

## Gender differences in the coping mechanisms to disruptions brought by COVID-19 pandemic among working adults in the Rural Philippines: The Case of Visayas State University

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### ABSTRACT

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The various social restrictions imposed to contain the spread of COVID-19 virus have brought unprecedented disruptions in people's lifestyle. The academic institutions were caught unprepared and had to adjust abruptly. With this, we assessed how working adults in a state university in rural Philippines are coping with the disruptions brought by the pandemic. We conducted a cross-sectional online survey on May 18 to 23, 2020 where 133 working adults from the Visayas State University, Leyte, Philippines responded to the survey. Results show that the top most rank coping mechanism for both men and women is doing household chores. Results further suggest that men are more inclined to surfing the net and use social media while women focus more on praying and gardening. Pets are considered as an important companion to cope better with the pandemic. Our results highlight differences in coping mechanisms between working men and women in dealing with the pandemic. Empirical findings

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suggest that working adults with diversified activities and engaged more in physical activities such as household chores and gardening tend to cope better during lockdowns. In addition, income and access to internet are significant determinants of coping mechanisms. Policy makers and administrators in state university in Philippines may benefit from understanding gender differences in coping with the pandemic and can tailor approaches that may contribute to wellbeing issues among working adults.

**Keywords:** multiple coping strategies, gender disaggregation, well-being, pandemic, rural Philippines, state university employees

## INTRODUCTION

This COVID-19 pandemic caught everyone by surprise. Even academic institutions were unable to prepare for such a public health disaster. COVID-19 was declared by the World Health Organization (WHO) as a Public Health Emergency of International Concern in January 2020 (World Health Organization (WHO) 2020). The outbreak escalated to and was characterized as a pandemic in March 2020. In response, the Philippines declared a national emergency and imposed enhanced community quarantine and lockdown measures to fight the pandemic, flatten the curve or slowdown the spread of the virus, and potentially decrease the growing rate of positive cases and deaths.

Following the mandate of the Philippine national government, the provincial government of Leyte enforced a general community quarantine to prevent the entry and spread of COVID-19 into the island from March 18, 2020 onwards (CNN Philippines 2020). In response, the municipalities within Leyte enforced quarantine procedures such as travel restrictions, closing of establishments and non-essential businesses, encouraging work from home for government and private agencies, closing of schools, and implementing curfews especially for students and senior citizens. Several precautionary measures such as regular hand washing, physical distancing, avoidance of crowded places, staying at home, seeking medical attention when experiencing fever, cough and difficulty breathing, and keeping up-to-date on the latest information about the disease were issued by the World Health Organization (WHO). The public was advised to follow these precautionary measures to prevent the spread of the virus.

As COVID-19 threatens national security, public health, food security and economy, it also poses a great threat to the people's mental health condition. It is a rolling combination of health and economic crisis. With people forced to stay at home and exposed to revolving news on the increasing number of COVID-19 cases and deaths day-by-day, it can take an emotional toll on people. This can cause stress, anxiety, extreme worry, panic and depression, among others. This will especially affect those suffering from clinically diagnosed mental health problems such as anxiety disorders. As revealed in the study of Roy et al (2020) with the Indian population, people reported having anxiety, sleeping disorders and even experienced paranoia about contaminating the virus.

Every individual reacts differently to adverse situations. How an individual respond may depend on several factors such as the community he/she lives in, socio-demographic background, economic status or profession, among others.

Coping mechanisms are behavioral, conscious efforts and approaches people use to respond, reduce or manage stress and other adverse events in order to maintain physical, psychological, emotional, and spiritual well-being (Algorani and Gupta 2020). Previous study have shown that households tend to use multiple coping strategies in response to climate-related hazards (Israel and Briones 2014). However, limited information is available highlighting gender differences in coping mechanisms. Disaggregated data on coping will be critical to capture the pandemic's impact on diverse individuals, communities and economies and to inform policy responses (Turquet and Koissy-Kpein 2020).

Pappas et al (2009) indicated that an individual's health and well-being would be affected negatively by the psychological response in times of health crisis. In times of current and past infectious disease outbreak, people engage in various coping strategies to deal with challenges and to keep sane (Yildirim et al 2020). Several studies such as adaptive coping mechanisms typically problem-focused (eg, working through the situation to find solution, seeking out advice from others) can help lead lower stress levels and increased mental health (Holton et al 2016).

In Visayas State University (VSU), Baybay City, Leyte, Philippines, there is limited information about the coping mechanisms employed by working adults. The faculty and staff have varying conditions during the time of COVID-19 pandemic. Others may be staying with their families, living alone, and some may be working from their homes or still going to the office to serve as a skeletal workforce. Others wanted to report to work but were restricted because of tighter border controls. With these conditions, some may be coping better or worse than others. In China, Zhang et al. (2020) reported unprecedented disruptions in life among the working class. Their study highlighted a need to identify whose health and well-being are more affected by the pandemic to enable more targeted assistance.

This study aims to identify and assess the gender differences in the coping mechanisms of VSU faculty and staff to the disruptions brought by the COVID-19 pandemic. This documented how men and women handle the situation to stay sane amidst the stresses brought by the pandemic. Specifically, we aim to (i) describe the socio-demographic characteristics and conditions confronting the working adults during this period of the COVID-19 pandemic; (ii) identify the gender differences in the coping mechanisms of faculty and staff during this period of the COVID-19 pandemic; and (iii) determine factors affecting the coping mechanisms of VSU constituents. Results of the study will provide recommendations to the administrators of the university that can help faculty and staff to maintain their physical and mental wellbeing in this period of the COVID-19 pandemic.

## **METHODOLOGY**

### ***Data Collection***

Given the COVID-19 pandemic context, primary data were collected through an online survey created in Google forms. The form was sent to randomly selected VSU faculty and staff by email. The form was also advertised at the Facebook page of the Visayas Socio-Economic Research and Data Analytics Center (ViSERDAC), scouting for random responses from page followers who are also VSU faculty and staff. A total of 133 respondents answered the online survey from May 18 to 23, 2020.

## Data Analysis

Descriptive statistics was conducted to summarize the respondents' socio-demographic background, internet accessibility, cash aid received, coping mechanisms, and the presence of co-morbidities of the respondents. The information was disaggregated by gender to distinguish differences and similarities. The analysis was done using IBM SPSS Statistics.

In determining the significant factors affecting the coping mechanisms of VSU faculty and staff during COVID-19, regression analysis was done. This was analyzed using licensed Stata 15 software. Mathematically, the econometric model is as follows:

$$\begin{aligned} \text{num\_cope}_i = & \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{female}_i + \beta_3 \text{income20-40k}_i + \\ & \beta_4 \text{income40-60k}_i + \beta_5 \text{income60-80k}_i + \\ & \beta_6 \text{income80-100k}_i + \beta_7 \text{income\_above100k}_i + \\ & \beta_8 \text{hhsz}_i + \beta_9 \text{cash\_assist}_i + \beta_{10} \text{noncash\_assist}_i + \\ & \beta_{11} \text{internet\_access}_i + \beta_{12} \text{have\_comorbidities}_i + e_i \end{aligned} \quad (1)$$

where:

<i>num_cope</i>	= number of coping mechanisms to capture diversity
$\beta_0$	= Constant
$\beta_i$	= coefficients
<i>age</i>	= age of respondent (in years)
<i>female</i>	= dummy variable for gender (ie, 1=female, 0=male)
<i>income20-40k</i>	= gross monthly income measured in Philippine pesos ranging from 20,000 to 40,000
<i>income40-60k</i>	= gross monthly income measured in Philippine pesos ranging from 40,001 to 60,000
<i>income60-80k</i>	= gross monthly income measured in Philippine pesos ranging from 60,001 to 80,000
<i>income80-100k</i>	= gross monthly income measured in Philippine pesos ranging from 80,001 to 100,000
<i>income\_above100k</i>	= gross monthly income measured in Philippine pesos more than 100,000
<i>hhsz</i>	= household size
<i>cash\_assist</i>	= dummy variable for having received cash assistance (1=yes, 0=no)
<i>noncash\_assist</i>	= dummy variable for having received non-cash assistance (1=yes, 0=no)
<i>internet\_access</i>	= dummy variable for having internet access (1=yes, 0=no)
<i>have\_comorbidities</i>	= dummy variable for having comorbidities (1=yes, 0=no)
<i>e</i>	= remaining error term
<i>i</i>	= corresponds to the individual respondents

## Regression Diagnostics

Several diagnostic tests were conducted to test the validity of the regression analysis results if it yields the best linear unbiased estimates (BLUE). These included tests for heteroskedasticity, multicollinearity, normality of residuals, and omitted variable test.

## RESULTS AND DISCUSSION

### *Socio-demographic Characteristics*

Table 1 shows the gender profile of the respondents. Of the 133 respondents, 66.9% are female while the remaining 33.1% are male. Further descriptive statistics on the selected socio-demographic characteristics of the respondents were disaggregated by gender (Table 2). Results show that the majority (58.2%) of the female respondents are staff or non-teaching workers, while the majority (56.8%) of the male respondents are faculty. Most of the respondents are single. The average age of female respondents is 36 years old and 32 years old for males. There is an average of 5 household members for both genders.

Table 1. Gender distribution of respondents

Gender	n	%
Female	89	66.9
Male	44	33.1
Total	133	100.0

Table 2. Type, civil status, age and household size of the respondents

		Female			Male			All		
		n	%	mean	n	%	mean	n	%	mean
Type of Respondent	Faculty	37	41.6		25	56.8		62	46.6	
	Staff	52	58.4		19	43.2		71	53.4	
	Total	89	100.0		44	100.0		133	100.0	
Civil Status	Complicated	0	0.0		1	2.3		1	0.8	
	Live-in	0	0.0		1	2.3		1	0.8	
	Married	41	46.1		12	27.3		53	39.8	
	Separated	1	1.1		0	0.0		1	0.8	
	Single	46	51.7		30	68.2		76	57.1	
	Widowed	1	1.1		0	0.0		1	0.8	
	Total	89	100.0		44	100.0		133	100.0	
Age Categories	20-30	44	49.4		27	61.4		71	53.4	
	31-40	19	21.3		10	22.7		29	21.8	
	41-50	7	7.9		3	6.8		10	7.5	
	51-60	15	16.9		2	4.5		17	12.8	
	61-70	4	4.5		2	4.5		6	4.5	
		Total	89	100.0		44	100.0		133	100.0
Average Age in years		36.21			31.95			34.80		
Average Household Size		5			5			5		

In terms of educational attainment, more than half of the respondents (51.7% for female, 56.8% for male) attained bachelor's degree (Table 3). This is followed by respondents with master's degree (36% for female and 25% for male). When it comes to the status of their employment, most (46.1%) of the female respondents

are regular-permanent workers. Meanwhile, most (36.4%) of the male respondents are job-order workers. Furthermore, 36% of females fall within the PHP20,000-40,000 gross monthly household income group, whereas 31.5% of males fall in the below PHP20,000 income group. The difference between the status of employment of both genders could be one of the factors that can explain the differences in gross monthly household income.

Table 3. Education, employment, and monthly income of the respondents

		Female		Male		All	
		n	%	n	%	n	%
Educational Attainment	Bachelor	46	51.7	25	56.8	71	53.4
	Masters	32	36.0	11	25.0	43	32.3
	Doctoral	9	10.1	7	15.9	16	12.0
	Juris Doctor	0	0.0	1	2.3	1	0.8
	Post-Doctoral	2	2.2	0	0.0	2	1.5
	Total	89	100.0	44	100.0	133	100.0
Status of Employment	Casual	6	6.7	0	0.0	6	4.5
	Contractual	0	0.0	2	4.5	2	1.5
	Job Order	23	25.8	16	36.4	39	29.3
	Part-time	4	4.5	3	6.8	7	5.3
	Project-based	1	1.1	0	0.0	1	0.8
	Regular -permanent	41	46.1	11	25.0	52	39.1
	Regular -temporary	11	12.4	11	25.0	22	16.5
	Substitute	3	3.4	1	2.3	4	3.0
Total	89	100.0	44	100.0	133	100.0	
Gross monthly household income	20,001 - 40,000	32	36.0	15	34.1	47	35.3
	40,001 - 60,000	10	11.2	6	13.6	16	12.0
	60,001 - 80,000	8	9.0	4	9.1	12	9.0
	80,001 - 100,000	4	4.5	1	2.3	5	3.8
	Above 100,000	7	7.9	3	6.8	10	7.5
	Below 20,000	28	31.5	15	34.1	43	32.3
	Total	89	100.0	44	100.0	133	100.0

### **Assistance Received in Response to COVID 19 Pandemic**

Table 4 presents the frequency of respondents who received cash and non-cash assistance in response to COVID-19. Based on the results, almost all of the respondents (97.7%) have not received cash assistance. This is because only those who belong to the poorest or informal sector, who are vulnerable or at risk of not earning a living, are the target beneficiaries of the cash assistance program (ie, Social Amelioration Program) of the Philippine government led by the Department of the Social Welfare and Development (DSWD). Since the respondents are faculty and staff of a state university, they are not considered recipients because they are still receiving their monthly salary. In addition, more than half (57.1%) of the respondents have indicated they received non-cash assistance in response to COVID-19. This is in the form of relief goods such as fresh vegetables, canned

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goods, groceries, seedlings, etc. This non-cash assistance was provided by the university. The Visayas State University launched “#OplanTanom” program (direct translation: operation vegetable planting) on April 30, 2020. This project aims to intensify vegetable production to mitigate disruption in supply chain brought by COVID-19 pandemic (VSU 2020). These vegetables are given freely to the VSU community and its neighboring barangays. Anyone working in the university and any representative from neighboring villages wanting to avail of the fresh vegetables can queue on the scheduled harvest per week for the distribution. In addition, vegetable seedlings are also provided to those who want to grow their own vegetable garden.

Table 4. Assistance received during COVID 19 pandemic

		Female		Male		Total	
		n	%	n	%	n	%
Received Cash Assistance	No	87	97.8	43	97.7	130	97.7
	Yes	2	2.2	1	2.3	3	2.3
	Total	89	100.0	44	100.0	133	100.0
Received Non-Cash Assistance	No	37	41.6	20	45.5	57	42.9
	Yes	52	58.4	24	54.5	76	57.1
	Total	89	100.0	44	100.0	133	100.0

**Internet Accessibility**

Table 5 shows information on respondents' internet accessibility. Results show that majority have access to the internet (75.2%) in their homes and dormitories. When asked to rate their internet connection speed, the majority of both males and females indicated fair internet speed (77.3% and 74.2%, respectively). They mostly access the internet using smartphones (83.1%), followed by laptops (63.1%), and by desktop computers (11.5%).

Table 5. Information on internet accessibility of respondents

		Female		Male		Total	
		n	%	n	%	n	%
Internet Access	No	23	25.8	10	22.7	33	24.8
	Yes	66	74.2	34	77.3	100	75.2
	Total	89	100.0	44	100.0	133	100.0
Speed of internet connection	Very Fast	9	12.5	6	16.2	15	13.8
	Fast	17	23.6	10	27.0	27	24.8
	Fair	27	37.5	13	35.1	40	36.7
	Slow	18	25.0	7	18.9	25	22.9
	Very Slow	1	1.4	1	2.7	2	1.8
	Total	72	100.0	37	100.0	109	100.0
Gadgets used	Desktop	9	10.5	6	13.6	15	11.5
	Laptop	52	60.5	30	68.2	82	63.1
	Smart TV	3	3.5	2	4.5	5	3.8
	Smartphone	73	84.9	35	79.5	108	83.1
	Tablet	5	5.8	3	6.8	8	6.2
	Total	86	100.0	44	100.0	130	100.0

### Presence of Co-morbidities

Around three quarters (75.2%) of the total respondents reported that they do not have co-morbidities (Table 6). Among the 24.8% who indicated to have co-morbidities, anxiety disorder ranks first (7.5%), followed by diabetes (5.3%) and asthma (5.3%).

On the one hand, the top 3 co-morbidities reported by women are anxiety disorder (6.7%), diabetes (6.7%), and asthma (4.5%). On the other hand, anxiety disorder in men ranks first (9.1%) followed by asthma (6.8%), and by depression (6.8%).

Table 6. Information on co-morbidities

Presence of Co-morbidities	Female*		Male*		Total*	
	n	%	N	%	n	%
None	68	76.4	32	72.7	100	75.2
Anxiety disorder	6	6.7	4	9.1	10	7.5
Diabetes	6	6.7	1	2.3	7	5.3
Asthma	4	4.5	3	6.8	7	5.3
Hypertension	3	3.4	2	4.5	5	3.8
Depression	2	2.2	3	6.8	5	3.8
prostate issue	0	0.0	1	2.3	1	0.8
Hypothyroidism	1	1.1	0	0.0	1	0.8
Hyper Acidity	1	1.1	0	0.0	1	0.8
High Blood Pressure	0	0.0	1	2.3	1	0.8
Acute gastritis	1	1.1	0	0.0	1	0.8

\*multiple response

### Coping Mechanisms during COVID 19 Pandemic

Several coping mechanisms are indicated by VSU faculty and staff during the COVID 19 pandemic (Table 7). On average, there are seven (7) identified coping mechanisms of the respondents. The minimum number of coping mechanisms identified per respondent is 2 and the maximum is 12.

Table 7. Descriptive Statistics on the number of coping mechanisms

Sex	Number of Coping Mechanisms			
	Mean	Minimum	Maximum	Standard Deviation
Female	7.22	2	12	2.65
Male	6.59	2	12	2.64
Total	7.02	2	12	2.65

Table 8 presents the specific coping mechanisms of the respondents. Results show that the major coping mechanism of the respondents is doing household chores (77.4%). Followed by praying (69.2%) and spending time with family (68.4%). It is worth mentioning that praying is the second top most coping mechanism indicated by the respondents. This reflects to what Serifio et al (2020) and



Verdida et al (2020) reported that in times of disaster, Filipinos resort to praying when things are happening beyond their control. This reflects the religious culture of Filipinos rooted in its daily activities.

With the rise of technology, 57.1% of the respondents identified both surfing the internet and increased social media usage as one of their coping mechanisms. Moreover, 54.1% of the respondents preferred to do backyard gardening (54.1%). This supports a study in Zimbabwe that also revealed that social (social media usage), religious (praying), and physical (cleaning, gardening, doing laundry, cooking meals, and packing things) coping strategies are guarding people from anxiety and fear during the pandemic (Chirombe et al 2020). Similarly, Gan (2020) also reported that social media plays a crucial role to make best of the lockdown situation and that families spent more time bonding and reconnecting with each other in Wuhan, China.

Furthermore, self-education through reading and writing is indicated by VSU constituents to be one of the coping strategies (48.9%), and around 48.1% of respondents resort to physical exercise to better cope with the pandemic. This coincides with the study of Burg et al (2017) that exercising can improve mental health as well as physical health by alleviating stress and worries.

Looking at the disaggregated information by gender, both men and women are engaged in doing household chores (63.6% and 84.6%, respectively). For women, the coping strategies that they are more inclined doing are praying (78.7%), spending time with family (76.4%), and gardening (56.2%). Interestingly, men are more into social media usage (63.6%), surfing the internet (63.6%) and educating themselves through reading and writing (59.1%). Our findings are similar to what Matud (2004) reported that women tend to resort to a more emotion-focused coping style than men. In addition, a meta-analysis of Soga et al (2017) found out that gardening can bring positive effects on public health and can even reduce depression and anxiety. This could be the reason why more women opt to do gardening. In addition, the increasing number of people engaging in agriculture especially backyard gardening during this pandemic has contributed to positive growth of the agriculture sector. The Philippine Statistical Authority (PSA) (2020) reported that despite the massive decline in the Philippines gross domestic product (GDP) by 16.5% in the 2<sup>nd</sup> quarter of 2020, agriculture posted a positive growth at 1.6%. This reinforces the need to boost agricultural productivity to maximize its potential in contributing to the regional economic growth in Eastern Visayas (Seriño 2014).

A third of the respondents indicated that pets are important companions to cope better with the pandemic. Also, there are increasing activities related to online selling. Others coped by reducing the time spent on watching/reading news as this can contribute to increase anxiety. However, very few of the respondents indicated meditation and volunteering as coping mechanisms.

Table 8. Coping mechanisms of men and women during COVID-19 pandemic

	Female*		Male*		Total*	
	n	%	N	%	n	%
Doing household chores	75	84.3	28	63.6	103	77.4
Praying	70	78.7	22	50.0	92	69.2
Spending time with family	68	76.4	23	52.3	91	68.4

Table 8. continued

	Female*		Male*		Total*	
	n	%	N	%	n	%
Increased social media usage	48	53.9	28	63.6	76	57.1
Surfing the internet	48	53.9	28	63.6	76	57.1
Gardening	50	56.2	22	50.0	72	54.1
Educating oneself (reading and writing)	39	43.8	26	59.1	65	48.9
Physical exercise	43	48.3	21	47.7	64	48.1
Movie marathon	43	48.3	20	45.5	63	47.4
Virtual Connecting to family and friends	42	47.2	12	27.3	54	40.6
Develop a new skill	25	28.1	17	38.6	42	31.6
Spending time with pets	30	33.7	11	25.0	41	30.8
Restrict watching/reading the news	23	25.8	7	15.9	30	22.6
Online/Virtual classroom preparations	15	16.9	11	25.0	26	19.5
Getting online jobs (e.g. selling online)	10	11.2	5	11.4	15	11.3
Sewing/Tailoring	8	9.0	2	4.5	10	7.5
Volunteering	0	0.0	6	13.6	6	4.5
Continue working from home	2	2.2	0	0.0	2	1.5
Home improvement/ minor renovations	1	1.1	0	0.0	1	0.8
Meditation	0	0.0	1	2.3	1	0.8
Writing articles for publication	1	1.1	0	0.0	1	0.8

\*multiple response

### **Factors Affecting the number of Coping Mechanisms during COVID-19 Pandemic**

Table 9 presents the results of the multiple regression analysis showing the relationship between the number of coping mechanisms during COVID-19 and the explanatory variables. The R-squared value implies that the model explains 14.5% of the variation in the dependent variable (ie, number of coping mechanisms). This relatively small value of R-squared is common for cross-sectional data or those one-time survey data. Among the explanatory variables, household income range of PHP40,001-60,000, income range of 60,001-80,000, and having internet access significantly and positively influence the number of coping mechanisms during this time of COVID-19 pandemic.

Assuming all things are constant, having a household monthly income of Php 40,001-60,000 as compared to income earners of below PHP20,000, significantly increases the number of coping mechanisms by 1.627 or approximately 2 ( $p$ -value<0.05). Similarly, having an income of PHP60,001-80,000 compared to income of below PHP20,000 increases the number of coping mechanisms by approximately 2. This is also significant at 5% level. This result suggests that middle income earners tend to cope better than those with gross monthly income of below 20,000. Even though most of the reported coping mechanisms do not directly entail cost, a substantial income stream is needed to reduce anxiety related to the pandemic. People who are doing household chores may need resources for cleaning, cooking, and minor repairs. In addition, gardening and access to internet have associated costs. Among the coping mechanisms mentioned, the least costly or no cost at all include praying and physical exercise. Hence, the result is plausible that income is one of the major determinants in the diversity of coping mechanisms during the pandemic. With the aim of controlling the spread of the virus, the

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economic activities have been minimized affecting working adults. In fact, the Philippine Statistical Authority (PSA) (202) reported that the rate of unemployment in the Philippines in the 2<sup>nd</sup> quarter has increased to 10% translating to around 4.6 million unemployed Filipinos. This figure is higher by 2.1 million compared to the same period in 2019 (PSA 2020).

Interestingly, having internet access positively influences the number of coping mechanisms. This is significant at 5% level. This result implies that access to the internet helps respondents to cope better during the COVID 19 pandemic. Having internet allows an individual to surf the net and use social media to effectively gather information, read or watch news, and even learn something new (eg, cooking, gardening, art, etc.), or earn through online selling. Moreover, they are also able to connect virtually with friends, family, and relatives. This result supports the study of the United Nations Development Programme (2020) and Talidong and Toquero (2020). Moreover, Király et al (2020) found out that the use of internet is important to alleviate the anxiety and stress brought about by the pandemic; however, problematic internet use should be prevented.

Table 9. Factors affecting the number of coping mechanisms

Variables	Coefficient	Standard Error
Age	0.00812	0.0242
Female	0.670	0.485
Income range 20,000-40,000	0.0856	0.555
Income range 40,001-60,000	1.627**	0.782
Income range 60,001-80,000	1.893**	0.938
Income range 80,001 – 100,000	0.953	1.381
Income range above 100,000	0.179	1.144
Household size	0.0171	0.125
Cash assistance received	-2.030	1.555
Non cash assistance received	-0.0710	0.486
Access to internet	1.093**	0.542
Have co-morbidities	0.346	0.558
Constant	4.935***	1.122
Observations	133	
R-squared	0.145	

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 10 summarizes the results of the diagnostics test conducted to further check the necessary assumptions in doing regression analysis. Table 10 shows that the model does not suffer from heteroskedasticity (ie,  $p$ -value  $> 0.05$  for Breusch Pagan test), multicollinearity (ie, mean vif  $< 10$ ) and omitted variable bias (ie,  $p$ -value  $> 0.05$  for Ramsey test). The residuals have also shown to be normally distributed ( $p$ -value  $> 0.05$  for the Shapiro Wilk test). The diagnostics test shows no alarming violations of critical assumptions in doing ordinary least square regression analysis.

Table 10. Summary of regression diagnostics

Parameters	Test	p-value	Mean
Heteroskedasticity	Breusch Pagan / Cook-Weisberg	0.3238	
Multicollinearity	Vector Inflation Factor (vif)		1.32
Normality of Residuals	Shapiro-Wilk	0.1992	
Omitted Variables	Ramsey Test	0.3031	

## CONCLUSIONS

To cope with the adverse effects of the COVID-19 pandemic, this study revealed that both men and women are mostly engaged in doing household chores. Women are also more inclined in praying, spending time with family, and gardening. Meanwhile, men are more into social media usage, surfing the internet, and educating themselves through reading and writing.

These observations in a state university can also be the same to other rural areas in the Philippines, where people are rediscovering household chores, family time, and gardening. These findings reflect what Chew et al (2020) reported that people tend to use a wide range of coping strategies to deal with the negative psychological outcomes associated with health crisis. Gardening is one of the best ways to localize supply of fresh vegetables and encourage Filipinos to eat more vegetables to boost their immune system (McDougall et al 2019).

The findings suggest that faculty and staff of VSU should employ multiple strategies and engage themselves more in physical activities such as doing household chores to help them cope better during this health crisis. This coping mechanism tends to be more effective to both men and women in staying sane since it keeps them proactive. This improves their mental and physical health by alleviating stress and even depression.

There is a need to intervene and prioritize efforts in helping those who are heavily and adversely affected by the pandemic. Information of coping mechanism is essential in providing targeted and tailored interventions so that timely and relevant actions can be taken. In addition, the university can take an active role in amplifying awareness about mental and health issues to help its constituents cope better with the pandemic or with a similar crisis. This may be beneficial to both men and women in preventing stress related-illnesses, building resiliency, and engagement in productive practices that can contribute to academic continuity in disruptive times.

## REFERENCES

- Algorani EB and Gupta V. 2020. Coping mechanisms. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK559031>
- Burg MM, Schwartz JE, Kronish IM, Diaz KM, Alcantara C, Duer-Hefele J & Davidson KW. 2017. Does stress result in you exercising less? Or does exercising result in you being less stressed? Or is it both? Testing the bi-directional stress-exercise association at the group and person (N of 1) level. *Annals of Behavioral Medicine* 51:799-809

- Chew QH, Wei KC, Vasoo S, Chua HC & Sim K. 2020. Narrative synthesis of psychological and coping responses towards emerging infectious disease outbreaks in the general population: practical considerations for the COVID-19 pandemic. *Singapore Medical Journal* 61(7):350-356
- Chirombe T, Benza S, Munetsi E & Herbert Z. 2020. Coping mechanisms adopted by people during the covid-19 lockdown in Zimbabwe. *Business Excellence and Management* 10(Special Issue 1):33-45
- CNN Philippines. 2020. More provinces, cities extend enhanced community quarantine until April 30. Metro Manila: CNN Philippines. <https://cnnphilippines.com/regional/2020/4/8/other-provinces-extend-lockdown-to-April-30-after-Luzon-announcement.html>
- Gan N. 2020. How Wuhan residents are trying to make the best of the coronavirus lockdown. CNN. <https://edition.cnn.com/2020/01/29/asia/coronavirus-wuhan-life-intl-hnk/index.html>
- Holton MK, Barry AE & Chaney JD. 2016. Employee stress management: an examination of adaptive and maladaptive coping strategies on employee health. *Work* 53(2):299-305
- Israel DC and Briones RM. 2014. Disasters, poverty, and coping strategies: the framework and empirical evidence from micro/household data—Philippine case. Philippine Institute for Development Studies, Discussion Paper Series No. 2014-06
- Király O, Potenza M, Stein DJ, King DL, Hodgins DC, Saunders JB, Griffiths MD, Gjonneska B, Billieux J, Brand M, Abbott MW, Chamberlain SR, Corazza O, Burkauskas J, Sales C, Montag C, Lochner C, Grunblatt E & Demetrovics Z. 2020. Preventing problematic internet use during the COVID-19 pandemic: Consensus guidance. *Comprehensive Psychiatry* 100:152180
- McDougall S, Gonzaga Z, Rodgers G, Adam G, Borines L, Gerona R, Serioño MNV, Labonite M, Gonzaga N, Justo V, Carusos E, Lonzaga E, Acosta R, Tesoriero L, Singh SP & Kernot I. 2019. Integrated Crop Management (ICM) to enhance vegetable profitability and food security in the Southern Philippines and Australia. Australian Centre for International Agricultural Research (ACIAR), Canberra ACT 2601, Australia
- Matud MP. 2004. Gender differences in stress and coping styles. *Personality and Individual Differences* 37(7):1401-1415
- Pappas G, Kiriakou IJ, Giannakis P & Falagas ME. 2009. Psychosocial consequences of infectious diseases. *Clinical Microbiology and Infection* 15(8):743-747
- Philippine Statistical Authority (PSA). 2020. Employment situation in July 2020. <https://psa.gov.ph/content/employment-situation-july-2020>
- Philippine Statistics Authority (PSA). 2020. GDP growth rate drops by 16.5 percent in the second quarter of 2020; the lowest starting 1981 series. [https://psa.gov.ph/content/gdp-growth-rate-drops-165-percent-second-quarter-2020-lowest-starting-1981series#:~:text=The%20Gross%20Domestic%20Product%20\(GDP,and%20Storage%2C%20%2D59.2%20percent](https://psa.gov.ph/content/gdp-growth-rate-drops-165-percent-second-quarter-2020-lowest-starting-1981series#:~:text=The%20Gross%20Domestic%20Product%20(GDP,and%20Storage%2C%20%2D59.2%20percent)
- QS Top Universities. 2020. Visayas State University. <https://www.topuniversities.com/universities/visayas-state-university>
- Roy D, Tripathy S, Kar SK, Sharma N, Verma SK & Kaushal V. 2020. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry* 51:102083

- Seriño MNV. 2014. Decomposition analysis of income inequality in Eastern Visayas, Philippines. *DLSU Business and Economics Review* 24(1):126-139
- Seriño MNV, Cavero JA, Cuizon J, Ratilla TC, Ramoneda BM, Bellezas MHI & Ceniza MJC. 2020. Impact of the 2013 super typhoon Haiyan on the livelihood of small-scale coconut farmers in Leyte Island, Philippines. *International Journal of Disaster Risk Reduction* 52:101939
- Soga M, Gaston KJ & Yamaura Y. 2017. Gardening is beneficial for health: a meta-analysis. *Preventive Medicine Reports* 5:92-99
- Talidong KJ and Toquero C. M. 2020. Philippine teachers' practices to deal with anxiety amid COVID-19. *Journal of Loss and Trauma* 25:6-7
- Turquet L and Koissy-Kpein S. 2020. COVID-19 and gender: what do we know; what do we need to know. <https://data.unwomen.org/features/covid-19-and-gender-what-do-we-know-what-do-we-need-know>
- United Nations Development Programme. 2020. COVID-19 and human development: assessing the crisis, envisioning the recovery. In 2020 *Human Development Perspectives*. UN Plaza, New York, USA
- Verdida CC, Galenzoga VAE, Ratilla TC, Mazo MP, Saz EB & Capuno OB. 2020. Coping mechanisms and determinants of perceived status of men and women farmer beneficiaries of the Yolanda Rehabilitation and Reconstruction Program (YRRP) in Region VIII. *Review of Socio-Economic Research and Development Studies* 4(1):33-50
- Visayas State University (VSU). 2020. To mitigate disruption of food supply, VSU launches #OplanTanum. <https://www.vsu.edu.ph/articles/news/1813-to-mitigate-disruption-of-food-supply-vsu-launches-oplan-tanum>
- World Health Organization (WHO). 2020. Mental health and psychosocial considerations during the COVID-19 outbreak. <https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf>
- World Health Organization (WHO). 2020. Coronavirus disease 2019 (COVID-19) Advice for Public. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>
- Yıldırım M, Akgül Ö & Geçer E. 2020. The effect of COVID-19 anxiety on general health: the role of COVID-19 coping. *International Journal of Mental Health and Addiction* (pp1-12)
- Zhang S, Wang Y, Rauch A & Wei F. 2020. Unprecedented disruption of lives and work: health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry Research* 288:112958