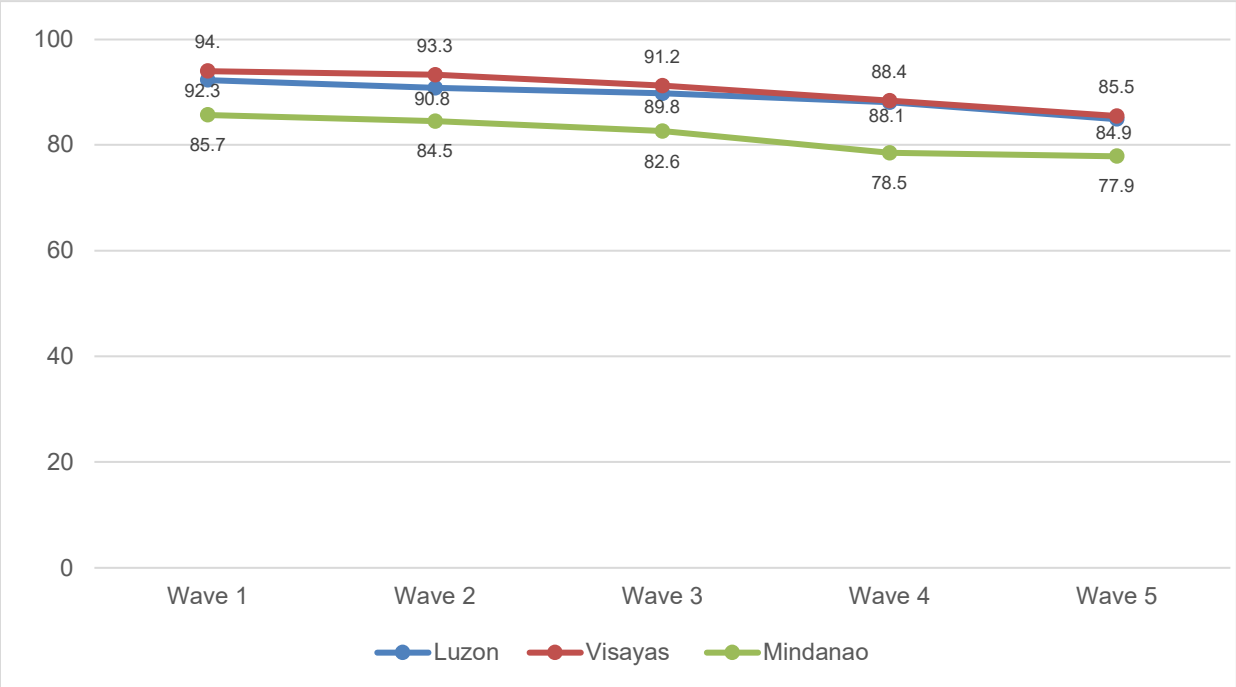
Another important background characteristic associated with learners' enrollment in age-appropriate grade levels is the mother's educational attainment. Mothers who have college level education have a higher percentage of children in age-appropriate grade levels compared to mothers with high school/vocational education and those with elementary-level of education. (Figure 7.5).

Figure 7.3. Percentage of Learners who are On-track or in Age-appropriate Grade Levels, By Waves and Learners' Sex



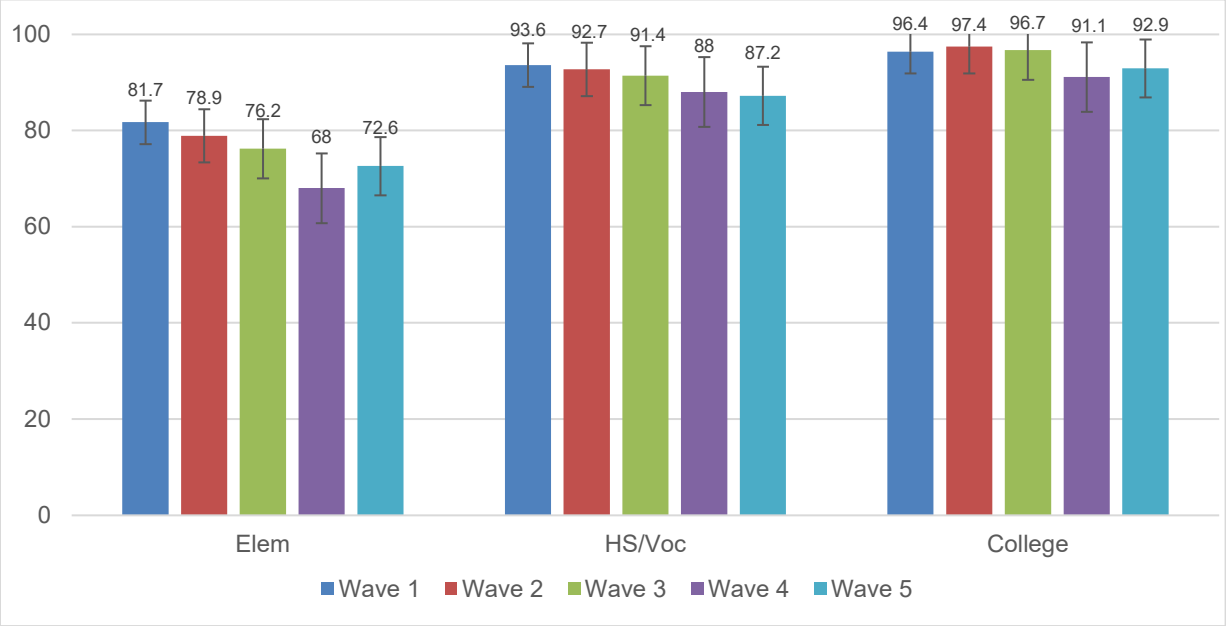
Data source: SDG4 Section of the Appendix Tables

Figure 7.4. Percentage of Learners who are On-track or in Age-appropriate Grade levels, by Island Group and Waves



Data source: LCSFC (Waves 1 to 5)

Figure 7.5. Percentage of Learners who are On-track or in Age-appropriate Grade Levels, by Mothers' Level of Education and Waves



Data source: LCSFC (Waves 1 to 5)

Learners' Access to School Resources and Assessment of Academic Performance

Before the pandemic, the country had been facing many barriers to achieving quality and inclusive education, such as poor school infrastructures, overcrowded classrooms, lack of computers, unstable yet costly internet connection, and low pay for teachers (Gutierrez, 2021; Tadalan, 2021).

In the same baseline survey results, 91 percent of students reported that they do have their own assigned desk in school, and this figure is significantly higher among students in Luzon, than those in the Visayas and Mindanao regions (Table 7.3). Moreover, 3 in 10 students either have no assigned textbooks or have to share the textbooks with their classmates.

Table 7.3. Percentage of 10-year-olds with Access to Own Desks and Textbooks

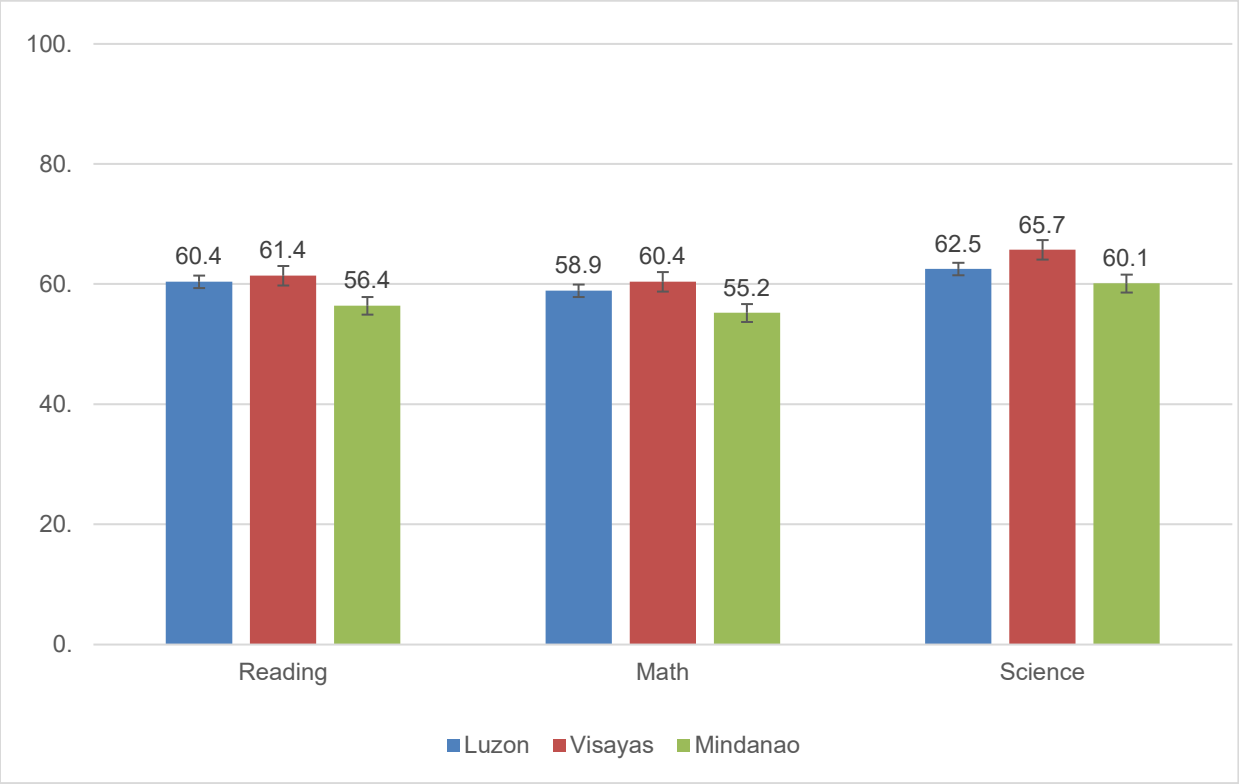
	Luzon	Visayas	Mindanao	Total	N
Desk					4,842
No desk assigned in school	0.8	0.9	1.8	1.1	
Shares a desk with a classmate	2.6	17.8	12.0	8.1	
Has own assigned desk	96.6	81.4	86.2	90.8	
Textbook					4,839
No textbooks assigned in school	16.4	13.1	22.8	17.4	
Shares textbooks with classmate	11.1	15.2	12.1	12.2	
Has own assigned textbooks	72.5	71.8	65.1	70.4	

Data source: LCSFC Baseline Data (2016, Wave 1)

International student assessments placed the Philippines last in reading comprehension and ranked 78th in Math and Science out of 79 countries in the Organization for Economic Cooperation and Development's (OECD) Program for International Student Assessment in 2018. Grade 5 Filipino students also ranked last in Reading, Writing, and Math among five other Southeast Asian countries in the 2019 Southeast Asia Primary Learning Metrics (Tadalan, 2021).

In Wave 2 conducted in 2018, or when the cohort adolescents were in grades 5/6, the Child Behavior Check List (CBCL) (Achenbach & Rescorla, 2001) was added. The instrument is a checklist that parents/caregivers complete in order to detect behavioral and emotional problems in children and adolescents. It also includes parents' assessment of how their children perform in school, including specific academic subjects like Reading, History, Math, and Science. Using a four-point scale, where 0 is failing, 1 is below average, 2 is average, and 3 is above average, the majority of parents assessed their children's performance as average: 60% in Reading, 58% in Math, and 63% in Science. Across island groups, parents from the Visayas consistently have the highest percentage of "average" assessment of their children's academic performance. By the same token, parents from Mindanao have the lowest percentage of average assessment (Figure 7.6). Furthermore, compared with parents of children enrolled in the public school system, more parents of children enrolled in the private school system assessed their children's performance in Reading, Math and Science as above average: 49.1 vs. 21.5 in Reading, 45.7 vs 19.5 in Math and 44.6 vs 18.9 percent in Science.

Figure 7.6. Percentage of Parents who Reported Average Performance of their Children in Reading, Math and Science by Island Group in Grades 5/6

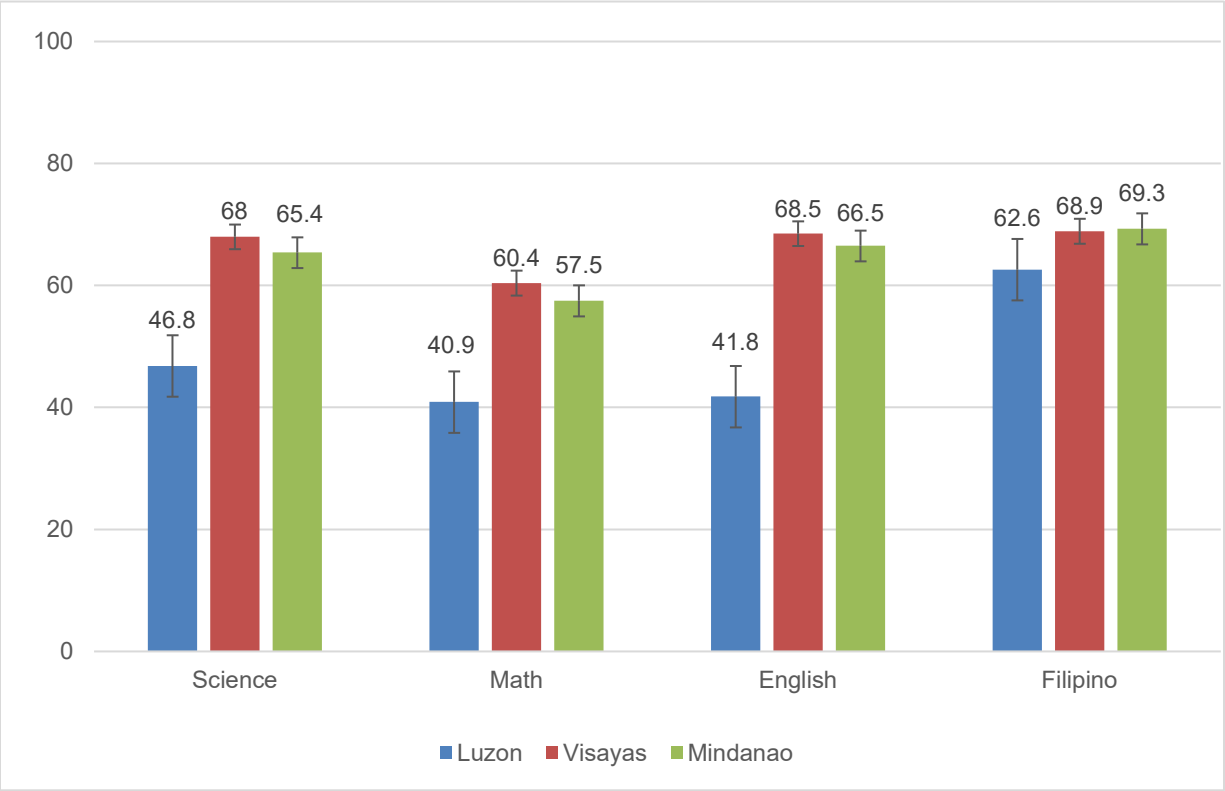


Data source: LCSFC- CBCL 2017 (Wave 2, 2018)

In addition to the use of CBCL, the LCSFC in Wave 4 (2020) included the use of the Youth Self Report (YSR) questionnaire (Achenbach and Rescorla, 2001). The YSR is a standardized questionnaire used to assess the behavior and emotional problems of children and adolescents in the age group 11-18. In contrast to the CBCL, the YSR is completed by the child or adolescent respondent. The YSR instrument is composed of a series of questions on behaviors, emotions, and social functioning in the past six months. It also tackles a variety of behaviors, such as aggression, delinquent behavior, anxiety, depression, and social withdrawal, as well as strengths and competencies of the child, such as prosocial behavior and activities, positive attitudes toward self and others, and school performance. In the assessment of school performance, the respondent is asked how he/she performs in each of the academic subjects taken at the time of the survey. The responses range from: 0, Failing, 1, Below Average; 2, Average; and 3, Above Average.

Results indicate the predominance of an "average" assessment in subjects such as Science (56%), Math (49%), English (53%), and Filipino (66%). The students' assessment of their academic performance at Grades 7/8 complements the results of parents' assessment based on the CBCL implemented in Wave 2 of the survey, when students were in Grades 5/6.

Figure 7.7. Percentage of Adolescent Respondents who Reported Average Performance in Science, Math, English and Filipino at Grades 7/8, by Island Group.



Data source: LCSFC- YSR 2020 (Wave 4)

Similar to the parents' assessment, regional variation also exists in students' own assessment of their academic performance in the four subjects. Except for Filipino, more learners from Visayas have consistently assessed their performance as average, compared to Luzon and Mindanao. In contrast, learners from Luzon have the lowest percentage of an average assessment. In fact, the majority of Luzon learners tend to give themselves "below average" assessments in Science (49%), Math (51%), and English (54%) (data not shown).

Digital Divide and the New Normal in Philippine Education

Digital divide is described as the uneven distribution of or unfair access to the internet, computers, digital skills, and the like due to social inequality, bringing about deprivation of opportunities, especially for the poor (Esteban, Jr. & Cruz, 2021; Hanna, 2021; Malindog-Uy, 2020). The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimates that 826 million students do not have computers at home, while 706 million do not have internet access worldwide (Esteban, Jr. & Cruz, 2021).

Compared to its neighboring countries in Asia, the Philippines has a weak digital infrastructure (Tria, 2020, Laforga, 2020). According to the National ICT Household Survey of 2019, only 17.7% out of 23.3 million households have an internet connection in the Philippines (DICT, 2019).

In the LCSFC baseline survey in 2016, only 10.2 percent of respondents' households reported having an internet connection at home. In succeeding waves, the proportion of households with internet connection at home increased over time. (See SDG9 Section of the Appendix Tables for more details).

Shortly before the pandemic, results of Wave 4 survey show that 86% of children used the internet. The percentage of internet use among children also increased over time, from 41% during Wave 1 to 90% in Wave 5. When the pandemic started and schools shifted to remote learning modality, access to the internet became more important for learners

The supplemental survey conducted in the last quarter of 2020 (Wave 4a) showed that 87 percent of learners use the internet, and it is slightly higher in Luzon (90%), followed by Mindanao (85%) and the Visayas (83%). The use of modules, or learning materials that were picked up from the school and used by learners to study at home, was the most common form of learning modality (72%). Across domains, more learners from Visayas used this mode compared to Mindanao and Luzon. Blended learning involves the use of the internet through synchronous and asynchronous learning sessions. Other forms included the use of TV, radio, and the internet.

Table 7.4. Percentage of Learners (Grades 8/9) Using Different Learning Modalities during SY 2020-21, by Island Group (n=3,059)

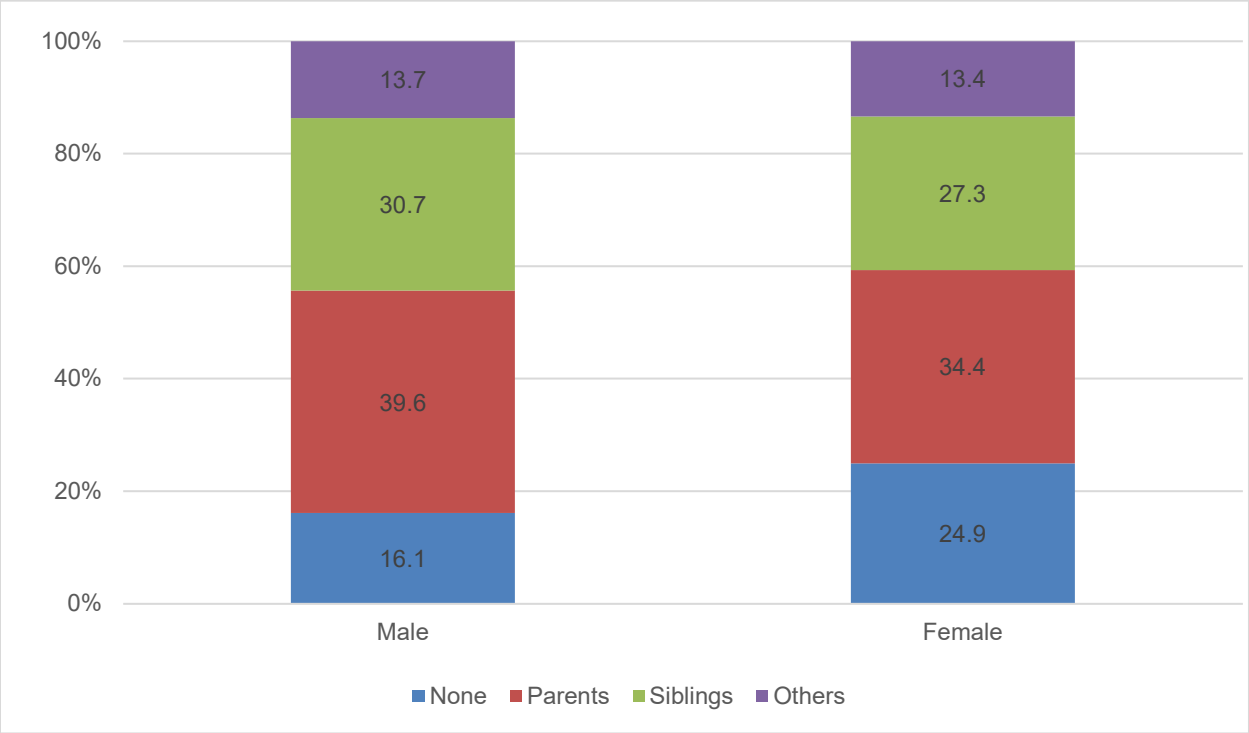
Learning Modality	Luzon	Visayas	Mindanao	Total
Module	60.3	92.2	85.4	72.7
Blended	25.2	2.9	11.2	17.4
Others	14.6	4.8	3.4	9.9

Data source: LCSFC- Supplemental Survey, 2020 (Wave 4a)

How did learners, now in Grades 8/9, manage the remote learning set-up? One in five learners said they have no one to help them with their lessons and school requirements. More than a third, on the other hand, received help from their parents (mainly mothers), followed by siblings. More female learners reported not having anyone to help them, while there are more male learners who got support from their parents and siblings for their school lessons and requirements.

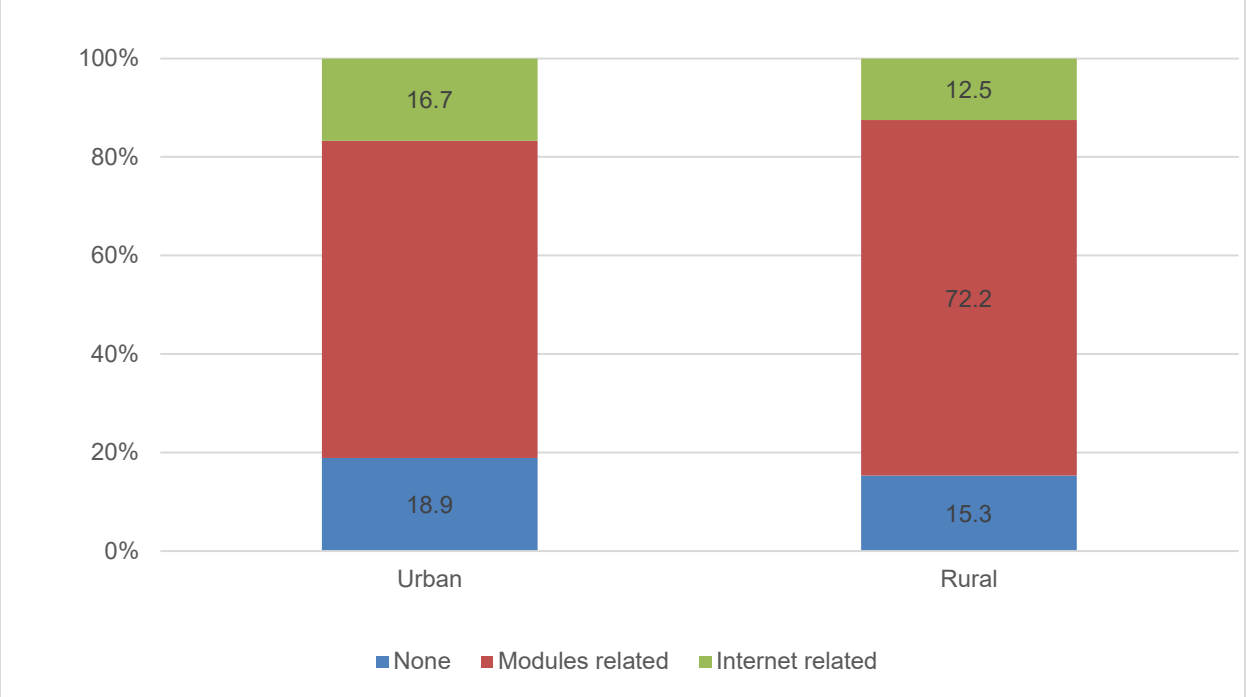
Adjusting to the new mode of learning proved to be a challenge to students. Two in three learners reported difficulties related to the modules; specifically, they found the modules difficult to understand, and that there was not enough explanation being provided. The poor communication infrastructure also affected learning as students complained about poor internet signal, power outages, and having no money to buy internet load. More students from urban areas reported problems with their internet connection, while more rural students experienced difficulty related to the modules. Nearly 20% of learners on the other hand said they did not encounter any problem with remote learning.

Figure 7.8 Percentage Distribution of Sources of Support for School Lessons by Learners' Sex



Data source: LCSFC- Supplemental Survey, 2020 (Wave 4a)

Figure 7.9. Percentage Distribution of Difficulties Encountered in Remote Learning, by Residence



Modular learning is still the most common among the modalities (83%), which is higher than the previous wave. Almost a similar percentage reported that their mode of learning is either through online or blended learning. Compared to students in Luzon, more students in Mindanao and Visayas were under modular learning. In contrast, more students in Luzon were using online learning or blended learning compared to students in Visayas and Mindanao. The majority of students said that they answered their modules on their own (88%). More female learners worked on their modules on their own compared to the male learners (91% vs. 85%).

Table 7.5. Percentage of Learners (Grades 8/9) Using Different Learning Modalities during SY 2020-21, by Island Group (n=3,713)

	Luzon	Visayas	Mindanao	Total
Module	72.1	93.8	96.2	82.7
Online only	14.3	3.2	1.7	8.8
Blended	13.6	3.0	2.0	8.4

Data source: LCSFC Wave 5, 2021

Among students who opted for the modular mode of learning, the mean average hours they spent studying their modules in a day was 3.4 hours (range: 0-14). Students from Luzon spent more hours a day studying their modules (3.7) than students from the Visayas (3.3) and Mindanao (3.1).

Compared to the results of the survey conducted in the early part of the pandemic (Wave 4a) where one in five learners said that they did not encounter any problem with remote learning, the percentage in Wave 5, decreased to 15%. Module-related concerns remain the top complaints of learners. More than a third said they found the subject matter difficult, and more than half experienced the difficulty of not having enough explanation or discussion on the subject matters. These complaints were consistent across island groups. More learners from Luzon cited that they experienced technical difficulty due to poor internet connection, while more learners from Mindanao cited the lack of gadgets or equipment for remote learning (Table 7.6).

Table 7.6. Difficulties Encountered by Learners (Grades 8/9) during SY 2020-21, by Island Group (n=3,957)

	Luzon	Visayas	Mindanao	Total
None	12.6	18.8	17.3	15.1
Difficult subject matter	31.7	36.7	41.1	35.2
Technical difficulty (i.e., internet)	19.3	10.2	6.8	14.2
Lack of gadgets/equipment	4.2	5.6	6.1	5.0
Too many modules	15.8	12.1	7.1	12.8
Lack of/no discussion of subject matter	56.7	52.3	51.3	54.4

Data source: LCSFC- Supplemental Survey, 2021 (Wave 5)

Remote education aims to continue education for all. However, not everyone can adapt quickly to online learning (Pokhrel & Chhetri, 2021) or thrive in such a learning setup due to students' diverse learning styles, attitudes, and habits, besides pre-existing socioeconomic and digital inequalities (Agaton & Cueto, 2021). Thus, an overwhelming majority of respondents expressed their preference to return to face-to-face learning (86%).

Summary and Recommendations

The Philippines is committed to achieving the UN Sustainable Development Goals, including the provision of free, equitable, and quality basic education for all children. It has enacted significant educational reforms, including the Kindergarten Education Act, the Early Years Act, and the Enhanced Basic Education Act, which extends compulsory schooling to Grades 11 and 12. Even before the COVID-19 pandemic, the education system was plagued with many challenges, such as a lack of classrooms, poor school infrastructure, lack of equipment, low pay for teachers, and declining students' performance in international assessments (Tadalan, 2021). The World Bank estimated learning poverty at 91 percent, which means that this is the percentage of children in the Philippines who are of primary age but are not proficient in reading. Nine in 10 students at the end of primary school did not achieve the minimum proficiency level in reading, and 5 percent of primary school-aged children are not enrolled (World Bank, 2022). These alarming statistics point to a brewing education crisis that was further exacerbated by the pandemic.

While school attendance has been consistently high among the school-going age population, the percentage of learners who are on track or in age-appropriate grade level is declining. Among the LCSFC cohort of 10-year-olds in 2016, the proportion that is on track dropped to 83% in 2021. This implies that a substantial percentage of learners either started schooling late, dropped out of school or repeated a grade. Findings also show that learners from Mindanao are more disadvantaged. They have the lowest proportion of learners who are on track across several survey waves. Aside from variations across Luzon, Visayas and Mindanao in the percentage of being on-track, there are more female learners in age-appropriate grade levels than males. Similarly, more learners from households that are non-4Ps beneficiaries are on track compared to learners from 4Ps households. Mother's education is also significantly associated with the learners' education track. There is lower percentage of on track learners among mothers with elementary level of education relative to children whose mothers have either high school or college level education.

A more surprising finding from the analysis is the low level of assessment of both parents and learners of their academic performance, even before the pandemic. The majority of parents rated their children's performance in Reading, Math and Science as "average". In the same token, the results of the Youth Self Report implemented during the 2020 survey round (Wave 4), also show that the majority of learners assessed their academic performance in Science, Math, English and Filipino as "average". Whether this is a cultural preference to underplay one's achievement or a tendency to settle for the minimum should be a cause for concern.

The shift to remote learning has also underscored how unprepared Filipino students are for self-learning. On the average, they spent three hours a day to study their modules. At Grades 8/9, 20 percent said they had no one to help them with their modules, while in the latter part of the pandemic (Wave 5), 8 in 10 reported that they answered their modules on their own. However, the most common difficulty they cited in modular learning is the lack of explanation or discussion on the subject matter. In addition, the

inequality in access to school resources, the average assessment of academic performance and the digital divide that had existed even before the pandemic are factors that contributed to the difficulty in learning that students experienced during the pandemic.

The achievement of the SDG4 goal of free, equitable, and quality primary and secondary education for all boys and girls by 2030 is already compromised by the existing problems in the Philippine education system, but the pandemic is expected to derail the trajectory further. Several policy directions are recommended based on the results of the study:

1. Invest in digital infrastructure to ensure that students have access to devices and reliable internet connectivity. The pandemic emphasized the importance of information communication technology and the need for connectivity. Although students and teachers alike prefer face-to-face learning, the pandemic made remote learning a viable option for some. The digital resources and the learners' skills in making use of them might be a critical learning tool for the future.

2. Address learning gaps and equity concerns. The results of the study emphasize that the pandemic has exacerbated learning gaps and equity concerns, particularly for students from Mindanao.

3. The most cited complaints of learners regarding their difficulty in understanding their lessons using an online, modular, or blended learning modality brings to fore the critical role of teachers in the learning process. In the new learning environment, teachers should also be equipped and capacitated to design learning materials suited for digital and online learning.

4. Expand access to early childhood education. The declining percentage of students who are in age-appropriate grade levels indicates that a number of students do not start school on time or they repeat a grade. Several studies have highlighted the importance of early childhood education in the development of children and as preparation for lifelong learning. In her study of early childhood education, Siraj-Blatchford (2004) found that preschool education has a positive effect on children's education that could help overcome structural inequalities associated with socio-economic class, gender and ethnicity in the early years. An evaluation of the early childhood development program in the Philippines found that investments in preschool children have led to improvements in later school success and to adult work productivity and income (Behrman, J., et al., 2004).

5. Emphasize the value of excellence. With the reality of an education crisis, the bigger challenge is how to make Filipino students more competitive and driven. Emphasis should be on quality teaching and learning rather than, meeting the minimum requirements.

6. Finally, the LCSFC provides a wealth of data on development trajectories of adolescents. The longitudinal design of the study affords the exploration of causality between various factors and different outcome indicators, specifically, on education. Further analyses of the LCSFC data, e.g., on children's readiness and use of information and communication technology can provide valuable information on how adolescents and young adults adapt to demands of the changing times as they navigate the transition from school to work.

REFERENCES:

Achenbach, T.M., & Rescorla, L.A. (2001). Manual for the ASEBA School-Age Forms and Profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

Agaton, C. & Cueto, L. (2021). Learning at home: Parents' lived experiences on distance learning during COVID-19 pandemic in the Philippines. *International Journal of Evaluation and Research in Education,* 10(3), 901-911. DOI: 10.11591/ijere.v10i3.21136

Alvarez, A. (2020). The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education.* 15(1), 144-153. https:doi.org/10.5281/zenodo.3881529

Asian Development Bank (ADB). (2021). Learning and Earning Losses from COVID-19 School Closures in Developing Asia. In https://www.adb.org/sites/default/files/publication/692111/ado2021-special-topic.pdf

Barrot, J., Llenares, I., & del Rosario, L. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies.* (26). 7321-7338. https://doi.org/10.1007/s10639-021-10589-x

Berhman, J., King, EM., Laigo, L. (2004). A better start in life: the early childhood development program in the Philippines. WorldBank Working Paper 30785. In https://documents.worldbank.org//en/publication/documents-reports/documentdetail

Commission on Higher Education (CHED). (n.d.) CHED K-12 Transition Program. In https://ched.gov.ph/k-12-project-management-unit/

Dayagbil, F., Palompon, D., Garcia, L., & Olvido, M. (2021). Teaching and Learning Continuity Amid and Beyond the Pandemic. *Frontiers in Edcuation.* 6. 1-12 DOI: 10.3389/feduc.2021.678692.

Department of Information and Communication Technology (DICT). (2019). National ICT Household Survey 2019. https://dict.gov.ph/ictstatistics/nicths2019/

De Vera, B., & Adonis, M. (2021, August 26). UNICEF points out effects of missing in-person classes on Filipino kids. *Inquirer.* https://newsinfo.inquirer.net/1478895/unicef-worries-for-ph-kids-missing-in-person-classes

Esteban, A., & Cruz, M. (2021). Digital Divide in Times of Pandemic among Teacher Education Students. *Open Access Library Journal, 8*, 1-12. DOI. 10.4236/oalib.1107323.

Geronimo, J. (2016). PH Rolls Out Senior High's Grade 11 Nationwide. *Rappler.* In https://www.rappler.com/nation/136224-school-opening-2016

Gutierrez, J. (2021, September 13). With Schools Closed, Covid-19 Deepens a Philippine Education Crisis. The New York Times. https://www.nytimes.com/2021/09/13/world/asia/philippines-students-remote-covid.html

Irwin, M., Lazarevic, B., Soled, D., & Adesman, A. (2021). The COVID-19 Pandemic and Its Potential Enduring Impact on Children. *Lippincott Williams & Wilkins Open Access.* 34(1), 107-115. DOI: 10.1097/MOP.0000000000001097

Laforga, B. (2020, October 6). PHL risks getting left behind as internet remains slow, expensive *Business World.* https://www.bworldonline.com/editors-picks/2020/10/06/320910/phl-risks-getting-left-behind-as-internet-remains-slow-expensive/

Orbeta, A. and Paqueo, V. (2022, Aug.) Philippine Education: Situationer, Challenges and Ways Forward. PIDS Discussion Paper Series No. 2022-23. In https://pidswebs.pids.gov.ph/CDN/document/pidsdps2223.pdf

Palis, L. (2022, March 22). Education in the time of a pandemic. https://home.kpmg/ph/en/home/insights/2022/03/education-in-the-time-of-a-pandemic.html

Panagouli, E., Stavridou, A., Savvidi, C., Kourti, A., Psaltopoulou, T., Sergentanis, T., Tsitsika, A. (2021). School Performance Among Children and Adolescents During COVID-19 Pandemic: A Systematic Review. *Children*. *8*, 1134. https://doi.org/10.3390/children8121134

Pitagan, F. (2021). Continuity of Education in the Philippines Amidst COVID-19 Pandemic. Japan Media Communication Center. https://www.jamco.or.jp/en/symposium/29/6/

Pokhrel, S., & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandmeic on Teaching and Learning. *Sage Journals,* 8(1), 133-141. https://doi.org/10.1177/2347631120983481

Rotas, E. & Cahapay, M. (2020). Difficulties in Remote Learning: Voices of Philippine University Students in the Wake of COVID-19 Crisis. *Asian Journal of Distance Education, 15*(2), 147-158. https://doi.org/10.5281/zenodo.4299835

Santos, A. (2021, September 21). Philippines: COVID school closures threaten education 'catastrophe'. *Deutsche Welle (DW)*. https://www.dw.com/en/philippines-covid-school-closures-threaten-education-catastrophe/a-59250348

Simeon, L. (2022, June 27). Learning poverty in Philippines to worsen due to COVID-19. *PhilStar Global*. https://www.philstar.com/business/2022/06/27/2191088/learning-poverty-philippines-worsen-due-covid-19

Siraj-Blatchfort, I. (2004). Educational disadvantage in the early years: How do we overcome it? Some Lessons from research. *European Early Childhood Education Research Journnal, 12* (2). pp.5-20.

Tadalan, C. (2021, February 1). Coronavirus pandemic highlights failures of Philippine education. *BusinessWor*ld. https://www.bworldonline.com/editors-picks/2021/02/01/341918/coronavirus-pandemic-highlights-failures-of-philippine-education/

Tria, J. (2020). The COVID-19 Pandemic Through the Lens of Education in the Philippines: The New Normal. *International Journal of Pedagogical Development and Lifelong Learning*. 1(1). ep2001. https://doi.org/10.30935//ijpdll/8311

United Nations-Philippines (n.d.). Sustainable Development Goals. In https://philippines.un.org/en/sdgs

World Bank; UNESCO. 2022. "Philippines - Learning Poverty Brief – 2022 (English)". Learning Poverty Brief. Washington, D.D.: World Bank Group.

Yacub, C., & Eadie, P. (2022, February 18). COVID-19 and a new social contract for education in the Philippines. *New Mandala*. In https://www.newmandala.org/covid-19-and-a-new-social-contract-for-education-in-the-philippines/

Chapter 8

SDG 5. Fulfilling SDG5 Commitment for Boys and Girls in the Philippines

Chapter 8

SDG 5. Fulfilling SDG5 Commitment for Boys and Girls in the Philippines

Chona R. Echavez [20]and Leah Wilfreda R.E. Pilongo[21]

Introduction

Sustainable Development Goal 5 (SDG5) aims to "achieve gender equality and empower all women and girls" (United Nations, 2017). It emanates from international instruments, such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the Beijing Platform for Action, and the Millennium Development Goals (MDGs) that preceded it (United Nations, 2015). SDG 5 is crucial to realizing the greater vision of the 2030 Agenda for Sustainable Development, which aspires to leave no one behind and to create a more equal, sustainable, and prosperous society for all. It acknowledges that gender equality and women's empowerment are fundamental human rights that are required for long-term development.

The 2015 Sustainable Development Goals (SDGs) replaced the MDGs as global goals to address political, environmental, and economic issues. Hence, this paper tackled the selected targets and indicators of SDG 5, which are enumerated in Box 1 (SDG 5 Tracker extracted from the Our World in Data team (2023)).

Box 1. SDG 5: Achieving gender equality and empower all women and girls (Selected targets and indicators used in this study)	
Target 5.1	End all forms of discrimination against all women and girls everywhere
Target 5.2	Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
Target 5.4	Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
Target 5.6	Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
Target 5.c	Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

[20] Director, Research Institute for Mindanao Culture, Xavier University. E-mail:echavez.chona@gmail.com

[21] Dean of Graduate School and Dean of Research, University of Bohol. E-mail: leahwilfredapilongo@gmail.com

As a signatory of the United Nations, the Philippines further defined its commitment and cooperation in achieving the SDGs. The summary of selected key national policies, strategies, and legislations responsive to achieving gender equality among children and adolescents is reflected in Box 2.

Box 2. Summary of Selected key national policies, strategies, legislations for SDG 5#		
Age of majority	18 years old	Civil Code of the Philippines: Emancipation and Age of Majority (Republic Act No. 6809) Juvenile Justice and Welfare Act of 2006 (S.4(c))
Age of consent to medical care	Children 14 years or older are presumed to have capacity to consent.	Cardwell v. Bechtol (American case law, but have been referred to in the Philippines)
Mental health and child protection	Committee for the Special Protection of Children by order of Executive Order No. 275 (s.1995) under S.19 Republic Act 7610	S.19 Republic Act 7610
Rights and protection of children and adolescents	All children shall be entitled to the rights herein set forth without distinction as to legitimacy or illegitimacy, sex, social status, religion, political antecedents, and other factors. Includes right of children to assistance, including proper care and nutrition, and special protection from all forms of neglect, abuse, cruelty, exploitation and other conditions prejudicial to their development.	Art.3 Presidential Decree No. 603 Philippine Constitution (Art 15(3))
Age of sexual consent	16 years This Act was also amended to specify that males can also be the victim of rape	Anti-Rape Law of 1997 (Art.266) (Republic Act No. 8353 Art 266-A) Republic Act No. 11648
Age of marriage	Age of consent for marriage is 18 years	Family Code The Family Code of the Philippines (Executive Order no. 209) was signed into law on July 6, 1987.
Prohibition of violence	No torture, force, violence, threat, intimidation, or any other means, which vitiate the free will, shall be used against a person.	Philippine Constitution (Art.3(12)) RA 7610; RA10364 and RA9775 Anti-Violence Against Women and their Children Act of 2004 (Republic Act No. 9262)
Laws on corporal punishment	Parental authority over children to impose discipline on them as may be required under the circumstances is permitted.	Family Code 1987 (Art. 20) Child and Youth Welfare Code 1974 (Art.45)

Box 2. Summary of Selected key national policies, strategies, legislations for SDG 5[#]		
	Right of parents to discipline the child as may be necessary for the formation of his/her good character is recognised.	
Prohibition of recruitment to armed forces	Do not allow any person below 18 years old to take part in the armed conflict. "Children shall not be recruited to become members of the Armed Forces of the Philippines or its civilian units or other armed groups"	S.4 Philippine Army Soldier's Handbook on Human Rights and International Humanitarian Law (2006); RA 11188 S.22 Republic Act No. 7610 (1992)
Minimum age criminal responsibility	15 years of age (It has been proposed to lower it to 12 in House Bill 8858) Mitigating circumstance- under 18 years of age	Juvenile Justice and Welfare Act of 2006 (Republic Act 3944) (S.20) Penal Code (Art.13(1))
Age set for child labor	Minimum age for employment is 15 years, and children younger than 18 years are protected from hazardous work.	Republic Act 679 (S.3, S.12); RA 7658 S.12 Republic Act 7610
Criminalization of same-sex consensual sex	In the Philippines, sexual relations between people of the same sex is not prohibited provided they do not violate provisions of the law that prohibit violence and force that amount to sexual assault, or sex in public, or sex under scandalous circumstances amounting to grave scandal, or sex with a minor which amounts to child abuse.	
Protection of children in emergency situations	This Act requires the State to protect the fundamental rights of children before, during and after disaster and emergency situations when children are gravely threatened or endangered by circumstances that affect their survival and development	Republic Act 10821 Children's Emergency Relief and Protection Act

[#] Selected from Table 1. Summary of MHPSS-Related Legislation and Policies, pp. 34-36 from strengthening mental health and psychosocial support systems and services for children and adolescents in East Asia and Pacific Region *(UNICEF, Research Institute for Mindanao Culture, Burnet Institute, 2022)*

Women and girls are subjected to various forms of violence and injustices in business and social life. Considering all of this, ending gender inequality is critical to the advancement of humanity. As a result, gender equality, the fifth goal of sustainable development, representing equality for men and women everywhere and in all fields based on their needs. Despite these objectives, sexism and discrimination persist. For example, one in every five women and girls between the ages of 15 and 49 is subjected to sexual or physical violence at the hands of another (United Nations, 2021).

As to the Gender Gap Index, the Philippines ranked 19th internationally and 2nd in East Asia and the Pacific. Its score lowers the gender parity criteria from 78.4 percent in 2021 to 78.3 percent in 2022. After

2013, the country's gender parity score fluctuated between 0.783 and 0.799, despite a 4.2 percentage point rise. The Philippines' gender gap remains at 21.7 percent in 2022. The country dropped from 17th to 19th overall, with small sub-index changes. The areas of political empowerment, health, and survival were unaffected. Regarding educational attainment, gender parity fell at the primary enrollment level, with boys making up a significantly greater proportion of the rising enrolment numbers. Even if the whole labor force was affected by the Economic Participation and Opportunity sub-index in 2022, there were still 24.5 percentage points fewer females who are working than males. Legislative, senior officials, managers, and professional and technical employees continue to be represented equally by men and women (WEF, 2022).

Schooling of Children, Food Insecurity, and Violence Against Children: A glimpse of what the literature says

Schooling of males and females. Education is a fundamental human right that should be available without discrimination. It increases the ability of people to promote health, widen access to paid employment, boost the market and non-market activity productivity, and facilitate social and political involvement, which improves the quality of life.

An increase in the educational attainment of children aged six and above was reported by the Functional Literacy, Education, and Mass Media Survey (FLEMMS, 2003; FLEMMS, 2008). The educational attainment of children aged six and up has increased from 62 percent in 2003 to 68 percent in 2008. Female adolescents have higher basic and functional literacy rates than their male counterparts. Female adolescents have a basic literacy rate of 98.5 percent and a functional literacy rate of 94 percent. Male adolescents, on the other hand, have basic literacy rates of 97 percent and functional literacy rates of 88.7 percent, respectively.

The Philippine Statistics Authority (2020) revealed that the Basic Literacy Rate from 10-64 years old among women is 97.1 percent, while for men it is 95.1 percent. The Functional Literacy Rate among women is 92.9, while their male counterpart has 90.2. Those who have no grade completed in 2020 among women, six years old and over reflect 3.6 percent, while for men it is 4.0 percent. In School Year (SY) 2020-2021, women had higher completion rates compared to men. From Grades 1 to 6, women reflect 84.7 percent and 80.5 percent for men, and for the secondary level (Grades 7-12), women had 74.6 percent and men had 64.2 percent. This report further stated that, among the household population aged five and above, the literacy rate was higher rate for females (97.1%) compared to males (96.8%). Examining the distribution of senior high school students across specialization tracks, females dominated in academics and arts and design with a rate of 54.3%, whereas males accounted for 45.7%. Specifically, in academic pursuits, females led with 52.1%, while males constituted 47.9%. Conversely, males surpassed females in technical-vocational tracks (55.5% for males and 44.5% for females) and sports (65.1% for males and 34.9% for females).

Food Insecurity. The Food and Agriculture Organization (FAO) emphasizes the importance of physical and economic access to sufficient, safe, and nutritious food in ensuring food security. In its Policy Brief, the FAO uses the 1996 World Food Summit definition of food security as existing "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" (FAO, 2006).

According to the World Food Programme Philippines Food Security Monitoring report from October 2022, about a quarter of agricultural households in the Philippines are food insecure, compared to only 9 percent of non-agricultural households. The report also highlights that seven out of ten households are relying on coping strategies to buy food, with 57 percent borrowing money, 46 percent purchasing food on credit, and 38 percent spending their savings (Cruz, 2022).

According to the Rapid Nutrition Assessment Survey (RNAS) carried out by the Food and Nutrition Research Institute in 2020 amid the ongoing COVID-19 epidemic, 62.1 percent of Filipino families reported moderate to severe food insecurity (Angeles, et al., 2022). Household food insecurity rose by 21.9 percentage points from 2019 to 2020. The most significant rise was among families in low-risk locations (24.0 percentage points), followed by those in moderate-risk areas (22.9 percentage points). Throughout the government-imposed Enhanced Community Quarantine period, almost 56.3 percent of the households reported having trouble getting food.

Gender disparities begin to appear in infancy, according to research, and are influenced by both biological preconditions and the effects of upbringing (Sawyer, 2012; Chowdhury, 2017). These findings imply that the growing disparity between males and girls derives from early developmental differences.

These findings highlight the significance of early interventions and gender-responsive policies to guarantee equitable opportunities and health outcomes for boys and girls. Countries can work toward more equitable outcomes and improved overall well-being for children of all genders by tackling gender disparity and enhancing access to resources.

Violence against children.

According to the 2016 National Baseline Study on Violence Against Children, 40 percent of 13 to 18-year-olds have ever been physically harmed at home, with nearly five percent needing medical attention. Males were somewhat more likely than females to have witnessed physical violence, with parents constituting the majority of offenders. In addition to being the victims of violence, nearly one in four respondents said they had experienced psychological violence in their homes (verbal abuse, threats, or abandonment), and 13.7 percent said they had experienced sexual violence. Of the respondents, 41.4 percent said their children had seen physical violence in the home. Participants in the baseline study stated that being exposed to violence contributed to their social isolation, low self-esteem, and feelings of sadness, dread, and anxiety (UNICEF, 2016).

Another concern to be reckoned with among children is bullying. It is a significant issue that affects students' lives severely all around the world. The Programme for International Student Assessement (PISA) 2018 statistics show significant inter-country variations in pupils' reported experiences with bullying (OECD, 2018). The Philippines is one of the five countries wherein more than 40 percent of children claimed to experience bullying at least once every month is the Philippines. Additionally, it is one of three nations wherein more than 20 percent of children experienced bullying on a regular basis. Additionally, it revealed that more than 20 percent of students claimed that their possessions had been removed or destroyed.

Findings from the Longitudinal Cohort Study on the Filipino Child (LCSFC)

This chapter used data from the LCSFC to examine the nature of gender disparity in early adolescence and assess how the Philippines fare in SDG 5 from the perspective of Filipino adolescents. Data from LSCSC Waves 1-5 (from 2018-2022), covering the lives of the cohort from ages 10-15, were used to report on their schooling, and on the impediments to their consumption of healthy/nutritious foods or eating when hungry due to lack of money or resources. Their experiences with violence from ages 10-13 (Waves 1-4) are also presented in this chapter. Since Wave 5 (2022) was conducted by phone (as explained in the Introduction), this survey excluded sensitive questions such as those on experiences with violence.

Schooling. From ages 10-15, females appear to have a greater edge over males in terms of schooling indicators, which was also reported in an LCSFC Policy Note (Alegado, et al. 2020). In the Philippines, sex differences in education outcomes are more favorable toward females (Daniels & Adair, 2004; Maligalig, et al., 2010; Paqueo & Orbeta, 2019; San Buenaventura, 2019). Education is one important area in which gender differences manifest early in life. Table 8.1 shows that significantly more females than males were enrolled in school, particularly at ages 11, 12 and 13. Results in Table 8.2 show that fewer females were likely to repeat a grade than males in most of the waves.

The panel data analysis reveals concerning results indicating that certain children are being left behind when it comes to accessing education. Ideally, all school-age children should have the opportunity to attend school; however, the data clearly demonstrate that this is not the case. The findings suggest that over the course of the five data collection waves, which covered the cohort at ages 10-15, the percentage of adolescents not enrolled in school varied from 1.6 percent at age 10 to 3.7 percent at age 15 (refer to Table 8.1). It is important to note the significance of these numbers in the context of the study population. The LCSFC sample represents 2.1 million Filipinos who were 10 years old in 2016 (OPS, 2018). Therefore, the reported 1.6 percent of the cohort who were out of school at age 10 actually translates to about approximately 33,763 10-year-old children. This figure is substantial and underscores the issue at hand. Furthermore, the data indicate a consistent downward trend in the percentage of the cohort enrolled in school from ages 10 to 15.

The results from all five waves of the study consistently highlight the ongoing disparity between males and females in terms of their educational opportunities. Specifically, there is a growing gender gap in the percentage enrolled in school, particularly from ages 11 to 15. This gender-based disparity is a persistent trend observed throughout the data.

In Wave 1, for instance, 11.8 percent of the cohort reported having repeated a grade by the age of 10. Subsequent waves, from Wave 2 to Wave 5, focus on grade repetition within the current school year, resulting in expected lower figures compared to Wave 1. However, the data shows an increasing trend in grade repetition from Wave 2 to Wave 5, highlighting a growing concern.

Table 8.1. Percentage of LCSFC Cohort Enrolled in School by Island Group, Residence, and Sex[#]

Categories	Wave 1 (Age 10) (n=4,931)	Wave 2 (Age 11) (n=4,715)	Wave 3 (Age 12) (n=4,629)	Wave 4 (Age 13) (n=3,051)	Wave 5 (Age 15) (n=4,156)
OVERALL	98.4	98.4	97.2	95.5	96.3
Island Group					
Luzon	98.1[a,c]	98.3	97.5	96.1	96.4
Visayas	99.3	98.9	97.3	95.4	96.4
Mindanao	98.4	98.1	96.5	94.3	96.1
Residence					
Urban	98.2	98.4	97.2	95.5	96.3
Rural	98.7	98.3	97.2	95.5	96.3
Sex					
Male	98.3	97.6***	96.1***	94.2	94.8***
Female	98.6	99.2	98.3	96.9	98.0

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

Table 8.2. Percentage of LCSFC Cohort Who Repeated a Grade by Island Group, Residence, and Sex[#,##]

Categories	Wave 1 (Age 10) (n=4,931)	Wave 2 (Age 11) (n=4,643)	Wave 3 (Age 12) (n=4,490)	Wave4 (Age 13) (n=2,916)	Wave 5 (Age 15) (n=3,987)
OVERALL	**11.8**	**1.6**	**1.7**	**2.3**	**2.7**
Island Group					
Luzon	10.9	1.6	1.3	1.9	2.2
Visayas	11.3	1.1	1.2	2.2	3.8
Mindanao	13.8	2.0	3.0	3.4	2.9
Residence					
Urban	11.7	1.2	1.8	2.5	2.7
Rural	11.9	2.1	1.6	2.0	2.8
Sex					
Male	13.8***	2.5***	2.4***	2.9	3.8***
Female	9.6	0.8	1.0	1.7	1.5

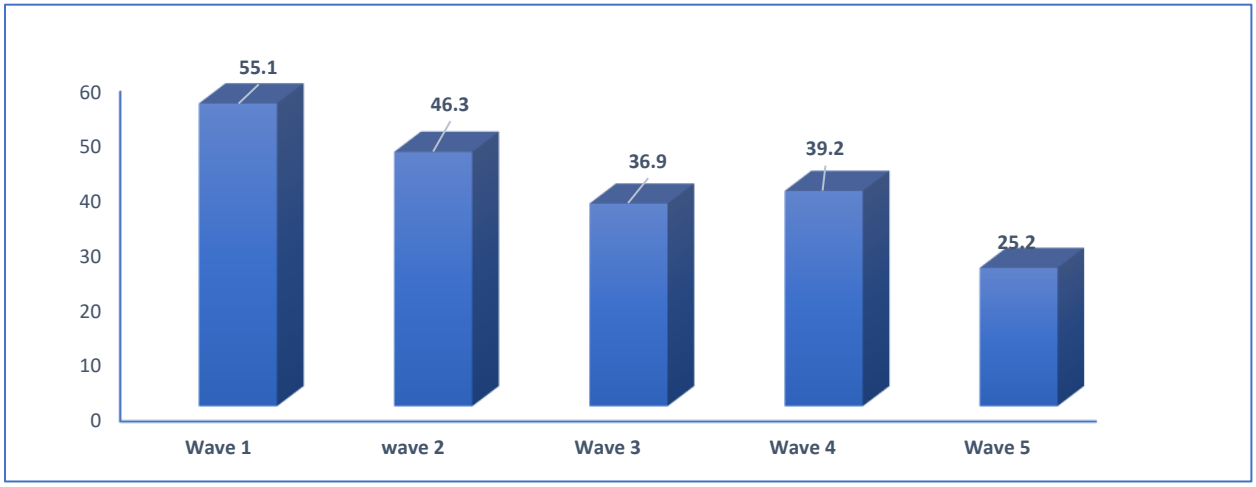
[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

[##] In Wave 1 the variable refers to ever repeated a grade by age 10; In Waves 2-5 the variables refer to having repeated a grade in current school year.

Resources and consumption of healthy foods. A number of people and families worldwide continue to face severe global hunger and food insecurity challenges. One of the many elements causing food

insecurity is a person's inability to meet basic nutritional demands because of a lack of financial resources. People from all socioeconomic levels experience food insecurity, characterized as the restricted or unpredictable availability of safe, nutritious food. In the LCSFC, the cohort adolescents were are asked if there was a time in the past six months when they were unable to eat healthy and nutritious foods as a result of financial or resource limitations (Figure 8.1). The data analysis reveals an important gender disparity. Across most waves, a significantly higher number of males compared to females reported being unable to eat healthy/nutritious foods due to financial or resource constraints (Table 8.3).

Figure 8.1. Percentage of LCSFC Cohort Who Were Unable to Eat Healthy or Nutritious Foods Due to Lack of Money or Other Resources[#]



[#]Weighted percentages

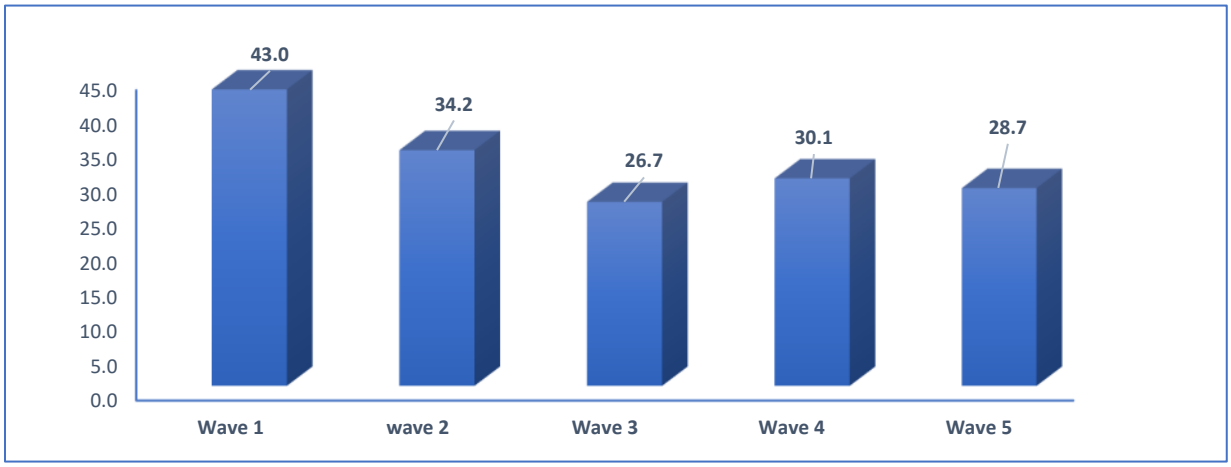
Table 8.3. Percentage of LCSFC Cohort Who Were Unable to Eat Healthy or Nutritious Foods Due to Lack of Money or Other Resources by Island Group, Residence and Sex[#]

Categories	Wave 1 (n=4,903)	Wave 2 (n=4,685)	Wave 3 (n=4,558)	Wave4 (n=3,039)	Wave 5 (n=4,128)
Island Group					
Luzon	48.1[a,b]	41.9[b,c]	32.2[a,b]	34.2[a]	28.6[a,b]
Visayas	62.5	45.7	43.8	41.8	41.5
Mindanao	63.8	55.0	40.6	38.4	43.7
Residence					
Urban	55.6	47.4	35.8	36.1	33.6
Rural	54.5	45.0	37.7	37.5	36.9
Sex					
Male	56.7	48.8[***]	39.0[**]	39.2	37.4[**]
Female	53.3	43.5	34.2	33.9	32.7

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at [**]p<0.05, [***]p<0.01

Hungry but did not eat due to the lack of money/resources. Individuals struggling financially frequently find themselves in a precarious situation of experiencing hunger but unable to acquire enough food to feed themselves and their families. Figure 8.2 shows that across the five waves, Wave 1 has the highest percentage of cohort adolescents who experienced not eating despite being hungry, and Wave 3 has the lowest. The data further show that males are more likely than females to experience hunger across most of the waves (Table 8.4).

Figure 8.2. Percentage of LCSFC Cohort Who Experienced Hunger But Did Not Eat Due to Lack of Money or Other Resources[#]



[#]Weighted percentages

Table 8.4. Percentage of LCSFC Cohort Who Experienced Hunger But Did Not Eat Due to Lack of Money or Other Resources by Island Group, Residence and Sex[#]

Categories	Wave 1 (n=4,907)	Wave 2 (n=4,686)	Wave 3 (n=4,562)	Wave4 (n=3,039)	Wave 5 (n=4,128)
Island Group					
Luzon	31.6[a,b]	26.9[a,b,c]	18.8 [a,b]	22.2[a,b]	21.0[a,b,c]
Visayas	56.9	36.3	36.7	33.7	33.3
Mindanao	55.7	46.7	34.5	36.9	41.4
Residence					
Urban	42.8	34.8	25.1	26.0	27.8
Rural	43.2	33.6	28.0	31.0	30.0
Sex					
Male	46.3***	37.5***	29.3***	29.6	30.6**
Female	39.3	30.7	23.4	26.3	26.8

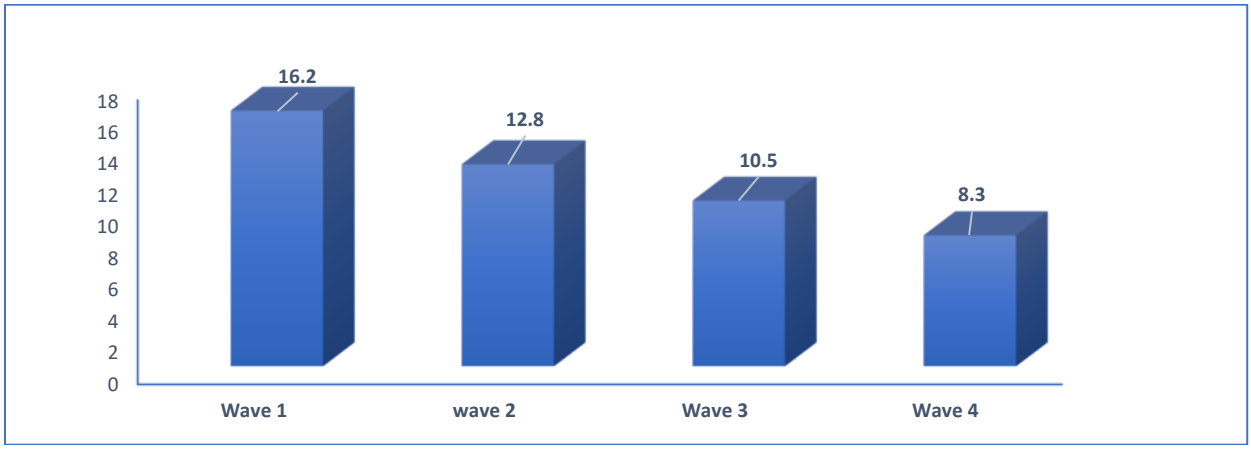
[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

Physical Violence by Parents. Physical violence inflicted on children by their parents is a severe concern, with long-term harmful effects on children's well-being and development. Understanding the frequency and associated determinants of such violence in the Philippines is critical for designing effective interventions and policies to safeguard children's rights and promote safety.

In the 2016 National Baseline Study on Violence Against Children (UNICEF, 2016), 40 percent of 13- to 18-year-olds had ever experienced physical violence at home, with almost 5 percent requiring hospitalization for physical harm. Parents were the main perpetrators of physical violence, with boys slightly more likely to have experienced violence than girls. Stakeholders who were interviewed for this report also highlighted the importance of family factors for the mental health and well-being of children and adolescents. They emphasized the critical influence of parental attachment and quality of caregiving relationships, parental support and guidance, parents' own mental health and mental health literacy, and exposure to family violence. National data describing parental attachment, positive parenting, early stimulation or adequate supervision during childhood are limited.

The LCSFC data revealed a downward trend in adolescents' reports of physical violence inflicted by parents (Figure 8.3). Moreover, Table 8.6 shows that significantly more male than female adolescents reported being physically hurt by their parents from ages 10-12.

Figure 8.3 Percentage of LCSFC Cohort Who Reported Experiencing Being Forcefully Hurt by Parents[#]



[#]Weighted percentages

Table 8.6. Percentage of LCSFC Cohort Who Reported Experiencing Being Forcefully Hurt by Parents by Island Group, Residence and Sex[#]

Categories	Wave 1 (Age 10) (n=4,816)	Wave 2 (Age 11) (n=4,612)	Wave 3 (Age 12) (n=4,562)	Wave4 (Age 13) (n=2,995)
OVERALL	16.2	12.8	10.4	8.5
Island Group				
Luzon	9.3[a,b]	8.3 [a,b,c]	7.0 [a,b]	6.3 [a,b]
Visayas	23.8	15.7	14.0	9.9
Mindanao	24.3	19.0	14.4	12.3
Residence				
Urban	14.7	13.5	10.3	8.0
Rural	17.9	12.1	10.4	9.2
Sex				
Male	18.8***	17.0***	13.6***	9.7
Female	13.3	8.3	6.9	7.2

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

Physical violence by peers. The percentage of cohort adolescents reporting physical violence experienced from friends or classmates decreased from Waves 1-4 as shown in Table 8.5.

Table 8.5. Percentage of LCSFC Cohort Who Reported Experiencing Physical Violence from Peers by Island Group, Residence, and Sex[#]

Categories	Wave 1 (Age 10) (n=4,822)	Wave 2 (Age 11) (n=4,615)	Wave 3 (Age 12) (n=4,567)	Wave4 (Age 13) (n=3,014)
OVERALL	38.4	29.5	22.6	18.3
Island Group				
Luzon	37.2[a,c]	25.2[a,b]	20.1 [a,b]	17.0
Visayas	44.1	35.0	24.7	17.3
Mindanao	36.8	33.4	26.2	21.9
Residence				
Urban	38.6	29.2	23.7	17.9
Rural	38.2	29.8	21.5	18.8
Sex				
Male	43.7***	33.9***	27.5***	22.0***
Female	32.7	24.8	17.4	14.2

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at $p<0.05$ between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **$p<0.05$, ***$p<0.01$

Psychological violence: hurtful words. Understanding psychological violence's prevalence is crucial for addressing its effects on people's well-being because psychological violence takes many forms. This study focuses on two types of psychological violence: verbal abuse from peers and emotional abuse from parents. We seek to shed insight into the patterns in reports of psychological violence among our respondents by evaluating these easily expressed experiences.

Hurtful words by peers and hurtful feelings caused by parents have been chosen as the study's primary indicators of psychological violence. These measurements were selected because they were simple for respondents to express verbally. The study results show a diminishing tendency in the adolescents' complaints of psychological abuse throughout four waves of data collection (Table 8.7). These results imply a steady decline in the frequency of harmful remarks made by peers, as reported by the respondents. The data further show that more females in all four waves report receiving hurtful words from their peers.

Table 8.7. Percentage of LCSFC Cohort Who Reported Experiencing Hurtful Words from Peers by Island Group, Residence, and Sex[#]

Categories	Wave 1 (Age 10) (n=4,819)	Wave 2 (Age 11) (n=4,631)	Wave 3 (Age 12) (n=4,574)	Wave4 (Age13) (n=3,022)
OVERALL	**44.6**	**44.3**	**40.6**	**36.3**
Island Group				
Luzon	44.9[c]	43.7[c]	40.0[c]	38.2
Visayas	48.7	48.6	44.3	33.5
Mindanao	41.1	42.1	39.2	33.9
Residence				
Urban	45.3	44.7	40.3	36.4
Rural	43.8	43.7	41.0	36.0
Sex				
Male	42.2**	42.2**	39.0	32.6***
Female	47.3	46.5	42.3	40.3

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

Table 8.8. Percentage of LCSFC Cohort Who Reported Having Their Feelings Hurt by Parents by Island Group, Residence, and Sex[#]

Categories	Wave 1 (Age 10) (n=4,822)	Wave 2 (Age 11) (n=4,625)	Wave 3 (Age 12) (n=4,569)	Wave4 (Age 13) (n=2,992)
OVERALL	21.4	19.9	18.4	18.0
Island Group				
Luzon	17.1[a,b]	15.5[a,b,c]	15.2[a,b,c]	18.5
Visayas	24.3	21.7	19.1	14.5
Mindanao	27.8	26.8	24.4	19.4
Residence				
Urban	21.9	21.3	19.5	19.0
Rural	20.8	18.3	17.2	16.5
Sex				
Male	23.6***	21.2	18.2	16.6
Female	18.9	18.5	18.6	19.5

[#]Weighted results are presented in percentages. Analysis sample excludes outliers and those with missing data; Significantly different at p<0.05 between [a]Luzon and Visayas, [b]Luzon and Mindanao, [c]Visayas and Mindanao; Significantly different between categories at **p<0.05, ***p<0.01

Summary of Findings and Conclusion

Significant insights can be gained from the research on numerous elements of adolescents' well-being between the ages of 10 and 15. The LCSFC data reveal an increasing trend in the proportion of adolescents not enrolled in school across the five waves, ranging from 1.6 percent at age 10 to 3.7 percent at age 15, which flags an important concern regarding their education. There is a persistent gender gap in schooling that widens especially from the ages of 11 to 15. From Wave 2 through Wave 5, there is an increasing trend in repeating a grade, pointing to a troubling pattern. A clear gender gap is again observed in this variable, with males between the ages of 10 and 15 being more likely to repeat a grade than the females. Pertaining to resources and the consumption of healthy/nutritious foods, there has been a decline in reported constraints over the waves, but there is a gender gap, with more men reporting difficulty accessing nourishing meals because of resource or financial constraints. The same pattern is observed with experiencing hunger and not eating due to lack of resources. Psychological violence in the form of cruel remarks and the frequency of physical violence by parents and peers show a downward trend across the waves. Females frequently report experiencing more psychological abuse from peers. These findings illustrate the continuous difficulties adolescents experience with regard to education, hunger, and violence, emphasizing the demand for focused interventions and legislative measures to advance their welfare and safety.

Due to social expectations that men should be seen as stronger and more independent than women, men frequently experience disadvantages in modern society. This rationale makes any biological disadvantage men may already have even worse. According to Kraemer (2000), social perceptions about males' resiliency exacerbate the biological disadvantage they are born with. In addition, the Global Education Monitoring Report published by UNESCO (2018) shows that specific conventional gender norms contribute to the widening gap in educational outcomes between males and females. Gender-biased decision-making within homes is a pervasive conventional norm that may be found worldwide, especially when faced with declining incomes. Males are sometimes pushed to drop out of school and enter the workforce in various Latin American nations, and a practice likely made more common by the belief that males are more easily hired than females. This incidence severely hampers their chances to pursue higher education. Another traditional gender standard that accentuates the educational gap is the belief that boys are more violently inclined than girls. Boys may thus experience tougher discipline from instructors or school officials, having a detrimental psychological impact. Boys may consider the learning environment unpleasant in places like Central and South Asia, which makes them disconnect from schoolwork and ultimately increases dropout rates.

As they age, a gender barrier that is invisible to them develops, affected by cultural expectations that ultimately affect several aspects of their life. Males and females are treated differently and required to conform to distinct behaviors. According to the Department of Education's Gender-Responsive Basic Education Policy published in 2017, gender includes all of the social characteristics, opportunities, and interactions that come with being male or female. Because it is a socially constructed idea learned through socialization, it differs from biological sex. As a result, cultural norms about how men and women should behave become firmly ingrained, giving rise to numerous gender divides (WHO, 2014).

RECOMMENDATIONS

Based on these research findings, it is clear that there are significant gender disparities in various aspects of the adolescent's well-being, particularly related to education, hunger, and violence. Efforts should focus

on challenging societal expectations, promoting equal opportunities, and creating safe and inclusive environments for all adolescents. Legislative measures and targeted interventions are crucial in advancing the well-being and safety of adolescents. The following recommendations can be derived from the information provided:

Based on the summary of findings and information provided, here are some recommendations:

1. **Education Interventions**
    - 1.1 Implement targeted interventions to address the increasing trend of adolescents between ages 10 and 15 not being enrolled in school.
    - 1.2 Develop initiatives to reduce the gender gap in schooling, particularly focusing on the ages of 11 to 15.
    - 1.3 Address the concerning pattern of increasing grade repetition, with a specific emphasis on supporting males in the age group of 10 to 15.
2. **Resource Accessibility**
    - 2.1 Design and implement programs to alleviate resource or financial constraints that hinder access to nutritious meals, particularly for males.
    - 2.2 Explore strategies to mitigate hunger and ensure adequate nutrition, paying attention to the identified gender gap in resource accessibility.
3. **Violence Prevention and Support**
    - 3.1 Develop targeted interventions to address psychological abuse from peers, primarily focusing on females who report higher frequencies.
    - 3.2 Continue efforts to decrease the occurrence of physical violence by parents and peers, emphasizing a gender-sensitive approach.
4. **Addressing Gender Disparities:**
    - 4.1 Implement policies and initiatives that challenge and change traditional gender norms contributing to disparities in education outcomes.
    - 4.2 Combat gender-biased decision-making within homes, considering its impact on educational choices for males.
    - 4.3 Challenge stereotypes that associate boys with violence and work towards creating a more inclusive and supportive learning environment.
5. **Educational Opportunities and Inclusive Policies**
    - 5.1 Advocate for policies that promote equal educational opportunities for both genders and counter practices that force males to drop out of work.
    - 5.2 Implement measures to make the learning environment more conducive and welcoming for boys, especially in regions where disconnect from schoolwork and dropout rates are prevalent.
6. **Cultural Awareness and Sensitization**
    - 6.1 Raise awareness about the invisible gender barriers that develop as adolescents age, influenced by cultural expectations.
    - 6.2 Promote cultural sensitivity in educational institutions and society to foster an understanding of the impact of cultural norms on gender divides.
7. **Legislative Measures**
    - 7.1 Advocate for legislative measures that protect adolescents' well-being, addressing the identified challenges in education, resource accessibility, and violence.

REFERENCES:

Alegado, J. L. G., Largo, F. M., Herrin, A. N., Borja, J. B., Mayol, N. L., Bechayda, S. A., & Bautista, C. A. P. (2020). Closing the gender gap in schooling outcomes and cognitive ability among Filipino children. In Longitudinal Cohort Study on the Filipino Child. UNFPA-OPS Policy Notes Series_No. 5. USC-Office of Population Studies Foundation, Inc. Retrieved from https://opsusc.org/lcsfc-policy-notes.php.

Angeles-Agdeppa, I., Javier, C. A., Duante, C. A., & Maniego, M. L. V. (2022). Impacts of COVID-19 pandemic on household food security and access to social protection programs in the Philippines: Findings from a telephone rapid nutrition assessment survey. Food and Nutrition Bulletin, 43(2), 213-231.

Chowdhury, R., Taneja, S., Mazumder, S., Bhandari, N., & Strand, T. A. (2017). Gender differences in infant survival: a secondary data analysis in rural North India. BMJ open, 7(8), e014179. https://bmjopen.bmj.com/content/7/8/e014179.citation-tools

Cruz, M. (2022). WFP Philippines – Food Security Monitoring - October 2022 . https://www.wfp.org/publications/wfp-philippines-food-security-monitoring-october-2022

Daniels, M. C., & Adair, L. S. (2004). Growth in young Filipino children predicts schooling trajectories through high school. *The Journal of nutrition*, *134*(6), 1439-1446. https://scholar.google.com/scholar?output=instlink&q=info:DMLj_R1JZUkJ:scholar.google.com/&hl=en&as_sdt=0,5&scillfp=3397742608634299199&oi=lle

Food and Agriculture Organization (FAO). (2006). Policy Brief. Food Security. https://www.fao.org/fileadmin/templates/faoitaly/documents/pdf/pdf_Food_Security_Cocept_Note.pdf

Functional Literacy, Education and Mass Media Survey (FLEMMS). (2003). Final Report. 2003. Republic of the Philippines National Statistics Office. Retrieved from: https://drive.google.com/file/d/1BaiUnCGywIZ51ZhirvqsRVlVpMAECMZw/view

Functional Literacy, Education and Mass Media Survey (FLEMMS). (2008). Final Report. 2008. Republic of the Philippines National Statistics Office. https://drive.google.com/file/d/1ecqw33oMpKJJIdsLHfY1s3BVQ7j6R4sU/view

Kraemer, S. (2000). The Fragile Male. British Medical Journal, vol. 321, pp. 1609-1612. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1119278/.

Maligalig, D. S., Caoli-Rodriguez, R. B., Martinez, A., & Cuevas, S. (2010). Education outcomes in the Philippines. Asian Development Bank Economics Working Paper Series, (199). https://www.think-asia.org/bitstream/handle/ 11540/1547/economics-wp199.pdf?sequence=1

OECD. (2019). *PISA 2018 results (volume III): What school life means for Students' lives*. OECD. https://www.oecd-ilibrary.org/sites/cd52fb72-en/index.html?itemId=%2Fcontent%2Fcomponent%2Fcd52fb72-en

Our World in Data team. (2023). Achieve gender equality and empower all women and girls. Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/sdgs/gender-equality' [Online Resource]

Paqueo, V. B., & Orbeta, A. C. (2019). *Gender equity in education: helping the boys catch up* (No. 2019-01). PIDS Discussion Paper Series. https://www.econstor.eu/bitstream/10419/211075/1/166636181X.pdf

Philippine Statistics Authority (PSA). 2020. Literacy Rate and Educational Attainment Among Persons Five Years Old and Over in the Philippines (2020 Census of Population and Housing). https://psa.gov.ph/content/literacy-rate-and-educational-attainment-among-persons-five-years-old-and-over-philippines

San Buenaventura, P. (2019). Education quality in the Philippines. International workshop on data disaggregation for the Sustainable Development Goals. Philippine Statistics Authority.

Sawyer, C. C. (2012). Child mortality estimation: estimating sex differences in childhood mortality since the 1970s. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3429399/

UNESCO. (2018). Achieving Gender Equality in Education: Don't Forget the Boys. Global Education Monitoring Report Policy Paper No. 35. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000262714.

UNICEF. 2016. National Baseline Study on Violence Against Children. Executive Summary. Retrieved from: https://www.unicef.org/philippines/reports/national-baseline-study-violence-against-children-philippines

UNICEF, Research Institute for Mindanao Culture, Burnet Institute. (2022). Strengthening mental health and psychosocial support systems and services for children and adolescents in East Asia and the Pacific: Thailand Country Report. UNICEF, Bangkok.

United Nations. (2015). Millennium Development Goals and Beyond. https://www.un.org/millenniumgoals/

United Nations. (2017). *The Sustainable Development Goals Report 2017*. New York, New York: Department of Economic and Social Affairs.

United Nations. (2021). Gender equality and women's empowerment – United Nations Sustainable Development. Retrieved from https://bit.ly/2q90yr9.

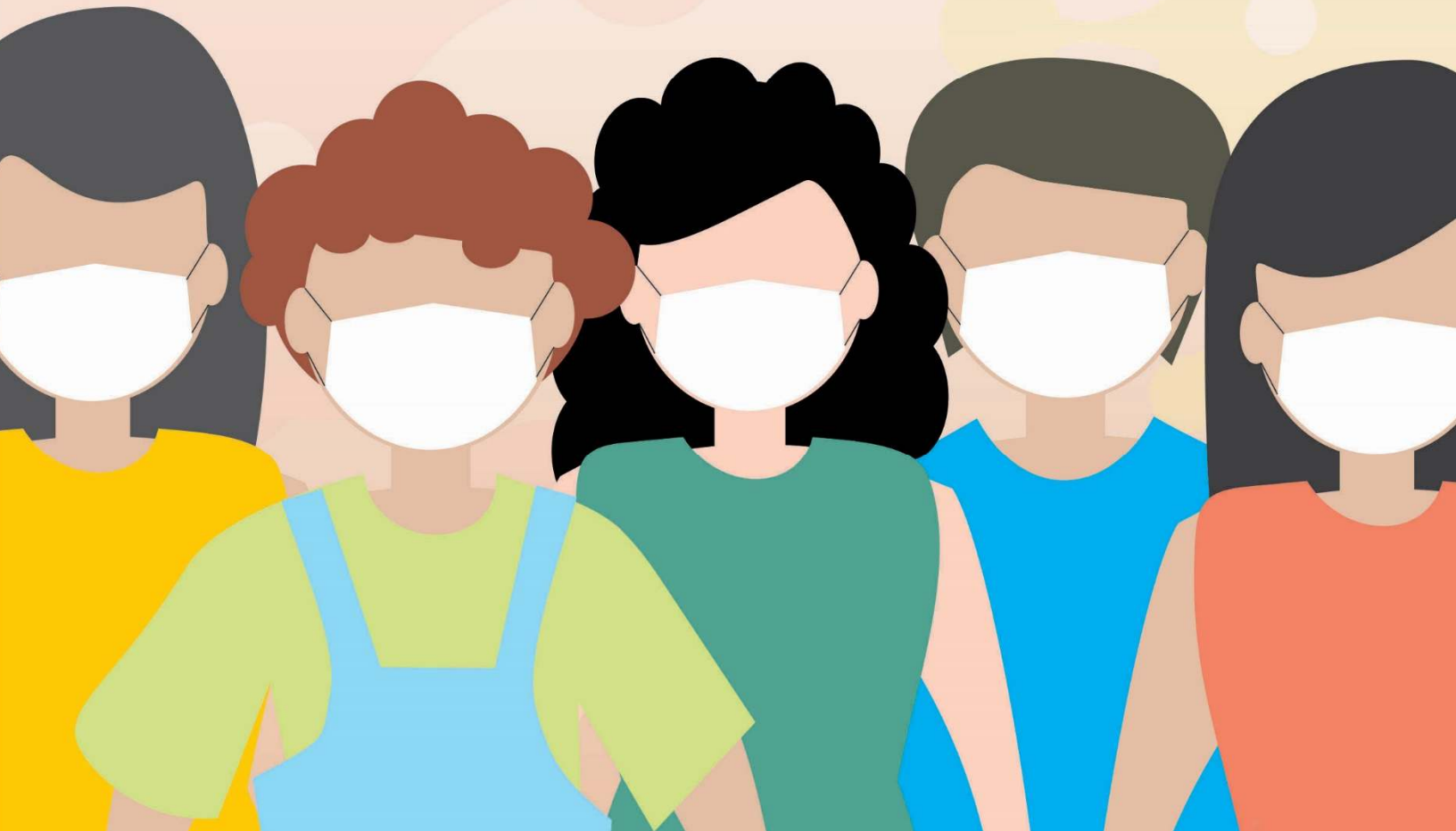
USC-Office of Population Studies Foundation, Inc. (OPS). (2018). Longitudinal Cohort Study on the Filipino Child. Baseline Survey Technical Report. OPS Report Series No. 2. Retrieved from . https://www.opsusc.org/lcsfc-survey-reports.php

World Economic Forum (WEF). (2022). *Global Gender Gap Report 2022*. Retrieved from https://www3.weforum.org/docs/WEF_GGGR_2022.pdf

World Health Organization (WHO). (2014). Gender and Health in the Western Pacific Region. World Health Organization Western Pacific Region Institutional Repository for Information Sharing. https://iris.wpro.who.int/handle/10665.1/10819.

Chapter 9

Assessing Adolescent School Performance and Anxiety across Levels of COVID-19 Status in the Community



Chapter 9

Assessing Adolescent School Performance and Anxiety across Levels of COVID-19 Status in the Community

Judith B. Borja, Nanette L. Mayol and Sonny A. Bechayda

Introduction

The more major concern for adolescents during the pandemic was not so much centered on the health threat presented by COVID-19 (WHO, 2021) but on how the imposed safety restrictions to control the virus spread have affected their schooling and mental health status (Panchal et al., 2023; Samji et al.,2022; Singh et al., 2020; Viner et al., 2022). The most consequential of these restrictions were the community lockdowns, limiting the youth's mobility, social interactions and usual way of life, and the shift from classroom-based to distance learning.

Chapter 1 of this report discussed the various community quarantine (CQ) classifications mandated by the Inter-Agency Task Force on Emerging Infectious Diseases (IATF-EID) on local government units (LGUs), depending on their number of COVID-19 cases and health system capacity. The most stringent of these classifications was the Enhanced Community Quarantine (ECQ) which required the total lockdown of communities with restrictions on transportation access. Vulnerable people, including those under age 18, were confined at home for the duration of the ECQ. When the COVID-19 threat was on a lower scale but remained significant, the Modified ECQ (MECQ) was imposed with less rigid measures such as only those age 15 years and below were required to stay at home. When confirmed COVID-19 cases were much lower, LGUs were placed on General Community Quarantine (GCQ) or Modified GCQ (MGCQ) where mobility of the vulnerable sectors and those below age 18 were not as restricted and being outdoors was allowed. In all these categories, face-to-face classes were suspended and distance learning mode was enforced (IATF-EID, 2020).

Chapter 7 discussed the difficulties and concerns associated with distance learning. The challenges that have already been plaguing in-person learning prior to the pandemic, are compounded by challenges associated with distance learning. Likewise, Chapter 6 discussed the psychological stress and mental health effects of potential social isolation that could be brought about by restrictions like community lockdowns and of the additional demands of distance learning.

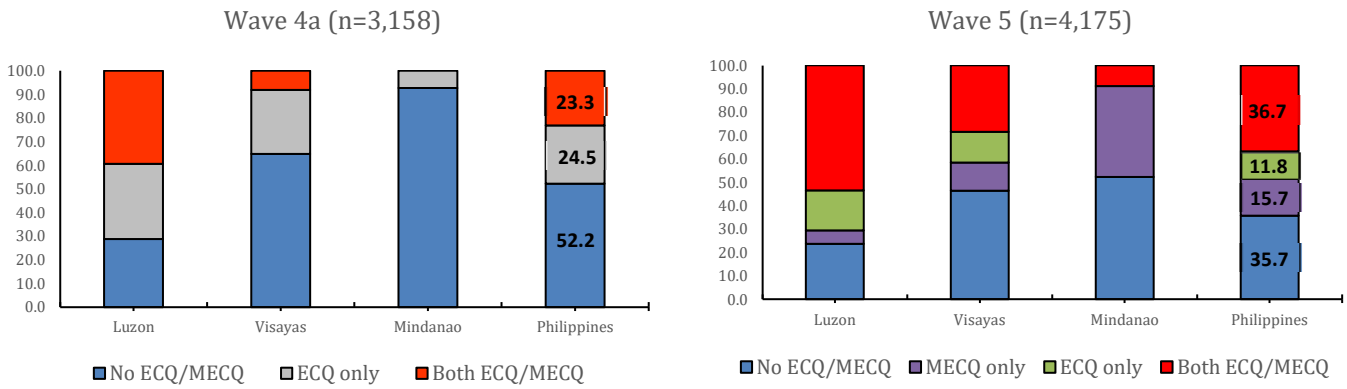
The Longitudinal Cohort Study on the Filipino Child (LCSFC) was able to continue collecting valuable information on the cohort during the pandemic. Using data from the IATF-EID memos, CQ categories were assigned to LCSFC survey data. CQ status issued by the IATF-EID at the regional, provincial and city/municipality levels were matched with the corresponding areas where the LCSFC sample reside. Figure 9.1 shows the distribution of LCSFC households by the CQ categories they were cumulatively exposed to by Wave 4a (from the start of the pandemic in March 2020 to November 2020) and by Wave 5 (March 2020 to August 2021).

The CQ categories are defined based on ECQ or MECQ exposures (in addition to MGCQ or GCQ exposure). Below are the CQ categories listed in the order of COVID-19 severity:

1. No ECQ/MECQ –only subjected to MGCQ and/or GCQ restrictions (regardless of number of episodes)
2. MECQ Only - exposed to MECQ (regardless of episodes)
3. ECQ Only - exposed to single episodes of ECQ
4. Both ECQ/MECQ –exposed to both MECQ and ECQ (single or multiple episodes of each). This is considered the most severe category given the multiple exposures of ECQ variants.

Figure 9.1 further shows that in Wave 4a or the early pandemic survey, about a quarter of the households interviewed experienced either ECQ Only or Both ECQ/MECQ (particularly in Luzon and the Visayas). Households in Luzon had the highest proportion in the "Both ECQ/MECQ" category, while none in Mindanao was categorized as such. Across the island groups, Mindanao had the least severe COVID-19 status. By the later stage of the pandemic or by Wave 5, the proportion in "Both ECQ/MECQ" increased to 37% from 23% in the early pandemic period. About 16% fell under the "MECQ Ony" group and only 12% were ever exposed to ECQ alone. Note that there were more households who participated in Wave 5 than in Wave 4a. These data provide essential context to the LCSFC households' COVID-19 risk profiles in both stages of the pandemic.

Figure 9.1. Distribution of LCSFC Households by CQ Category across Island Groups in Waves 4a and 5[#]



[#] Presented as weighted percentages. Differences across island groups significantly different at p<0.01.

This chapter reports on the differences in schooling and mental health status of Filipino adolescents, represented by the LCSFC cohort, across various levels of COVID-19 severity in the community. Factors at the community-level that characterize CQ categories and household- and adolescent-level variables associated with these categories are identified to better understand the pathways by which the pandemic affects adolescent schooling and mental health status[22], in light of the corresponding CQ restrictions. This set of analysis focuses on CQ categories in the early pandemic period (Wave 4a) when a higher proportion

[22] Another significant consequence of the lockdown on adolescence is the increased risk of domestic violence. However, since Wave 4a was conducted by phone, no sensitive questions were administered in this survey. In the LCSFC Policy Note 7 on "Ensuring the Safety and Welfare of Filipino Children in the COVID-19 Pandemic and the New Normal" (Largo et al, 2021) the anticipated increased vulnerability to domestic violence, given the prolonged home confinement due to lockdowns, was assessed using pre-pandemic data (Waves 1-4).

of the households were under ECQ Only and the impact of COVID-19 was more strongly felt by households and adolescents being a novel experience. Data from the survey conducted right before the pandemic started (Wave 4, first quarter of 2020) and in the later stage of the pandemic (Wave 5, June to August 2021) were used to assess the changes in outcomes.

Community, Household and Adolescent Characteristics Associated with CQ Categories

To provide context to the kind of communities exposed to various levels of pandemic restrictions, Table 9.1 presents a profile of communities across CQ categories in Wave 4a. Significantly more city and urban barangays were exposed to both ECQ/MECQ compared to municipal and rural barangays. Compared to barangays never exposed to ECQ/MECQ, those categorized as having either both ECQ/MECQ and ECQ Only were significantly more populated, had higher population densities and more households. These results clearly illustrate that urban and more populated communities were more at risk of severe COVID-19 status. This pattern is consistent with results in Figure 9.1 showing more severe COVID-19 exposure in Luzon. In the LCSFC sample, significantly higher proportions of urban households are in Luzon compared to Mindanao and Visayas (about 61%, 53%, and 37% respectively in Wave 4a; see SDG1 section, Appendix Tables). Although the proportion of urban households in Mindanao closely approaches that in Luzon, the households in Mindanao are mostly in urban barangays in municipalities rather than in cities since the mean population density in Mindanao is even lower than in the Visayas in Wave 4a (data not shown).

Table 9.2 compares characteristics at the household level across CQ categories. Compared to the other categories, households exposed to Both MECQ/ECQ appear to be most vulnerable socio-economically (in terms of overcrowding, losing jobs) as well as in experiencing COVID-19-related incidents. Regardless of CQ category, the majority of the households reported having difficulty in meeting expenses relative to what the household earned and thus similar proportions across CQ categories perceived COVID-19 as a significant threat to their income capacity.

Table 9.1 Selected Community Characteristics by CQ Category in Wave 4a[#]

Community Characteristics	No ECQ/MECQ	ECQ Only	Both ECQ/MECQ	ALL
Barangay location,%***				
City	49.1	18.7	32.2	100.0
Municipality	73.3	23.5	3.2	100.0
All	62.6	21.4	16.0	100.0
Stratum,%[a]***				
Urban	48.4	21.5	30.2	100.0
Rural	75.6	21.0	3.4	100.0
All	61.6	21.2	17.1	100.0
Mean distance from town/city center (in km.)	6.5	7.3	6.5	6.7
Mean number of households in barangay**	1,397	3,382	7,639	2,736
Mean population***	7,628	18,473	42,440	15,595
Mean population density (persons/km^2; n=342) ***	3,842	6,493	46,350	11,135

[#] Presented as unweighted row percentages or means. No community survey was done in Wave 4a and the corresponding survey in Wave 4 was truncated due to the pandemic. Except for urban/rural stratification, data for this table were extracted from the Wave 3 (2019) community survey instead (n=396 barangays).

Differences across CQ categories were significant at *** p<0.01, ** p<0.05

[a] Wave 4a urban/rural stratification (n=537 barangays)

Table 9.2 Selected Household Characteristics by CQ Category in Wave 4a[#]

Household Characteristics (n=3,157)	No ECQ/MECQ	ECQ Only	Both ECQ/MECQ	ALL
Mean household crowding index (HCI)[##b,c]	3.4	3.3	4.0	3.5
Overcrowded [b,c],%	41.3	39.1	58.2	44.7
Experienced difficulty in meeting household expenses,%	75.1	75.1	78.9	76.0
Had household members who lost jobs,% [a,b,c]	43.3	56.8	68.8	52.5
COVID-19 perceived as high/very high income threat,%	63.1	63.6	61.0	62.7
Had household members with COVID-19 symptoms[b],%	14.7	11.6	20.0	15.1
COVID-19 perceived as high/very high health threat,% [a,b,c]	61.4	53.1	43.1	55.1
Felt unsafe/very unsafe against getting sick in surroundings,% [c]	13.7	15.3	18.7	15.2
Household ever in contact with COVID-19 positive persons,% [b,c]	1.4	2.7	6.9	3.0
Household had family/friends die of COVID-19,% [a,c]	1.7	3.8	5.8	3.2

[#] Weighted values presented as row percentages or means.

[##] HCI: total number of household members divided by the total number of rooms used for sleeping. Overcrowded: if HCI>3 or there are more than three people per habitable room.

[a] Significantly different at p<0.05 between No ECQ/MECQ and ECQ Only; [b] between ECQ Only and Both ECQ/MECQ; [c] between No ECQ/MECQ and Both ECQ/MECQ

The data in Table 9.3 illustrate the adolescents' reactions to various levels of CQ category. Reflective of the level of severity in their barangays, higher proportions of adolescents exposed to Both ECQ/MECQ were tested for the virus than in the other categories. Of the 39 adolescents who were tested, only two tested positive (see Chapter 4 for more details). It is also worth noting that adolescents exposed to the more severe COVID-19 categories were more likely to register complains on pandemic restrictions, particularly about being bored and the inability to play outside their homes. Although not significant across CQ categories, the inability to play with friends was also among the more common complains. About 83% of all adolescents who were enrolled in school, regardless of CQ category, reported having any difficulty with schooling. The most cited difficulty was of modules being too difficult (74.9%). Of the learning modalities available to students during the pandemic, Chapter 7 reported that 83% of the LCSFC adolescents opted to do printed modules (with parents or adult household members picking up the modules from school) while the rest did online learning or blended mode (modules and online). Another commonly cited difficulty was having problems with cell phone signals (11.3%). Among those who reported difficulties, significant differences across CQ categories were observed in the kind of difficulty experienced. These difficulties do not appear related to the severity of COVID-19 cases in the area, as in the case of difficulty with modules where the lowest proportion was found in the most severe category.

Table 9.3 Selected Adolescent Characteristics by CQ Category in Wave 4a[#]

Adolescent Characteristics (n=3,150)	No ECQ/MECQ	ECQ Only	Both ECQ/MECQ	ALL
Ever tested for COVID-19[b,c],%	0.4	0.6	5.9	1.8
Had any complain about COVID-19 restrictions,%[a]	34.4	42.5	40.0	37.7
Complained about being bored,%[a,c]	11.5	19.9	18.3	15.2
Complained about not being able to%:				
Play outside home[a]	19.4	25.1	24.3	21.9
Go to basketball court, parks	9.5	8.8	18.3	8.5
Play with friends	13.8	13.2	11.2	13.0
Go to internet cafes	3.0	2.1	2.9	2.8
Reported any difficulty with schooling,%	82.7	84.9	81.0	82.9
Reported difficulties,% [a,b,c]:				
Modules/Lessons too difficult	80.2	80.6	56.5	74.9
Too many modules/lessons/assigned	5.4	5.8	8.0	6.1
No cellphone/tablet/gadget to use	4.4	1.4	5.3	3.9
Problems with cell phone signal	7.2	10.2	22.1	11.3
No money for load/internet	1.9	1.9	6.5	2.9

[#] Weighted values presented as row percentages or means.

[a] Significantly different at p<0.05 between No ECQ/MECQ and ECQ Only; [b] between ECQ Only and Both ECQ/MECQ; [c] between No ECQ/MECQ and Both ECQ/MECQ

Table 9.4 shows compelling differences in schooling status and anxiety levels by categories. A slight increase in enrolment rates was observed at the opening of the 2020-2021 school year (SY) compared to the pre-pandemic period. However, lower enrolment rates were observed in Wave 5, at the later stage of the pandemic but within the same SY. Because of the pandemic, the SY 2020-21 was moved to October 2020 to July 2021. Thus, when Wave 5 was conducted from June to August of 2021, the cohort adolescents were still in the same grade levels (mostly Grades 8/9) as in Wave 4a. The decrease in enrolment rates from Wave 4a to Wave 5 reflects the drop-out rate within the SY -- enrolling but stopping within or not completing the SY. Those exposed to both MECQ/ECQ had the lowest rates of remaining enrolled by the end of the SY compared to the other categories.

The results for anxiety were equally of concern. While there were small differences in mean scores over time, when the scores were categorized into levels of severity, the proportion of adolescents having mean scores classified under the clinical range significantly increased between the pre-pandemic and pandemic periods[23]. While the rates in Wave 5 were lower than in Wave 4a, these were still higher than the pre-pandemic rates. Chapter 6 in this report revealed that adolescent males were more likely to be classified in more severe anxiety categories than their female peers. The increase in anxiety levels appears to be independent of the level of COVID-19 severity since those in the mild and ECQ only categories had higher proportions than those exposed to both MECQ/ECQ. This pattern was also observed in reported

[23] Chapter 6 of this report shows higher true trend in the proportions of adolescents in the clinical range, when examining data on adolescents with complete data from Wave 2 (age 11) through Wave 5 (age 15).

difficulties with the modules as shown in Table 9.3, where about 80% of the adolescents in either the No ECQ/MECQ or ECQ Only categories reported difficulty with the modules while only 57% in the group exposed to both ECQ/MECQ did so. The root cause of the anxiety may be more related with the school curriculum or protocols rather than with pandemic restrictions. The anxiety triggers may have even existed prior to the pandemic given that in the pre-pandemic survey, mean anxiety scores were significantly higher in the least severe CQ category compared to the other categories.

Table 9.4 Adolescent School Performance and Anxiety Levels by CQ Category in Wave 4a[#]

Adolescent Characteristics (n=3,150)	No ECQ/MECQ	ECQ Only	Both ECQ/MECQ	ALL
Reported any difficulty with schooling,%	82.7	84.9	81.0	82.9
Currently enrolled in school[##]				
Wave 4 (n=2,243),%[c]	97.7	96.3	94.1	96.4
Wave 4a (n=3,140),%	98.2	97.1	96.3	97.5
Wave 5 (n=2,963),%[c]	97.9	96.7	93.8	96.7
Remained enrolled in Waves 4 and 4a (n=2,240),%[c]	96.8	95.8	92.5	95.3
Anxiety levels, mean scores[##]				
Wave 4 (n=2,235)[c]	4.1	3.9	3.6	3.9
Wave 4a (n=3,148)[a,b,c]	4.5	3.7	3.1	4.0
Wave 5 (n=2,942)[a,c]	5.6	4.4	3.8	4.9
Anxiety levels, mean scores in clinical range, %[###]				
Wave 4 (n=2,235)[c]	2.6	1.1	1.2	1.9
Wave 4a (n=3,172)[a,b,c]	17.2	10.8	5.6	12.9
Wave 5 (n=2,942)[a,c]	9.3	5.1	2.8	6.7
In more severe anxiety category in Wave 4a than in Wave 4,%[a,c]	33.1	25.0	17.5	27.0

[#] Weighted values presented as row percentages or means.

[a] Significantly different at p<0.05 between No ECQ/MECQ and ECQ Only; [b] between ECQ Only and Both ECQ/MECQ; [c] between No ECQ/MECQ and Both ECQ/MECQ

[##]Differences in % enrolled between Waves 4 and 4a, and Waves 4a and 5 were significantly differenct at p<0.05 in a sample with complete data across waves (n=2,129)

[###] DSM-oriented problem scale scores (range: 0-16) and categories (See Chapter 6 of this report for full description). Higher mean scores mean higher anxiety experienced. Scores classified in the clinical range indicates the presence of clinical symptoms.

Summary

While the pandemic adversely affected the entire country, and had serious consequences on the schooling and mental health status of all adolescents, some may have had it worse, depending on the level of COVID-19 severity experienced by their communities. Adolescent problems linked with urbanicity prior to the pandemic, such as the risky behaviors associated with urban adolescents cited in Chapter 4, may have exacerbated given that urban areas and cities were more prone to severe COVID-19 status. The socio-economic challenges brought about by the pandemic, were more felt by households exposed to more severe CQ categories, which added to the trauma of their experiencing the virus more closely in the form of having friends and families testing positive or even dying of COVID-19. The adverse effects of the

pandemic on the household are also likely to be felt by its adolescent members. As reported in this chapter, this is manifested through the adolescents' complains related to their home confinement and their difficulties in adapting to the distance learning mode. Results showed that exposure to more severe COVID-19 exposure was associated with greater disadvantage in terms of the adolescents' school performance, particularly in staying enrolled until the end of the 2020-2021 SY. Anxiety levels for all Filipino adolescents in general increased during the pandemic, particularly in the early stages. About 27% of the adolescents in this analysis were classified in more severe anxiety categories at the early onset of the pandemic. Adolescents in the least severe CQ category had the highest rates indicating that the increase may be attributed to factors other than the pandemic. Results reveal that difficulties with the modules and circumstances prior to the pandemic that may have triggered higher anxiety levels need to be more closely examined. These results identified community-, household- and adolescent-level factors associated with levels of COVID-19 severity and provide useful context to the next set of analysis that is required in assessing the net effects of the pandemic on adolescent schooling and mental health outcomes.

REFERENCES

Inter-Agency Task Force for the Management of Infectious Diseases (IATF-EID). (2020). *IATF-EID Recommendations Relative to the Management of the COVID-19 Situation*. Republic of the Philippines. Retrieved from https://iatf.doh.gov.ph/iatf-resolutions/.

Largo, F.M., Alegado, J.L.G., Herrin, A.N., Borja, J.B., Mayol, N.L., Bechayda, S.A., Bautista, C.A.P. (2021). Ensuring the safety and welfare of Filipino children in the Covid-19 pandemic and the new normal. In UNFPA-OPS Policy Notes Series No. 7. USC-Office of Population Studies Foundation, Inc. Retrieved from https://opsusc.org/lcsfc-policy-notes.php.

Panchal, U., Salazar de Pablo, G., Franco, M., Moreno, C., Parellada, M., Arango, C., & Fusar-Poli, P. (2023). The impact of COVID-19 lockdown on child and adolescent mental health: systematic review. *European child & adolescent psychiatry*, *32*(7), 1151–1177. https://doi.org/10.1007/s00787-021-01856-w

Samji, H., Wu, J., Ladak, A., Vossen, C., Stewart, E., Dove, N., Long, D., & Snell, G. (2022). Review: Mental health impacts of the COVID-19 pandemic on children and youth - a systematic review. *Child and adolescent mental health*, *27*(2), 173–189. https://doi.org/10.1111/camh.12501

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, *293*, 113429. https://doi.org/10.1016/j.psychres.2020.113429

Viner, R., Russell, S., Saulle, R., Croker, H., Stansfield, C., Packer, J., Nicholls, D., Goddings, A. L., Bonell, C., Hudson, L., Hope, S., Ward, J., Schwalbe, N., Morgan, A., & Minozzi, S. (2022). School Closures During Social Lockdown and Mental Health, Health Behaviors, and Well-being Among Children and Adolescents During the First COVID-19 Wave: A Systematic Review. *JAMA pediatrics*, *176*(4), 400–409. https://doi.org/10.1001/jamapediatrics.2021.5840

World Health Organization (WHO). (2021, September 29). COVID-19 Disease in children and adolescents [Scientific Brief]. https://www.who.int/publications/i/item/WHO-2019-nCoV-Sci_Brief-Children_and_adolescents-2021.1