

Reactions, Behavioral Practices and Coping Mechanisms of Filipinos in Luzon, Philippines during the Lockdown Due to Covid-19

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Abstract

As COVID-19 cases rose in the Philippines in March 2020, the government declared a state of calamity nationwide and implemented the Enhanced Community Quarantine (ECQ) over Luzon which was most affected. The ECQ imposed measures that restricted the mobility of citizens and disrupted their usual routines, in addition to various directives for the public to protect themselves against COVID-19. As the pandemic and the measures to contain it were all novel, this cross-sectional survey looked into the Filipinos' reactions towards the pandemic, their compliance to directives on how to protect themselves, and their coping mechanisms to maintain physical, mental, and emotional health during the lockdown. Results showed that Filipinos have a high level of concern over the pandemic, and expressed fear for their health and that of others. They also most often to always adhered to practices protecting them against COVID-19, and performed activities that maintained their physical, mental, and emotional health during the lockdown. Some responses were affected by the respondents' regional location, age, sex, and civil and employment status.

Keywords: Impact of COVID-19, citizen's responses to the pandemic, consequences of health quarantine, mental and emotional health during pandemic

Introduction

An outbreak of pneumonia of unidentified etiology occurred in Wuhan City, Hubei Province, China, in December 2019. It was due to a new type of coronavirus that eventually got named as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) and the disease it caused as Coronavirus Disease 2019 (COVID-19). The virus has since spread out of China and into other countries through international travel. As cases of COVID-19 multiplied worldwide, the World Health Organization (WHO) initially

declared it as a Public Health Emergency of International Concern but eventually recognized this as a pandemic. Different agencies worldwide henceforth took necessary precautions to contain the viral infection.

In the Philippines, the first COVID-19 patient was a 39-year old female Chinese national from Wuhan City who traveled to Manila on January 25, 2020 (Edrada et al., 2020). Upon confirmation of the case on January 29, 2020, the Research Institute for Tropical Medicine started confirmatory testing for suspected cases using rt-PCR (Panganiban-Perez, 2020). By the first week

of March, reports on the virus spreading in the country started to pour in, all considered potential cases of local transmission (CNN Philippines, 2020; Punzalan, 2020). Several of the COVID-19 cases were individuals who had travel history within the Philippines, linking imported cases to the Philippines (Malasig, 2020).

When the number of cases within the country rose to six individuals, the Department of Health recommended to the Office of the President the declaration of a public health emergency, Code Red Sub-Level 1, based on Republic Act No. 11332 (Cordero, 2020). Considering the outbreak of COVID-19 as an emergency that threatens national security, the President issued Proclamation No. 922 on March 8, 2020, declaring a nationwide state of public health emergency and enjoining all government agencies, local government units and the general public to cooperate in addressing the threat (Office of the President, 2020 March 8). The government likewise mobilized the Inter-Agency Task Force for the Management of Emerging Infectious Diseases to lead the country's efforts in managing the pandemic.

Following the sharp increase in the number of COVID-19 cases throughout the country, the President issued Proclamation No. 929 on March 16, 2020, which declared a state of calamity nationwide for the duration of six months. The proclamation also enforced immediately an Enhanced Community Quarantine (ECQ) throughout the island of Luzon that included the National Capital Region where the most number of cases were located (Office of the President of the Philippines, 2020 March 16a). Following the directives of the proclamation, the Executive Secretary released on the same date a memorandum spelling out the ECQ guidelines for the management of the coronavirus contagion (Office of the President of the Philippines, 2020 March 16b). The memorandum imposed home quarantine; suspended classes and mass public transport facilities; prohibited mass gatherings; and restricted land, sea, and air travel. Work from home arrangement was advised for public offices and private institutions, and only private establishments providing necessities and activities related to food and medicine were allowed to operate. The ECQ, together with its restrictions, was initially set until midnight of

April 13, but was extended until April 30 then to May 15 in some locations. By then, areas that were classified as moderate-risk were put into a Modified Enhanced Community Quarantine, while low-risk areas were put under Modified General Community Quarantine (Aurelio, 2020, May 13; Kyodo News, 2020; Lopez, 2020; Ranada, 2020). Nonetheless, the restrictions imposed under ECQ conditions were similarly implemented. In addition, the Department of Health also released several directives following WHO guidelines on how citizens can protect themselves against COVID-19 (WHO, 2020 April 29). The recommendations included consistent washing or sanitizing of hands, wearing surgical masks, social distancing, and even self-isolation.

The pandemic and the various measures to contain it are a novel experience not just in the Philippines but globally. Understandably, these have sparked massive research into the virus' biology, pathogenesis, and disease. However, it is also important to look into how people are affected and are reacting to the pandemic and the measures meant to address it. Thus, this study was conducted to determine the behavior and responses of Filipino citizens towards the pandemic, their compliance to directives of the government and health agencies on how they can protect themselves against COVID-19, and their coping mechanisms to maintain physical, mental, and emotional health during the lockdown. The results could be of help to the Department of Health and other government and non-government agencies in their continuing efforts to assist the public in coping up with the impacts of the pandemic.

Materials And Methods

Research Design and Data Collection

The study employed a cross-sectional survey that was conducted among local residents of Luzon, Philippines, three weeks into the implementation of the lockdown imposed in the island. Data collection was done from April 5 to May 4, 2020. Due to the lockdown, the survey instrument was served and answered online. Recruitment of participants was likewise done online using Facebook and Instagram.

Research Tool

The questionnaire was crafted after a review of relevant literature (Brooks et al., 2020; CDCP, 2020 April 30; Chan et al., 2015; Galea et al. 2020; Jester et al., 2018; Smith & Robinson, 2020, April; WHO, 2020 March 7). Three medical doctors evaluated the structured questionnaire. After comments and suggestions from validators were integrated, the tool was pre-tested to 28 individuals. The results were analyzed for reliability using Cronbach's Alpha with a result of $\alpha=0.89$, indicating that the tool has a good level of internal consistency. The final questionnaire was formatted in Google Forms and then shared through social networking sites.

The questionnaire has two parts, but this paper presents only the first part of the survey. Information obtained includes the respondents' personal data, level of concern and reactions towards COVID 19, individual practices to protect themselves against COVID-19, and activities they undertook to maintain their physical, mental, and emotional health during the lockdown.

Demographic data obtained from the respondents covered their administrative region, sex, age, civil status, and employment status. For the respondents' level of concern, they were to choose from a 5-point Likert scale (1=not concerned to 5=very concerned). From an open-ended list of possible reactions towards COVID-19, the respondents chose how frequently they experienced these using a 5-point Likert scale (1-not at all to 5-always). On the practices to protect themselves against COVID-19 as well as to maintain their health physically, mentally, and emotionally during the lockdown, the respondents rated an open-ended list of activities and practices using a 5-point Likert scale (1=never practiced, 2=sometimes, 3=often, 4=most often, and 5=always practiced).

Data Analysis

Descriptive statistics was used to analyze the respondents' demographic data (frequency and percentages). The responses were tested for normality using Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) tests. The data were

not normal based on the two tests ($p<0.05$). The median was the measure of central tendency, and the interquartile range (IQR) for statistical dispersion. The responses were analyzed according to the respondents' demographic data. Levene's test was used to analyze homogeneity of variances across the groups. The result ($p<0.05$) supports the use of non-parametric Kruskal-Wallis test to determine significant differences of the responses as affected by region, age, civil status, and employment status. Mann-Whitney test was used for data as affected by sex. Confidence level was set at 95%, and significance level at 0.05. SPSS v.20 was used in the analyses.

Ethical considerations

All participants were asked to answer an informed consent form to signify their voluntary participation in the survey and to declare that they are 18 years of age or higher. As the data gathering procedure was online, the researchers ensured that the participants' responses would not be traceable back to them. The respondents' email or IP addresses were not also collected.

Results

Demographic Data

Three hundred and seven (307) individuals were recruited to participate in the online survey. Majority of the respondents were from the Cordillera Administrative Region (35.50%) and Central Luzon (37.79%), females (64.17%), young adults (18-35 years old, 76.55%), single (72.3%), and employed (54.39%). For details, see Tables 1 and 2.

Table 1. Distribution of Respondents according to Region, Age and Sex

Region*	Sex						Age					
	M	%	F	%	Tot	%	18-35	%	36-55	%	> 55	%
CAR	39	12.7	70	22.80	109	35.50	89	28.99	16	5.21	4	1.30
RI	11	3.583	17	5.54	28	9.12	23	7.49	5	1.63	0	0.00
RII	5	1.629	10	3.26	15	4.89	7	2.28	8	2.61	0	0.00
RIII	39	12.7	77	25.08	116	37.79	92	29.97	21	6.84	3	0.98
RIVa	10	3.257	9	2.93	19	6.19	13	4.23	6	1.95	0	0.00
NCR	6	1.954	14	4.56	20	6.51	11	3.58	9	2.93	0	0.00
Total	110	35.83	197	64.17	307	100.00	235	76.55	65	21.17	7	2.28

*CAR- Cordillera Administrative Region; includes the provinces of Abra, Apayao, Benguet, Ifugao, Kalinga, Mt. Province, and the City of Baguio. Respondents came from Baguio City, Abra, Benguet, Mt. Province, and Kalinga.

RI- Region 1, Ilocos Region; includes the provinces of Ilocos Sur, Ilocos Norte, La Union, and Pangasinan. Respondents were from Ilocos Sur, Ilocos Norte, and Pangasinan

RII – Region 2, Cagayan Valley Region; includes the provinces of Batanes, Cagayan, Isabela, Nueva Vizcaya, and Quirino. Respondents were from the provinces of Isabela, Nueva Vizcaya, and Quirino.

RIII – Region 3, Central Luzon Region; includes the provinces of Aurora, Bataan, Bulacan, Nueva Ecija, Pampanga, Tarlac and Zambales. Respondents were from Bulacan, Nueva Ecija, Pampanga, Tarlac, and Zambales.

RIVa – Region 4a, Calabarzon Region; includes the provinces of Batangas, Laguna, Quezon, Cavite, and Rizal. Respondents were from Batangas, Cavite, Laguna, Quezon, and Rizal.

NCR – National Capital Region; Metro Manila

Table 2. Distribution of Respondents according to Civil Status and Employment Status

Civil Status	n	%	Employment Status	n	%
Single	222	72.3	Employed	167	54.39
Married	77	25.1	Full-time student	77	25.1
Widowed	5	1.63	Retired	3	0.98
Separated	3	0.98	Unemployed	60	19.54
Total	307	100	Total	307	100

Level of Concern and Reactions towards COVID-19

The respondents' level of concern over the pandemic is shown in Table 3, column Q1. In all categories, according to region, age, sex, civil status, and employment status, the median for the level of concern for the pandemic was 5, which indicated a deep concern over COVID-19. The percentage of respondents in each category (region, age range, sex, civil status, and employment status) shows that majority of the respondents gave a score of 5 for their level of concern. Analysis by Kruskal Wallis showed that the distribution of responses in terms of age is not the same ($p=0.044$), civil status ($p=0.040$), and employment status ($p=0.002$). Pairwise comparison of age-range showed the responses between the young adults (18-34 yo) and middle-aged adults (34-55 yo) to vary significantly ($p=0.022$). Pairwise comparison showed a significant difference in the responses between the single and married respondents ($p=.015$) and between full-time students and employed respondents ($p=0.011$). Mann-Whitney test of responses according to sex also rejected the null hypothesis that the distribution of responses between males and females is the same ($p=0.028$).

The apprehensions were manifested in the participants' responses when asked what they felt or experienced about the contagion. Among the reactions, the respondents revealed that they most often (median value is 4) experienced fear and worry about their health and that of others (Q2a). Kruskal-Wallis analysis showed that the

responses for this concern varied significantly among the respondents as affected by region ($p=0.035$) and sex ($p=.023$). For the other possible reactions, median values in the different categories ranged from 1 to 3. Over-all, the median for the inability to eat (Q2b), worsening of chronic health problems (Q2e), and increased use of alcohol, tobacco, and drugs (Q2f) was 1, which means many respondents never experienced these. They sometimes experienced the inability to sleep and irritability as indicated by the overall median, which was 2. Mann-Whitney test showed that males and females differ in their experience regarding the worsening of chronic health problems ($p=.001$), and the increased use of alcohol, tobacco, and drugs ($p=.000$).

A few respondents added some emotions they have experienced such as anxiety ($n=12$), fear ($n=9$), isolation ($n=4$), paranoia ($n=3$), depression ($n=2$), stress ($n=2$), overthinking (2), and panic attacks ($n=1$). These negative feelings were brought about by school requirements and problems involving work and financial status ($n=9$). Other respondents felt inconvenienced with the situation, were unable to focus, often experienced hunger, felt unproductive, and got bored. Some individuals were disappointed with other citizens' behavior and skepticism, and how the government handled the situation. A few respondents expressed their sympathy and gratefulness for those in the frontline. Some appreciated the cooperation of many citizens in their communities.

Table 3. Reactions towards COVID-19 according to Region, Age, Sex, Civil and Employment Status

Categories		n	Q1	%	Q2a	Q2b	Q2c	Q2d	Q2e	Q2f
Region	CAR	109	5 (1)	71.6	4 (2)	1 (2)	2 (2)	1 (1)	1 (0)	2 (1)
	NCR	20	5 (0)	85	5 (1)	2 (2)	2 (2)	1 (1)	1 (0)	1 (1)
	Region I	28	5 (0)	85.7	4 (1)	2 (1)	2 (2)	1 (2)	1 (0)	1 (1)
	Region II	15	5 (0)	86.7	4 (2)	1 (1)	2 (2)	1 (1)	1 (0)	2 (2)
	Region III	116	5 (0)	78.4	4 (2)	2 (2)	2 (2)	1 (1)	1 (0)	2 (2)
	Region IVA	19	5 (0)	78.9	4 (2)	2 (2)	2 (2)	1 (2)	1 (1)	2 (2)
Over-all		307	5 (0)	77.5	4 (2)	1 (1)	2 (2)	1 (1)	1 (0)	2 (2)
<i>P</i> value			0.526		0.035	0.301	0.537	0.669	0.300	0.417
Age	18-35	235	5 (1)	73.6	4 (2)	1 (2)	2 (2)	1 (1)	1 (0)	2 (2)
	36-55	65	5 (0)	89.2	4 (2)	2 (1)	2 (2)	1 (1)	1 (0)	1 (1)
	56 and up	7	5 (0)	100	4 (2)	2 (1)	2 (1)	2 (1)	1 (0)	1 (2)
	<i>P</i> value		0.044		0.310	0.981	0.599	0.313	0.217	0.502
Sex	Male	110	5 (1)	70.9	4 (2)	1 (2)	2 (2)	1 (2)	1 (1)	1 (2)
	Female	197	5 (0)	81.2	4 (2)	2 (1)	2 (2)	1 (1)	1 (0)	2 (1)
	<i>P</i> value		0.028		0.023	0.752	0.206	0.001	0.000	0.515
Civil Status	Single	222	5 (1)	73.4	4 (2)	1 (1)	2 (2)	1 (1)	1 (0)	2 (1)
	Married	77	5 (0)	87	4 (2)	1 (1)	2 (2)	1 (1)	1 (0)	1 (2)
	Widowed	5	5 (0)	100	4 (1)	1 (2)	1 (2)	1 (1)	1 (0)	1 (2)
	Separated	3	5 (0)	100	5 (2)	3 (1)	3 (2)	2 (2)	1 (0)	3 (0)
	<i>P</i> value		0.040		0.770	0.297	0.504	0.657	0.373	0.151
Employment Status	Employed	167	5 (0)	83.8	4 (2)	2 (1)	2 (2)	1 (1)	1 (0)	2 (1)
	Full Time student	77	5 (1)	63.6	4 (2)	1 (1)	2 (2)	1 (1)	1 (0)	1 (1)
	Retired	3	5 (0)	100	4 (2)	2 (1)	3 (1)	2 (0)	1 (0)	2 (2)
	Unemployed	60	5 (0)	76.7	4 (2)	1 (2)	2 (2)	1 (2)	1 (0)	2 (2)
	<i>P</i> value		0.002		0.841	0.575	0.499	0.394	0.332	0.215

*Q1- How concerned are you about COVID 19?

Likert scale: 1-not concerned to 5-very concerned

Q2- Which of the following have you experienced since you heard of COVID-19?

2a – Fear and worry about personal health and health of others; 2b – not being able to eat well; 2c – not being able to sleep well; 2d – worsening of chronic health problems; 2e – the increased use of alcohol, tobacco, or drugs; and, 2f – becoming irritable. Likert scale: 1-not experienced; 2- sometimes; 3-often; 4-most often; 5-always experienced

Personal Protective Practices against COVID 19

Considering their deep concern over the pandemic, the respondents showed that they generally abided by the health directives set forth by the Department of Health (Table 4). One of these practices is hand washing (Q3a). The over-all median for this practice was 5 (always practiced). There was no significant difference in the participants' responses as affected by region, age, and civil status. However, there was a significant difference in the distribution of responses as affected by sex ($p=.018$) and employment status ($p=.019$), where pairwise comparison showed the distribution of scores to vary significantly between the employed and unemployed respondents ($p=.044$).

Hand-rubbing with alcohol (Q3b) is another practice if soap and water are not available. The overall median score for this practice was 4 (most often). There was no significant difference in the responses as affected by age and civil status. However, there was a significant difference in the responses as affected by region ($p=.046$), employment status ($p=.019$), and sex ($p=.016$).

A pairwise comparison shows the difference between respondents from Regions CAR and NCR ($p=.031$) and between responses of full-time students and employed respondents ($p=.042$).

One should also avoid touching one's face with unwashed hands (Q3c) because the virus can enter the respiratory tract through the mucous membrane of the nose, oral cavity and lips, and the conjunctiva of the eyes. The overall median for this practice was 4 (most often practiced). The responses varied significantly as affected by region ($P=.008$), employment status ($p=.002$), and sex ($p=.041$). Pairwise comparison showed the responses to differ between participants from Region IVA and NCR ($p=0.40$), and between full-time students and employed respondents ($p=.001$).

Maintaining a distance of around 1 m apart was also advised. The overall median score for this practice (Q3d) was 5 (always practiced). Responses did not vary significantly, as affected by region, age, civil status, and employment status, but varied significantly between males and females ($p=.043$).

Table 4. Ratings of Practices Needed to Protect Selves against COVID-19

Categories		n	Q3a	Q3b	Q3c	Q3d	Q3e	Q3f	Q3g	Q3h	Q3i
Location	CAR	109	5 (1)	4 (2)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (2)
	NCR	20	5 (0)	5 (1)	5 (1)	5 (1)	5 (1)	5 (0)	5 (0)	5 (0)	5 (1)
	Region I	28	5 (1)	4 (2)	4 (2)	5 (1)	5 (1)	5 (1)	5 (0)	5 (1)	5 (1)
	Region II	15	5 (2)	4 (2)	4 (1)	5 (1)	5 (1)	5 (0)	5 (0)	5 (0)	5 (1)
	Region III	116	5 (1)	5 (1)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
	Region IVA	19	4 (1)	4 (1)	3 (1)	5 (1)	5 (1)	5 (0)	5 (1)	5 (1)	5 (1)
Over-all		307	5 (1)	4 (1)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
<i>p value</i>			0.096	0.045	0.008	0.372	0.327	0.186	0.124	0.544	0.567
Age	18-35	235	5 (1)	4 (1)	4 (2)	5 (1)	4 (1)	5 (1)	5 (1)	5 (1)	5 (1)
	36-55	65	5 (1)	4 (1)	4 (1)	5 (1)	5 (1)	5 (0)	5 (1)	5 (1)	5 (2)
	56 and up	7	5 (1)	4 (1)	4 (1)	5 (2)	5 (1)	5 (1)	5 (1)	5 (1)	4 (1)
	<i>p value</i>			0.052	0.993	0.118	0.391	0.001	0.08	0.731	0.371
Sex	Males	110	4 (1)	4 (2)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	4 (1)
	Female	197	5 (1)	5 (1)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
	<i>p value</i>			0.018	0.016	0.041	0.043	0.371	0.379	0.009	0.06
Civil Status	Married	77	5 (1)	4 (1)	4 (2)	5 (1)	5 (1)	5 (0)	5 (1)	5 (0)	5 (2)
	Single	222	5 (1)	4 (2)	4 (2)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
	Widowed	5	5 (0)	5 (1)	4 (1)	5 (1)	5 (0)	5 (0)	5 (0)	5 (0)	5 (0)
	Separated	3	5 (1)	5 (1)	4 (2)	5 (1)	5 (1)	4 (1)	5 (0)	5 (0)	4 (1)
	<i>p value</i>			0.633	0.763	0.951	0.955	0.122	0.364	0.602	0.073
Employment Status	Employed	167	5 (1)	5 (1)	4 (1)	5 (1)	5 (1)	5 (0)	5 (0)	5 (1)	5 (1)
	Full Time Student	77	4 (1)	4 (2)	4 (3)	5 (1)	4 (1)	5 (1)	5 (1)	5 (1)	5 (1)
	Retired	3	5 (1)	5 (1)	4 (1)	4 (3)	4 (2)	5 (3)	5 (1)	5 (1)	5 (1)
	Unemployed	60	4 (1)	4 (2)	4 (2)	5 (1)	5 (1)	5 (0)	5 (1)	5 (1)	5 (2)
	<i>p value</i>			0.019	0.019	0.002	0.592	0.269	0.138	0.036	0.109

*Question 3. Which of the following have you practiced to protect yourselves against COVID-19?

Likert scale: 1-not practiced; 2-sometimes; 3-often; 4-most often; 5-always practiced

Practices: 3a – frequent hand washing (at least every four hours and whenever your hands are soiled/grossly dirty; 3b – doing alcohol hand rub; 3c – not touching one’s face, especially the mouth, eyes, or nose with unwashed hands; 3d – social/physical distancing; 3e – staying at home or not going out; 3f-covering the mouth when sneezing or coughing; 3g – avoiding crowded places when going out; 3h-wearing face mask; 3i – stacking food and other essential items.

The citizens were also advised to stay at home unless it was necessary for them to go out. The overall median score for this practice (Q3e) by the respondents was 5 (always practiced). The responses of the participants differ significantly as affected by age ($p=.001$). Pairwise comparison showed the distribution of responses to vary between the young adults (18-34 yo) and middle-aged adults (35-54 yo) ($p=.001$). The median for the young adults was 4 (most often) as against 5 for those with ages 35 and above. Also, 49% of the young adults, while 74% of the middle-aged adults answered 5.

Covering one's mouth when sneezing or coughing prevents spraying respiratory droplets into the atmosphere or onto surfaces that may be touched by anybody; hence, it is one way of preventing the spread of the virus. The overall median for this practice (Q3f) was 5, with no significant difference in the responses as affected by region, sex, age, civil status, and employment status.

Citizens were also warned to avoid crowded places and mass gatherings. The overall median score for this practice (Q3g) was 5 (always practiced), but the distribution of the responses between males and females differ significantly ($p=.009$). Employment status also affected the participants' responses ($p=.036$). Pairwise comparison showed the responses to vary significantly between the full-time students and the employed respondents ($p=.021$). While both groups gave a median score of 5, only 54% of the full-time students but 71% among the employed gave this score.

Wearing of face mask is necessary to protect oneself of respiratory droplets from infected individuals or to protect others if one has the infection. This practice (Q3h) got a median

score of 5 (always practiced), with no significant difference in the distribution of responses according to region, sex, age, civil status, and employment status.

A good practice is to buy food and other necessities and stockpile these supplies to avoid frequent moving out of the house. This practice (Q3i) got an over-all median score of 5 (always practiced), and the responses did not differ significantly, according to region, age, civil and employment status. The distribution of responses, however, varied significantly between males and females ($p=.003$). The median score for males was 4 but it was 5 for females. Moreover, 64% of the females always practiced this, as against 47% of the males who did it.

Practices to Maintain Physical and Mental Health during the ECQ

The respondents chose from a list of possible activities that could maintain their physical, emotional, and mental well-being during the ECQ, and indicated how often they practiced these. Results show that they had undertaken often to always all the listed activities (Table 5). The overall median score is 4 (most often) for activities that could keep their physical health, such as taking vitamins and other supplements (Q4a), eating a well-balanced diet (Q4b), taking adequate sleep (Q4d), and drinking enough water (Q4e). The overall median score of 3 (often) was given for doing physical exercise even within the limits of their homes (Q4c). There was no significant difference in the distribution of responses according to region, age, sex, civil status, and employment status.

Table 5. Practices to Maintain Physical and Mental Health during the ECQ

Categories		n	4A	4B	4C	4D	4E	4F	4G	4H	4I	4J
Location	CAR	109	4 (3)	4 (2)	3 (2)	4 (2)	4 (2)	4 (1)	4 (1)	3 (3)	3 (1)	4 (2)
	NCR	20	5 (1)	4 (2)	3 (3)	4 (2)	4 (1)	4 (2)	4 (1)	4 (2)	3 (3)	4 (2)
	Region I	28	5 (3)	5 (1)	3 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	5 (1)
	Region II	15	4 (1)	4 (1)	4 (2)	4 (2)	4 (2)	4 (1)	4 (2)	4 (2)	4 (2)	5 (1)
	Region III	116	4 (2)	4 (2)	4 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)
	Region IVA	19	5 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (1)	4 (2)	5 (1)
Over-all		307	4 (2)	4 (2)	3 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (1)	5 (1)
<i>p value</i>			0.099	0.517	0.093	0.84	0.291	0.379	0.706	0.142	0.335	0.115
Age	18-35	235	4 (2)	4 (2)	3 (1)	4 (2)	4 (2)	4 (2)	4 (1)	4 (2)	4 (2)	5 (2)
	36-55	65	4 (2)	5 (1)	3 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)
	56 and up	7	4 (2)	4 (1)	3 (2)	3 (2)	3 (2)	4 (1)	3 (2)	3 (1)	3 (3)	3 (1)
	<i>p value</i>		0.937	0.003	0.758	0.08	0.027	0.227	0.142	0.514	0.086	0.024
Sex	Male	110	4 (2)	4 (2)	3 (2)	4 (2)	4 (2)	4 (2)	4 (1)	4 (2)	3 (1)	4 (2)
	Female	197	4 (2)	4 (1)	3 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	5 (1)
	<i>p value</i>		0.729	0.296	0.591	0.47	0.857	0.283	0.637	0.044	0.013	0.018
Civil Status	Married	77	4 (2)	4 (1)	3 (1)	4 (2)	4 (2)	4 (1)	4 (1)	4 (2)	4 (2)	4 (2)
	Single	222	4 (2)	4 (2)	3 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	5 (1)
	Widowed	5	3 (3)	4 (1)	3 (1)	4 (1)	4 (2)	4 (1)	3 (2)	2 (2)	5 (2)	4 (2)
	Separated	3	3 (2)	5 (1)	3 (3)	3 (1)	3 (2)	2 (3)	4 (1)	3 (1)	3 (1)	3 (1)
	<i>p value</i>		0.465	0.579	0.655	0.64	0.764	0.311	0.727	0.195	0.236	0.009
Employment Status	Employed	167	4 (2)	4 (2)	3 (1)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)	4 (2)
	Full Time Student	77	4 (3)	4 (2)	3 (3)	4 (2)	4 (2)	4 (2)	3 (2)	3 (2)	3 (2)	5 (1)
	Retired	3	4 (2)	4 (2)	3 (1)	4 (1)	4 (1)	4 (0)	4 (1)	4 (1)	5 (1)	4 (2)
	Unemployed	60	4 (2)	4 (2)	4 (1)	4 (2)	4 (2)	4 (1)	4 (1)	4 (2)	4 (1)	4 (1)
	<i>p value</i>		0.636	0.43	0.958	0.87	0.123	0.685	0.113	0.403	0.005	0.642

*Question 4. Which of the following activities have you practiced to maintain your health?

Likert scale: 1-not practiced; 2-sometimes; 3-often; 4-most often; 5-always practiced

*Practices to maintain physical health: 4a – taking vitamins and other micronutrients; 4b– eating foods coming from three main food groups; 4c– performing physical exercises like walking, running, and others; 4d– taking adequate rest (7 to 8 hours of sleep/day); 4e – drinking at least two liters of water each day.

**Practices to maintain emotional and mental health: 4f– doing relaxation activities (e.g. yoga, listening to music, etc.); 4g – taking breaks from watching, reading, or listening to news about COVID-19; 4h – talking to people about your concerns and worries; 4i - creating some fun moments/activities with family members; 4j – reading books or watching shows that make one happy

Activities to keep themselves mentally and emotionally healthy received a median score of 4 (most often practiced). These include activities such as doing relaxation activities (e.g., yoga, listening to music, among others) (Q4f), taking breaks from watching, reading, or listening to news about COVID-19 (Q4g), talking to people about their concerns and worries (Q4h), and creating some fun moments with family members (Q4i). Reading books or watching shows that make one happy garnered a median score of 5 (always).

Mann-Whitney test, however, showed that males and females varied significantly in their responses regarding talking to people about their worries and concerns ($p=.044$), creating fun moments with family members ($p=.013$), and reading books or watching comedies ($p=.018$). Marital status also affected the responses to the activity of reading books and watching funny shows ($p=.009$). Pairwise comparison showed the difference between married and single respondents ($p=.030$).

Employment status also has an effect on the responses regarding the activity of creating fun moments with family members ($p=.005$). Pairwise comparison showed the difference between full-time students and employed respondents ($p=.011$).

Discussion

This study investigated the Filipinos' reactions, practices, and coping mechanisms during the current COVID-19 pandemic. Conducted three weeks after the proclamation of Enhanced Community Quarantine over the entire Luzon, this is the first study done in the country on these concerns to the best of the researchers' knowledge. Results show that the outbreak of the COVID-19 contagion has generated a deep concern among the 307 respondents, males and females alike, from younger to older adults, married or single, employed or unemployed. The disease made them fear for their health and safety. Likewise, the respondents showed high compliance to the directives and health protocols of the Department of Health. Most often to always, they adhered to the washing of hands

or rubbing with alcohol, maintaining physical distance, wearing masks, and staying at home. During the enhanced community quarantine, the respondents looked after their physical health by taking enough rest, eating a well-balanced diet, taking vitamins and other health supplements, and doing some physical exercise. Mental health was most often protected by doing relaxation activities, talking out their fears with relatives and friends, and limiting listening to news about the COVID-19 that can trigger more fear and worry. The participants' responses vary at times as affected by their region, sex, age, civil status, and employment status.

The Philippines never experienced a health situation of this severity. Hence, it is understandable that the citizens feel a great concern over the pandemic regardless of their region, age, sex, or civil and employment status. This echoes situations noted elsewhere where the uncertainty surrounding the virus has created panic and anxiety (Smith & Robinson, 2020 April). Further, news on the number of deaths due to the pandemic in countries with advanced medical facilities and technologies has alarmed countries like the Philippines with a weak healthcare system. This was aggravated by local experts' warnings that hospital care resources in the country will hardly cope up if COVID-19 cases increased dramatically (Nonato, 2020 April 20).

The adherence of the respondents to practices advised by the Department of Health to protect themselves against COVID-19 indicates that they recognized the seriousness of the situation. This could also be taken as an indication of the effectiveness of the government's efforts in instilling compliance to these practices.

It should be noted, however, that some practices varied significantly between males and females as to how often they carried them out. These include hand washing with soap and water, doing alcohol hand rub, not touching one's face with unwashed hands, social or physical distancing, avoiding crowded places, or stockpiling food and other necessities. Generally, more females gave higher scores for the practices than males, meaning they do them more often than males. A related survey showed that women tend to worry more about COVID-19 than men;

hence, they have been more proactive in taking precautionary measures (Frederiksen, Gomez, Salganicoff, & Ranji, 2020).

Age influenced the responses to the practice of staying at home. Results showed the median score to be 4 for young adults and 5 for the older adults. It means that the younger respondents at times went out of their homes while the older adults always stayed at home during the ECQ. The risk for severe illness from COVID-19 increases as age increases (CDCP, 2020 June 25); hence, older people generally stayed at home and usually asked younger members of the family to run errands. Moreover, a recent National Youth Agency (2020 April) report found that 84% of young people have reported worsening mental health problems due to school closures and less mental health support. For younger people involved in this study, going out a few times during the lockdown would have been one way to relieve stress.

The declaration of a lockdown or enhanced community quarantine changed almost everyone's daily routines. The home environment presents opportunities to be sedentary (The Conversation, 2020 March 26). Many individuals tend to be less physically active, spend longer screen time, have irregular sleep patterns, and unhealthy diets resulting in weight gain and loss of physical fitness (UNDESA, 2020).

To maintain their physical health, the respondents, declared that they often exercised even during the quarantine. The favorable effects of regular physical activity on one's health are well-founded (Pedersen & Saltin, 2015). Research has demonstrated that the improvement of physical and physiological health parameters had positive health consequences in areas of mental health and well-being (Chekroud et al., 2018). For these reasons, undergoing physical activities, even simple ones at home during the quarantine, will decrease the adverse physiological and psychological impact of sedentary behaviors (Hammami et al. 2020). Home-based activities allow people to stay fit and healthy by practicing simple movements while staying at home. Likewise, there is widespread belief on the connection between mental health and the immune system (Brandslet, 2019 August 15): If one's physical health is maintained, one's

mental health is also protected and, consequently, one has more robust immune responses against infections.

The respondents also stated that they had enough sleep, drunk sufficient amount of water, and ate a balanced diet. WHO advised the importance of a healthy diet during the pandemic, adding that while no food or dietary supplements can prevent or cure the COVID -19 infection, a healthy diet can boost the body's immune system that protects against a disease or helps recover from any ailment (WHO, n.d.-a).

Studies comparing the psychological impact of quarantine reported a high prevalence of psychological distress and disorder (Brooks et al., 2020). The new realities of home-based working or home-schooling, temporary or permanent loss of employment, and the lack of physical contact with other family members, friends, and colleagues can be challenging mentally and emotionally. Adapting to the situations may take time, especially among people with mental health issues (WHO, n.d.-b). According to the Centers for Disease Control and Prevention (2020, April 30), people's responses to psychological well-being vary and are affected by factors such as age, background, and the community where they live. There are individuals at increased risk of adverse psychosocial outcomes. In particular, these include people who contract the disease, those at heightened risk for it (including the elderly, and people with compromised immune function), those living or receiving care in congregate settings, and people with preexisting medical, psychiatric, or substance use problems (Pfefferbaum & North, 2020).

The respondents most often did the activities listed in the questionnaire to keep them mentally and emotionally healthy during the pandemic. It implies that they recognized the harm that the quarantine had on one's emotions and mental dispositions, and so ventured into diversions that can prevent this. Again, males and females differ in the frequency by which they perform some of the listed activities that could help maintain their mental and emotional health. In general, men and women differ in the way they handle stress (Mirgain, 2018, August 1). In the same manner, the pandemic has been noted to affect men and women differently (Dietrichson, 2020,

July 30). Some differences are due to the societal roles of males and females, others with how men and women respond to and process situations.

Frequency on the performance of some activities is also affected by civil status, with the difference often between the single and married respondents, and employment status with the difference usually between full-time students and employed respondents. These differences in the responses can be associated with age (single and full-time students are generally younger), and the responsibilities they are facing (especially for married and employed respondents).

While this study presents several significant findings, these should be considered with some caution due to a couple of limitations. First, the respondents were limited to residents of Luzon, and thus the responses cannot be taken as representative of the whole Filipino citizenry. The study was done three weeks into the implementation of the ECQ in Luzon with the intention of capturing the experience of the respondents while the ECQ-imposed lockdown and restrictions were in effect; it was not foreseen that the situation will worsen and that the lockdown would later on be extended outside Luzon. Second, the researchers posted the questionnaire publicly online, but the respondents were mostly the friends and acquaintances of the researchers from the same locality. This resulted in an uneven distribution of participants from the targeted regions, aside from the potential bias arising from the personal connections of the respondents with the researchers. A randomized selection of participants would have been more desirable. Unfortunately, participant recruitment was a big challenge not just because of the lockdown but also to poor internet connections in various parts of the country.

Conclusion

This study provides a picture of the Filipinos' reactions, practices and coping mechanisms during the COVID-19 pandemic. The high level of concern that the respondents have over the contagion indicates the seriousness with which they assessed the situation and how much this has affected their lives. The respondents also

manifested high compliance to the government's guidelines and health directives for protecting themselves, as well as adopted practices to maintain their physical and mental health during the lockdown. This suggests that the citizens are doing their part responsibly, even as it also signifies a measure of effectiveness in the government's efforts to enlist public support for its programs to address the pandemic. Notwithstanding this generally positive outlook, concerned government agencies and other groups attending to the pandemic could do well by paying attention to some details of this study pointing out to where improvements can yet be done.

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