



The Impact of the COVID-19 Pandemic on Low Income Households in the Philippines: Impending Human Capital Crisis[§]

COVID-19 Low Income HOPE Survey Note No. 3

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Executive Summary

- **The COVID-19 pandemic has caused a dramatic disruption in the delivery of education and health services in the Philippines.** Schools were closed in March 2020 as part of COVID-19 containment measures, only to be reopened with distance learning in October 2020. As of mid-February 2021, the country stands out as one of few countries which have banned all face-to-face classes since the start of the pandemic with no clear plans to resume them. With school closures and challenges in the delivery of distance learning, students learning losses are expected to be enormous. Meanwhile, the health system is strained under the challenge of management of COVID-19 cases which likely crowd out the delivery of essential health services.
- **This note, a third note of the series using the COVID-19 Low Income Household Panel and Economic (HOPE) Survey, investigates the impact of the pandemic on education and health behaviors as well as other welfare indicators of low-income households in the Philippines.** The survey traces approximately 500 low income families, including both beneficiaries of the country's flagship safety net, Pantawid Pamilyang Pilipino Program (4Ps), and other comparable non-4Ps families. Based on panel data from December 2019 to October 2020, the HOPE note series have investigated the pandemic's impact on low income households' well-being over time, in order to inform evidence-based policymaking. Focusing on survey results of October, when schools reopened, this note delves deeper into the impact of the COVID-19 crisis on the delivery of education.
- **There is a serious concern for health and education service delivery, and an impending human capital crisis is foreseen unless urgent policy measures are introduced.** While overall school enrollment is high in our sample (97.3%), few parents or students were satisfied with the current education environment. Parents recognized significant barriers to education and were particularly concerned about stress due to the pandemic, lack of access to gadgets, and inability of children to focus on distance learning. This raises important policy questions on the effectiveness and quality of home-based and virtual learning. Likewise, the delivery of basic health services has been challenging despite significant efforts made by local health workers. Along with health risks, the loss of learning due to challenges in education delivery, is likely to reduce human capital accumulation today, which will undermine future productivity and thus the country's long-term competitiveness.
- **With respect to distance learning, households' access to gadgets does not lead to their use for education purposes.** Three quarters of households reported owning at least one smartphone, but students from these households spent an average of 37 minutes per school day studying online using the phone. Difficulties in internet access, insufficient loads (mobile credits), or sharing the gadget with multiple household members were part of challenges. Also, over two

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thirds of households had TV or radio at home. However, households' awareness on educational TV / radio programming was low which resulted in only about a tenth of children watched or listened to it. Outreach by schools to parents for information and education materials were common in Luzon, but it was not the case for Visayas and Mindanao.

- **Households still reported their children spending relatively long hours on schooling** (almost 25 hours in the past 7 days). Time spent on education increased with the child's age and access to gadgets without a gender difference, and was greater for children in Luzon than others. Nearly all of the time was however spent on offline study – without any interactions with teachers or classmates. It was common that students received help on schooling (i.e., contents; use of gadgets) from other household members, who were far more likely to be women than men. These findings suggest that the government's efforts should prioritize increasing the quality of paper modules and encouraging teachers' follow up, especially in lagging regions and for students with limited help.
- **Since lockdown there has been a sharp decrease in visits to health centers by children 5 and under, but this has been offset by home visits by Barangay Health Workers.** Prior to the lockdown, 73% of young children (< 5) had been to a health facility. Between the start of lockdown and August, only 41% of children (< 5) visited a health center and 64% received a home visit. However, home visits did not appear to provide as extensive care services as check-ups at a health center, and concerns for basic health service delivery remain.
- **4Ps beneficiary households presented a greater likelihood of visiting health facilities with their children (<5), but a slightly lower school enrollment rate, compared to non-4Ps counterparts.** It is encouraging to observe among 4Ps families significant health seeking behaviors and education indicators not too far behind despite the suspension of the program conditions. However, continued efforts would be required to sustain the program's impact on promoting human capital accumulation among low income households.
- **In order to avert the human capital crisis, the Government of the Philippines should develop a strategy for continued primary health care and strengthened education delivery including the resumption of face-to-face schools.** Risks associated with the spread of virus in case of physical opening of schools are duly recognized. However, the costs of losing human capital due to poor health and education services and the cumulative impacts on the future productivity and competitiveness of the country should also be considered. Our data suggest that additional benefits from in-person schooling beyond education, such as school feeding or childcare for women's economic activities, should be taken into consideration.

1. Introduction

The COVID-19 crisis has caused a dramatic disruption in the delivery of education and health in the Philippines. In March 2020, the government closed schools and in June President Duterte announced the banning of face-to-face classes until a vaccine is widely available. While schools reopened in October, only distance learning was allowed, and as of February 2021, the prospect for the resumption of face-to-face classes remains unclear. This makes the Philippine one of only a handful of countries which have banned all face-to-face classes since the start of the pandemic and have no clear plan to resume face-to-face classes in the near future.¹ The Philippines health system is straining under the challenge of direct management of COVID-19 cases leaving little spare capacity for continued delivery of essential health services like maternal care. In addition, as documented in Cho et al. (2021a), the crisis has led to a large economic shock, leaving households with fewer financial resources at exactly the time they most need additional funds to compensate for these disruptions.²

¹ According to data from <https://data.humdata.org/dataset/global-school-closures-covid19>, only 13 countries have not held any face-to-face classes since March 16th, 2020. In addition, several of these countries, including Bolivia, Venezuela, and El Salvador, plan on resuming face-to-face classes in December. <https://en.unesco.org/fieldoffice/santiago/covid-19-education-alc/monitoring>.

² Cho et al. 2021a, "Mitigating the Impact of COVID-19 on the Welfare of Low Income Households: The Role of Social Protection."





Evidence from previous crises suggests that the long-term effect on human capital in the Philippines will be substantial. Almond (2006) finds that the 1918 influenza pandemic led to increased disability, lower income, and reduced educational attainment nearly 50 years later among American children in utero at the time of the pandemic.³ Andrabi et al. (2020) show that the 2005 earthquake in Northern Pakistan led to large and persistent reductions in learning outcomes despite the fact that household incomes quickly recovered to pre-disaster levels.⁴ A large body of evidence finds that disasters lead to significant long-term effects on mental health, especially among children.⁵ Sochas et al. (2017) found that indirect mortality from Ebola outbreaks due to disrupted health services was actually greater than direct mortality from the primary disease itself.

Early data on the effect of COVID-19 on human capital formation from various countries suggest that the effects of the pandemic on human capital will be at least as large, if not larger, than previous disasters. Data on time-use of schoolkids in Senegal, Bolivia, and Ghana show that a large fraction of children spend no time on education at all.⁶ Even in countries in which access to the internet is high and schoolkids spend significant amounts of time on online study, initial evidence suggests that learning may have stalled or even backtracked. In the Netherlands, where national exams were conducted just before and after an 8 week school closure, researchers found that, on average, students lost a fifth of a year of learning with students from poorer households exhibiting the largest learning losses.⁷ Based on simulation of the learning shock, Kaffenberger (2021) suggests that a three-month school closure could reduce long term learning by a full year's worth of learning.⁸ Given the long school closure in the Philippines and lower rates of internet access, learning loss will likely be much higher in the Philippines.⁹

Similarly, a rapid survey of health systems around the world by the World Health Organization (WHO) found that delivery of essential health services had been disrupted in 90 percent of the countries surveyed due to the COVID-19 pandemic.¹⁰ Routine primary health care for instance for maternal and child's health was expected to be impeded in the Philippines. The Department of Health (DOH) warned that falling immunization rates increase the risk of a measles outbreak in the coming year and threaten progress in controlling the on-going polio outbreak.¹¹ World Bank (2020) highlights that even if the pandemic turns out to be a temporary shock, the COVID-19 shock could still leave current cohorts of children behind for the rest of their lives. Noting that close to half of the workforce in a typical country (people ages 20 to 65) will be composed of individuals who were either in school or under the age of 5 during the COVID-19 pandemic, the study projects that the Human Capital Index (HCI)¹² of the workforce in 20 years' time would be lower by almost 1 HCI point (0.01) due to COVID-19 today.

This note, a third one of the series using the COVID-19 Low Income Household Panel and Economic (HOPE) Survey, investigates the impact of the pandemic on education and health behaviors of low-income households in the Philippines. The survey traces approximately 500 low income families, including both beneficiaries of the country's flagship safety net, Pantawid Pamilyang Pilipino Program (4Ps), and other comparable non-4Ps families. Based on the panel data from December 2019 to October 2020, the HOPE notes have investigated the pandemic's

³ Almond, "Is the 1918 Influenza Pandemic Over?"

⁴ Andrabi, Daniels, and Das, "Human Capital Accumulation and Disasters."

⁵ Kar, "Psychological Impact of Disasters on Children."

⁶ Nestour, Mbaye, and Moscoviz, "Phone Survey on the Covid Crisis in Senegal"; Debenedetti et al., "Prioritizing Evidence-Based Responses in Burkina Faso to Mitigate the Economic Effects of COVID-19"; Asadullah et al., "COVID-19, Schooling and learning"; Bosumtwi-Sam and Kabay, "Using Data and Evidence to Inform School Reopening in Ghana."

⁷ Engzell, Frey, and Verhagen, "Learning Inequality During the Covid-19 Pandemic."

⁸ Kaffenberger, "Modeling the Long-Run Learning Impact of The Covid-19 learning shock: Actions to (more than) mitigate loss."

⁹ A nationwide high frequency monitoring survey in July 2020 conducted by the World Bank found that about only a fifth students who had attended school prior to the pandemic in the Philippines engaged in learning activities during community quarantines.

¹⁰ "In WHO Global Pulse Survey, 90% of Countries Report Disruptions to Essential Health Services since COVID-19 Pandemic."

¹¹ Tomacruz, "DOH to Mount Mass Immunization Campaign as PH Risks Measles Outbreak in 2021."

¹² The Human Capital Index is a composite metric that is internationally comparable, reflecting a country's current health (child and adult survival rate) and education (learning adjusted years of education), and quantifying a potential productivity loss in the future due to limitations in health and education. See World Bank (2020) for more details.





impact on low income households' well-being over time. The first note (Cho et al. [2021a]) highlighted the role of a well-established social assistance program through 4Ps in mitigating the pandemic's impact during the peak of community quarantines in April 2020. The second note (Cho et al. [2021b]) presented the deepening distress among low-income families due to COVID-19 despite the recovering economy. Focusing on survey results of October 2020, shortly after the resumption of public school classes on October 5th with a distance learning modality, this note delves deeper into impact of the COVID-19 crisis on the delivery of education in addition to other welfare indicators.

We find that there is a serious concern for health and education service delivery, and an impending human capital crisis is foreseen unless urgent policy measures are introduced. There are numerous barriers to receive good quality education. Respondents expressed a variety of concerns about the current state of education, in particular that stress due to the pandemic, lack of access to gadgets, and inability of children to focus would impede learning. Moreover, most of the time students spent for educational activities was offline study with no interactions with classmates or educators, which not only limits learning effectiveness but also significantly hinders the development of social skills. With regard to access to essential health services, we find that a significant share of health checkups was replaced with home visits, which may not provide as full services as health facilities. Health risks along with the loss of learning due to challenges in education delivery are likely to greatly reduce future productivity and thus the country's long term competitiveness, unless remedial actions are taken.

2. Changes to the delivery of education and essential health services

Education

In March 2020, all schools in the Philippines were closed across the country¹³ with the introduction of the Enhanced Community Quarantine (ECQ). In June, President Duterte announced that schools would not re-open for face-to-face classes until a vaccine was widely available.¹⁴ This restriction was relaxed later by the announcement that face-to-face classes might be allowed starting from January 2021 in some areas with low rates of infection. On December 26, 2020, however, the earlier approval of the pilot implementation/dry run of face-to-face classes in low-risk areas was recalled in light of the emerging concern over the reported new strain of the virus.

The Department of Education (DepEd) released a “Basic Education Learning Continuity Plan” (BE-LCP) in June 2020 to assist students and schools in their transition to remote classes.¹⁵ The BE-LCP outlines a “blended” strategy for remote learning in which students use self-learning materials called “modules” for self-study. The BE-LCP specifies that students without access to the internet be provided with printed versions of the modules while students with access to the internet can access the modules directly online. DepEd developed a standardized version of modules but gave local government units (LGUs) and schools flexibility to customize or develop their own modules. DepEd has offered training to school leadership teachers on the BE-LCP and how to effectively transition to remote learning. DepEd also created a series of educational TV and radio shows which launched on the same day as the start of classes. DepEd Commons is a virtual platform where both teachers and students can find and share learning resources and materials through mobile phones and websites.¹⁶ In addition to these actions by DepEd, many LGUs have engaged in local initiatives to help families deal with the transition to remote classes. In Pasig City, for instance, the LGU distributed tablets to 150,000 students and in Valenzuela, the LGU

¹³ Department of Education, Fifth Set of Policy Directives on DepEd Task Force COVID-19.

¹⁴ AFP, “No Students in School without Coronavirus Vaccine, Philippines Says.”

¹⁵ Department of Education, “Learning Opportunities Shall Be Available: The Basic Education Learning Continuity Plan in the Time of COVID-19.”

¹⁶ DepEd's Commons can be accessed at <https://commons.deped.gov.ph/>





distributed “NutriPacks”¹⁷ to parents of children attending daycare.¹⁸ The extent to which additional investments were made however varies significantly with LGU capacity.

Resumption of classes at government schools was originally scheduled for August 24, 2020, but delayed until October 5, 2020. Reasons for these delays included challenges in the distribution of modules, questions regarding the quality of the modules, and strong reservations from practitioners in the education sector. As a result, few education related activities took place in the country nearly for 7 months between March and October 2020. During this time, children’s mobility remained significantly limited, not being allowed in public spaces (e.g., malls and restaurants) even as community quarantines were gradually relaxed.¹⁹

Health

Due to the pandemic, much of the Philippines’ health system has shifted its focus to tracing, diagnosis and treatment of COVID-19 cases. For example, Barangay Health Workers (BHWs), the frontline health workers in the Philippine health system, have been tasked with performing contract tracing of COVID-19 cases, delivering emergency healthcare as part of Barangay Health Emergency Response teams, and informing households of changes to immunization procedures though the extent to which BHWs have been tasked with these additional duties varies by Barangay.²⁰ In addition, mobility restrictions made it more difficult for people needing medical help to travel to a health facility and fear of contracting COVID-19 led many people who need medical assistance to stay away from health facilities (World Bank 2020).²¹ To ensure that the crisis does not lead to an interruption of essential health services such as maternal and child’s care and immunization, the government has developed guidelines for how health facilities and health workers should deliver essential health services during the pandemic. However, such administrative guidelines might not be enough to protect basic health service delivery during a pandemic.

In April, the DOH issued a memorandum providing guidance to LGUs, which manage most local public hospitals and health facilities, on how to treat COVID-19 patients while continuing to offer other health services.²² The memorandum advises LGUs to route COVID-19 and non-COVID-19 patients to different facilities or parts of a facility and to set up telemedicine facilities for other health services. The memorandum also instructs health centers to ensure that immunization services are not interrupted by going door-to-door to deliver vaccines if necessary.²³ Several LGUs have taken additional steps beyond those included in the DOH guidelines to ensure continuity of essential health services. Several examples were featured in the Department of the Interior and Local Government (DILG)’s report “Rising above the Challenge of Addressing the COVID-19 Pandemic.”²⁴

¹⁷ A food pack contains snacks such as fruit jellies, a variety of biscuits / cupcakes or sponge cakes, one container of wafer sticks, six bottles of probiotic drinks and 1.7kg powdered milk drink.

¹⁸ Kabagani, “Pasig Honors LGUs Covid-19 Response on Local Government Day”; PIO, “In for a Treat.”

¹⁹ There have been a few discussions to consider allowing children in the public space, but the decisions were not fully supported. For instance, the decision was over-ruled by mayors in Metro Manila. <https://www.rappler.com/nation/metro-manila-mayors-reject-plan-allow-kids-in-malls>

²⁰ Department of Interior and Local Government, Guidelines in the Implementation / Rollout of the Building Resilience of LGUs for the New Normal: Embracing COVID-19 Contact Tracing Work.

²¹ A nationwide high frequency monitoring survey in July 2020 conducted by the World Bank found that about a third of respondents who needed medical assistance did not access to it, due to various reasons including the fear of contracting the virus, lack of resources, and mobility restrictions.

²² Department of Health, “Memorandum on Interim Guidelines on Health Care Provider Networks during the COVID-19 Pandemic.”

²³ Cator, “DOH to Health Centers.”

²⁴ For instance, Pasig City has worked with the private sector to deliver meals, transportation, accommodation, and other services to frontline health workers. Caloocan City has launched a mobile pharmacy to allow residents to receive medicine without having to travel to a pharmacy. Taguig City created a telemedicine service which allows residents to receive medical consultation over the internet. In case a patient requires medicine, BHWs are tasked with delivering the medicine to the resident.





Pantawid Pamilyang Pilipino Program

The flagship conditional cash transfer program, implemented by the Department of Social Welfare and Development (DSWD), covering approximately 20 percent of the total number of households in the country has had positive impacts on the human capital of beneficiaries' children prior to the crisis (See Cho et al. [2021a] for summary of 4Ps conditions and impacts). 4Ps beneficiaries are required to meet education and health nutrition conditions to be entitled to receive grants every two months. For instance, children 3-4 years old need to attend daycare or pre-school, while children 5 -18 years old should attend elementary or secondary school with a class attendance rate of 85 percent or more each month, to be eligible for education grants. Pregnant women need to avail of prenatal services, while children 0-5 years old need to receive regular preventive health and nutrition services such as growth monitoring and immunization. The third impact evaluation of 4Ps conducted from November 2017 to January 2018 confirmed that Pantawid Pamilya encouraged beneficiaries to avail of prenatal care services and skilled birth attendance, enhanced children's access to health care services, and improved education outcomes, especially for older children.

Following the State of Emergency on March 16, 2020,²⁵ the DSWD suspended the program conditions for 4Ps beneficiaries on the basis of *Force Majeure* to ensure continuous access to cash grants for poor beneficiary-families during the crisis. On September 4, 2020, after almost half a year, the suspension of program conditions was lifted as per Pantawid National Advisory Council (NAC) Resolution No.3, S.2020.²⁶ Subsequently, the DSWD issued amended rules related to conditions for entitlement to cash grants for the "4Ps new normal," which were still subject to prevailing DOH and DepEd guidelines. Compliance monitoring of health and education conditions resumed in Period 5 covering October and November 2020. This was the first time that the program's conditions were waived across the entire country, though there were cases of waiving conditions in affected areas after natural disasters (e.g., Typhoon Yolanda in 2013). A prolonged suspension of the conditions with school closures and limited availability of health facilities may undermine the program's objective to improve human capital of children from poor households.

3. Data

Households in our sample were originally selected for inclusion in an earlier 4Ps impact evaluation.²⁷ Sample households included 4Ps and non-4Ps households that were comparable. Earlier studies have presented that the sample households have a nationwide coverage and similar characteristics to poor and near-poor households in the 2018 Family and Income Expenditure Survey (FIES) (See Cho et al. [2021a and 2021b]). We surveyed households in this sample five times between December 2019 and October 2020. While December data were collected through face to face interview, others went through phone surveys. As shown in Table 1, the attrition has been modest (less than 10 percent in each wave) at the household level, except in Wave 4, conducted in October 2020. This may be due to multiple factors such as resumed economic activities and a series of typhoons that hit the country in October 2020.²⁸

Table 1. Sample size over time

		Wave 0 (December 2019)	Wave 1 (April 2020)	Wave 2 (June 2020)	Wave 3 (August 2020)	Wave 4 (October 2020)
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²⁵ Presidential Proclamation No. 929 dated March 16, 2020

²⁶ The title of NAC Resolution is "Conditions for Entitlement to Cash Grants of Pantawid Pamilyang Pilipino Program Beneficiaries during the New Normal / Covid-19 Pandemic".

²⁷ Orbeta et al., "Keeping Children Healthy and in School. Evaluating the Pantawid Pamilya Using Regression Discontinuity Design."

²⁸ A series of typhoons hit the Philippines in October 2020: Nika (October 11 to 12), Ofel (October 13 to 15), Pepito (October 18 to 20), and Quinta (October 24 to 27).





Num. Households	Sample	580	527	507	485	416
	Retention rates*		90.9%	96.2%	95.7%	85.8%
	Cumulative retention rates**		90.9%	87.4%	83.6%	71.7%
Num. Individuals (of all age groups)	Sample	3,327	2,928	2,873	2,760	2,272
	Individuals from Wave 0		2,928	2,815	2,729	2,240
	New individuals not in Wave 0		0	58	31	32

*Retention rates from the previous wave; ** cumulative retention rates from Wave 0 sample.

Cumulatively, about 72 percent of the Wave 0 households remains in the survey by October 2020. The household respondents provided information about all individuals in the household roster, which generated over 2,000 individual observations in all waves with only few compositional changes. The characteristics of attritors slightly differ from those who were re-interviewed across our survey rounds (Table A1 in the Appendix 1). The heads of the households tend to have a lower level of education, be more likely to be 4Ps beneficiary, and less likely to own an asset such as a fridge. Thus, it is likely that our final sample may have dropped the more vulnerable households and slightly under-estimated the COVID-19 impact. Nonetheless, these differences are not statistically significant in most cases and the level of per capita income is similar for both attritors and remaining households.

4. Results

Education

Nearly all school-age children in our sample (97.3 percent) were reported to be currently enrolled in school as of October 2020 (Figure 1). This is not far lower from the enrollment rate of the previous academic year (academic year 2019-20) for children in this sample (98.8 percent), but is higher than DepEd's reports showing the level of enrollment being 91.5 percent of the previous year's rate.²⁹ Differences in enrollment by gender were small and not statistically significant. Our survey in August 2020 had reported the enrollment rate to be around 91 percent, in line with the recent work done jointly by the UNICEF and UNDP that showed school enrollment around 93 percent in the National Capital Region (NCR) in August prior to school reopening in October.³⁰ It appears that between August and October, additional enrollment took place and overall enrollment rate was brought back to the pre-crisis level. Indeed, a nationwide high frequency monitoring survey in December 2020, conducted by the World Bank, found that school enrollment rate was over 90 percent with the highest rate among the lowest income households at 95 percent. The reason why enrollment among children in our sample is higher than among children in the general population may require further investigation. One possible explanation could be from the exclusion of ultra-poor households due to the sampling scheme and attrition that may present very low enrollment rates. Also, social desirability bias may have been in effect here that households over-report a 'good behavior' of school enrollment.

The enrollment rate in Luzon was highest, followed by Visayas and Mindanao. Older children (ages 12-18) fell short in enrollment compared to younger children (ages 6-11). Also, children in 4Ps households were slightly less likely to be enrolled than non-recipients, and this difference is statistically significant (p -value = .0037). The difference in enrollment between children in 4Ps households and non-4Ps households is reduced, but not eliminated, when controlling for age as children in 4Ps households are older. Prior to the crisis, there was no

²⁹ Mocon-Ciriaco and Mocon-Ciriaco, "DepEd Reports 24.72-Million Enrollees, Three Days before SY 2020-2021 Opens on Oct. 5 | Claudeth Mocon-Ciriaco."

³⁰ Economic Policy Research Institute 2020.





difference in enrollment between 4Ps and non-4Ps children in our sample, and this gap may have come from the suspension of education conditionality and family development sessions where families are reminded of the need for schooling.

Despite the overall high enrollment, the small number of households whose children were not enrolled raise concern for exclusion. They cited lack of gadgets for distance learning (or online learning) (19 percent), lack of school related expenses (15 percent), and children’s fear for contracting the virus when shifting to face to face classes (15 percent) as the main reasons for not enrolling their children.³¹ The lagging results among 4Ps beneficiaries in school enrollment, albeit small in the magnitude, were disappointing given the program’s important role in boosting education among low income families in the country.³² This suggests that DSWD’s efforts to support beneficiaries including through facilitating access to gadgets may have fallen short and that continued encouragement for education is required now that program conditions are back.

Figure 1. School enrollment rate by various population groups

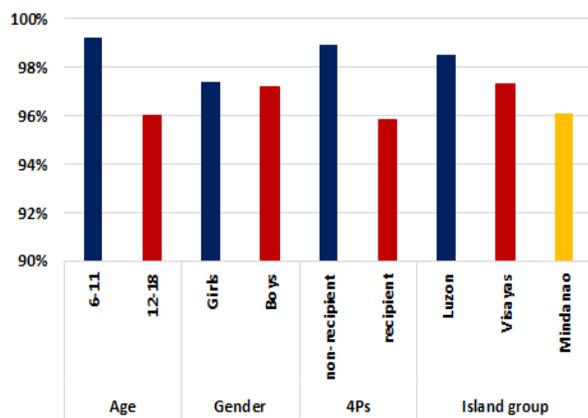
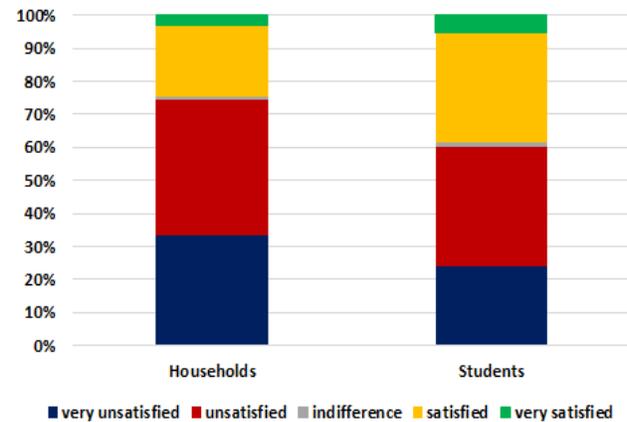


Figure 2. Satisfaction with current education situation



While enrollment is high, only one quarter of parents and two fifth of students are very satisfied or satisfied with the current schooling situation (Figure 2). The majority of respondents were either unsatisfied or very unsatisfied with the current education situation (75 percent) and from students’ perspectives (60 percent). The satisfaction rates varied little with pre-pandemic per capita household income.

Three quarters (73.4 percent) of respondents believed that there were barriers to effective learning. Stress due to the pandemic, lack of access to gadgets, and inability of children to focus on remote learning were the most commonly cited challenges (Figure 3). These challenges were mentioned when asked about the largest impediment or top three barriers. Other commonly mentioned challenges included the lack of loads (mobile credits) related to the mobile phones for education and lack of content knowledge to support children. While only a small share of households reported it as a top barrier, lack of knowledge on online classes was also mentioned frequently among top three challenges. The extent to which these barriers impede students’ learning, may vary by public and private schools. In our sample, there is practically no change in the composition of public and private schools, with over 90 percent of the children in the sample enrolled in public schools. Thus the reported concerns reflect the situation of public schools.

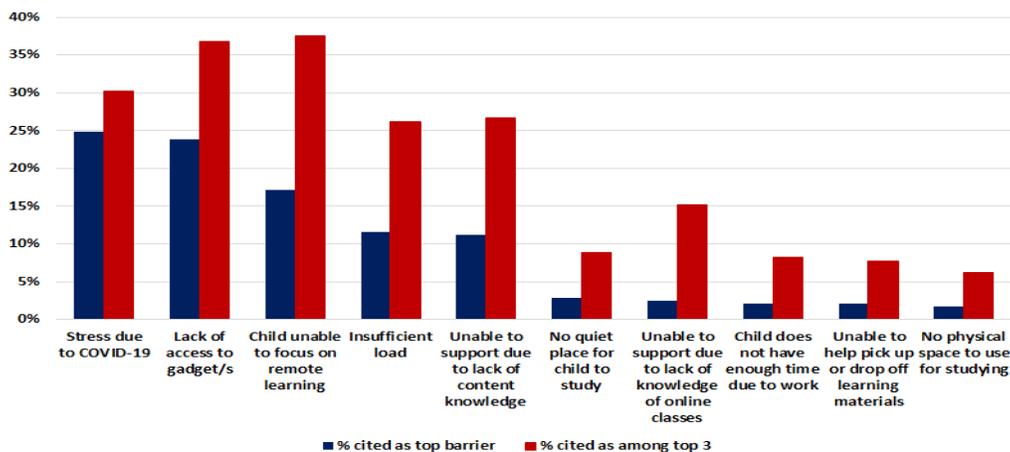
³¹ Other reasons include: ineffective remote learning, parents’ concern about children’s health in case shifting to face to face classes, children’s needs to work for incomes and to care for younger siblings.

³² See Cho et al. (2021a) for discussions.





Figure 3. Most common education related concerns



Nearly all respondents chose printed modules for the primary mode of learning in the class for both guardians (96.2 percent) and students (98.2 percent). The DepEd BE-LCP specifies that public schools must provide students the option of using printed modules in case they are unable to access the modules over the internet. Most student guardians (91.4 percent) also reported that their preferred mode of learning was printed modules, though it is unclear if the preference is because of the lower cost or the perceived effectiveness. Despite the preference for modules, many respondents did not believe that students, especially younger ones, in the household knew how to use modules effectively. Figure 4 shows the share of students who can use modules effectively (according to respondents) by age. While respondents believed that many students 16 or over know how to use modules, they did not believe that younger students knew how to use them.

Figure 4. Share of students able to use modules effectively by age

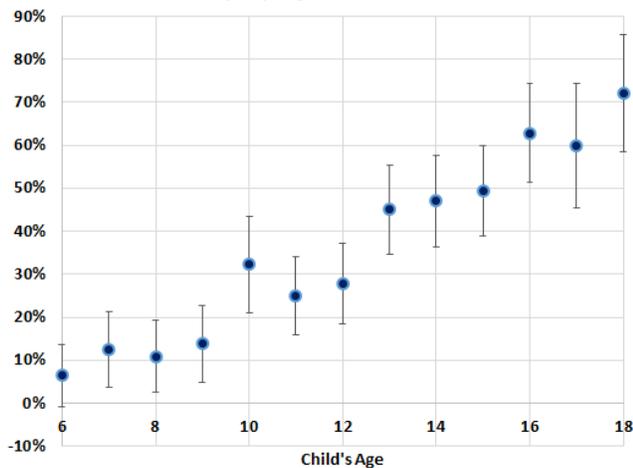
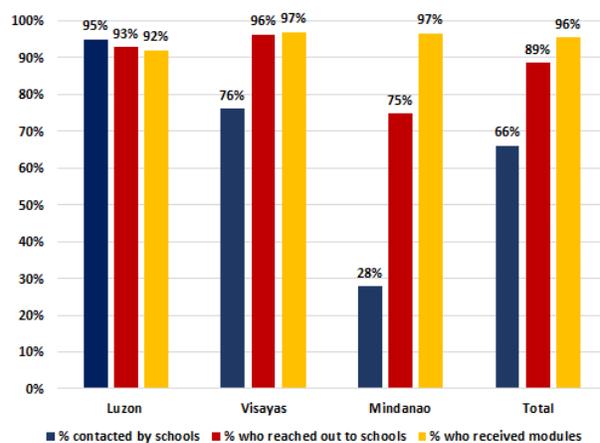


Figure 5. Outreach by island group



While most students received printed modules, the level of efforts made by schools to reach out to households and students for education varied widely by the location of residence. Figure 5 shows the share of student guardians who had been contacted by the school, who reached out to the school themselves, and who received printed copies of modules by island group. Nearly all (95.5 percent) students reported to have received printed versions of modules from their school yet at least of a third of student guardians had not been otherwise contacted

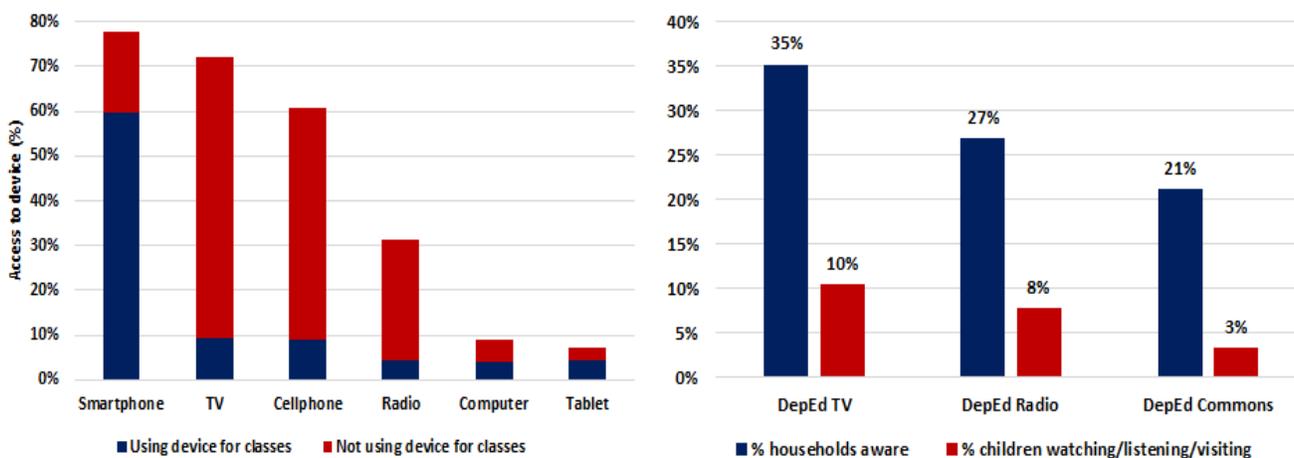




by the school. The share of student guardians who had been contacted by the school varied enormously by island group – in Luzon 95.1 percent of parents were contacted but in Mindanao only 27.8 percent of parents were contacted – and slightly by rural vs urban (rural students were about 10 percentage points more likely to be contacted). Among those children whose parents/guardians had been contacted by the school, about half were contacted through a face-to-face visit and half were contacted via other methods (i.e., text messages, online messaging platforms and phone calls). In most cases (about 89 percent of school contacts), the school shared information about the schedule of classes and in 82.4 percent of cases the school shared information about how to support the child in his/her studies.

Households have access to various gadgets (either through ownership or, much more rarely, because they are renting or were given the device), but the access does not lead to use the devices for classes (Figure 6). About 78 percent of households own a smartphone, and among them, 80 percent report using it for classes. With this, smartphone is the most commonly used gadget for classes and educational activities. By contrast, TVs, cellphones, and, to a lesser extent, radios are commonly owned but not commonly used for classes. Computers and tablets are less commonly owned. Among households which had access to a smartphone but which did not use it for classes, the most common reason (mentioned by 41 percent of the households) for not using it was because the smartphone was not fit for remote learning. Students with access to smartphones spent an average of 37 minutes per school day studying online. This is not surprising given that only 11 percent of households had a Wi-Fi internet connection, many reported insufficient loads (mobile credits), and multiple students had to share it.

Figure 6. Access/use of devices and awareness/use of platforms for classes (household level)



Given high ownership of TVs and to some extent radios, Educational TV/radio is a particularly promising tool for helping students deal with school closures. Interactive radio has been shown to be effective at increasing learning outcomes in a variety of countries and contexts.³³ Similarly, high-quality “Edutainment” shows such as Sesame Street have been shown to increase learning outcomes in many countries.³⁴ There is less evidence of the impact of televised lessons, which typically lack the carefully written scripts and production quality of shows like Sesame Street, though one study of televised lessons in Mexico found that it increased school enrollment.³⁵

The reason for not using TV / radio for education purposes can be attributed to low awareness of DepEd TV / radio classes. DepEd has developed educational TV and radio programs to complement module-based learning.

³³ Bosch, “Interactive Radio Instruction: Improving Educational Quality.”

³⁴ Kearney and Levine, “Early Childhood Education by Television”; Mares, “Effects of Sesame Street: A Meta-Analysis of Children’s Learning in 15 Countries”; Baydar et al., “Effects of an Educational Television Program on Preschoolers.”

³⁵ Navarro-Sola, “Secondary School Expansion through Televised Lessons: The Labor Market Returns of the Mexican Telesecundaria.”

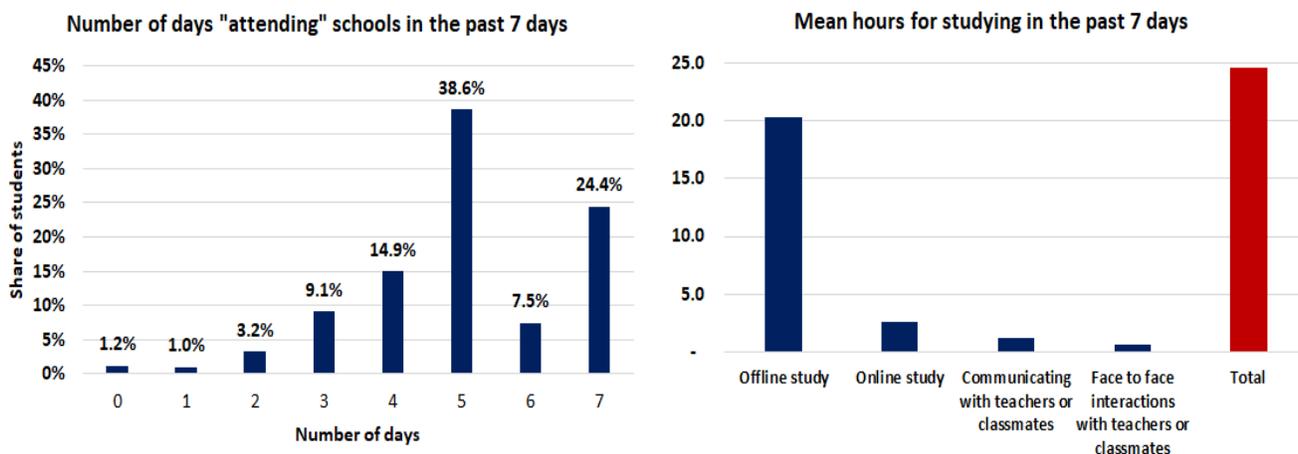




Yet only a third of households were aware of DepEd TV and only a quarter of households were aware of DepEd radio. Further, even among households aware of DepEd TV / radio, usage was low; overall, about one in ten students watched DepEd TV and one in twelve listened to DepEd radio. Only a moderate share of students (61 percent for TV and 64 percent for radio) students who “attended” class through DepEd TV / radio reported that they were able to follow the content. Students who watched DepEd TV watched 1.6 hours of programming on average while DepEd radio listeners listened to 2.5 hours of programming on average.

Households reported a substantial amount time being spent for schooling, but most of them were for offline studies (Figure 7). Close to 40 percent of students reported school “attendance” for 5 days, and 24 percent reported all 7 days. Students in our sample spent nearly 5 hours per school day and close to 25 hours in the past 7 days on education activities. While not entirely comparable, the amount of time spent on education activities in the past 7 days appeared to be longer than for students in Ghana, Senegal, and Bangladesh and even for Germany, where a recent survey found that students spent 3.6 hours per school day on education.³⁶ The amount of time is only slightly lower than for British students, who spent about 5 hours a school day on education according to a recent survey.³⁷ While encouraging, a caution is required that our survey was conducted in the first few weeks after the resumption of classes after a long closure while enthusiasm for remote learning may be high. Nonetheless, nearly all of the time spent on schooling was spent on offline study. Over half (55.1 percent) of students spent no time at all online, communicating with teachers, or in face-to-face interactions. This suggests that DepEd should focus efforts on increasing the quality of paper modules in the short term.

Figure 7. Number of school days and mean hours spent on education activities in the past 7 days



Time spent on education varies significantly with child’s age, location of residence, and access to gadgets, but not by gender. Older students spent generally more time on education than younger students, though the trend reverses from age 16 (Figure 8). It is encouraging that the oldest group of children (ages 16-18), mostly at their senior high school level, spent significantly more time than others. At the same time, given the decreasing pattern with the age among these children potentially due to labor market work, closer monitoring of older children’s enrollment, academic performance, progression to higher education, and entry into the labor market, would be needed. Time spent on education activities varied significantly by region with Luzon students spending significantly more time than those in Mindanao or Visayas (29.1 hours, 23.8 hours, and 21.9 hours in the previous

³⁶ Nestour, Mbaye, and Moscoviz, “Phone Survey on the Covid Crisis in Senegal”; Asadullah et al., “COVID-19, SCHOOLING AND LEARNING”; Bosumtwi-Sam and Kabay, “Using Data and Evidence to Inform School Reopening in Ghana”; Debenedetti et al., “Prioritizing Evidence-Based Responses in Burkina Faso to Mitigate the Economic Effects of COVID-19”; Grewenig et al., “COVID-19 and Educational Inequality: How School Closures Affect Low- and High-Achieving Students.”

³⁷ Sevilla et al., “Learning during the Lockdown.”





7 days respectively). Time spent on education also varied by access to gadgets: students in households which owned either a computer, tablet, or smartphone spent, on average, 2.3 hours more in the previous 7 days on online study and spent slightly more time (0.7 hours) on offline study as well than students in households which did not own a gadget. These patterns are similar for both boys and girls.

Most school-age children (90.4 percent of enrolled children) received help with their schoolwork from other household members. Help was predominantly for explaining lessons (91.6 percent), and for collecting and submitting materials (80.8 percent).³⁸ The average number of hours of help received was 2.1 and most enrolled children received between 1 and 3 hours of help in per day. Younger students (ages 6 to 11) received about 3 hours of help while hours of help gradually decline with the child’s age and 18 year old students received about 1 hour of help (Figure 9). This means that younger students needed help for almost the entire time of schooling. Students in Luzon received about .45 hours more help than students in other areas, but there is no statistically significant difference in number of hours of help by gender of the child, rural versus urban areas, the total number of school-age children in the households, or the level of education of the household head.

Figure 8. Number of hours spent for studying in the past 7 days by child’s age

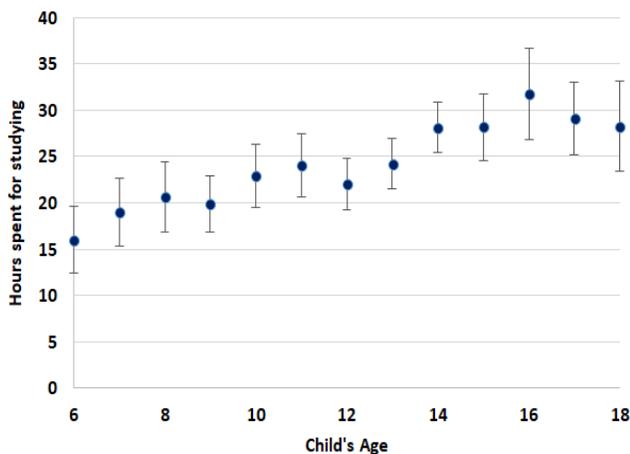
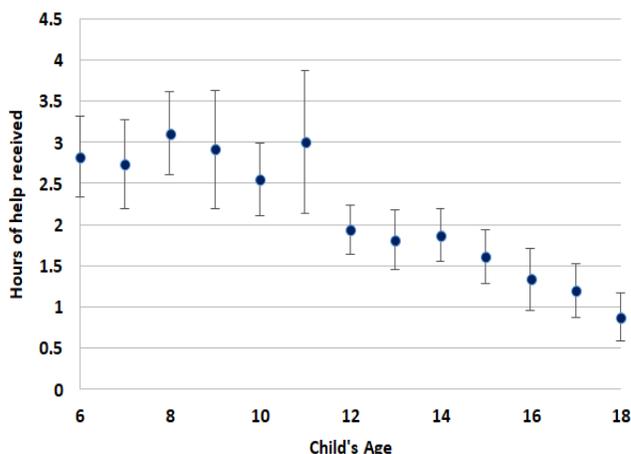


Figure 9. Number of hours per day receiving help for studying by child’s age



There is a stark gender divide on who provides help to children for studying within a household. Women were much more likely to provide help to a child on schoolwork than men. While men were more likely to report working than women (62.3 percent of adult men worked versus 36.4 percent adult women in October 2020), differences in employment did not account for these differences in help for children’s schooling (Table 2). In fact, women who worked in the labor market were more likely to help children with schoolwork while men who worked were no less likely to help children with schoolwork. There is a widespread concern that COVID-19 may have been especially harmful for working women in the United States, and this may be the case for the Philippines’ low income families too.³⁹

Table 2. Proportion of household members who helped others with schoolwork (the average number of hours helped per day in parentheses)

	15 or under	Non-working adult	Working adult
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³⁸ Others include help on using gadgets, accessing internets, and using websites or applications.

³⁹ See these articles from major think tanks, for instance: <https://www.rand.org/blog/2020/06/working-moms-at-risk-of-being-left-behind-in-economic.html>; <https://www.brookings.edu/essay/why-has-covid-19-been-especially-harmful-for-working-women/>; and <https://www.vox.com/21536100/economy-pandemic-lose-generation-working-mothers>.





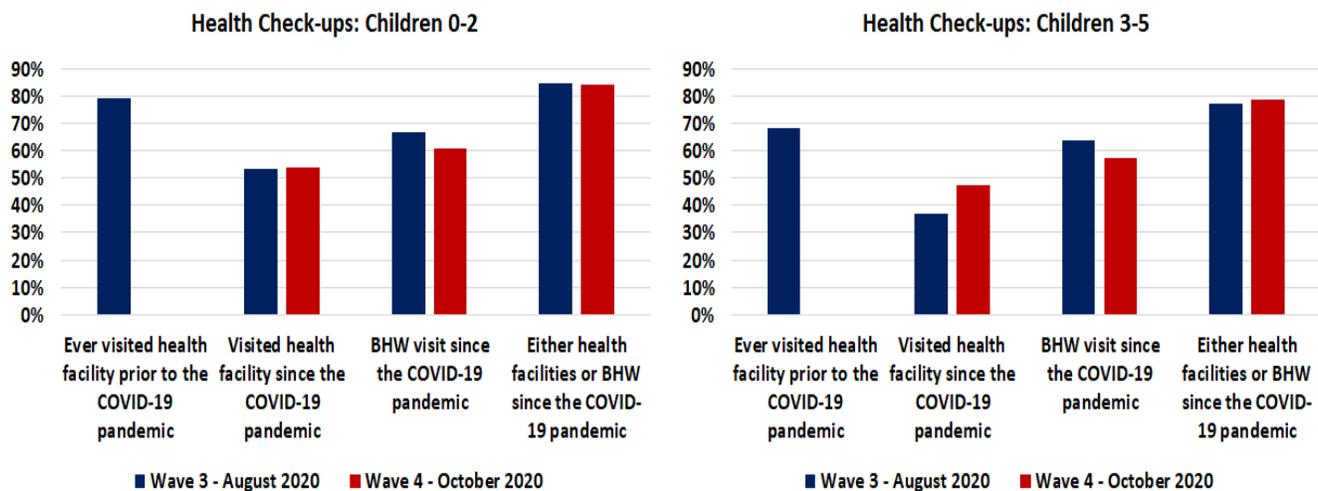
Men	7% (0.09)	27% (0.44)	27% (0.56)
Women	17% (0.24)	65% (1.34)	82% (1.76)

Apart from academic activities and performance, not being able to attend school in person will likely have other impacts including nutrition. Indeed, nearly a third (30.5 percent) of students in the sample reported that they had received in-school meals in the previous academic year. Shortly after classes resumed, the government announced that subsidized meals would continue to be provided to children through home delivery but it is unclear how successful this program has been.⁴⁰ Younger students and students in 4Ps households were more likely to receive in-school meals. Our April survey showed that food insecurity was more prevalent among households with three or more children. As these children can no longer receive in-school meals, there are rising concerns of increased food insecurity and dietary imbalances, which would require further examinations.

Health

Since quarantine measures were introduced there has been a sharp decrease in visits to health centers by children 5 and under, but this has been offset by home visits by BHWs (Figure 10). Prior to the lockdown, 73 percent of children 5 and under had been to a health facility and 64 percent went to a health facility at least once every two months. Between the start of community quarantines and August, only 41 percent of children 5 and under had visited a health center. The reduction in the visit to health facilities was offset by BHWs' home visits, maintaining (or even increasing) regular health check-ups among children, with 79 percent of under 5 children had received a health checkup either at a health facility or at home since the start of lockdown. Child health checkups are more common among younger children, and between August and October, visits to health facilities increased especially for older children. Given that the share of households reporting BHW's visits since the pandemic decreased over time, it is likely that their visits may have been more active during the earlier period of lockdown. It appears that home visits may not be able to provide full services for children's health check-ups: for instance, children who received a health checkup at home were less likely to have their weight measured (88 percent at health facilities versus 71 percent at home). Between lockdown and August, it was reported that 83 percent of children 5 and under were given a Vitamin A dose and 40 percent were given micronutrients.

Figure 10. Health check-ups among children by age group



⁴⁰ Parrocha, "Feeding Program for Students to Continue amid Pandemic."

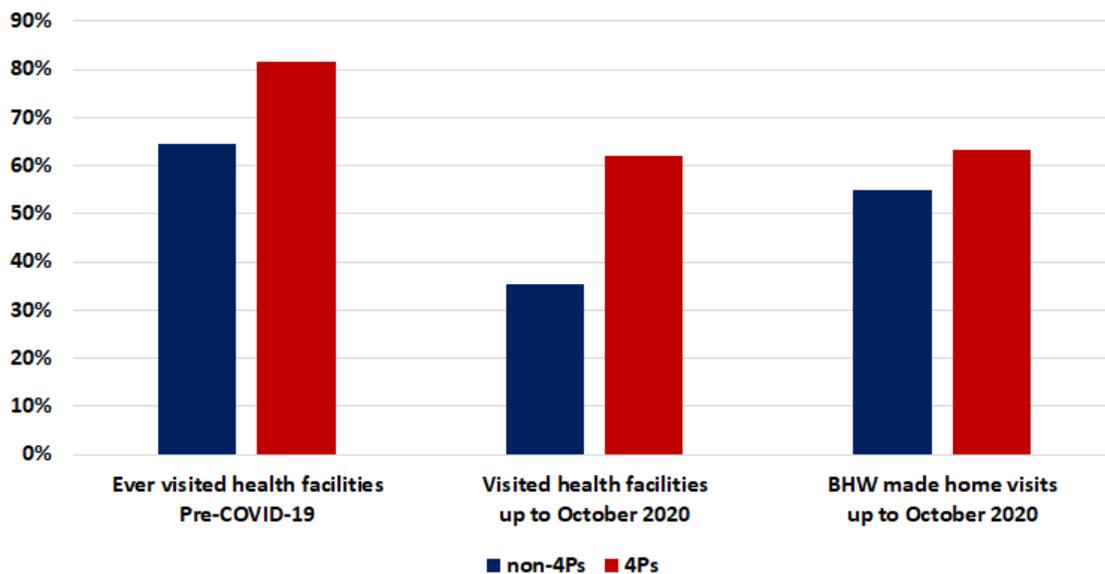




Most household members who suffered an acute illness visited a health center. Between lockdown and August, only a small share of household members suffered an acute illness for which they would normally visit a health center. Among these household members, 74 percent actually visited a health facility. Reasons for not visiting a health facility were evenly split between fear of contracting COVID-19, inability to travel, belief that the illness could be managed at home, and fear of being perceived as having COVID-19.

Children in 4Ps households were significantly more likely to visit a health facility before and during the pandemic. Figure 11 displays the share of all children 5 and under who visited a health facility prior to COVID-19, the share who visited a health facility between the onset of the lockdown and October, and the share who received a visit from a BHW between lockdown and October broken up by households' 4Ps status. The figure shows that children in 4Ps households were significantly more likely to visit a health facility even after the onset of community quarantine when the 4Ps requirement health checkups was waived. This suggests that 4Ps may have induced positive health seeking habits among parents through conditions for benefits and family development sessions. Better access to public health insurance (i.e., PhilHealth) and confidence towards public health systems among 4Ps beneficiaries may have helped them better utilize health facilities. The HOPE survey Wave 1 in April showed that the share of 4Ps households with at least one member having access to PhilHealth was 85 percent, significantly higher than that of non-4Ps households at 69 percent. Also, many 4Ps households (44 percent) expressed willingness to visit government hospitals if sick compared to non-4Ps households (37 percent) in April 2020, indicating a higher level of confidence or comfort in the government's health services. Some of health center visits among 4Ps beneficiaries after the pandemic may have been made because parents were not aware that the conditions had been waived. Our survey in August reports that a large share of 4Ps household did not seem to be aware that they were receiving COVID-19 emergency subsidies through the Social Amelioration Program or that the regular program was modified due to the pandemic (Cho et al. [2021b]).

Figure 11. Child health checkups by 4Ps status



Employment

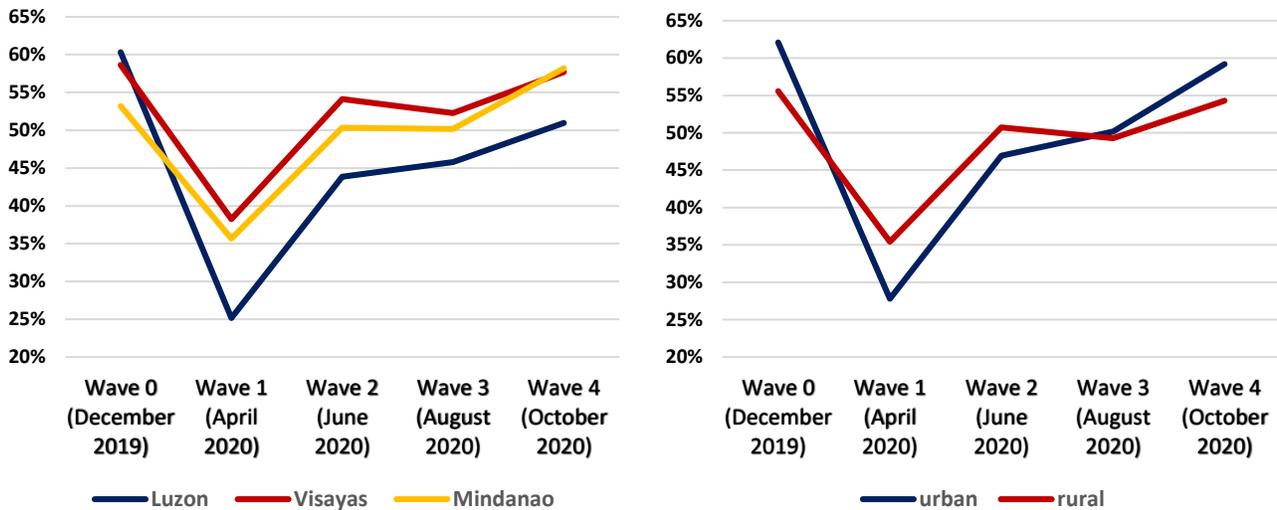
Employment continued to increase between August and October. In previous notes, we documented that the COVID-19 crisis caused a large decrease in employment between December 2019 and April 2020, but that employment recovered substantially in subsequent months (Cho et al. [2021b]). Between August and October,





employment continued to increase in all island groups, though the employment ratio in Luzon was still 9 percentage points lower than prior to the crisis (Figure 12 left). In Visayas, the employment ratio in October was roughly the same as it was in December; in Mindanao, the employment ratio was actually 5 percentage points higher. Earlier notes also found that employment had decreased significantly more in urban areas but that the recovery was also larger in urban areas. By October, the difference in employment between urban and rural areas was similar to the difference (in percentage point terms) between urban and rural areas prior to the crisis (Figure 12 right).

Figure 12. Employment ratio by island group and locality



The share of households with no working members continued to decline. In the earlier note, we found that a large share (42 percent) of households had no earnings at all in April, but that many of these households found some income by August. The share of households with no working adults at all continued to decline from 18 to 12 percent between August and October, with the distribution of the number of workers in October getting closer to the pre-pandemic one (Figure 13). Strongly driven by employment increases, household earnings are increasing. However, the level of earnings per working adult has not been recovered to that of pre-pandemic (Figure 14 **Error! Reference source not found.**) as the number of days worked and wage rates were still lower.

Figure 13. Share of households by number of working members

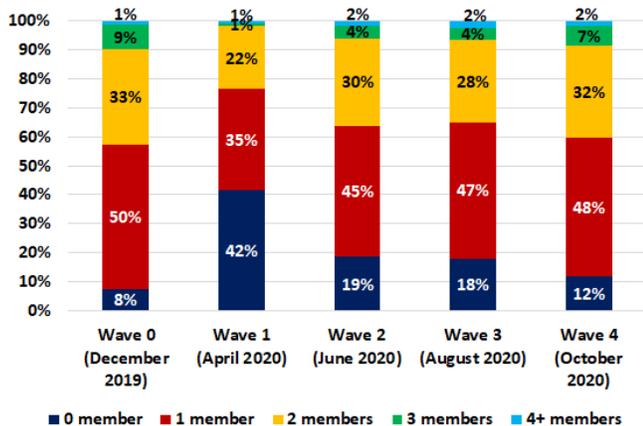
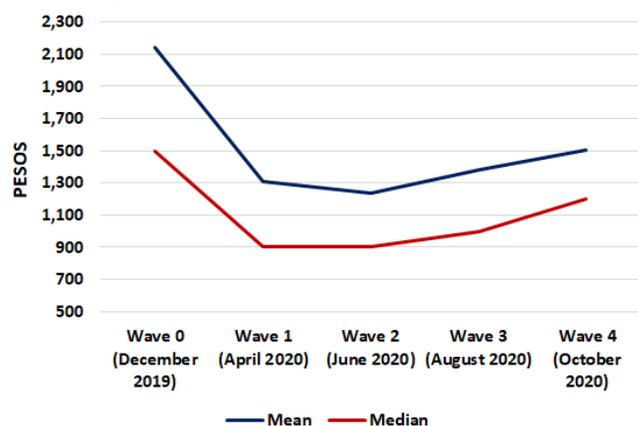


Figure 14. Mean/median weekly earnings per working adult

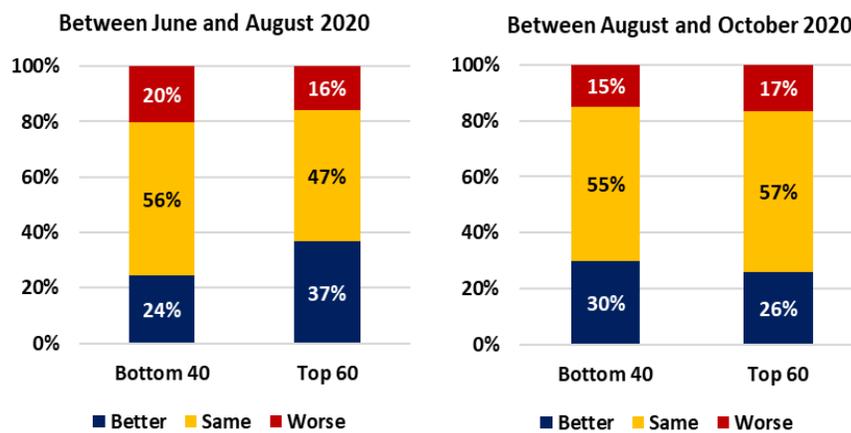




Food Security

Food security continued to improve between August and October 2020. As discussed in Cho et al. (2021b), we used nine questions to gauge food security, adapted from the Household Food Insecurity Access Scale (HFIAS). The questions reflect the three important dimensions of food insecurity -- anxiety, food quality, and food intake. The respondents report the incidence with “never,” “rarely (1-2 times a month),” “sometimes (3-10 times a month),” and “often (more than 10 times a month).” We aggregate data from these 9 questions using a method similar to the one prescribed in Coates et al. (2007) but with some modifications (See Cho et al. [2021b] for details).⁴¹ Between August and October, the share of respondents who are reporting “never” in these questions has significantly increased. Changes in food security status appeared similar across island groups. When looked into by income group (Figure 15), it appears that households in the bottom 40 percent of per capita income distribution in our low income sample were catching up in food security with more reporting the improved status in October than in August.

Figure 15. Change in food security status from June to August, and August to October, by income group



5. Summary and Conclusions

Continued recovery of economic activities and improvement in food security provide a sense of optimism in the Philippines. While the overall household income level was not fully recovered yet to the pre-crisis level, the return of economic activities reflected the great resilience of the Philippine economy and people. Along with the rebounding of employment and increased number of working household members, food security continued to improve with the lowest income households also catching up.

Despite economic progress, the note highlights numerous challenges posed by the COVID-19 pandemic to developing children’s human capital. To respond to expected disruption in the provision of health and education services for children with the school closures and limited mobility, significant efforts have been made to help mitigate the impact by relevant agencies. A long-awaited school resumption in October 2020 provided a relief to many parents. Children’s school enrollment turned out to be higher than expected and households reported relatively significant time spent by students for educational activities. Despite large variations in schools’ proactive reach-out to parents, most low income households in our sample received DepEd’s learning modules and materials. However, numerous challenges associated with distance learning were reported, confirming many

⁴¹ Coates, Swindale, and Bilinsky, “Household Food Insecurity Access Scale (HFIAS) for Measurement of Food Access.”





anecdotes.⁴² Concerns related to access to gadgets and children's inability to focus on remote learning, in addition to COVID-19 related anxieties, highlighted the grave challenges in learning, clouding the already struggling academic performance in the Philippines.⁴³ Access to various modalities of education service delivery varied widely across the island groups, indicating a potentially widening inequality in education and learning. Disruptions in primary health care for children, such as routine health check-ups, also add to the human capital concern.

In order to avert the human capital crisis, the Government of the Philippines should develop a strategy for continued primary health care and strengthened education delivery including the resumption of face-to-face schools. Risks associated with the spread of virus in case of physical opening of schools are duly recognized. However, the costs of losing human capital due to poor health and education services and the cumulative impacts on the future productivity and competitiveness of the country should also be considered. This is more so given the large variations of health service provision by LGUs, and significant limitations in access to education through the current distance learning modality. Our data suggest that additional benefits from in-person schooling beyond education, such as school feeding or childcare for women's economic activities, should be taken into consideration. Thus, while efforts to enhance the services through health workers' home visits and improve the quality of paper-based modules for distance learning should continue, transition plans for resuming regular health and education services are urgently required.

Further, more research is warranted to examine the heterogeneous impact of the pandemic on various population groups. In doing so, inequality across various dimensions such as region, income group, and gender should be investigated carefully. For instance, our note suggests that challenges in access to education likely fall on the shoulders of female members of the households. With students spending most of their study time on paper based modules with limited interactions with educators or peers, women seem to bear the brunt of care responsibilities. Female siblings and spouse of the household heads (most of whom are male), reported a significantly greater amount of time helping children's distance learning. Women's employment did not spare them from spending time to help the children. This area requires greater policy attention as an increasing body of literature suggests looming mental health and productivity challenges among working women during the pandemic.⁴⁴

⁴² See the article for instance, https://www.theguardian.com/artanddesign/gallery/2021/jan/18/mountain-trekking-to-catch-a-signal-online-learning-in-the-philippines?CMP=share_btn_tw

⁴³ Results from the 2018 Programme for International Student Assessment (PISA) ranked Filipino students at the bottom of the chart for reading, and second-lowest for both science and mathematics among 79 participating countries.

⁴⁴ For instance, CARE Rapid Gender Analysis, 2020.





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Appendix 1: Attrition of Sample Households

Table 1 provides dates, sample sizes, and attrition figures for each round. The rows labeled “attritors” are for households included in Wave 0 (December 2019) but not in that round. Attrition gradually increased each round with the first round having very low attrition and the last round having moderate (23%) attrition. In addition, Table A1 shows that the average attritors’ characteristics slightly differ from households who were re-interviewed across our survey rounds indicating that households who participated in our interviews may be better off than those who were not reached.

Table A1. Sample size and attrition figures by round

		Wave 0 (December 2019)	Wave 1 (April 2020)	Wave 2 (June 2020)	Wave 3 (August 2020)	Wave 4 (October 2020)
Num. Households	Sample	580	527	507	485	416
	Attritors		55	73	97	166
HH size	Sample	5.7	5.7	5.7	5.8	5.7
	Attritors		5.7	5.7	5.6	5.8
# children 5-18	Sample	2.5	2.5	2.5	2.5	2.5
	Attritors		2.8 (*)	2.6	2.6	2.6
HH head ed level junior high or above	Sample	48%	48%	48%	49%	49%
	Attritors		40% (**)	43% (*)	42% (**)	43% (**)
Share 4Ps	Sample	48%	48%	48%	49%	50%
	Attritors		53%	49%	45%	46%
Own fridge	Sample	30%	31%	30%	30%	32%
	Attritors		21%	30%	31%	24% (**)
Own TV	Sample	73%	73%	73%	73%	74%
	Attritors		68%	72%	73%	69%
Own washing machine	Sample	23%	24%	23%	22%	25%
	Attritors		15%	22%	24%	18%
Strong roof materials	Sample	63%	63%	62%	63%	64%
	Attritors		58% (*)	64%	61%	60%
Strong wall materials	Sample	47%	48%	47%	48%	47%
	Attritors		34%	46%	42%	46%
Strong floor materials	Sample	11%	11%	11%	11%	12%
	Attritors		9%	11%	11%	9%
Has electricity	Sample	88%	89%	88%	88%	89%
	Attritors		81% (*)	87%	86%	85%
PMT estimated per capita annual income	Sample	14,602	14,694	14,639	14,579	14,564
	Attritors		13,688 (*)	14,358	14,724	14,701

Notes: Stars indicate statistical significance of t-test of mean of attritors versus sample. Single star indicates significance at .1 level and two stars indicates significance at .05 level.

