

Health Disaster Resilience: Knowledge, Attitudes and Practices of Caraga Constituents towards COVID-19 Pandemic

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ABSTRACT

This study describes the health disaster resilience of the Caraga residents towards the COVID-19 pandemic. Specifically, the objectives of this study are to: describe the respondents' profile, identify the state of well-being, anxiety, knowledge, attitude and practices of Caraga constituents toward COVID19; determine the association of state of well-being, anxiety, knowledge, attitudes, and practices across sex and age groups; identify the COVID-19 related issues and concerns afflicting the household and community; and develop appropriate strategic recommendations for action and policy formulation toward effective prevention of the spread, control, and treatment of the infection.

Triangulation method was used in this study. There are 125 respondents, comprising of 375 survey respondents and 50 key informant interviews from selected city/municipality of Caraga Administrative Region or Region XIII. The data are gathered from June 30, 2020 to August 12, 2020.

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In general, Caraga respondents are in a state of well-being, as they did not report any impending anxiety. Results imply that they became resilient to the impact of the pandemic, despite some unhappiness, daily work suffering, and other nuisances. Through social media platforms, they engage in positive activities that contribute to their resilience and coping with the situation.

Caraga respondents show high level of knowledge, positive attitudes, and good practices with the pandemic. Majority of the respondents follow the health protocols except for those who still go to crowded places. To some extent, there is association of state of well-being, anxiety, knowledge, attitudes, and practices with age and sex.

In terms of the issues and concerns of the household and community, the utmost pressing concerns are community lockdown, physical or social distancing, home quarantine, availing of cash assistance and relief goods, and activities during quarantine for the young, middle aged, and the elderly. Strategic recommendations for action and policy formulation are forwarded based on the findings of the study.

Keywords: COVID-19 Knowledge, Attitudes, and Practices, Caraga Philippines

INTRODUCTION

Resilience is a wide-ranging concept comprising the psychological and social resources. As a conglomeration of behaviors, it thrives from difficult circumstances that are inextricably linked to the occurrence of disasters. Natural disasters can be classified as geophysical, metrological, hydrological, climatological, and biological (Center for Research on the Epidemiology of Disasters (CRED), 2020). Categorized as biological, the most pressing global health and security concern of the year 2020 is marked by Coronavirus Disease 2019 (abbreviated COVID-19) surge. With the present pandemic, it is expected that Filipinos will exhibit behaviors that constitute resilience as a process of overcoming the negative effects of adversities in life.

COVID-19 is an emerging respiratory disease caused by a novel coronavirus and first detected in December 2019 in Wuhan, China. The condition is highly infectious, and its primary clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea. The world comes to a halt with the global pandemic, terrifically annihilating human beings and causing enormous devastating sufferings. This pandemic uncontrollably spreads throughout the world. Virologists along with health experts and scientists fervently hope that a vaccine will be developed to ease the consequences.

As of January 1, 2021, the World Health Organization (WHO) reports 81,947,503 cumulative confirmed cases of COVID-19 with 1,808,041 deaths worldwide (WHO, 2021). At the national level, the total confirmed cases reached 475,820 with 26,677 active cases, 9,248 deaths and 439,895 recoveries, as of January 1, 2021 (Department of Health (DOH) COVID-19 Case Tracker). In Southeast Asia, it appears that the Philippines ranks second in terms of COVID-19 confirmed cases, with an additional one-day record of 2,115 cases as of December 16, 2020 (Center for Strategic & International Studies, 2020).

In Caraga, the first case of COVID-19 was reported last April 6, 2020 (Awitan, ABS-CBN News, 2020). The patient was a 63-year-old male who went to Manila last February and returned to Butuan on March 12, 2020 and was monitored in Southern Philippines Medical Center. Last June 14, 2020, the Department of Health Caraga confirmed 32 COVID-19 positive cases in the region. Caraga has since recorded a total of 461,505 confirmed cases which includes 23,341 active cases with 429,207 recoveries and 8,957 deaths as of December 21, 2020 (DOH Center for Health Development (CHD) - Caraga, 2020).

It can be recalled that Caraga was the last region in the Philippines to confirm its first COVID-19 case while the province of Dinagat Islands was the last province in Mindanao to log its first confirmed case on August 22, 2020 (Arguillas, 2020). The region undergone Enhanced Community Quarantine (ECQ) from mid-March to April 30, 2020 while borders were remained locked down, with Butuan City retaining its ECQ status among 50 barangays from May 1 to May 15, 2020. Butuan City first reported local transmission on June 19, 2020 and has since been the region's epicenter of COVID-19, accounting for 55% of the region-wide report.

Notwithstanding the devastating health and social impact, the national and global economy is affected by the pandemic. The working class and the disadvantaged sector, especially those daily wage earners, are expected to endure most of the impacts of poverty and the health disaster. Similarly, those in the formal sectors are equally affected. The community quarantines and lockdowns also signify a stoppage of the flow of subsistence income to millions of poor Filipino families. Since millions are Overseas Filipino Workers (OFWs), the flow of remittances accounting for a third of the national income is also expected to be severely affected.

It is observed that scant attention has been afforded to the social and psychological factors that are most likely affecting the spread of infection and the accompanying emotions and social costs. These play a crucial impact on the knowledge, attitudes and behavior of all people across the socioeconomic spectrum. These influence how people cope, react and comply with the health and safety orders of government institutions, as well as deal with the threat of infection and associated losses. Additionally, they are essential to manage societal problems

associated with pandemics, such as the spread of anxiety and fear, when people are threatened with infection.

Behavioral studies are vital for alleviating the spread of infection. Behavioral Health (BH) refers to a state of mental or emotional being and behaviors that affect wellness. Following disasters, behavioral health problems may range from transitory distress followed by a return to pre-exposure levels to the emergence of new disorders (California Public Health and Medical Emergency Operations Manual 2011 Disaster Behavioral Health). The provision of mental health and stress management services to disaster survivors and responders are important elements of Disaster Behavioral Health (DBH) (ASPR ABC, 2012). Thus, DBH must be incorporated into all phases of emergency management to ensure "resilient and responder preparedness, an effective, compassionate response effort, and a more resilient community" (Disaster Behavioral Health: Resources at Your Fingertips, March 24, 2017).

Coronavirus, as a major surge, has an impact on our mental health. There can be three mental health zones/categories relative to the emotions and behaviors we are going through. These zones are namely: fear zone, learning zone, and growing zone (Singh, 2020). Being in a pandemic situation is likely to be accompanied by fear. As a bridge from a negative and an unhealthy mindset to a positive and healthy one, the learning zone is the transformational stage that will help overcome out of one's fear zone and enter the zone of growth, considered the healthiest. The growing zone is believed to boost one's mental well-being possessing certain features such as community service. It upholds that a healthy mind nurtures a healthy body (Singh, 2020).

In this context, it is imperative to conduct a scientific undertaking to explore the current knowledge, attitudes, and practices of the people and their responses to the pandemic to guide actions and policy implementation of concerned government agencies and other non-government or private institutions for evidence-based action and empirically-based development intervention.

OBJECTIVES OF THE STUDY

General: To ascertain the health disaster resilience focused on knowledge, attitudes and practices of Caraga constituents towards COVID-19 global pandemic.

Specific:

1. To describe the respondents' profile (age, sex, civil status, occupation, ethnicity, occupation, educational attainment, estimated monthly income, number of family members, health status in relation to COVID-19 as

Persons under Monitoring (PUM/ Persons under Investigation (PIU (suspect, probable, confirmed), assistance received) and life values and;

2. To determine the knowledge, attitudes, practices, level of anxiety and state of well-being of Caraga constituents towards COVID-19;
3. To determine the association of state of well-being, level of anxiety, knowledge, attitudes, and practices across sex and age groups;

Hypotheses Statements:

H₁: The age of the respondents is not significantly associated with their state of well-being.

H₂: The sex of the respondents is not significantly associated with their state of well-being.

H₃: The age of the respondents is not significantly associated with their level of anxiety about COVID-19.

H₄: The sex of the respondents is not significantly associated with their level of anxiety about COVID-19.

H₅: The age of the respondents is not significantly associated with their knowledge about COVID-19.

H₆: The sex of the respondents is not significantly associated with their knowledge about COVID-19.

H₇: The age of the respondents is not significantly associated with their attitudes toward COVID-19.

H₈: The sex of the respondents is not significantly associated with their attitudes toward COVID-19.

H₉: The age of the respondents is not significantly associated with their practices on COVID-19.

H₁₀: The sex of the respondents is not significantly associated with their practices about COVID-19.

4. To identify COVID-19 related issues and concerns affecting the household and community; and
5. To develop appropriate strategic recommendations for action and policy formulation towards effective prevention of the spread, control, and treatment of the infection.

CONCEPTUAL FRAMEWORK

The coronavirus disease 2019 (COVID-19) pandemic has overturned the people's sense of order and control. Far from being mere a medical phenomenon, it disrupts personal and social lives and affects individual households and communities on several levels. The mandated preventive policies such as physical or social distancing, community lockdown, and home quarantine implemented for containment of the pandemic can have significant impacts on the resiliency and state of the peoples' well-being as reflected in their knowledge, attitudes and practices (Fendrick and Shrosbree, 2020).

In critical times, socioeconomic, cultural and psychological factors may affect the state of well-being and quality of life of the people both short-term and long-term. The quality of life as defined by the World Health Organization (WHO, 1998) is the individual's perception of their current position in life in the context of the culture and value systems in which they live; and about their goals, expectations, standards, and concerns. It is a concept that is far-reaching and incorporates in a complex way the individual's physical health, psychological state, level of independence, social relationships, personal beliefs; and how these are influenced by the environment they are in. It is therefore apparent that quality of life cannot be succinctly described as health status, lifestyle, life satisfaction, and mental state, rather it is a multi-dimensional concept that takes into account all of these, and the perception of the individual towards these and other aspects of life. On the other hand, well-being is a psychological construct that centers on the Eudaimonic Theory that individuals need to have a sense of meaning and fulfillment in their lives. Ryff (1989) developed a theoretical model of psychological well-being where the varying levels of each of these factors make up the psychological well-being of any individual, in the context of their situation in life. Consequently, any adverse changes in the social environment that affect the individual will, in turn, affect their quality of life and psychological well-being.

The COVID-19 pandemic has brought about several changes that most people find difficult, most notably physical distancing, isolation of suspected cases, the fear of being infected with the virus, the need to stay inside their homes, and the stoppage of work and businesses and livelihood. More likely, these affect the quality of life and well-being of the individuals and communities.

Notwithstanding, the Filipino people have been known to have a culture of resilience. It has gone through so many catastrophes both natural and man-made, such as earthquakes, volcanic eruptions, floods, typhoons, war, and massacres, but the Filipino spirit is never defeated, it can bounce back after each tragedy (Rutter, 2012). Despite the present pandemic, it is expected that Filipinos will exhibit behaviors that embody resilience. Resilience is the process of overcoming adversities in life. As a process, it is not a trait but rather a conglomeration of

behaviors that can be referred to as protective factors. Protective factors make people succeed despite experiencing difficulties, and it may come from within the family (support, cohesion, and quality of communication), outside the family (friends, mentors and supportive relationships) and it can also come from individual factors (resourcefulness, intelligence, optimism, self-regulation, and spirituality) (Rutter, 2012). All of these protective factors serve to buffer the individual from the negative effects of the adverse situation or environment.

The Filipino culture had always been relational, and more often than not, an important protective factor for most Filipinos has been family, strong sense of spirituality, and their social support system (Glossan, 2017). The health and safety measures being implemented by the government to ensure that the virus does not spread include social and physical distancing, and having to stay inside their homes at all times, strict implementation of curfews and minimal face to face interaction. These measures, however, challenge the protective factors of the common Filipino in weathering the difficulties of the pandemic. It is therefore of scientific interest to understand how people are being resilient despite their experiences of social isolation.

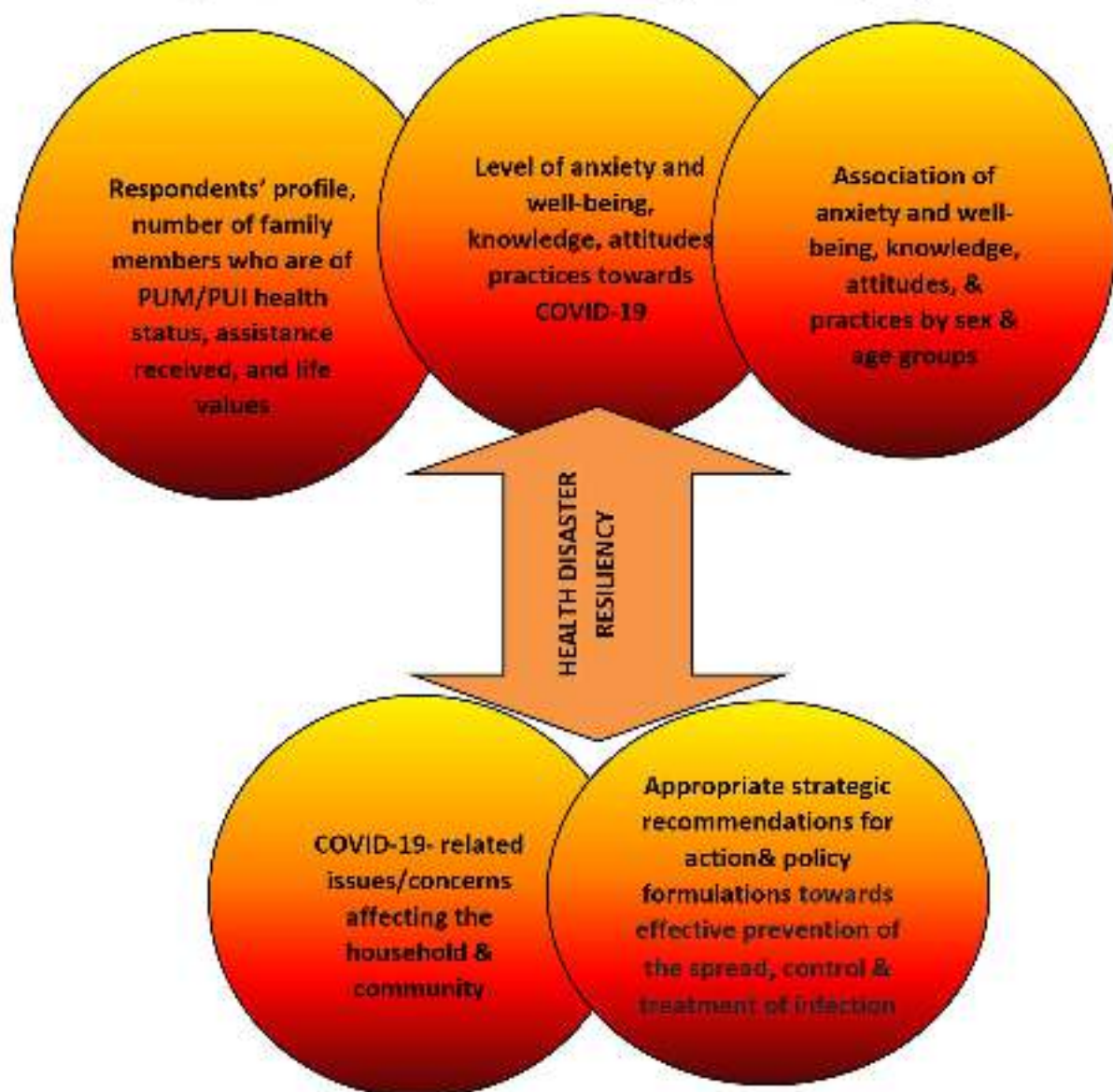
Although, the factors affecting resiliency may differ by culture, preemptive measures should also be taken to promote resiliency particularly among the vulnerable sectors of the society during community quarantine. On the individual level, different age groups activities should be taken into consideration to relieve them of anxiety caused by the pandemic. On the community level, the government may opt to provide the logistics and services in public health care along with emergency relief goods, social amelioration fund, and alternative livelihoods particularly to poor communities that do not have substantial savings to rely on in order to lessen anxiety that mitigate the inevitable widespread of mental health crisis caused by the pandemic.

The Extended Parallel Processing Model (EPPM) determines whether or not the individual or community feels threatened in relation to the mandated preventive policies such as physical or social distancing, community lockdown, home quarantine, and other strict preventive measures issued by the WHO and DOH. The degree to which the individual or community feels threatened when confronted with fear, with regard to the effects of COVID-19, determines his or her or their motivation to follow the mandated preventive measures.

It is widely accepted that determining subjective well-being is a critical part of measuring the quality of life, alongside with the other dimensions such as the respondents' profile (age, sex, civil status, occupation, ethnicity, occupation, educational attainment, estimated monthly income, number of family members), health status as PUM or PUI (suspect, probable, confirmed), assistance they received from other sources, and life values.

It is assumed that resiliency is entwined to cope with the threat of COVID-19 individual households and communities as gauged by the nature of knowledge, attitudes and behavior. These eventually result in appurtenant health, socio-cultural, and economic issues and other concerns that need to be dealt with by appropriate government agencies. These would bear on appropriate strategic recommendations to aid action and policy formulations, methods, and strategies to better address a health disaster such as the COVID-19. It is therefore imperative to study empirically the responses of the people focused on their knowledge, attitudes and behavior as affected by a health crisis such as the COVID-19 pandemic.

Below is a diagram of the conceptual framework to guide the study (Figure 1):



METHODOLOGY

This study employs a triangulation design. In this design, both qualitative and quantitative research methods are utilized and both data are collected concurrently in one phase. In this case, the qualitative and quantitative data are analyzed separately. Findings are then compared and combined. The purpose of this method is to confirm, cross-validate or corroborate results so that the weakness in one method is overcome with the strength of another (Creswell & Plano, 2011). Also, triangulation has been defined as the use of multiple observers, interpretive points of views, and levels of forms of empirical materials in the construction of interpretation (Denzin, 1989:270). This involves using multiple researchers of different disciplines and data sources in research to enhance data, and a deep understanding of patterns generated by the study. Employing qualitative and quantitative data complement aspects of the same phenomenon provides more insights and enhances the scientific rigor of the study.

The triangulation of quantitative and qualitative tools employs primary and secondary data as follows:

- Baseline Survey using Standardized Interview Schedule (Quantitative)
- Key Informants (KIs) (Qualitative)
- Secondary Data (e.g. Eco profile, Latest reports from Inter-Agency Task Force on COVID-19 (IATF) and DOH, others)

Due to the current situation stemming from the strict observance of physical distancing and strict infection prevention and control measure being implemented by the Department of Health, special precautionary protocols have been formulated by the Health Systems Research Management Team as provided in the DOH Regional Memorandum 2020-021 ensuring safety of researchers, as well as of the respondents and general public during data gathering or field visits. Special authority to travel and conduct the said survey were obtained from the Regional Inter-Agency Task Force (RIATF): One Caraga Shield.

In carrying out the survey, a quota sampling of 75 respondents per province or 375 respondents were chosen through convenience sampling. As a type of non-probability sampling, convenience sampling is where people are sampled because they are "convenient" sources of data for the researchers (Lavrakas, 2008).

Prior to the administration of the survey questionnaire and interview of the key informants, the study went through the Caraga Health Research and Development Consortium Ethics Review Committee (CHRDC-ERC) for approval. The researchers duly incorporated the suggestions or comments made by the committee before a go signal was given to conduct the study. To ensure success of the data gathering, an orientation for the Barangay Health Workers (BIW) as

enumerators on the study was conducted using the pre-recorded module prepared by the researchers.

The quantitative data were gathered through self-administered questionnaire or face-to-face survey interview method with the assistance of BIWs following strictly physical distancing, infection prevention, and control measures as stipulated in the DOH Regional Memorandum 2020-021. A total of 139 BIWs participated as enumerators of this research. Each BIW had to interview a maximum four respondents or depending on the number of BIWs engaged in the study per area.

The qualitative data were sourced primarily from the key informants through face-to-face interview, via email and or other social media platforms to shed light, knowledge, attitude, behavior, and other pertinent issues and concerns. The informed consent form for the KI of ages 21 years old and above, as well as the informed assent form for KI respondents of ages from 16 to 18 were procured personally. However, for key informants who were reached through email and other social media platforms, informed consent and assent forms were secured via email with an electronic signature.

The respondent's face-to-face survey interview lasted for at least 30 minutes on average while the key informant interview lasted for at least 45 minutes on average. The qualitative and quantitative data were collected simultaneously in a span of nine days.

Brief Description of Research Locale. Caraga has a total population of 2.5 million with an annual growth rate of 1.42 percent (POPCEN, 2015). The region registered 42 thousand births, 22 thousand are males and 20 thousand are females. Registered deaths were at 14 thousand with eight thousand males and five thousand females. Crude birth rate is at 27.3 per 1000 population and the crude death rate is at 6.5 per 1000 population. The life expectancy in the region is 65.9 for males and 71.3 for females.

In terms of morbidity, FHSIS-DOH Caraga reports the top 10 which includes acute, upper and lower respiratory infections with bronchitis as the leading causes. This is followed by urinary tract infection or disease, hypertensive cardiovascular disease, influenza, dengue fever, pneumonia, dental caries, acute gastroenteritis, intestinal infections, and injuries or wounds. For mortality, the top 10 leading causes in the Caraga region are cardiovascular disease, pneumonia, cancer, cerebrovascular accident, Diabetes Mellitus, sepsis, tuberculosis, renal, multiple organ failure and accident.

Caraga has an annual per capita poverty threshold of P25,000.00, with poverty incidence of 24.1 percent. This means that a family of five needs an annual P25,000.00 income to meet the basic commodities but 24.2 percent of the families' income did not reach the minimum, which translates to 149, 000 families in

Caraga. Caraga also reports a 96.2 percent of literacy rate. All of the provinces have access to safe water supply, with only Agusan del Sur reporting a 61 percent access to water among its residents.

In terms of medical facilities and personnel, Caraga has 10 government-operated hospitals. Of the 12, eight are Level 1 hospitals and four Level 2 hospitals. In addition, there are 10 private hospitals in Caraga. Of the 10, four are Level 1 and six are Level 2 hospitals. Aside from the hospitals, there are also government and privately operated infirmaries in the region. There are 26 government-operated infirmaries and 13 privately operated infirmaries in the region.

The Department of Health Department Memorandum No. 2020-0142 designated facilities in the region as certified COVID-19 referral hospitals. As of October 5, 2020, there are 25 COVID-19, DOH-certified referral hospitals in Caraga. Among the provinces, Surigao del Sur (SDS) leads with 10 COVID-19 referral hospitals; six from Agusan del Norte (ADN), five from Agusan del Sur (ADS), three from Surigao del Norte (SDN) and one district hospital in the Province of Dinagat Islands. Note that four out of six hospitals in ADN are located in Butuan City which is the epicenter of the COVID-19 pandemic in the region.

In addition, DOH CHD-Caraga has a total of 78 newly employed healthcare workers who were emergency hired for COVID-19 response. A total of 34 nurses, 13 medical technologists, 11 doctors, 9 administrative officers, 4 radiologic technologists, 3 nursing attendants, 3 midwives and 1 pharmacist were hired and deployed in COVID-19 referral hospitals. Most of the doctors, nurses and medical technologists were assigned in Butuan Medical Center where it caters the bulk of COVID-19 patients in light of the Butuan pandemic situation.

Caraga's COVID-19 pandemic situation in October 21, 2020 has reached 2,366 confirmed cases with 1,562 recoveries, 703 admitted and on strict facility quarantine and 101 deaths. 29 new confirmed cases were added as of this date. ADN has recorded 215 cases and is highest among the provinces. PDI has the lowest cases at 14. Meanwhile, the city of Butuan has registered majority of the confirmed cases at 1,161, of which, is the 868 local transmission frequency. Butuan is currently the epicenter of the region's pandemic situation. This is followed by Surigao City with 186 cases and Bislig City with 183 cases.

Data Presentation and Analysis

Respondents' Profile: In terms of the socio-demographic profile of the survey respondents, a greater number are female of ages 21-39 years old (41.9%) and between 40 – 59 years old (40.5%). Majority are married with one to two children. Catholics dominate the respondents and are either Cebuano or Surigaonon. The number of household members range from 1 to 10 with majority comprising of 3 to 4. In terms of dependents, majority have 1 to 2 dependents. Fur

their educational attainment, 34.7% of the respondents have a college degree and a few has attained graduate education such as MA, PhD or Doctor of Medicine. Most work in the government and some are self-employed. As such, more than half earns less than P5,000.00 per month signifying low income.

Among the 50 key informants interviewed, majority are female and between the ages 16 – 20 and 21 to 39 years old. Majority of the informants are single and those who are married registered having two children as the average. Catholic followers predominate and are mostly Cebuano. In terms of their educational attainment, most are college graduates and are currently students. For those with occupation, the primary work is medical worker, teacher, government employee, business, manual laborer, LGU official, technical professional, academe, and retired government official. Their declared income is P20,000.00 and up per month signifying a higher socio-economic status compared with the survey respondents.

For the COVID-19 health status of the survey respondents, 13 signified as Persons under Monitoring (PUM) and 3 as Persons under Investigation (PUI) during the data gathering period. Under the current DOH classification, the 13 PUMs were classified as confirmed (three persons), probable (one person), suspect (six persons), and five do not know their health status. For the PUI, the current DOH classification is 1 confirmed and 2 who do not know their status.

The survey respondents received a variety of assistance such as social amelioration fund (SAF), other forms of financial assistance from the city or municipality, relief goods, rice distribution, canned goods, and groceries by the barangay, vegetable and meat or poultry products, noodles, as well as non-food items such as face masks and gadget from various non-governmental organizations.

Life Values: The life values of the survey respondents are what they consider as extremely important to not at all important in the nine areas of life. Out of the nine life values that they need to rate, seven are considered as extremely important: marriage or couple or intimate relations, family, work, education or training, spirituality or religion or beliefs, citizenship or communal life and physical self-care. On the other hand, two areas rated as important are friends or social life or network and recreation or fun. During this time of pandemic, it can be implied that the family or social network, education, faith in God and livelihood are very important considerations in life.

Filipinos are known for having strong and close family ties. They place high regard and place importance in their family. Closely related to this, is working hard in order to provide for the family. Although, Filipinos belong to various religious groups, they all have a Supreme Being/ God in the center. According to Bernardo (2003), Filipinos value education indicating that having an education is

as important as having family life and being successful in work. Thus, these four life values, family, education, faith in God and livelihood, are highly valued.

Well-Being: The well-being of an individual is very important especially in times of disasters. In a 20-item statement adopted from the Self-Reporting Questionnaire (SRQ) by the World Health Organization, respondents answered "Yes" or "No" to the questions. In general, Caraga respondents are in a state of well-being. There is a predominance of "No" response to the 18 negatively stated questions; except for SRQ 5 (Do you feel unhappy? - a depressive mood) and SRQ 11 (Is your daily work suffering? - decreased energy). This high response on the two negative statements manifest their unhappiness with COVID-19 impacts on their life and that their daily work is suffering due to the disruptions brought about by the lockdowns, quarantine, and other health protocols imposed by various government agencies.

A Mann Whitney U Test between the state of well-being and sex is undertaken which shows that at 0.05 level of significance, four SRQ questions were associated with sex. These are SRQ 3 ("Are you easily frightened?" $p = .004$), SRQ 4 ("Do you feel nervous, tense or worried?" $p = .010$), SRQ 5 ("Do you feel unhappy?" $p = .027$), and SRQ 6 ("Do you cry more than usual?" $p = .009$). It can be recalled that SRQ 4, 5, and 6 are under the factor Depressive Mood while SRQ 3 is under the Depressive Thoughts factor. This association may mean that men and women differ in terms of their emotions and thoughts about COVID-19. This may also be culture-bound, as Filipinos perceive women as soft and of the weaker sex.

The association between state of well-being SRQ 20 and age is also undertaken. The age cluster of young, middle age, and elderly is shown to have association with 14 out of the 20 SRQ questions. Four SRQ questions with very high association are SRQ 5 ("Do you feel unhappy?" $p = .000$), SRQ 8 ("Do you have trouble thinking clearly?" $p = .000$), SRQ12 ("Are you unable to play a useful part in life?" $p = .000$), and SRQ13 ("Have you lost interest in things?" $p = .000$). The other 10 SRQ statements, which is associated with age, are SRQ2, "Do you sleep badly?" (.001), SRQ6, "Do you cry more than usual?" (.008), SRQ7, "Do your hands shake?" (.031), SRQ9, "Do you find it difficult to enjoy your daily activities?" (.001), SRQ11, "Is your daily work suffering?" (.001), SRQ14, "Do you feel that you are a worthless person?" (.038), SRQ17, "Are you easily tired?" (.001), SRQ18, "Is your appetite poor?" (.035), SRQ19, "Is your digestion poor?" (.052), and SRQ20, "Do you have uncomfortable feeling in your stomach?" (.002). This positive association clearly shows that the respondents' state of well-being or mental health must likely differ among the young, middle aged, and elderly. The younger ones usually sleep late and wake up late as against the middle aged and elderly. Similarly, appetite and digestion differ among the younger respondents, as well as daily work and engagements of the young, middle aged and elderly.

Anxiety Scale: Using the Coronavirus Anxiety Scale (CAS) developed by Lee (2020), the five-item scale demonstrates the ability to measure the mental health concerns of the Caraga respondents during the COVID-19 pandemic. Generally, the respondents did not report impending anxiety, which implies that they are able to positively adapt to the impact of the pandemic in their lives. They became resilient to the impact of the pandemic. Through social media platforms, they engage in positive activities that contribute to their resilience and cope with the situation.

Testing for the association between anxiety scale and sex, Kruskal-Wallis Test shows that there is no significant difference between male and female respondents towards their anxiety with COVID-19. On the other hand, the test of association between anxiety scale and age show two statements have a significant difference. The first statement is "I lost interest in eating when I thought about or was exposed to information about the coronavirus" and the second statement is "I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus." This may imply that the elderly who are more at risk to contracting COVID-19 feel more anxious which are shown in the psychological effect of losing their appetite and somatic distress of being nauseous and having stomachaches.

Employing the Extended Parallel Processing Model (EPPM), it is evident that the perceived threat of COVID-19 has made them respond through their perceived efficacy in order to counteract their fear. The respondents are afraid of being infected with COVID-19 so they manage their fears by following the preventive measures or health protocols mandated by the government agencies such as DOH and the IATF. The fear motivates the respondents to follow most of the health protocols; however, there are some who do not heed the preventive measures set by the government. This would likely explain why after the data gathering period, there is an increase in the number of COVID-19 cases in Caraga region.

Knowledge, Attitudes and Practices

Knowledge: There is a high level of knowledge among the Caraga respondents. Out of the 12 items, only three items were answered incorrectly: 1b. "The main clinical symptom of COVID-19 is fatigue", 5. "The COVID-19 virus spreads only via respiratory droplets of infected persons", and 7. "It is a must for the elderly only to take measures to prevent the infection by the COVID-19 virus." Based on the results of the answered statements, the respondents have sufficient information and knowledge about how the corona virus is transmitted, the clinical symptoms, and the protection and prescriptions of DOH and the IATF about COVID-19.

A close look at the association between knowledge about COVID-19 and the sex of the respondents shows there is no association except for one statement: "persons with COVID-19 can still infect the virus to others even if not manifesting the symptoms" at $p = .012$. This result may mean that men and women have different views pertaining to how people with COVID-19 can infect other people. This points out to the need for more information regarding the issue on when a person with COVID-19 can start infecting others.

The result of the test for association between knowledge of COVID-19 and age shows no significant difference except for one item: "It is a must for the elderly only to take measures to prevent the infection by the COVID-19 virus" at $p = .048$. This may indicate that there is a difference on how the young, middle aged and elderly respondents view how age affects the risk of contracting COVID-19 for the elderly.

The result of the test for association between practices and age among the young, middle aged and elderly show that four statements are significant. These statements are: "Have you gone outside your house, to report to work or purchase essential needs for your family"; "Have you gone to any crowded spaces"; "Do you use disinfectants to clean hands when soap and water was not available for washing hands"; and "Do you use herbal supplements or other homeopathic remedies when you were sick or when you had a cold". It can be assumed that the middle aged and elderly are more likely to go outside the house in public domain to perform the productive role. In addition, it is also likely that the middle aged and elderly are more inclined to use disinfectants and use herbal medicines and other homeopathic remedies when ill.

The key informants forward the need to follow and observe the mandated health protocols imposed by the government agencies and IATF to prevent COVID-19. This is strengthened by practices that include using face masks, using alcohol, and cleaning hands with disinfectant or soap, staying at home and avoiding going outside, avoiding crowded gatherings and strengthening the immune system.

In addition, the key informants also prescribe ways to control COVID-19, which are similar to their suggestions in preventing infection with the corona virus. The things to be done to treat COVID-19 from the informants' perspective include health protocols and proactive and precautionary measures. Majority suggest maintaining a healthy lifestyle, following the general preventive advice and getting genuine information from legitimate sources. Some mention consulting the experts and using alternative medicine as "tuob" to cure flu or cough.

Based on the observations of the key informants, those between 16 to 20 years old are bored and anxious about the disease. They are under stress and show manifestation of fear and worry about the changes in their lives. Some use the social media platforms to cope with their stress and hearing about the pandemic resulted in negative thoughts and actions such as being sad and unmanageable at

home. They, however, follow the DOH guidelines in preventing the spread of the disease.

Those between 21 to 39 years old key informants' observe that their mental health are more on the positive coping in dealing with COVID-19. Most of the positive coping include following the health protocols, finding ways to deal with financial problems and working hard. On the other hand, there are also reports of anxiety and fear about the future and financial stability as well fear for their children and family. The economic recession has affected their mental health due to the overwhelming conflicting information about the coronavirus and the government policies. Respondents from the 21-39 year old age range cautiously follow the health protocols, but some experienced mental stress due to loss of jobs and fearing for the future of their children. Some were also anxious about their health since some of them are vulnerable to illness due to financial instability and living condition. They are also upset because of the conflicting and repeated information about COVID-19 in the locality. Some also doubt following the preventive protocols due to conflicting information. For those 60 years old and above, they are more likely to feel the stress due to underlying conditions that make them vulnerable to COVID-19. The LATT' restrictions of going outside also hinder their movement, making them feel helpless and worthless. They also feel resentment against the government for not being taken cared of which worsen their anxiety in purchasing their maintenance medicines.

Akin to this, the informants do varieties of activities in order to relieve their anxiety. For instance,

- 16 to 20 years old make use of the internet by indulging in social media platforms such as Facebook, Tik Tok, YouTube and Instagram to feel connected with their peers as millennials.
- 21 to 39 years old, browse the internet and engage in various social media platforms like Facebook and Instagram, enjoy movie marathon through Netflix, and online buying and selling which provide opportunities to connect and participate in economic activities.
- 40 to 59 years old mostly deal with their anxiety through online business activities such as buying and selling, making home improvements, and gardening. In addition, they report spending more time with family members during lockdown compared to pre COVID-19.
- 60 years old and above deal with their anxiety by doing some physical activities inside the home such as gardening, exercising, cleaning the house, and cooking for the family. In addition, they also focus on spending more time with their family and taking care of their grandchildren, and on their spiritual life by praying.

COVID19- Related Issues or Concerns Affecting the Household/Community

The salient issues and concerns of the respondents are divided into two sets: at the household and community level. At the household level, the topmost pressing concerns are community lockdown, availment of SAs, home quarantine, activities during the quarantine for the senior or elderly, and availment of relief goods. At the community level, the respondents identified the topmost five, which includes activities during quarantine for the middle aged, physical or social distancing, and activities during the quarantine for the senior or elderly, home quarantine, and activities during quarantine for the young.

Among the key informants at the household level, the topmost concerns comprise the economic aspect of their livelihood or income source, activities during quarantine for the senior or elderly, activities during quarantine for the young, home quarantine, and access to health care and services. At the community level, the informants choose the topmost five to include concerns about physical or social distancing, access to genuine news updates from legitimate sources, access to health care and services, livelihood or income source, and community lockdown.

There are similarities and differences in the topmost concerns for the household and community level among the respondents and informants. For example, both of the groups consider livelihood as one of the topmost concerns during the pandemic. With labor markets in disarray due to the COVID-19 pandemic, some of the respondents and informants may have lost or could lose their jobs. Usually, those in retail, service, and tourism, transportation and hospitality sectors with low-income jobs are the ones to suffer more. Both groups also consider access to health care and services as a vital concern during the pandemic.

Strategic Recommendations for Action and Policy Formulations towards Effective Prevention of the Spread, Control, and Treatment

The recommendations of the survey respondents and the key informants can be categorized into seven: COVID-19 related prevention and protection at the community or society level; COVID-19 related prevention and protection at the individual or household level; socio-cultural aspect; COVID-19 related treatment; political aspect; economic aspect; and others.

In terms of COVID-19 related prevention and protection at the community or society level, most of the respondents suggested actions and policy formulations such as following LATH health protocols, mandatory wearing of face masks and face shields, physical distancing and infection control. For COVID-19 related prevention and protection at the individual or household level, the respondents recommended staying at home and avoiding crowded spaces.

The socio-cultural aspect includes praying and other religious activities. COVID-19 related treatment suggested by the respondents embraces monitoring of the health of the family and vaccination for flu and pneumonia. Concerning the political aspect, respondents said that LGU officials should be models for following the protocols and implementation of the liquor ban. The economic aspect focuses on many having problems with their livelihood due to the pandemic while others suggest there should be a mandatory implementation of the hand wash area in all businesses. Some also mention that COVID-19 has become a business for others.

The responses among the key informants are a mix of established health protocols and scientific and practical ways of dealing with the COVID-19 in terms of prevention, control, and treatment. The three topmost recommendations underscored the strict implementation of disinfection, physical distancing, and wearing of face mask. Other recommendations include following and observing IATF and government health protocols; strict home quarantine, only one household member should go out if necessary, elderly and children are strictly prohibited from going outside the home and research-based laws and policies on infectious disease to have sound and effective policies and programs, involve the grassroots in the implementation of health policies.

CONCLUSION

Socio-economic, cultural, and psychological factors may affect the state of well-being and quality of life of the people in perilous and precarious times. The quality of life as defined by the World Health Organization (WHO, 1998) is a multi-dimensional concept that incorporates in a complex way that the individual's physical health, psychological state, level of independence, social relationships, personal beliefs, and how these are influenced by the environment. On the other hand, well-being is a psychological construct cognizant to the need having a sense of meaning and fulfillment in people's lives. Any adverse changes in the social environment that affect the individual will, in turn, affect their quality of life and well-being. The COVID-19 pandemic has brought about several changes that most people find difficult, most notably the physical distancing, the isolation of suspected cases, the fear of being infected with the virus, the need to stay inside their homes, and the stoppage of work and businesses and livelihoods.

The pandemic has indeed overturned the people's sense of order and control. With the present pandemic, the Caraga constituents exhibit behaviors overcoming the negative effects of this health disaster. Resiliency interweaves to cope with the threat of COVID-19 affecting the individual households and communities as gauged by the nature of their knowledge, attitudes, and behavior.

The Filipino people have been known to have a resilient culture experiencing several catastrophes such as earthquakes, volcanic eruptions, floods, typhoons, war, and massacres, but the Filipino spirit is never defeated, it can bounce back after each tragedy (Rutter, 2012).

The values upheld by Filipinos are reiterated in this study where life values considered extremely important deal with marriage or couple or intimate relations and family, work, education or training, spirituality or religion or beliefs, citizenship or communal life, and physical self-care. Friends or social life or network and recreation or fun are also regarded as important. This indicates the possession of positive attributes vital for good social relations placing primal importance to family and spirituality or religion/beliefs. This is a social capital and a facilitating factor for life survival.

In general, Caraga respondents are generally in a state of well-being in terms of their happiness amidst the pandemic. The respondents did not report impending anxiety, which implies that they are able to positively adapt to the impact of the pandemic in their lives despite some unhappiness, daily work suffering, and other nuisances.

Employing the Extended Parallel Processing Model (EPPM), it is evident that the perceived threat of COVID-19 has made them fearful of being infected with COVID-19. They manage their fears by following the preventive measures or health protocols mandated by the government agencies such as DOH and the IATF. The fear motivates the respondents to follow most of the health protocols; however, there are some not heeding the preventive measures set by the government.

Findings of the study generally show high knowledge, positive attitudes, and good practices with the present pandemic. To some extent (limited to particular items), there is association of state of well-being, anxiety, knowledge, attitudes, and practices with age and sex where there are variances among the young, middle aged and elderly groups, and between the males and females.

The knowledge level is high that must be an aftermath of the experience of lockdown, quarantine, and physical distancing and exposure to mass media dissemination via television, internet, FB, radio, billboards, and the like. Similarities and differences obtain among the Caraga constituents in terms of activities and prescriptions for the young, middle-aged, and senior citizens, as well as the mandated health protocols imposed by the government agencies and IATF. Key informants forward the need to follow and observe the mandated health protocols. This is strengthened by practices that include using face masks and alcohol, cleaning hands with disinfectant or soap, staying at home, and avoiding going outside in crowded places and gatherings, along with strengthening the immune system. In addition, the key informants also prescribe ways to control COVID-19. The things to be done to treat COVID-19 from the informants'

perspective include health protocols, pro-active and precautionary measures, maintaining a healthy lifestyle, following the general preventive advice and getting genuine information from legitimate sources. Some mention the use of alternative medicine to cure cough or flu such as "luoh" and consulting experts. The coping mechanisms employed by the survey respondents and key informants are similar to the responses of Zimbabweans (Chrirambe et al., 2020), which is by using a social media platform WhatsApp to connect with workmates, friends, schoolmates, and relatives.

The key informants observed that people between 16 to 20 years old are bored and anxious about the disease. Under stress manifesting fear and worry about the changes in their lives, a number use the social media platforms to cope with their stress, albeit they follow the DOH guidelines in preventing the spread of the disease. Those between the ages of 21 to 39 years old also cautiously follow the health protocols, but some experience mental stress due to loss of jobs, thus, fearing for the future of their children. Some were also anxious about their health sensing vulnerability to illness due to financial instability and their living condition. They are also upset because of the conflicting and repeated information about COVID-19 in the locality. For those 60 years old and above, they are more likely to feel the stress due to underlying conditions, which make them vulnerable to COVID-19.

There is discrepancy between the high level of knowledge and practices as data show a number away from the health protocols as they go to crowded spaces. This is cognitive dissonance (Festinger, 1957) where the knowledge does not harmonize with actual behavior.

Facilitating factors that make people cope with family support and outside the family come from individual factors such as optimism and spirituality. All of these factors serve to buffer the individual from the negative effects of the adverse situation. The Filipino culture had always been relational, and more often than not, an important protective factor for most Filipinos has been family, spirituality, and their social support system (Jocson, 2017).

Note the health and safety measures taken by the government to ensure that the virus will not spread include physical distancing, staying at home, lockdown, strict implementation of curfews and minimal face-to-face interaction. As Filipinos are known for their close-knit family ties and extended family networks, these measures continue to challenge the protective factors of the typical citizen in weathering the difficulties of the pandemic.

Topmost concerns for the household and community level among the respondents and informants exhibit similarities and differences. Both of the groups consider livelihood as one of the topmost concerns during the pandemic.

Overall, the study comes up with descriptions of notable state of well-being and less anxiety, high level of knowledge, positive attitude, and mostly conforming behavior of Caraga respondents or participants in responding to the pandemic challenges.

The numerous recommendations are categorized into seven, namely: COVID-19 related prevention and protection at the community or society level; COVID-19 related prevention and protection at the individual or household level; sociocultural aspect; COVID-19 related treatment; political aspect; economic aspect; and others. They are a mix of established health protocols and scientific and practical ways of dealing with the COVID-19 in terms of prevention, control, and treatment inclusive of research-based laws and policies on infectious disease to have sound and effective policies and programs, involve the grassroots in the implementation of health policies. This calls for a democratic consultation among the multi-sectors and agencies or institutions to have a strategic and workable prevention, control and treatment of the infection of this deadly COVID-19 virus.

Strategic Recommendations for Action and Policy Formulation Towards Effective Prevention of the Spread, Control, and Treatment of COVID-19

Based on the findings of this study, the following are hereby forwarded as strategic recommendations:

Immediate/ Short-Term (2021)

1. Strategic Planning Workshops and COVID-19 Summit
 - a) Review and assessment of scientific-based findings or research outputs focused on COVID-19 and presentation of the salient findings to all appropriate concerned government agencies and private institutions
 - b) Mini-planning at the barangay/municipality level regarding prevention, control and treatment of COVID-19 through bottom-up approach/ grassroots approach
 - c) COVID-19 Multisectoral Summit to consolidate the outputs of 1 and 2 above, with DOH-Caraga/DOST-Caraga as lead conveners
 - d) Memorandum Order for Intersectoral/ Interagency Body (i.e. ONE Caraga Shield) to integrate the feasible mechanisms/strategies to prevent the spread, control and treatment of COVID-19
 - e) Generate and formulate urgent policies regarding the desired intervention, including budget allocation for the needed resources. It is imperative to implement ordinances for minimum health standards and availment of COVID-19 vaccine by the underprivileged and underserved sectors should this be available

2. Health/Medical Care

- a) Ensure universal access and availability of medical/health care services
- b) Establish a unified protocol for APOR within the region that is endorsed and approved by the Regional IATF to minimize the accrual of repeated costs for RDT in the light that it is reportedly not a reliable tool in assessing the exposure and risk of individuals. Further, DOH DM 2020-0220, 2020-0258 and 258-a, PSMID, PCCP, PCP, PRA and PCHTM Patients with Suspected or Confirmed COVID-19 Infection V3.1 should be adopted by all stakeholders. The autonomy of LGU should be guided by existing policies/guidelines on the employment of specific technologies to 1) limit wastage of logistics and thereby limit wastage of resources, 2) unify the strategies and facilitate vital activities in aid of policy determination and program development, 3) facilitate research undertakings to better guide policy determining bodies
- c) Provide enabling environment for research and researchers to facilitate COVID-19 related endeavors
- d) Make more visible local government leaders in advocating for the COVID-19 prevention and control protocol or practices
- e) Enhance the Zoning Containment Strategy

3. Monitoring and Social Mobilization

- a) Intensify Monitoring and Evaluation of Local Government Units in managing COVID-19 matters to include strict monitoring of the implementation of hand washing, wearing of masks, and interpersonal physical distancing in all establishments
- b) Strengthen the capability of the front liners in all national/local government agencies to rigidly comply with the health protocols and contact tracing process
- c) Community-led observance of health protocols (staying at home, handwashing or use of alcohol-based disinfectants, wearing of masks and face shields, interpersonal physical distancing, and avoiding mass gatherings and crowded areas)

4. Psychosocial Development Intervention (Mental Health)

- a) Utilize source of life values based on the result of this study namely, the extreme importance of family, work, and spirituality and the like in psychosocial interventions regarding COVID-19
- b) Prioritize mental health concerns of elderly and young adolescents to deal with their yearning for social interactions causing boredom, anxiety and uncertainty
- c) Strengthen sense of spirituality in coping with mental health issues

- d) Facilitate lectures/webinars to raise awareness about electromagnetic radiation due to excessive use of electronic gadgets (i.e. mobile phones, tablets, laptops, etc.)
5. Social Media Platforms or HEC (Information, Education and Communication) Advocacy
 - a) Make use of all credible social media platforms (i.e. official FB page of government agencies) to ensure access of genuine COVID-19 news and updates. Search for innovative ways to combat disinformation and misinformation
 - b) Utilize social media as primary means of reaching 16-20 years old to promote productive use of time
 - c) Reach older adults and senior citizens using traditional media such as TV, radio and print to engage in more productive work attuned to their interests and needs (i.e. Zumba, prayer meetings, cooking show, gardening show, etc.)
 6. Infrastructure Development
 - a) Install state-of-the-art internet connectivity in both urban and far flung rural areas
 - b) Build infrastructure to strengthen barangay level infection, prevention and control (i.e. isolation facility)
 - c) Acquire new and well-functioning needed equipment for COVID-19 early detection and treatment duly approved by the Food and Drugs Administration (FDA) and other authorized government agencies
 7. Research and Development
 - a) Conduct studies exploring factors influencing or contributing to the level of anxiety and fear of young adolescent boys and girls and elderly men and women
 - b) Further studies on how social media and online games deal with anxiety during COVID-19 pandemic
 - c) Further studies to understand why different age groups have different attitudes towards COVID-19
 - d) Further studies to identify the factors affecting cognitive dissonance
 - e) Conduct of Training Needs Analysis (TNA) to determine the existing skills and resources of the locals for alternative livelihood
 - f) Publication of COVID-19 related research to enhance public knowledge, guide actions and policy formulations

8. Economic/Livelihood

- a) Identify appropriate culture and gender-sensitive economic interventions, especially for the disadvantaged and marginalized sectors and those who lost their jobs or source of livelihood or employment.
- b) Provision of means of alternative livelihood for economic recovery
- c) Supervise online business or online trade to ensure safety of customers and sellers
- d) Innovate ways to market or promote home activities while on community quarantine

Medium to Long Term (2022-2025) Monitoring and Evaluation

- a) Comprehensive assessment of the short-term desired targets
- b) Monitor and review the mechanisms adopted to ensure peoples' availment of the COVID-19 vaccine
- c) Integrate health disaster (physical and mental) or pandemic in the action plan of the existing national and local Disaster Risk Reduction and Management Plans

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