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Life in the times of the COVID-19 pandemic: the experiences and responses of households in Guimaras and Miagao, Iloilo

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This paper assesses the experience and responses to the COVID-19 pandemic of households in the province of Guimaras and the municipality of Miagao to gain insights and lessons that can be applied during similar disruptions in the future. Survey data using a questionnaire were collected in July to early August 2020 from 580 households in Guimaras and 401 households in Miagao using convenience sampling. As a health threat, COVID-19 caused many households to feel unsafe and worried. The COVID-19 pandemic has highlighted the economic vulnerability of households to disruptions affecting their livelihood and income sources. The effects on loss of livelihood and income sources were worse with lower-income households whose income status and the ability to meet basic needs were worse than the pre-pandemic period. The paper recommends several approaches and interventions to improve household resilience and to be better prepared for similar challenges and threats in the future.

JEL classification: D10, I12, I18
Keywords: COVID-19 response, vulnerability, household assessment

1. Introduction

A year after the COVID-19 pandemic was declared on March 11, 2020, the Philippines recorded 607,048 cases, 546,671 recoveries, and 12,608 deaths [DOH 2021]. The Philippines is among the worst-performing countries in controlling the cases, ranking second to Indonesia in Southeast Asia in terms of highest officially reported COVID-19 cases [WHO 2021].

As COVID-19 cases continue to climb[1], the economic numbers continue to slide. Based on the latest available statistics for 2020 [PSA 2021], the unemployment rate was 10.3 percent or 4.5 million people without work, the annual inflation rate

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[1] In the province of Guimaras, the COVID-19 cases started to rise during the month of July 2020, while in the municipality of Miagao the surge in COVID cases started as early as April of the same year.

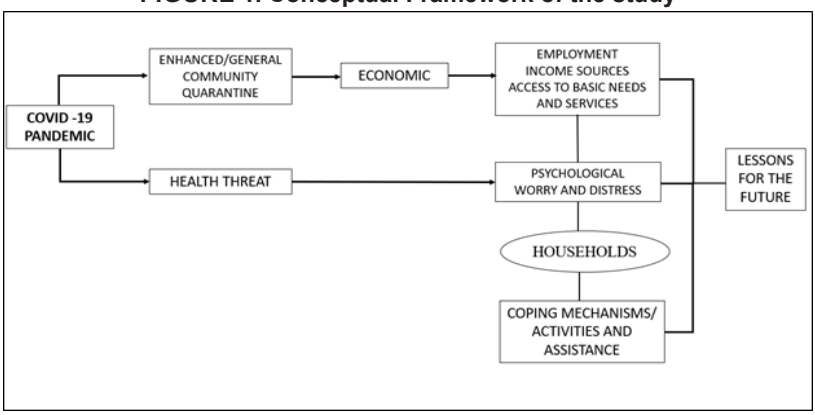
was 2.6 percent (vs. 2.5 percent in 2019), and the Gross Domestic Product (GDP) dropped by 9.5 percent (vs. 6 percent positive growth in 2019). This is the largest GDP drop in the country since 1946 and reported as the deepest in Southeast Asia. After ₱126.75 billion approved loans from the Asian Development Bank, World Bank, Asian Infrastructure Investment Bank, and the DOH Bayanihan Project for the vaccination program, less than 1 percent of the needed doses have arrived in the country as of February 2021. With the slow pace of the vaccine rollout, it is expected to take time to vaccinate 60 to 70 million of the country's 108 million population to attain herd immunity.

The COVID-19 pandemic is considered an exogenous shock that affects households. The impact of this shock transpired in two ways: (1) as a health threat and (2) through the implemented restriction measures. Concerns related to safety and social isolation imposed by quarantine measures contribute to the stress and anxiety experienced by the general population [Saladino et al. 2020]. In the survey conducted by Warren et al. [2020], 30 percent of the study participants reported developing mental health symptoms since the start of the quarantine. Low socioeconomic status is one of the risk factors associated with anxiety and depression related to COVID-19 [Luo et al. 2020]. The fear of contracting the virus causes household members to feel anxious about their health and safety and can negatively affect their well-being and mental health. Stress, if not managed, can be debilitating and have long-term impacts.

The country's experience with the COVID-19 pandemic has exposed the weaknesses of its health, social, and economic systems. Like many countries, the Philippines imposed "community quarantine" to contain the spread of the virus by restricting the mobility of people and by halting all forms of transportation (air, water, land), particularly during the first three months of its imposition. The mobility and transportation restrictions led to economic difficulties among households. According to McKibbin and Fernando [2020], COVID-19 affected households, business sectors and the government through its effects on labor supply, production cost, consumer demand, and public health expenditures. Specifically, COVID-19 affects households through various channels including loss of employment or reduced working hours, loss of sales and income of a household, inability to travel to work, increased need to stay at home to look after children or sick household members, higher prices, lack of availability of staple items, and reduced access to school [Morgan and Trinh 2021]. During the implementation of enhanced and general community quarantine, many business establishments had to cease their operations temporarily or permanently. As a result, many individuals lost their jobs and income sources, while those involved in the informal sector were equally vulnerable to income losses. The loss of employment and income sources had negative implications on households' ability to meet their basic needs. Households' access to basic services was also constrained due to travel restrictions and border closures. Households engaged in various coping activities

to get by during the quarantine. Aid provided by different sources were essential in alleviating the economic challenges faced by the households. However, the pandemic management response is being largely left to the local government units, creating different policy responses.

FIGURE 1. Conceptual Framework of the study



While the effects of COVID-19 pandemic at macro level are well known, not much is known about households' experiences and responses to it, particularly in low-and-middle-income countries [Janssens et al. 2020]. This is particularly true in the Philippines where much of the focus has been on the macroeconomy or the national-level impact of the pandemic. The lack of studies that provide a local perspective in the broader COVID-19 pandemic experience has resulted in limited information on the joint effects of COVID-19 and community quarantine policies on households. According to Martin [2020], a household-level assessment can capture the distributional impacts and better account for the household's coping mechanism in response to the effect of the pandemic. As shown by the previous discussions, the experience of households during pandemic time can provide important insights into the localized impacts of COVID-19. Valuable lessons can be gleaned that can be useful in preparing for similar threats in the future and in developing strategies to reduce economic vulnerability of households during stress and normal times. This highlights the importance of household-level assessment in the context of COVID-19 in drawing a better picture of the impacts of the pandemic and restrictions on households.

In this light, this study was conducted to assess the experience and responses to the COVID-19 pandemic of households in the province of Guimaras and the municipality of Miagao in Iloilo Province. The aim is to gain insights into the households' experiences and responses in guiding decisions and actions to improve the current situation, and to prepare for similar threats and disruptions in the future. The study is an addition to the growing literature on the effects of

the COVID-19 pandemic, but with emphasis on the experience of the household at the local level. Given the restrictions on face-to-face interactions, survey data were collected from July to August 2020 using a questionnaire. Due to the use of convenience sampling method, the data collected and the conclusions and information generated are only true for the households covered by the study. Nonetheless, the lessons derived can still be important for localities.

2. Methodology

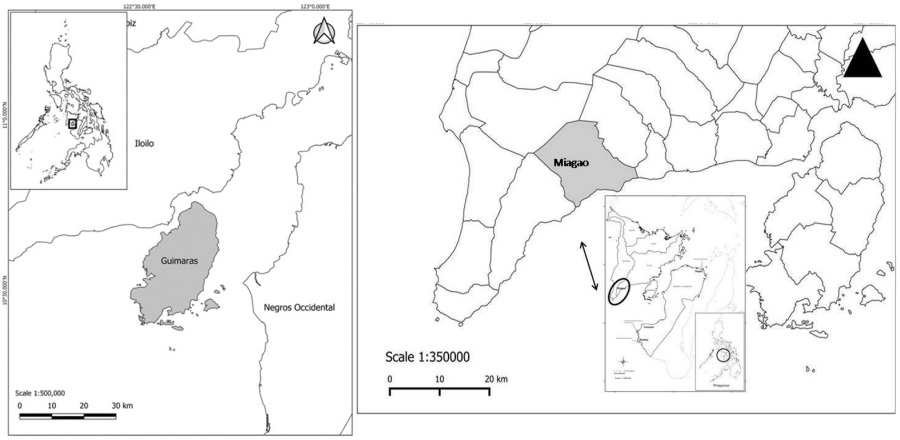
2.1. Study area

The study covers households in the province of Guimaras and the municipality of Miagao in Iloilo Province. These two local government units (LGUs) were chosen to illustrate cases of households in LGUs impacted later (Guimaras) and earlier (Miagao) by COVID-19. The Guimaras case can inform and provide lessons on the vulnerability of undiversified and fragile economies in pandemic context. On the other hand, the Miagao case can provide information and lessons on how households in LGUs earliest hit by COVID-19 are getting by or living under pandemic.

Guimaras Province is the last province in the Western Visayas Region to implement the enhanced community quarantine (ECQ) measure from April 15 to April 30, 2020, and to have recorded local transmission that happened in late July 2020. Beginning May 1, 2020, the province was placed under general community quarantine (i.e., less restrictive policies on mobility than ECQ). Despite the late implementation of ECQ in the province, its economy was already affected when neighboring provinces of Iloilo and Negros Occidental were placed under ECQ as early as the middle of March 2020. Residents of the province employed in the establishments in Iloilo City or Bacolod City that temporarily or permanently closed were out of jobs, and those with regular jobs faced difficulties in travelling outside of the province due to border controls and limited transportation facilities. As of March 11, 2021, Guimaras has recorded 343 COVID-19 cases, 314 recoveries, and 6 deaths. Guimaras reported a population of 175,613 in 2015.

On the other hand, the municipality of Miagao in the southern Iloilo province was one of the first municipalities to record active cases and the first mortality case due to COVID-19. Miagao, like the rest of the municipalities in the province of Iloilo, was placed under ECQ from March 17, 2020 until May 15, 2020. Thereafter, lesser restrictions were imposed. Miagao is the host municipality of two universities: University of the Philippines Visayas and Iloilo Science and Technology University (Southern Iloilo Campus). The cancellation of face-to-face classes and the closure of local establishments in Iloilo City have caused disruptions to many local establishments in the municipality as well as to the local transport sector. As of March 11, 2021, Miagao has recorded 202 COVID-19 cases, 187 recoveries, and 3 deaths. Miagao reported a population of 67,565 in 2015.

FIGURE 2. Map of the study areas



Source: Authors requested GIS expert M. Orquejo to develop these maps.

2.2. Data

Primary survey data were collected for this study. Data included sources of information related to COVID-19, response soon after the declaration of ECQ, frequency of feeling of safety and of worry (not at all, a few times, a number of times, all the time), sources of worry, level of anxiety experienced (scale of 1 to 10 with 1 as no anxiety and 10 as extreme anxiety), activities conducted during the period, access to basic services (banks/money courier, pharmacy, grocery, wet market, health facilities, government offices), perceived household income status (current vs. pre-pandemic), adequacy in meeting basic needs (e.g., food, drinking water, medicine; compared to pre-pandemic), coping strategies, effect on employment (presence of household members who were temporarily or permanently out of work resulting from COVID-19 responses), support received (kind and from whom), adequacy of the support received, and perception of the future.

2.3. Data collection method, survey participants, and questionnaire

The data for this study were remotely gathered, utilizing Google Form for the online survey questionnaire. Hard copies of the questionnaire were also distributed to households in accessible barangays in Miagao (450 copies) and Guimaras (400 copies). The survey ran from July 2020 to early August 2020. Prior to the data collection period, permissions were secured from the Provincial Government of Guimaras and the Municipal Government of Miagao.

The content of the online and hardcopy (4 pages) survey questionnaires for Miagao and Guimaras was similar. It had three sections: 1) personal information of the participants and the socioeconomic characteristics of the families; 2) their general experience (e.g., feeling of safety and worry, sources of information,

income level, employment, coping mechanisms, assistance received) during the E/GCQ period; and 3) prospect for the future. The online and the hard copy of the questionnaire were pilot tested with ten persons each to assess the ease of accomplishing the form, ease of comprehension of questions, and the length of time needed to accomplish the form. Data collection was conducted with the help of volunteers in the barangay who were trained for the work. Upon receiving the questionnaire from the researchers, they were instructed to distribute the questionnaire. Depending on the availability of the household respondent to answer the questionnaire, the volunteers either had to wait upon their visit for the accomplished form or return on another day to pick it up.

In selecting the study participants, convenience sampling was employed. The participants were those who volunteered to respond to the survey questionnaire online or using the hard copy form. The survey participants were of legal age and representing a household. There was a total of 981 survey participants in both online and printed questionnaire surveys, of which 580 were from Guimaras (279 online; 301 printed) and 401 were from Miagao (32 online; 369 printed). The 580 survey participants in Guimaras were from the municipalities of Jordan (36 percent), Buenavista (28 percent), San Lorenzo (26 percent), Sibunag (6 percent), and Nueva Valencia (5 percent). In Miagao, the survey participants were from 41 out of the 119 barangays. The distribution of samples per study site is summarized in Table 1.

TABLE 1. Distribution of sample per study site

	Sample	% of the sample
Guimaras		
Municipality		
Buenavista	161	27.80
Jordan	207	35.70
Nueva Valencia	27	4.70
San Lorenzo	153	26.40
Sibunag	32	5.50
Total	580	100
Miagao		
Barangay		
Alimodias	2	0.50
Bacauan	1	0.25
Bagumbayan	1	0.25
Banuyao	9	2.24
Baybay Norte	2	0.50
Baybay Sur	45	11.22
Bolho	4	1.00

TABLE 1. Distribution of sample per study site (continued)

	Sample	% of the sample
Calagtangan	1	0.25
Calampitao	64	15.96
Cawayanan	12	2.99
Damilisan	10	2.49
Damilisan	1	0.25
Dingle	15	3.74
Gines	19	4.74
Igbugo	3	0.75
Igcabito-on	14	3.49
Igdalaquit	1	0.25
Igsoligue	11	2.74
Igtuba	10	2.49
Kirayan Norte	9	2.24
Lanutan	6	1.50
Malagyan	51	12.72
Maninila	9	2.24
Maringyan	2	0.50
Mat-y	11	2.74
Naclub	1	0.25
Narat-an	9	2.24
Narorogan	26	6.48
Naulid	1	0.25
Oyungan	11	2.74
Palaca	2	0.50
San Fernando	1	0.25
San Rafael	12	2.99
Sapa	3	0.75
Tabunacan	12	2.99
Tacas	2	0.50
Tan-agan	1	0.25
Ubos Ilawod	3	0.75
Ubos Ilaya	2	0.50
Ubos Ilaya	1	0.25
Valencia	1	0.25
Total	401	100

2.4. Statistical analysis

Descriptive statistics such as frequencies, percentages, and univariate analysis (cross-tabulations) were used to analyze the gathered data. Tests of means such as ANOVA and Chi-square tests were also conducted, when appropriate, to determine significant differences or relationships across groups or parameters. ANOVA was used to test for significant differences in the level of distress experienced by households of different income groups. The result indicates whether income level has a significant relationship to the level of distress experienced by households. Furthermore, Chi-square tests were performed to evaluate possible significant relationships between qualitative parameters (e.g., effect on employment, income status during E/GCQ, access to basic needs) across different income groups.

3. Results and discussion

3.1. Socioeconomic profile of the survey participants

The socioeconomic profile of all the survey participants and their households are presented in Table 2. More women (76 percent) participated in the survey than men (24 percent). On average, the study participants were in their late 30s and living in a household with five members. Households who were beneficiaries of the Pantawid Pamilyang Pilipino Program (4Ps) comprised 17 percent of the total survey participants.

Six in every ten households earned a monthly income of less than or equal to ₱11,000, which means they were poor. The percentage of households in this income bracket was higher in Miagao (64 percent) than in Guimaras (56 percent). Moreover, the fraction of households that were near-poor or those earning a monthly income between ₱11,001 and ₱30,000 was almost the same for Guimaras (23 percent) and Miagao (25 percent). Few households in Miagao (8 percent) and in Guimaras (10 percent) had a monthly income of greater than ₱30,000.

Less than 10 percent of households had an OFW household member. During the pandemic, remittances declined with the loss of employment of OFWs or due to difficulty in sending remittances, attributable either to decreased demand for labor or quarantine protocols [Abueg 2020].

A significant number of households likewise had members who belonged to the vulnerable groups including children aged five years old and below (33 percent), senior citizens (33 percent), persons with disabilities (8 percent), and those who were chronically ill (12 percent).

TABLE 2. Socioeconomic profile of the study participants, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Gender						
Male	251	25.59	133	22.93	118	29.43
Female	711	72.48	440	75.86	271	67.58
LGBT+	17	1.73	5	0.86	12	2.99
Prefer not to say	2	0.20	2	0.34	0	0
Household monthly income						
>₱30,000	87	8.87	56	9.66	31	7.73
₱11,001 to ₱30,000	231	23.55	132	22.76	99	24.69
≤ ₱11,000	595	60.65	338	58.28	257	64.09
Prefer not to say	68	6.93	54	9.31	14	3.49
4Ps beneficiary	171	17.43	99	17.07	72	17.96
With OFW member	208	21.20	130	22.41	78	19.45
With PWD member	77	7.85	51	8.79	26	6.48
With senior member	327	33.33	184	31.72	143	35.66
With chronically ill member	118	12.03	74	12.76	44	10.97
With child aged≤5	321	32.72	205	35.34	116	28.93
With child aged 6 to 17	557	56.78	321	55.34	236	58.85
Age	40.13		38.56		41.66	
Household size	4.84		4.67		5.08	

3.2. Sources of COVID-19 related information

The common sources of COVID-19 related information by the survey participants were the television (90 percent), radio (80 percent), relatives, household, and friends (79 percent), Facebook and Twitter (79 percent), and the internet (60 percent). Government websites were less popular (46 percent). The printed media was the least cited source of information (16 percent).

The impact of COVID-19 depends on the action of everyone and on the quality of information that people possess. People act on what they know. Access to accurate and reliable information during the pandemic or any stress situation can keep people calm and informed on what to do to keep themselves safe from the virus (Lee and Mun [2020]; Zhong et al. [2020]; Reddy and Gupta [2021]).

Communicating to the public as part of the public policy against COVID-19 should still harness the mass media in local areas, particularly TV and radio. News media tends to provide reliable information on COVID-19 [Bridgman et al. 2020]. However, there is significant danger of misinformation as popular social media platforms were highly common information sources. Misinformation is rampant in social media (Bridgman et al. [2020]; Kulke [2020]; Pennycook et al. [2020]) given the inadequate, if not lack of, content monitoring [Li and Su 2015]. The use of unregulated social media as COVID-19 source is a health risk, particularly by being a source of COVID-19 conspiracy beliefs [Allington et al. 2020], as well as information on risk factors and preventative treatments [Baum et al. 2020].

TABLE 3. Sources of information about COVID-19 of the study participants, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=80)	%	No. (n=401)	%
Television	883	90.01	538	92.76	345	86.03
Radio	786	80.12	482	83.10	304	75.81
Relatives, household, friends	771	78.59	470	81.03	301	75.06
Social media	769	78.39	463	79.83	306	76.31
Internet	586	59.73	361	62.24	225	56.11
Government websites	451	45.97	304	52.41	147	36.66
Newspaper	156	15.90	97	16.72	59	14.71

3.3. Experience during the E/GCQ period

3.3.1. Response soon after the declaration of the pandemic and the ECQ

As soon as the pandemic was declared on March 11, 2020 and the ECQ was implemented by provinces in the Western Visayas Region (except for Guimaras) by March 17, 2020, households in both Guimaras (98 percent) and Miagao (89 percent) stayed tuned to the news to keep informed and updated (Table 4). They also sent messages to their relatives and friends about staying safe (90 percent). This implies the importance of conveying information via family relationships, as well as a demonstration of social support.

The households in both Guimaras (83 percent) and Miagao (77 percent) also calmly received the news and prepared the essential items (e.g., vitamins, medicines, disinfectants, food, water). Overall, the households had a positive immediate response to the threat of COVID-19 and the ECQ.

3.3.2. Feeling of safety, worry, and distress

Feeling safe means having the feeling of stability, and freedom from fear or anxiety wherever the person is and what the person does. From the declaration of the pandemic to the time of the survey, 27 percent of the survey participants indicated that they felt safe all the time, while 74 percent felt safe in varying frequencies: 21 percent a number of times, 27 percent a few times, and 26 percent did not feel safe at all (Table 5). These indicated that the quarantine measures were inadequate to provide individuals or households with a feeling of safety all the time. Although the distribution pattern was the same in Miagao and Guimaras, a higher share of survey participants who reported that their household did not feel safe at all was observed in Miagao (35 percent) than in Guimaras (20 percent).

Moreover, few (5 percent) survey participants reported to have not been worried at all from mid-March to the time of the survey. Among the study participants, 40 percent reported being worried all the time, 30 percent were worried a number of times, and 20 percent were worried a few times. Three-fourths of the households in Miagao were worried all the time (51 percent) or a number of times (25 percent). These proportions were just slightly higher than for the households in Guimaras, of which 40 percent reported to be worried all the time and 33 percent worried a number of times. They were worried about different things such as whether they or their relatives will get infected with COVID-19, how they will survive during the E/GCQ, worried about food, financial concerns, work, and the disruption in the education of the children.

TABLE 4. Response of the study participant after declaration of ECQ, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Tuned in for latest news about COVID-19	921	93.88	566	97.59	355	88.53
Messaged relatives and friends to stay safe	884	90.11	522	90.00	362	90.27
Calm	787	80.22	480	82.76	307	76.56
Stocked vitamins, medicines, and disinfectants	780	79.51	460	79.31	320	79.80
Stocked food, water and other essentials	735	74.92	442	76.21	293	73.07
Panicked	224	22.83	140	24.14	84	20.95

TABLE 5. Distribution of the participants in terms of feeling of safety during the E/GCQ period, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Felt safe during E/GCQ						
All the time	260	26.50	167	28.79	93	23.19
A number of times	202	20.59	137	23.62	65	16.21
A few times	264	26.91	160	27.59	104	25.94
Not at all	255	25.99	116	20.00	139	34.66
Worried during E/GCQ						
All the time	437	44.55	233	40.17	204	50.87
A number of times	293	29.87	192	33.10	101	25.19
A few times	200	20.39	122	21.03	78	19.45
Not at all	51	5.20	33	5.69	18	4.49

The higher percentage of households in Miagao than in Guimaras that felt not safe all the time and also worried all the time may be due to Miagao as being among the first municipalities to record active cases and also deaths from COVID-19 in the region. During the time of the survey, Guimaras was just experiencing local transmission of cases for the first time.

On a scale of 1 to 10, the survey participants from Guimaras and Miagao were asked to rate the level of distress or anxiety they and their household members have felt (Table 6). Among the survey participants in Guimaras, the mean level of anxiety was 7, across all children in the household it was 6, and across all members in the household, it was 7. The scores meant a moderately high level of stress. The level of stress did not differ much across household income levels. Among the survey participants in Miagao, their level of stress, particularly those from lower-income groups, were higher compared to those from Guimaras (7.47 vs. 7.04). The same mean level was observed across children in the household and across all members of the household.

In times of uncertainty such as the COVID-19 pandemic, feeling safe is difficult because of several unknowns and uncertainties, especially during the early months of the pandemic. People are not sure how safe they are from the virus, who has the virus, how one's body will respond to the virus, or when the pandemic is ending. The uncertainties are more and challenging among the poor for they are also uncertain on how they will put food on the table and earn income as economic activities are deliberately limited under the community quarantine. According to Luo et al. [2020], lower socioeconomic status is one of the risk factors associated with anxiety and depression related to COVID-19. Moreover, quarantine and isolation can increase stress and anxiety.

These feelings of not being safe and worrying are expected in these times. They are uncomfortable but also helpful in a pandemic situation [UCSF Department of Psychiatry and Behavioral Sciences 2021]. These feelings, if managed well, can move people to protect themselves by observing protection protocols, bond with others from a distance, cope with the situation, and slow down the spread of the virus. However, if the stress is high and cannot be managed, it can be debilitating. The survey result of Warren et al. [2020] found that 30 percent of the study participants reported developing mental health symptoms since the start of the quarantine.

TABLE 6. Mean level of anxiety of the study participants and other members of their household, by income group, Guimaras and Miagao, 2020

	Guimaras			Miagao		
	Level of distress of the participant	Level of distress across all children in the household	Level of distress across all members in the household	Level of distress of the participant	Level of distress across all children in the household	Level of distress across all members in the household
All	7.08	6.40	7.11	7.44	6.75	7.38
Low	7.04	6.41	7.14	7.47	6.95	7.51
Mid	7.00	6.19	7.90	7.55	6.83	7.31
High	7.09	6.45	7.09	6.61	5.00	6.48
Unspecified	7.52	6.89	7.22	7.93	6.50	7.64
F	1.00	1.02	0.25	1.87	5.05	1.95
Prob>*F*	0.3922	0.3811	0.8635	0.1346	0.0019	0.1206

Notes: Income groups: Low –with monthly income ≤ ₱11,000; Mid – with monthly income of ₱11,001 to ₱30,000; High – with monthly income of > ₱30,000; Unspecified–those who answered prefer not to say.

3.3.3. Observed precautionary measures against COVID-19

Households from both Guimaras and Miagao were compliant with the minimum health protocols against COVID-19 (Table 7). The top five preventive measures practiced were: observing physical distancing when going out (99 percent), frequent washing of hands (98 percent), wearing of masks (98 percent), maintaining clean surroundings (97 percent), and staying at home most of the time (96 percent). This was similar to the findings of the Institute of Global Health Innovation [2020] and Warren et al. [2020] showing that Filipinos are compliant with public health advisories mandated by the national and local authorities. According to Prasetyo et al. [2020], people's intent to follow the prescribed preventive measures is significantly associated with positive health behaviors. The effectiveness of these preventive measures is indirectly affected by people's understanding of COVID-19. This underscores the importance of having an informed citizenry in minimizing the transmission of COVID-19.

TABLE 7. Protective measures undertaken by the households against COVID-19, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Practice of physical distancing	969	98.78	576	99.31	393	98.00
Frequent washing of hands	965	98.37	569	98.1	396	98.75
Wearing of mask	961	97.96	569	98.1	392	97.76
Maintain clean surroundings	952	97.04	567	97.76	385	96.01
Stayed at home	944	96.23	561	96.72	383	95.51
Tuned in for latest news	942	96.02	565	97.41	377	94.01
Conscious of physical feelings	869	88.58	521	89.83	348	86.78
Stock essentials	836	85.22	496	85.52	340	84.79
Stock medicines	824	84.00	487	83.97	337	84.04
Disinfect house	810	82.57	464	80	346	86.28

3.3.4. Access to basic services

Public health response to the virus such as the quarantine measures, travel restrictions and the practice of social distancing, has restricted people's mobility which hampered access to basic services. Households found it difficult to access the grocery stores (69 percent) and the wet markets (61 percent) during the quarantine period (Table 8). Health service providers like clinics (62 percent) and pharmacies (60 percent) were also difficult to access. Other services that majority of the households had difficulty accessing were government offices (53 percent), banks (51 percent), and money couriers (50 percent). A higher percentage of households in Miagao than in Guimaras reported having difficulty accessing the wet market (73 percent vs. 62 percent) and the groceries (79 percent vs. 69 percent).

The results imply that the mobility restrictions that were implemented worked. During the implementation of enhanced community quarantine in Guimaras, locals were required to secure a quarantine pass issued by their barangays to travel in and out of the province. Likewise, senior citizens and minors were fully restricted from going out for belonging to as a vulnerable group. Limited public transportation was also a factor that contributed to the difficulty in accessing basic services. The practice of social distancing in public vehicles resulted in fare hikes and discouraged travel. Fear of contracting the virus also deterred people from going out. Similarly, in Miagao, a home quarantine pass was issued by barangays to every household allowing them to travel within and outside of the municipality.

TABLE 8. Frequency distribution of the participants having difficulty accessing different basic services, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Money courier	477	48.62	290	50.00	187	46.63
Wet market	648	66.06	354	61.03	294	73.32
Groceries	715	72.88	400	68.97	315	78.55
Clinics	606	61.77	357	61.55	249	62.09
Pharmacy	595	60.65	346	59.66	249	62.09
Government services	537	54.74	313	53.97	224	55.86
Banks	461	46.99	293	50.52	168	41.90

3.3.5. Effects on employment and income sources

As expected, the livelihood and household income sources were affected by the mobility restrictions imposed. In both the study sites, 30 percent of the households had members who were temporarily out of work (Table 9) during the implementation of E/GCQ, and many of those households belonged to the lower income bracket (60 percent). Moreover, a small fraction of the survey participants reported permanent employment loss, with 8 percent in Guimaras and 13 percent in Miagao, respectively. The effect on the informal sectors was worse with 43 percent of the households reported losing their sources of income.

Based on the latest labor force survey, there were 15.6 million Filipinos employed in the informal sector, accounting for 38 percent of the total working population. Informal workers are more vulnerable during this time of the pandemic because of their lack of job security (i.e., usually the first to be laid off), and low income [Pitoyo et al. 2020]. Furthermore, the lack of income replacement and saving among informal workers make them also susceptible to food insecurity (FAO [2020]; ILO [2020]). In 2020, there were 4.5 million Filipinos without work [PSA 2021].

The impact of the pandemic was likewise evident in the households with OFWs due to a significant drop in remittances. In the case of Guimaras and Miagao, there were 68 participants (34 for each study sites) who reported having OFW household members who lost employment during the quarantine. This represented 6 and 8 percent of the local households participating in the survey in Guimaras and Miagao, respectively. This was similar to the national situation of 14-20 percent drop in remittance inflow in the country (Murakami et al. [2020]; World Bank [2020]). The reduction in remittances was primarily due to the decline in labor demand and restriction measures in other countries, hindering OFWs from sending money [Abueg 2020] or some becoming unemployed and forced to return home.

TABLE 9. Percentage distribution of the survey participants who had lost employment and income sources during E/GCQ period across income groups, 2020

Income Levels	Guimaras (n=580)				Miagao (n=401)			
	Loss employment temporarily (n=192)	Loss employment permanently (n=51)	Lost sources of income (n=248)	OFW out of employment (n=34)	Loss employment temporarily (n=135)	Loss employment permanently (n=51)	Lost sources of income (n=153)	OFW out of employment (n=34)
Low	60.42	58.54	68.95	46.34	68.15	60.78	71.24	47.06
Mid	18.75	15.85	15.32	29.27	21.48	31.37	20.26	41.18
High	7.81	3.66	4.44	19.51	4.44	1.96	3.92	11.76
Unspecified	13.02	21.95	11.29	4.88	5.93	5.88	4.58	0
Prob>χ^2	7.5057	21.9495	33.0495	27.2159	7.5391	4.7118	9.2064	31.644
P-value	0.057	0.000	0.000	0.000	0.057	0.194	0.027	0.000

Note: Income groups: Low –with monthly income ≤₱11,000; Mid – with monthly income of ₱11,001 to ₱30,000; High – with monthly income of >₱30,000; Unspecified–those who answered prefer not to say..

TABLE 10. Distribution of study participants in terms of their perceived income status during E/GCQ, Miagao and Guimaras, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Better	51	5.20	20	3.45	31	7.73
Same	367	37.41	223	38.45	144	35.91
Worse	563	57.39	337	58.10	226	56.36

The decline in remittances left recipient households vulnerable to poverty and difficulty meeting their basic needs (ADB [2020]; Diao and Mahrt [2000]).

It is commonly known that many residents of Guimaras work in either Iloilo City, Bacolod City or in nearby municipalities in Iloilo and Negros Occidental. When the neighboring provinces implemented E/GCQ, the livelihoods and income sources of many locals were affected. With mobility and transportation restriction, many business establishments that temporarily closed or adjusted their business operations. Moreover, being dependent on tourism, the local economy of Guimaras was severely affected by the decline in tourist arrivals. The cancellation of the annual Manggahan festival in May 2020, and the temporary closure or adjusted business operation of local establishments also contributed to the decline in local employment.

3.3.6. Income status of households

Loss of employment and income sources seriously affect household income. This was true for the 57 percent of the survey participants that reported their household's income to have worsened during the pandemic compared to the levels before the pandemic (Table 10). This was slightly higher in Guimaras (58 percent) than in Miagao (56 percent). Furthermore, 37 percent of the study participants said that their income was during the pandemic was the same as before. Few (5 percent) reported having better income status during pandemic than pre-pandemic time.

The percentage of the study participants who reported that their income status worsened was lower compared to the 83 percent of the households that reported the same in Metro Manila and Cebu City in May 2020 [UNDP Pulse Survey 2020]. These two key cities in the country had most of the COVID-19 cases and had longer lockdown periods. Moreover, other countries such as Kenya (73 percent), Uganda (66 percent) [Kansiime 2021], and Vietnam (66 percent) [Tran et al. 2020] also reported high rates of households whose economic status worsened during the pandemic.

By income groups, the lower income households became poorer (Table 11). The household's pre-COVID income level and perceived income status during E/GCQ were found to be significantly related based on the result of the chi-square tests for both study sites ($\chi^2 = 72.1955$; $p = 0.000$). Majority of the poor households perceived their income status worsened during E/GCQ (66 percent); with a slightly higher percentage recorded in Guimaras (69 percent) than in Miagao (62 percent). The percentage of households reporting to have worsened income status during the pandemic compared to pre-pandemic went higher when moving from high-income households (>₱30,000 monthly income) to middle-income households (above ₱11,000 to ₱30,000), and to low-income families. For Guimaras, these were 27 percent, 40 percent, and 69 percent, respectively. For Miagao, these were 29 percent, 48 percent, and 69 percent, respectively. For both sites, these were 28 percent, 44 percent, and 69 percent, respectively.

TABLE 11. Percentage distribution of study participants' perceived income status during E/GCQ across different income groups, Miagao and Guimaras, 2020

	Pooled				Guimaras				Miagao			
	Income groups				Income groups				Income groups			
Income status	Low (n=595)	Mid (n=231)	High (n=87)	Unspecified (n=68)	Low (n=338)	Mid (n=132)	High (n=56	Unspecified (n=54)	Low (n=257)	Mid (n=99)	High (n=31)	Unspecified (n=14)
Better	4.71	5.19	8.05	5.88	2.07	5.30	3.57	7.41	8.17	5.05	16.13	0
Same	29.41	51.08	64.37	26.47	29.29	54.55	69.64	24.07	29.57	46.46	54.84	35.71
Worse	65.88	43.72	27.59	67.65	68.64	40.15	26.79	68.52	62.26	48.48	29.03	64.29
	Pearson $\chi^2(6) = 72.1955$ P- value = 0.000				Pearson $\chi^2(6) = 63.2195$ P-value= 0.000				Pearson $\chi^2(6) = 20.8732$ P-value = 0.002			

Note: Income groups: Low –with monthly income ≤ ₱11,000; Mid – with monthly income of ₱11,001 to ₱30,000; High – with monthly income of > ₱30,000; Unspecified–those who answered prefer not to say.

TABLE 12. Percentage distribution of families' level of adequacy of needs across different income groups

	Pooled				Guimaras				Miagao			
	Income Levels				Income Levels				Income Levels			
Level of Adequacy	Low (n=595)	Mid (n=231)	High (n=87)	Unspecified (n=68)	Low (n=338)	Mid (n=132)	High (n=56)	Unspecified (n=54)	Low (n=257)	Mid (n=99)	High (n=31)	Unspecified (n=14)
Less than adequate	62.86	35.5	18.39	54.41	67.16	31.82	23.21	62.96	57.2	40.4	9.68	21.43
No change	29.58	50.22	55.17	35.29	28.11	61.36	55.36	24.07	31.52	35.35	54.84	78.57
More than adequate	7.56	14.29	26.44	10.29	4.73	6.82	21.43	12.96	11.28	24.24	35.48	0
	Pearson $\chi^2(6) = 99.6641$ *P*- value = 0.000				Pearson $\chi^2(6) = 88.0337$ *P*-value= 0.000				Pearson $\chi^2(6) = 46.2085$ *P*-value = 0.000			

Note: Income groups: Low –with monthly income ≤ ₱11,000; Mid – with monthly income of ₱11,001 to ₱30,000; High – with monthly income of > ₱30,000; Unspecified–those who answered prefer not to say.

These results are consistent with the findings of previous studies, (e.g., Enriquez and Goldstein [2020], Gallo and Raitano [2020], Lau et al. [2020]) showing that the economic consequences of COVID-19 fall heavily on the poorest sector of society. Being at the bottom of the socioeconomic ladder, poor households are already suffering from multiple deprivations, which make them more susceptible to the adverse economic impacts of COVID-19 [Lustig 2020]. This implies that households falling below or along the poverty threshold are more likely to fall deeper into poverty during the pandemic. The World Bank [2020] already projected that an additional 2.7 million people will fall into poverty in the country because of this pandemic.

3.3.7. Adequacy of meeting basic needs

With the restrictions from implementation of E/GCQ, the household's supply of basic needs was affected. The results of the chi-square tests showed that families' level of adequacy of basic needs and income level were significantly associated in Guimaras ($\chi^2 = 88.0337$; $p = 0.000$) and Miagao ($\chi^2 = 46.2085$; $p = 0.000$) or combined ($\chi^2 = 99.6641$; $p = 0.000$). The percentage of households reporting not meeting adequate basic needs during the pandemic compared to the pre-pandemic period went higher when moving from high income households (>₱30,000 monthly income), to middle income households (above ₱11,000 to ₱30,000), and to low-income families (Table 12). For Guimaras, these were 23 percent, 32 percent, and 67 percent, respectively. For Miagao, these were 10 percent, 40 percent, and 57 percent, respectively. For both sites, this was 28 percent, 44 percent, and 69 percent, respectively. Poor households were more likely to experience liquidity constraint during this time of the pandemic, hindering them from acquiring adequate supply of basic goods. Conversely, the percentages of households having adequately or more than adequately met their basic needs were higher for more economically better off ones.

Karpman et al. [2020] noted that low-income households deliberately reduced their spending on food as a response to the COVID-19 crisis. Such finding is similar to the survey results of Warren et al. [2020] showing that low-income households in the Philippines are more likely to reduce their food portion sizes at mealtime as well as the number of meals in a day compared to wealthier households. UNDP Pulse Survey [2020] showed that more than half of the surveyed households in NCR and Cebu City reported having experienced food insecurity. Hence, low-income households are more susceptible to food insecurity during the pandemic (Das et al. [2020]; Elsahoryi et al. [2020]). According to Kansiime et al. [2020], the worsening food security experienced by the households in Kenya and Uruguay during the COVID-19 pandemic was caused by income losses, decrease in purchasing power, and reduced access to markets due to restrictions.

3.4. Coping

3.4.1. Coping mechanisms

The COVID-19 and the community quarantine are shocks that adversely affected the livelihoods of families. The loss or reduction of income posed an additional burden. The survey participants identified household coping mechanisms during the E/GCQ. Coping mechanisms were strategies that the households used to manage the difficulties brought about by the pandemic. These involved the use of existing resources, relying on external sources, and engaging in activities that help them get by during the quarantine. The ranking of common coping strategies differed by income group (Table 13). In Guimaras, households earning a monthly income greater than ₱30,000 and those earning from ₱11,001 to ₱30,000 had similar top three coping strategies: reliance on income (93 percent and 86 percent, respectively), availment of government assistance (77 percent and 76 percent, respectively), and dip into savings (both 63 percent). For households with a monthly income of less than ₱11,000, the top three coping strategies were: availment of government assistance (79 percent), reduction of consumption (73 percent), and reliance on income (72 percent).

In Miagao, the households earning a monthly income greater than ₱30,000 coped by relying on income (81 percent), dipping into savings (74 percent), and reducing consumption (35 percent). Among households earning a monthly income from ₱11,001 to ₱30,000, their top three coping strategies were availment of government assistance (83 percent), relying on income (75 percent), and reducing consumption (65 percent). For households with monthly income of less than ₱11,000, the top three coping strategies were availment of government assistance (83 percent), reliance on income (67 percent), and reduction of consumption (65 percent).

Reliance on income and availment of government assistance were the two most common coping strategies for all households by income groups in the two study sites. This underscored the importance of government support during the pandemic, especially to the lower-income households. Reduction in consumption was seen in all income groups in Miagao, but it was only seen among the lowest-income group in Guimaras. Moreover, more households from lower-income group availed of help from the private sector.

Households engaged in different activities to cope with challenges (e.g., fear, stress, boredom, feeling of isolation) during the quarantine (Table 14). These were to pray more frequently (94 percent), accepting the situation and embracing changes (94 percent), working on chores at home (93 percent), bonding with household members (90 percent), working on things for which one had no time before (89 percent), and home gardening (87 percent). The same pattern of coping activities was observed in both Guimaras and Miagao.

TABLE 13. Percentage distribution of study participants in terms of their coping mechanisms across different income groups, Guimaras and Miagao, 2020

Income status	Pooled				Guimaras				Miagao			
	Income groups				Income groups				Income groups			
	Low (n=595)	Mid (n=231)	High (n=87)	Unspecified (n=68)	Low (n=338)	Mid (n=132)	High (n=56)	Unspecified (n=54)	Low (n=257)	Mid (n=99)	High (n=31)	Unspecified (n=14)
Rely on income	69.75	80.95	88.51	60.29	71.60	85.61	92.86	59.26	67.32	74.75	80.65	64.29
Dip into savings	49.58	58.44	66.67	48.53	56.21	62.88	62.50	51.85	40.86	52.53	74.19	35.71
Resorted to borrowing	60.34	35.93	20.69	45.59	61.24	34.09	23.21	48.15	59.14	38.38	16.13	35.71
Reduce consumption	69.58	49.35	31.03	67.65	72.78	43.94	28.57	66.67	65.37	56.67	35.48	71.43
Avail donation from the private sector	34.29	21.65	17.24	41.28	31.07	22.73	19.64	46.30	38.52	20.2	12.9	21.43
Avail government assistance	80.67	76.19	60.92	72.06	78.99	75.76	76.79	66.67	82.88	76.77	32.26	92.86
Avail assistance from relatives	50.92	44.59	22.99	54.41	48.22	44.70	26.79	53.70	54.47	44.44	16.13	57.14

Note: Income groups: Low –with monthly income ≤ ₱11,000; Mid – with monthly income of ₱11,001 to ₱30,000; High – with monthly income of > ₱30,000; Unspecified–those who answered prefer not to say.

TABLE 14. Coping activities of the study participants, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=80)	%	No. (n=401)	%
Praying more frequently	923	94.09	550	94.83	373	93.02
Embraced the situation	919	93.68	557	96.03	362	90.27
Worked on chores at home	911	92.86	554	95.52	357	89.03
Bonded more with the household	886	90.32	530	91.38	356	88.78
Worked on things that had no time for before	876	89.30	530	91.38	346	86.28
Started home gardening	854	87.05	506	87.24	348	86.78
Became more creative	836	85.22	500	86.21	336	83.79
Connected with relatives and friends more often	803	81.86	476	82.07	327	81.55
Watched TV more frequently	780	79.51	483	83.28	297	74.06
Helped/participated in works to fight COVID	750	76.45	447	77.07	303	75.56
Surfed the net more frequently	641	65.34	383	66.03	258	64.34
Did more leisurely readings	501	51.07	321	55.34	180	44.89
Donated goods or money	348	35.47	195	33.62	153	38.15

The quarantine provided more time for households to bond and do things their members did not have time for before. In both study areas, most household members accepted the situation and started productive activities (e.g., gardening, chores, creative works). They also engaged in activities inside the home, fostering a close social relationship among household members. Such activities serve as an avenue for household members to talk about their worries related to the pandemic [Salin et al. 2020]. Engaging in these activities can also reduce psychological stress and anxiety, particularly among children [Leung et al. 2020].

3.5. Assistance received

During the ECQ, households received assistance from various sources. In both Guimaras and Miagao, majority of the households received assistance from the barangay and municipal government, and the Department of Social Welfare and Development (DSWD) (Table 15). The least frequent sources of assistance were from the private sector, the Department of Labor and Employment (DOLE), and relatives.

TABLE 15. Percentage of study participants in terms of the number of times they received assistance from different sources, Guimaras and Miagao, 2020

	Guimaras					Miagao				
Source	None	Once	Twice	Thrice	More than 3 times	None	Once	Twice	Thrice	More than 3 times
Barangay	11.38	42.41	20.17	7.59	18.45	10.47	23.69	42.89	13.72	9.23
Municipal	11.38	10.17	28.62	25.52	24.31	37.41	19.95	6.23	29.93	6.48
DSWD	54.31	35.00	5.52	1.03	4.14	33.67	40.65	2.99	19.95	2.74
DOLE	93.97	4.48	0.17	1.38	0	92.52	4.99	2.49	0	0
Private	86.38	10.00	2.10	0.52	1.03	83.54	11.22	4.49	0	0.75
Relatives	69.14	13.28	6.90	3.10	7.59	60.10	15.71	11.47	2.24	10.47

In Guimaras, local governments started to distribute relief assistance on April 15, 2021, the start of ECQ in the province. Miagao, on the other hand, was ahead in relief distribution because Iloilo province was placed under ECQ on March 17, 2020. In-kind relief assistance included rice, canned goods, noodles, sugar, coffee, fresh meat and vegetables. Face masks and other hygiene products were also distributed by the local government and national agencies such as the DSWD and DOLE. Beneficiaries of the Pantawid Pamilya Pilipino Program (4Ps) automatically qualified for the cash assistance from the SAP program amounting to ₱6,000 during the first tranche. Others also received cash assistance under the Social Amelioration Program (SAP) if they qualified. The identification of beneficiaries and the distribution of SAP, however, was marred by controversy. Households found the assistance they received to be inadequate for their needs.

National government support arrived after more than a month from the declaration of community quarantine, signifying the lack of systematic program planning and action to support the households during disruptions. The local government supplied food subsidies designed as short-term coping strategies to address immediate challenges brought about by the pandemic.

While the households received assistance from different sources, most were temporary relief assistance, which were enough to support the households for days in a week. The cash subsidy provided by the government through the SAP provided immediate relief to household beneficiaries. However, for households who depend on their daily wage earnings for subsistence, medium-term assistance is needed. The government should target programs that would restore jobs and enable the informal sector to resume earning income. A long-term solution to the problems of unemployment, vulnerability, and marginalization of households is needed.

3.6. Perception of the future and preferred assistance

The participants were asked about the assistance they perceived they need to enjoy a better economic situation in the future. The top responses were discounted utility bills (87 percent), cash assistance (82 percent), employment program (79 percent), and cash for work (77 percent) (Table 16).

TABLE 16. Frequency distribution of the participants in terms of needs to enjoy better economic situation in the future, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Discounted utility bills	851	86.75	512	88.28	339	84.75
Cash assistance	805	82.06	473	81.55	332	83.00
Employment program	773	78.80	464	80.00	309	77.25
Cash for work	757	77.17	442	76.21	315	78.75
More resilient banking system	631	64.32	409	70.52	222	55.50
Credit	577	58.82	353	60.86	224	56.00
Wide availability of Gcash, Paymaya	570	58.10	361	62.24	209	52.25

When asked about their expectation of their income status for the rest of the year, the survey participants perceived their income to be the same (49 percent), worse (36 percent), and better (14 percent) than the current time (Table 17).

TABLE 17. Frequency distribution of the participants in terms of expected income status for the rest of the year, Guimaras and Miagao, 2020

	Pooled		Guimaras		Miagao	
	No. (n=981)	%	No. (n=580)	%	No. (n=401)	%
Better	140	14.27	69	11.90	71	17.71
Same	483	49.24	281	48.45	202	50.37
Worse	358	36.49	230	39.66	128	31.92

The lack of confidence about the pandemic ending soon caused the participants to expect the pandemic to last longer. According to Christelis et al. [2020], the fear of the financial impact of the COVID-19 pandemic reduces people's marginal propensity to consume, thereby reducing household expenditure. Given the financial uncertainty caused by COVID-19, people might choose to further delay or limit their consumption (precautionary saving) (Byrne et al. [2020]; Christelis et al. [2020]) and cause a more severe effect on the country's output. This was evident by the 9.5 percent decline in the country's Gross Domestic Product

(GDP) for 2020. This highlights the importance of households' confidence in the economy and perception that the government is in control of the situation.

4. Conclusions and recommendations

The COVID-19 pandemic and the policy response of "community quarantine" (ECQ/MECQ/GCQ/MGCQ), which basically meant "stay at home", have affected households in Guimaras and Miagao that participated in the study. The situation not only highlighted long-existing problems (i.e., inequality, poverty, vulnerability, marginalization), but also provides a chance to learn and make change for the future.

The COVID-19 pandemic posed a serious threat to the livelihoods of households. The effects of livelihood and income loss were worse among lower-income households, who felt that their income status and ability to meet their basic needs were worse than the pre-pandemic period. The households mainly coped by consuming less (a host of other problems) and availing of external support. While short-term responses of providing food and financial assistance have been helpful, long-term support to address not only pandemics such as COVID-19 but also other stressors will require developing more resilient families. If low-income households are left behind in recovery efforts, it will be the "worst normal".

The pandemic has likewise emphasized the urgency for household resilience. Households should be able to respond to stresses even if resources are strained. Inequalities should be reduced by well-targeted actions by considering the heterogeneity in livelihood trajectories and unequal social vulnerability. Specifically, there is a need to refocus and reallocate funds towards programs, including social safety net schemes, for low-income households to protect or help them recover from the adverse impact of COVID-19.

Several approaches/interventions are recommended to improve the resilience of families. The first approach is to restore consumer confidence by prioritizing their health and safety. The main policy instrument of the government of ECQ has brought about severe impacts on the economy. It will be an effective strategy if it is accompanied by mass testing, contact tracing, quarantine and isolation, vaccination, and cash assistance to give people purchasing power so they remain in their homes during the quarantine. Without these other interventions accompanying it, the ECQ will not be effective. The second approach is to strengthen households through the social network of friends, relatives, and neighbors – social capital. The strengthening and formation of social capital can serve as both a social safety net and a bridge toward the transition to financial inclusion. The third approach is financial inclusion through savings, credit, digital payment products, and insurance that has all been found to increase resilience and cut risk. The fourth approach is the provision of access to social protection measures such as government health insurance and social security.

A limitation of the study is that due to travel restrictions and lack of face-to-face interactions, it was not possible to conduct more comprehensive surveys and other supplementary data collections to fully understand the experience and responses of families. Once the situation allows, it is therefore recommended that a more in-depth data collection be conducted of households to gain more knowledge about the impact and responses to COVID-19 among households.

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References

Abueg, L. [2020] "Extended, enhanced, and extreme: macroeconomic implications of the community quarantine in the Philippines due to the COVID-19 pandemic", *CEM Discussion Paper*, University of the Philippines Los Baños.

Asian Development Bank (ADB) [2020] "COVID-19 impact on international migration, remittances, and recipient households in developing Asia", *ADB Briefs* 148.

Allington, D., B. Duffy, S. Wessely, N. Dhavan, and J. Rubin [2020] "Health-protective behaviour, social media usage and conspiracy belief during the COVID-19 public health emergency", *Psychological Medicine* 1-7.

Baum, M.A., K. Ognyanova, H. Chwe, A. Quintana, R. Perlis, D. Lazer, J. Druckman, M. Santillana, J. Lin, J.D. Volpe, M. Simonson and J. Green [2020] "The State of The Nation: A 50-state COVID-19 survey (Report #14: misinformation and vaccine acceptance)". Report of September 23, v.1 From: *The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States A joint project of: Northeastern University, Harvard University, Rutgers University, and Northwestern University*. https://www.kateto.net/COVID19/COVID19%20CONSORTIUM%20REPORT%2014%20MISINFO%20SEP%202020.pdf. Accessed June 2020.

Bridgman, A., E. Merkley, P.J. Loewen, T. Owen, D. Ruths, L. Teichmann, and O. Zhilin [2020] "The causes and consequences of COVID-19 misperceptions: understanding the role of news and social media", *The Harvard Kennedy School Misinformation Review* 1, Special Issue on COVID-19 and Misinformation. June 2020(1). https://doi.org/10.37016/mr-2020-028. Accessed March 2021.

Byrne, S., A. Hopkins, T. McIndoe-Calder, and M. Sherman [2020] "The Impact of COVID-19 on consumer spending", *Central Bank of Ireland Economic Letter* 2020(15).

Christelis, D., D. Georgarakos, T. Jappelie and G. Kenny [2020] "The COVID-19 crisis and consumption: survey evidence from six EU countries", *European Central Bank Working Paper Series No*. 2507.

Das, S., M.G. Rasul, M.S. Hossain, A. Khan, M.A. Alam, T. Ahmed, and J.D. Clemens [2020] "Acute food insecurity and short-term coping strategies of urban and rural households of Bangladesh during the lockdown period of COVID-19 pandemic of 2020: report of a cross-sectional survey", *BMJ Open* 10, e043365.

Department of Health (DOH) [2021] *COVID-19 Tracker*. Republic of the Philippines. doh.gov.ph. Accessed March 2021.

Diao, X. and K. Mahrt [2020] "Assessing the impact on household incomes and poverty of declines in remittances due to COVID-19", *IFPRI Strategy Support Program Policy Note* 06.

Elsahoryi, N., H. Al-Sayyed, M. Odeh, A. McGrattan, and F. Hammad [2020] "Effect of COVID-19 on food security: A cross-sectional survey", *Clinical Nutrition* 40: 171-178.

Enriquez, D. and A. Goldstein [2020] "COVID-19's socioeconomic impact on low-income benefit recipients: early evidence from tracking surveys", *Socius: Sociological Research for a Dynamic World* 6:1-17.

Food and Agriculture Organization (FAO) [2020] *Impact of COVID-19 on informal workers*. FAO: Rome.

Gallo, G. and M. Raitano [2020] "SOS incomes: simulated effects of COVID-19 and emergency benefits on individual and household income distribution in Italy", *Working Paper Series* 566, ECINEQ.

International Labour Organization (ILO) [2020] *COVID-19 crisis and the informal economy: immediate responses and policy challenges*. ILO brief.

Institute of Global Health Innovation (IGHI) [2020] COVID-19 *behaviours in the Philippines*. Imperial College London.

Janssens, W., M. Pradhan, R. de Groot, E. Sidze, H.P.P. Donfouet and A. Abajobir [2020] "The short-term economic effects of COVID-19 on low-income households in rural Kenya: an analysis using weekly financial household data", *World Development* 138, 105280.

Kansiime, M.K., J.A. Tambo, I. Mugambi, M. Bundi, A. Kara and C. Owuor [2021] "COVID-19 implications on household income and food security in Kenya and Uganda: findings from a rapid assessment", *World Development* 137, 105199.

Karpman, M., S. Zuckerman, D. Gonzalez, and G.M. Kenney [2020] "The COVID-19 pandemic is straining families' abilities to afford basic needs", Health Policy Center Urban Institute: Washington.

Kulke, S. [2020]. "Social media contributes to misinformation about COVID-19", https://news.northwestern.edu/stories/2020/09/social-media-contributes-to-misinformation-about-COVID-19/. Accessed March 2021.

Lau, L.L., N. Hung, D.J. Go, J. Ferma, M. Choi, W. Dodd, and X. Wei [2020] "Knowledge, attitudes, and practices of COVID-19 among income-poor households in the Philippines: A cross-sectional study", *Journal of Global Health* 10(1):011007.

Lee, Y.S. and H.S. Mun [2020] "COVID-19: public access to information – legal and institutional frameworks", *Law and Development Review* 13(2): 535-542.

Leung, C.C., T.H., Lam, and K. K. Cheng [2020] "Mask making in the COVID-19 epidemic: people need guidance", *Lancet* 395: 945-947.

Li, R. and A. Suh [2015] "Factors influencing information credibility on social media platforms: evidence from Facebook pages", *Procedia Computer Science* 72: 314-328.

Luo, M., L. Guo, M. Yu, W. Jiang, and H. Wang [2020] "The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public – a systematic review and meta-analysis", *Psychiatry Research* 291, 113190.

Lustig, N. and M. Tommasi [2020] "COVID-19 and social protection of poor and vulnerable groups in Latin America: a conceptual framework", in Luis F. Lopez-Calva and Marcela Meléndez (Eds.), *The Economics of the COVID Pandemic in Latin America and the Caribbean: Ideas for Policy Action*, UNDP.

Martin, A., M. Markhvida, S. Hallegatte, and B. Walsh [2020] "Socio-Economic Impacts of COVID-19 on Household Consumption and Poverty", *Economics of Disasters and Climate Change* 4:453-479.

McKibbin, W. and R, Fernando [2020] "The global macroeconomic impacts of COVID-19: seven scenarios", *Centre for Applied Macroeconomic Analysis Working Paper*, 19.

Morgan, P. and L. Trinh [2021] "Impacts of COVID-19 on households in ASEAN countries and their implications for human capital development", *Asean Development Bank Institute Paper Series* (1226).

Murakami, E., S. Shimizutani, and E. Yamada [2020] "Projection of the effects of the COVID-19 pandemic on the welfare of remittance-dependent households in the Philippines", *Economics of Disaster and Climate Change* 25:1-14.

Organization for Economic Cooperation Development (OECD) [2020] "Coronavirus (COVID-19): Living with uncertainty", *OECD Economic Outlook*, Interim Report.

Pennycook, G., J. McPhetres, Y. Zhang, J. Lu, and D. Rand [2020] "Fighting COVID-19 misinformation on social media: experimental evidence for a scalable accuracy-nudge intervention", *Psychological Science* 31(7):770 –780.

Prasetyo, Y.T., A.M. Castillo, L.J. Salonga, J.A. Sia, and J.A. Seneta [2020] "Factors affecting perceived effectiveness of COVID-19 prevention measures among Filipinos during enhanced community quarantine in Luzon, Philippines: integrating protection motivation theory and extended theory of planned behavior", *International Journal of Infectious Diseases* 99: 312-323.

Pitoyo, A.J., B. Aditya and I. Amri [2020] "The impact of COVID-19 pandemic to informal sector in Indonesia: theoretical and empirical comparison", *E3S Web of Conferences* 200, 03014.

Philippine Statistical Authority (PSA) [2021] "PSA Statistical Databases", https://openstat.psa.gov.ph/Database. Accessed March 2021.

Reddy, B.V. and A. Gupta [2020] "Importance of effective communication during COVID-19 infodemic", *Journal of Household Medicine and Primary Care* 9(8): 3793-3796.

Saladino, V., D. Algeri, D., and V. Auriemma [2020] "The psychological and social impact of COVID-19: new perspectives of well-being", *Frontiers in Psychology* 11, 577684.

Salin, M., A. Kaittila, M. Hakovita, and M. Anttila [2020] "Household coping strategies during Finland's COVID-19 lockdown", *Sustainability* 12, 9133.

Tran, B.X., H.T. Nguyen, H.T. Le, C.A. Latkin, H.Q. Pham, L.G. Vin, X.T.T. Le, T.T. Nguyen, Q.T. Pham, N.T.K. Ta, Q.T. Nguyen, C.S.H. Ho, and R.C.M. Ho [2020] "Impact of COVID-19 on economic well-being and quality of life of the Vietnamese during the national social distancing", *Frontiers in Psychology* 11, 565153.

United Nations Development Programme (UNDP) [2020] *A pulse on poverty: application of citizen-centered innovation*. Working paper on Phase 1 of the United Nations Development Programme Philippines and the Zero Extreme Poverty Philippines 2030.

UCSF Department of Psychiatry and Behavioral Sciences [2021] "Emotional well-being and coping during COVID-19", https://psychiatry.ucsf.edu. Accessed March 2021.

Warren, S., D. Parkerson, and E. Collins [2020] "RECOVR Philippines: Tracking the effects of the COVID-19 Pandemic", https://www.poverty-action.org/recovr-study/recovr-philippines-tracking-effects-COVID-19-pandemic. Accessed March 29, 2021.

World Bank [2020] *Building a resilient recovery*. World Bank: Washington.

World Health Organization (WHO) [2021] "WHO Coronavirus (COVID-19) Dashboard" https://COVID19.who.int/table. Accessed March 2021.

Zhong, B.L., W. Luo, H.M. Li, Q.Q. Zhang, X.G. Liu, W.T. Li, and Y. Li [2020] "Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey", *International Journal of Biological Sciences* 16(10): 1745-1752.