

# Expanded role of public health nurses during COVID-19 pandemic

Badillo, Janel ✉

Graduate School, Lyceum of the Philippines University – Batangas, Philippines ([badillojanelrn@gmail.com](mailto:badillojanelrn@gmail.com))

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## Abstract

Public Health Nurses dedicate their time, passion, and services to help improve the health of an entire population over time. They are also considered to be the heart of the healthcare system and considered to be one of the most important human resources in hospitals and other healthcare facilities. The main objective of this study was to determine the expanded role of Public Health Nurses during the COVID-19 pandemic with the use of a 4-point Likert Scale and a set of questions and factors prepared by the researcher. This was distributed to the public health nurses chosen in this study. The researcher also identified the issues, challenges, and level of competencies of the respondents. A purposive random sampling of public health nurses from selected localities of Batangas Province including nurses under the Nurse Deployment Program of the Department of Health were the participants of the study. The researcher was able to gather 180 nurses as the respondents of this study. On the other hand, the weighted arithmetic mean was used to determine the importance of each item in the questionnaire and their respective descriptive ratings. Lastly, Cronbach's Alpha was used for computing and analyzing the results and to also assess the reliability and feasibility of the questionnaire. Public health nurses positively identified that they experienced the different issues from social stigma due to lack of knowledge to support their clients and less support in the preparation and resources. There was no significant difference between the cognitive and psychomotor levels of competencies of the nurses when grouped with the issues and challenges that they experienced. However, the issues and challenges had a significant relationship with the level of competency of the nurses in terms of affective which implied that the nurses were more competent when faced with more challenges and issues. The proposed framework that shows the skill enhancement should be adopted by the community or public practicing nurses to set the direction of competency enhancement as part of their expanded role in the performance of Public Health Nursing. A program for the sustainable mental and psychological well-being of nurses should be prioritized through strategic analysis of the situation to further safeguard the interest of the nurses.

**Keywords:** public health nurse, nurse competencies, issues and challenges, COVID-19 pandemic, performance

## Expanded role of public health nurses during COVID-19 pandemic

### 1. Introduction

Everyone was alarmed by the Corona Virus Disease associated with the Sudden Acute Respiratory Syndrome of the twentieth century otherwise known as COVID-19. This phenomenon started in China and grossly affected the whole world thus COVID-19 pandemic was then identified and became a serious concern of the World Health Organization. The said pandemic affected the whole populace of all the countries regardless of age, sex, race, and people with known diseases or claimed to have co-morbidities. The COVID-19 pandemic became the most healthcare priority of all nations, the indicators of both morbidity and mortality, and had risen to a frightening level of menace among the populace worldwide. As the number of affected people increase, each country did its own systems and strategies to address the needs of the people to safeguard their health.

The concept of management posted to the government for the said activities gave ample responsibilities to the authorities at the level of the community, municipality, and the whole local government units which prompted the public health nurses to be at the forefront of health care delivery. Their expertise and work are incredibly needed and significant among all other professions. Public health nurses are the modern-day heroes of the public health crisis the world now called as the COVID-19 pandemic. As mentioned by CDC (2021), these nurses served in challenging work environments working in intensive contact tracing of cases, health education and promotion on self-isolation and quarantine through emergency hotlines and home visits and interpreting the rapidly changing guidelines from the Centers for Disease Control and Prevention that safeguard the health of each family and the whole community.

This exposed the manifestation of scenarios worldwide, as the hospital and even in the community, buckle under the influx of cases, nurses work long and exhausting hours trying to save lives and preparing for the observable of almost eight peak fold of cases. Public health nurses managed and counseled clients of all ages, including the most vulnerable population, such as people with co-morbidities, senior citizens, and those with other health-related issues. Community care, with nurses administering medications and educating people about nutrition and healthy lifestyles, is also carried out by public health nurses.

In the Philippines, millions of Filipinos were afflicted by this devastating virus which enormously affected even the health of the frontline workers. As the COVID cases increased, the Department of Health enhanced the duties and responsibilities of the doctors, nurses, and all other healthcare personnel to address the gaps identified in the movement of human resources in such a way that service delivery will be the top priority. In this light, the public health services elicited the trust of the people for their safety, welfare, and health. The public health nurses likewise were tasked to spearhead the implementation of care regimens and management among clients afflicted by the said virus. Batangas alone, being a huge city in CALABARZON areas, manifested in the top three areas in the Philippines cited with high cases of COVID-19 positive and suspects as well.

Thus, nurses were on the front line of public health services as they actively participate in implementing, testing, and modifying school reopening regulations and responses for disease prevention and control. With their exposure and responsibilities embedded in their roles in formulating strategies in the defense of preventing a health crisis, only a few emerging studies have been obtained in relation to the extended responsibilities of public health nurses during the COVID-19 pandemic. However, a paramount of COVID-19-related roles to add to their regular responsibilities weigh them down, making public health nurses overwhelmed and burned out in the situation. Lucchesi (2022) has noted that almost 60 percent of the United States are lacking full-time nurses during the pandemic, while challenges affecting the performance of public health nurses in their roles, whether they are standard or extended, can possibly put people at risk in relation to their wellness and health. The problem arises during the pandemic when the definition of a public health nurse's role was not as solid as it

seems since it becomes dramatically expanding by circumstance, compounding more confusion if not well-recognized and defined in commitment to the provision of care among constituents.

With these scenarios of the nurses, the researcher sought to determine the expanded role of public health nurses during the COVID-19 pandemic as they were the so-called 24/7 workers in caring and dealing with the client having been known to have symptoms, quarantined, and isolated in the communities where they belong. The abovementioned study may provide insights and inputs to the nursing administrators and nurses on how they are going to strategize the workforce to enhance their competencies that will aid the government to deliver the best care needed by the clients. This may also be a basis for the government to come up with a law that will increase the benefits of the frontline workers and give the necessary augmentation for the personal protective equipment, the personal needs for accommodation and transportation that these nurses and other front liners may enjoy during the pandemic or any other health-related issues that may confront them. As such, the research becomes a tangible tool for the areas that need to be improved in terms of management, material, or manpower-borne issues in the health system.

**Objectives** - The study aimed to determine the expanded role of public health nurses during the COVID-19 pandemic. Specifically, this study aimed to determine the issues and challenges met by public health nurses (PHN) in the performance of their duty during the pandemic, the level of competencies of PHN in relation to cognitive, skills, and affective domains of nursing, and the performance of the PHN in the delivery of their services in relation to COVID-19. Furthermore, the study aimed to determine the significant difference between competencies and issues and challenges experienced by public health nurses during the performance of duties during the COVID-19 pandemic. With the said study, the researcher also identified strategies that will lead to the enhanced delivery of services among COVID-19 patients other cases.

## **2. Review of Related Literature**

Public health nurses work beyond what is expected of them during this pandemic. As stated by Masaga, 2020, the COVID-19 pandemic not only came as a surprise, but it also put public health nurses as frontline medical responders during the pandemic supported by Billings et al., 2020, stated that COVID-19 placed healthcare workers in extreme demand. To ensure the quality of nursing care rendered and readiness for unexpected case scenarios, nurses extended their exhausting working hours as health facilities worldwide buckled under the influx of cases as supported by the study of Deering, 2021. The community treats nurses as a vital point of reference during this pandemic as they are in charge in health promotion thru disseminating correct information on disease prevention and strategies to cope easily with health crises for them to develop their skills in handling scenarios that may challenge their ability to provide holistic care for every patient. (Sadang, 2020). In the delivery of quality health care, nurses' job satisfaction plays an important role, especially during this COVID-19 pandemic (Semachew, 2017). Furthermore, the Centers for Disease Control and Prevention (CDC) (Edmonds et al., 2021) stated that public health nurses (PHNs) deal with contact tracing, ambulance, and emergency response teams, health education, coordination, house-to-house visits to ensure isolation protocols and implement updates in guidelines which makes every nurses a frontline worker during this health crisis which is now called COVID-19 pandemic.

In addition, during the COVID-19 pandemic, the roles of nurses involve triaging patients and providing necessary nursing management for suspected and emergency cases following health protocols. To add more, they collaborate with medical technologists, radiology technologists, pharmacists and other healthcare workers. Nurses provide holistic care in dealing with every patient specifically on infection control and decontamination (Al Thobaity & Alshammari, 2020). Each nurse had different experiences as they deal with every patient during this pandemic and with this, they gained new learning that they may apply for the future (Turale, 2014; Veenema, 2013). Despite the fear of getting infected in handling confirmed COVID-19 cases and the risk that they may infect also they families way back home, nurses respond professionally and positively in providing nursing care (Leime, 2021).

The COVID-19 pandemic became a challenge to nurses, despite their fear for their physical safety and the virus they might bring home that may affect their loved ones secondary to an insufficient supply of personal protective equipment. Increased workload led nurses to develop environmental safety issues. As the number of affected individuals including healthcare workers increases, most healthcare facilities declared a shortage of staff which resulted in additional duties and responsibilities of unaffected nurses which affected their coping abilities in sudden changes in work situations that led to inefficiencies as healthcare workers. In relation to this, social support during unexpected changes in the workplace plays a big role in improving self-confidence and efficacy among nurses and lessening psychological and occupational stress.

Based on the study of Labrague et al., 2020, nurses in far-flung communities including those nurses assigned in temporary quarantine facilities are the most affected by psychological stress brought by work-related dilemmas as they provide direct care hand on hand not only affected individuals but also their close contacts. The COVID-19 pandemic brought anxiety among nurses that affects their well-being and work performance. As stated by Liu et al., 2020, there is a need to provide regular and intensive training for crisis management preparedness to ensure the quality of care being rendered and to secure the healthcare workers' well-being by providing holistic support that will lead to producing resilient, dedicated and professional health-care providers even in the most difficult times in their healthcare facility.

As discussed in the study written in Public Health Journal 2021, public health nurses showed their dedication to being the frontline healthcare workers during COVID-19 pandemic. They demonstrated different functions such as case investigation, health education, direct care thru home visits, coordination with other healthcare workers, and intensified referral system especially on isolation and quarantine matters as supported by the study of Joyce Edmonds, Shawn Kneipp, and Lisa Campbell in "A Call to Action for Public Health Nurses. During the COVID-19 Pandemic, 2021, revealed the reliability and proved the nurses' skills as responders during the health crises provided exemplary service for all patients as well as their relatives.

In the past few years, the medical field was considered a good success step in life whereas, in some studies, students appraised their satisfaction in any practice or knowledge during the pandemic as supported by the study of Etikan, et al. 2016, wherein opinion of students regardless of their gender in regards with their environment was considered. Furthermore, it also initiated a new study on the mixed perceptions of nurses, and inconsistencies surrounding preferences. Their experiences continue to breed confounding evidence on nurses' competency preference for a general orientation toward acceptability.

Enhancement in delivering healthcare services was the goal of public health workers in community-focused care. Application of public health theory on community-focused care, health providers can cater services to a specific population which emanates the concept of health and wellness among individuals, families, and the whole community that would not have proper access to nursing service and those are responsibilities being carried out by the public health nurse. Community health programs ensured equitable and equal access to available health resources by working for inconsistencies among recipients of health care. The isolated rural areas usually experience difficulties in having healthcare providers and are even unable to afford health insurance utilized for healthcare needs is one of the healthcare problems identified. Rural health centers served as the primary care provider in areas where equality in health services is limited by various factors being on the ground and the first level of health care. Understanding the area's unique characteristics is a must especially for those who wants to apply public health principles to address a community needs. In this regard, it allows the community to interact and create a lasting positive impact on the whole population. School of Public Health, Tulane University, 2021 viewed public health nurses role to have better community but not limited to prevention and providing primary care services, disease prevention and control of further complication at the level of the community which includes vaccinations, health education and health monitoring as the basic functions. Health education that emphasizes health promotion on nutrition, injury prevention, and disease prevention and management, mental and psychological counseling is an essential function especially during the time of pandemic and some other related activities that may contribute to wellness of an individual and for the whole

community.

Public health nurses embedded their competencies in integrating their knowledge, skills, and judgment which attributes to the expected role of a public health nurse to serve with dedication and integrity. In relation with updated on public health nurses' competencies, the adaption of previous related literature was attained. Public health nurses' core competencies applied include clinical, home visits, and community-based services. Nurses' responsibilities include providing nursing care directly to a vulnerable populations, facilitating health promotion programs at all levels of prevention, intensive data collection and analysis, community work, planning of activities, outreach programs, systematic support, and other organizational duties and responsibilities. Understanding the foundation of public health, applying nursing theories into practice and developing evidenced-based research when developing policies and programs, and engaging with academic partnerships among clientele was the highlight of the public health science skills.

Public health nurse core competencies depicting performance creatively includes the use the evidence-based practices and factors affecting public health and nursing practice which includes health promotion programs and activities planning and disease prevention and control interventions for individuals, families, and community. Public health and nursing practice in the community utilized mastery of public health in the planning of public health nursing programs and practice environments which was included in the core competencies. In addition, the determination of the measures and ways to provision of clean, sustainable water, sanitation, food, air, and energy quality on individual, family, and community health. To reduce the risk for natural and environmental injury, hazards and threats to individuals, families, and populations were assessed. Community engagements that support the provision of clean, sustainable water, sanitation, food, air, and energy were maximized. Community hazards and threats and the risk of natural and environmental injuries were identified. Organizational programs and activities that secure access to clean water, sanitation, food, air, and energy quality of the community were emphasized. Interventions that address hazards and threats to communities and reduce natural and environmental risks were prepared.

Evidenced-based practice in community-level programs to contribute to meeting core public health functions and the ten essential public health services was applied. The benefits of evidence-based practice in community-level programs in achieving core public health functions and the ten essential public health services were analyzed. The organization's contribution in attaining the core public health functions and the ten essential public health services using epidemiology and other methods were appraised. Public health nurses who participated in research studies influenced the health of the community. They supported studies across different nursing disciplines in relation to public health priorities and community-focused management. Various research programs within the health facility were holistically supported by any means. The outcome of evidenced-based study was effectively maximized and applied. Guidelines and policies are based on current research and evidence-based practice.

Added to these, is the formulation of family nursing diagnosis and the implementation and evaluation of the successful implementation of the activities carried out in the implementation of family nursing care based on the performance model of public health nurses were among the stages of nursing assessment formulation. The emphasis of NRC-based family nursing care is the process of nurse interaction among the self, other colleagues, and family as well. Nurses' personal interaction can test their personal preparedness and self-regulation in rendering nursing management. Gunther (2001) explains that there is a need to have self-awareness in every decision-making. Nurses confidence level affects their readiness in performing their duties and responsibilities as supported by the study of Slameto, (2010) stating that physical factors, mental, emotional, knowledge, skills, needs, motives and goals influenced the readiness at the workplace. In addition, it was also proven by Putra Mahendra's study (2015) that self-confidence affects nurses' preparedness in working. Personal and interpersonal interaction of nurses should be performed especially on community-focused care. Interpersonal interaction is the cooperation built by nurses with other nurses, clients, and families. It involves communication, transactions, roles, and stress according to King, in Gonzalo, (2011). Therapeutic relationship was developed by applying

nurse interpersonal communication skills wherein patients recognized being cared for and valued by nurses. The client's behavior in implementing nursing orders was influenced by interpersonal communication as a tool utilized by nurses. Change in behavior process in goal attainment theory is a transaction process. Whenever nurses interact with clients, relatives' perceptions will arise as a response to the action. Individuals, families, and communities have different perceptions of the nurse that may be taken into consideration for their actions. Consideration of nurses' and clients' actions was revealed when patients and relatives initiate assistance to learn to do independent nursing care at home as they established a sense of trust from positive perceptions. Positive perceptions of nurses influenced patients to solve health problems independently. The reaction becomes an interaction between nurses, clients, and families and builds collaborative nursing interventions to solve problems and attain goals to improve the quality of family nursing care (King, in Gonzalo, 2011).

Public health nurses being at the forefront of the services expanded their role which included all the activities and set strategies in the total implementation of primary community health care. The duties and responsibilities of public health professionals during the health crisis were identified by public health nurses in coordination with other healthcare professionals. Their function includes but is not limited to the provision of health education and promotion on COVID-19 and non-pharmaceutical interventions, reassuring the community that fears are acceptable but that panic should be avoided or even lessened, offering and provision of flu vaccine and other related vaccines available, providing health, suggesting to local government unit to reassess and develop emergency operations plans in handling unexpected health crisis, ensuring partnership with key stakeholders to help support COVID-19 preparation efforts, reviewing national guidance and considering the needs of employees and vulnerable populations in communities. A highly vulnerable population became the priority where their participation was in developing plans to support homeless individuals. Public health nurses are defense frontliners in the war against the coronavirus disease as they rendered care beyond the ideal healthcare settings. As a healthcare professional, public health nurses exhibited various roles such as supervisor of teams which focused on developing community-centered healthcare services, outpatient clinic manager, community health coordinator, emergency management and program planning manager, spokesperson of health education programs, maternal and child public health nursing programs manager and all other aspects of care implemented in the community level.

### *2.1 Theoretical Framework*

When competencies and performance of nurses are discussed, the theory of Faye Abdellah is cited. According to her "Nursing is performed based on art and science that nurtures the nurse towards positive attitudes, intellectual competencies, and technical skills towards desire, ability and the goal to help and support people, sick or well to cope with their health needs." (Abdellah, 2018). Also, the patient-centered approach to nursing is one identified in Abdellah's practice, and which is considers and elaborates a human needs theory which depicts the Nursing competencies and performance, further, is formulated to be an instrument for nursing education applied in the Clinical setting. In her 21 problem solving model, it has been discussed the needed competencies on quality professional nursing care requires that nurses be able to identify and solve overt and covert nursing problems. To maintain good hygiene and physical comfort. To promote optimal activity and address physiological needs. To promote safety by preventing accidents, injuries, or other trauma and preventing the spread of infection. To maintain good body mechanics and prevent and correct the deformity. To facilitate the maintenance of a supply of oxygen to all body cells. To facilitate the provide proper nutrition for all body cells, to facilitate the maintenance of elimination. To facilitate the maintenance of fluid and electrolyte balance and to recognize the physiologic responses of the body to disease conditions pathologic, physiologic, and compensatory. Also, it mentioned the significant competencies on facilitating the maintenance of regulatory mechanisms and functions and the maintenance of sensory function, identifying and accepting expressions whether it is positive or negative, feelings, and reactions as well as the interrelatedness of emotions and organic illness, ensuring the maintenance of effective verbal and nonverbal communication, promoting productive interpersonal relationships development, initiating advancement and surveillance of progress toward attaining personal and spiritual goals,

sustaining a therapeutic environment, maximizing awareness of self as an individual with varying physical, emotional, psychological and developmental needs, accepting the highest possible goals in the consideration of limitations, physical and emotional, utilization of community resources as an aid in resolving problems that arise from an illness and understanding the role of social problems as influencing factors in the cause of illness.

### 3. Methods

**Research Design** - The research utilized a cross-sectional descriptive quantitative design through a self-made questionnaire to determine the competencies and performance of public health nurses during the COVID-19 pandemic. In this descriptive quantitative research, the researcher collected the quantifiable data for analysis as described by a population in the locale of the study.

**Participants** - The researcher selected subject respondents through purposive random sampling of public health nurses from selected localities of Batangas Province including nurses under the Nurse Deployment Program of the Department of Health. The study was participated by 180 public health nurses who had been actively participating and dispensing care to clients in the community and public health setting. The sample size was determined based on the population of public health nurses in 34 municipalities of Batangas province in which each municipality had an average of two public health nurses and a minimum of seven deployed Department of Health nurses.

**Research Instrument** - A self-made questionnaire was utilized and designed specifically for the above-cited study as the essential tool for gathering data. It was influenced by the related literature and related studies gathered by the researcher. The questionnaire consisted of 3 parts. The first part was the demographical profile of respondents. The second part was about the issues and challenges met by the Public Health Nurses (PHN) in the performance of their duty during the pandemic including transportation, logistics, and, physiological threats such as professional stress, fear of getting infected by COVID-19, and feeling of helplessness. The third part was the level of competencies of PHN in relation to cognitive, skills, and affective domains of nursing and the performance of the PHN in the delivery of their services in relation to COVID-19 which included nursing policies, guidelines, and principles. Also, the study aimed to determine the significant difference in competencies and performance of public health nurses during the COVID-19 pandemic. With the said study, the researcher identified strategies that will to the enhanced delivery of services among COVID-19 patients and to some other similar cases.

**Validation of Research Instruments** - The researcher developed questionnaires as the tool for data gathering to support ideas from the respondents that were identified and showed a willingness to take part and met the requirements of the study. For checking and reviewing, the researcher consulted the research adviser for comments, suggestions, and further corrections or modifications if necessary. The first draft of the research paper was submitted to the research adviser for review. All comments and suggestions were accepted. These provided feedback on the manuscript in the form of comments and revisions. Thereafter, the researcher conducted a pilot test among 20 respondents who were not included in the actual survey and were sent to a statistician for a reliability test. The Cronbach's Alpha score was 0.967 interpreted as excellent for computing and analyzing the results to assess the reliability and feasibility of the said questionnaire.

| Indicators                                                                                     | Cronbach Alpha | Remarks   |
|------------------------------------------------------------------------------------------------|----------------|-----------|
| Issues encountered by public health nurses in the performance of duties during COVID-19        | 0.957          | Excellent |
| Challenges encountered by public health nurses during the performance of duty during COVID- 19 | 0.919          | Excellent |
| Cognitive Competencies                                                                         | 0.943          | Excellent |
| Psychomotor Competencies                                                                       | 0.957          | Excellent |
| Affective Competencies                                                                         | 0.950          | Excellent |

George and Mallery (2003) provide the following rules of thumb: “\_ > .9 – Excellent, \_ > .8 – Good, \_ > .7 – Acceptable, \_ > .6 – Questionable, \_ > .5 – Poor, and \_ < .5 – Unacceptable”

**Data Gathering Procedures** - Due to the restriction brought by the pandemic while safety precautions and health protocol requirements were observed and implemented, the researcher collected the data through Google Forms. It was disseminated to the respondents through the use of social media. The purpose of the study was discussed with the respondents in detail. Respondents were assisted whenever there were queries or concerns that needed to be addressed. Responses for the questionnaires were immediately consolidated and subjected to analysis for interpretation.

**Data Analysis** - The researcher used the following statistical tools in interpreting and analyzing the gathered data: **Frequency and Percentage Distribution**. This statistical analysis determined the tally of participants who answered for a certain item on the questionnaire. This assisted the researcher in determining the mean of each item on the questionnaire. **Weighted Arithmetic Mean**. It was applied to determine the average value of the answers of each respondent on each item considering the weight for each answer. This provided the numerical significance of each item on the questionnaire. The weightings are to give a numerical value and the importance of each item in the questionnaire would give a descriptive rating. The computed weighted mean for all the responses of the respondents was given a class interval and an equivalent verbal interpretation. The Likert Scale served as the options offered to the response which corresponds to the following:

| Weight | Class Interval | Verbal Interpretation |
|--------|----------------|-----------------------|
| 4      | 3.5-4.0        | Highly Identified     |
| 3      | 2.5-3.49       | Moderately Identified |
| 2      | 1.5-2.49       | Fairly Identified     |
| 1      | 1.0-1.49       | Not Identified        |

**Ranking** - This helped to decide which items on the table were the lowest, highest, and in between. It was used for making it easier for researchers and readers of the study to determine which among the questions on the list of questions were the most and the least important.

**Ethical Considerations** - In the study, a list of ethical considerations was observed to maintain and protect the rights of the participants. First, the researcher solicited a consent from the respondents before allowing them to fully engage in the study. The study was submitted and evaluated by Lyceum of the Philippines University – Batangas – Research Ethics Review Committee. The following ethical principles were observed in this research: To follow the ethics of full disclosure, all the necessary information including the study’s purpose, objectives, and benefits to the researchers, respondents, and the university was embedded in the informed consent. Respondents will be informed that their participation in the study is completely voluntary and that they have the choice to withdraw at any time. Compliance with the Data Privacy Act was guaranteed throughout the process of the study to safeguard the privacy of the participants. None of the information provided will be made public in any way that may be used to identify the respondents, and the data will be secured and accessible only by the researchers and approved personnel. The researchers ensured to provide a pressure-free environment to allow the participants to give their responses freely. Throughout the data collection and analysis phase, the confidentiality of respondents was maintained. The value of beneficence was always considered, observed, and employed in the conduct, performance, and output of the study. This guaranteed that all data were reported honestly and that the responses of the respondents were not altered or manipulated to meet particular predictions or interests. This helped the researchers ensure that accurate and reliable data were delivered throughout the study.

#### 4. Results and Discussions

Table 1 presents the assessment on the issues encountered by public health nurses in the performance of duties during COVID-19. The composite mean of 3.08 indicated that the respondents moderately identified the issues in general. All items were rated strongly agree and social stigma felt by confirmed COVID-19 patients which defy in the participation to health care protocols, physiological threats such as professional stress, fear of getting infected by COVID-19, and feeling of helplessness and logistical problems arising in the community including personal protective equipment and first aid supplies got the highest mean score 3.43, 3.41 and 3.33 respectively.



**Table 1***Issues encountered by the public health nurses in the performance of duties during COVID-19*

| Indicators                                                                                                                                                      | Weighted Mean | Verbal Interpretation  | Rank |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------|------|
| Lack of transportation to carry out information dissemination and advocacy                                                                                      | 2.90          | Moderately Encountered | 7    |
| Unknown level of understanding of the community members to assimilate the conveyed instructions regarding COVID-19 and the preventive activities to be complied | 3.26          | Moderately Encountered |      |
| Lack of staff to monitor and evaluate the effectiveness of COVID-19 activities on prevention and control                                                        | 2.93          | Moderately Encountered | 6    |
| Lack of engagement of other key stakeholders to support COVID-19 preparation efforts                                                                            | 2.94          | Moderately Encountered | 5    |
| Lack of time and opportunity to review institutions compliance with mandatory guidelines of Department of Health including service delivery network             | 2.86          | Moderately Encountered | 9    |
| Lack of strategies on how to support the needs of employees and the community                                                                                   | 2.87          | Moderately Encountered | 8    |
| Lack of knowledge in developing plans to support homeless individuals and highly vulnerable population                                                          | 2.82          | Moderately Encountered | 10   |
| Physiological threats such as professional stress, fear of getting infected by COVID-19 and feeling of helplessness                                             | 3.41          | Moderately Encountered | 2    |
| Social stigma felt by confirmed COVID-19 patients which defy in the participation to health care protocols                                                      | 3.43          | Moderately Encountered | 1    |
| Logistical problems arising in the community including personal protective equipment and first aid supplies                                                     | 3.33          | Moderately Encountered | 3    |
| Composite Mean                                                                                                                                                  | 3.08          | Moderately Encountered |      |

Legend: 3.50 – 4.00 = Highly Identified; 2.50 – 3.49 = Moderately Identified; 1.50 – 2.49 = Fairly Identified 1.00 - 1.49 = Not Identified

Meanwhile, lack of strategies on how to support the needs of employees and the community (2.87), a lack of time and opportunity to review institutions' compliance with mandatory guidelines of the Department of Health including service delivery network (2.86) and lack of knowledge in developing plans to support homeless individuals and highly vulnerable population (2.82) were rated the least. The article of World Health Organization (WHO) entitled "The impact of COVID-19 on mental health cannot be taken lightly because it stated that" it justifies that the mental health of most people and especially COVID-19 patients have been reported to have psychological distress and anxiety, depression, and post-traumatic stress. This correlates with the result of the survey in Table 2 wherein the highest weighted mean was the social stigma felt by confirmed COVID-19 patients. In addition to this, WHO also recommended preparing for public health emergencies since the COVID-19 pandemic may result in a lot of post-traumatic health consequences.

**Table 2***Challenges encountered by public health nurses during the performance of duty during COVID-19*

| Indicators                                                                               | Weighted Mean | Verbal Interpretation  | Rank |
|------------------------------------------------------------------------------------------|---------------|------------------------|------|
| We lack appreciation from colleagues that caused psychological pressure                  | 2.77          | Moderately Encountered | 10   |
| We work with extreme fear and risk of infection risking our lives                        | 3.41          | Moderately Encountered | 1    |
| We lack appreciation from our patients                                                   | 2.88          | Moderately Encountered | 9    |
| We (nurses) are always ignored and underpaid in this country                             | 3.23          | Moderately Encountered | 2    |
| We are trying to cope and extend services due lack of staff                              | 3.12          | Moderately Encountered | 5    |
| We experienced difficulty of monitoring due to various locations of isolation facilities | 3.03          | Moderately Encountered | 6    |
| We were challenged by politically motivated actions during COVID-19 pandemic             | 3.03          | Moderately Encountered | 7    |
| We are with the patients experiencing anxiety and depression and sometimes nightmares    | 3.14          | Moderately Encountered | 4    |
| We engaged in scenarios leading to cross contamination                                   | 3.02          | Moderately Encountered | 8    |
| We have time constraints for reporting and advocacy                                      | 3.16          | Moderately Encountered | 3    |
| Composite Mean                                                                           | 3.08          | Moderately Encountered |      |

Legend: 3.50 – 4.00 = Highly Identified; 2.50 – 3.49 = Moderately Identified; 1.50 – 2.49 = Fairly Identified 1.00 - 1.49 = Not Identified

Shown in Table 2 is the summary of the weighted arithmetic mean of the questions answered by the

respondents on the challenges that they have encountered during their duties amidst the global pandemic of COVID-19. It can be observed from the table that most respondents worked with extreme fear that they might acquire the infection which was a risk to their lives with a weighted mean of 3.41. In addition to risking their lives while working, the respondents feel that they are underpaid and most of the time ignored by our country and the government obtaining the second-highest weighted mean of 3.23. Lastly, the workplace of all the respondents seems to be healthy which obtained the lowest weighted mean of 2.77 which indicated that the nurses do not feel unappreciated by their colleagues that decrease the chance of affecting their mental health.

According to the article of “Fear of Nurses During COVID-19 Pandemic in Saudi Arabia: A Cross-Sectional Assessment” in October 2021, mentioned that nurses that have a demographic profile of women, married, and older age tend to be more frightened during the pandemic due to fear, stress, and overthinking of worst case scenarios that might happen to them once they have been infected with the virus. This justified that not only does the public health nurses in the Philippines were frightened during the pandemic but also nurses from around the world and especially in Saudi Arabia as discussed in the article. The level of fear of being a normal citizen to the virus is already at an alarming level and most especially to our front liners during the pandemic.

**Table 3**

*Issues and Challenges encountered by public health nurses during the performance of duty in COVID- 19*

| Indicators     | Weighted Mean | Verbal Interpretation  | Rank |
|----------------|---------------|------------------------|------|
| 1. Issues      | 3.08          | Moderately Encountered | 1.5  |
| 2. Challenges  | 3.08          | Moderately Encountered | 1.5  |
| Composite Mean | 3.08          | Moderately Encountered |      |

Legend: 3.50 – 4.00 = Highly Identified; 2.50 – 3.49 = Moderately Identified; 1.50 – 2.49 = Fairly Identified 1.00 - 1.49 = Not Identified

Shown in Table 3 is the summary of the composite mean for the issues and challenges that Public Health Nurses encountered during their duties in the COVID-19 Pandemic. It can be observed that both the issues and challenges obtained a composite mean of 3.08 which obtained a verbal interpretation of Moderately Identified which indicated that there were some alarming issues and challenges that most nurses encountered during the pandemic.

**Table 4**

*Level of Competency of PHNs in Relation to Cognitive Domain of Nursing Responsibilities*

| As public health nurse, I have the KNOWLEDGE, understanding and know how on the following: | Weighted Mean | Verbal Interpretation | Rank |
|--------------------------------------------------------------------------------------------|---------------|-----------------------|------|
| Policies and guidelines on IATF and DOH protocols                                          | 3.38          | Moderately Competent  | 9    |
| Hand washing principles and concept                                                        | 3.61          | Highly Competent      | 1    |
| Mask utilization and different types of mask specific for COVID-19                         | 3.47          | Moderately Competent  | 6    |
| Social distancing of at least one meter away from each other                               | 3.49          | Moderately Competent  | 5    |
| Principles of isolation techniques and Precautionary measure                               | 3.46          | Moderately Competent  | 7.5  |
| Vaccination principles and concepts                                                        | 3.58          | Highly Competent      | 3    |
| Principles and concepts or recording and reporting                                         | 3.52          | Highly Competent      | 4    |
| Principles of contact tracing                                                              | 3.59          | Highly Competent      | 2    |
| Dietary management among COVID-19 patients                                                 | 3.37          | Moderately Competent  | 10   |
| Concepts and management of medications, vitamin supplementations and exercise              | 3.46          | Moderately Competent  | 7.5  |
| Composite Mean                                                                             | 3.49          | Moderately Competent  |      |

Legend: 3.50 – 4.00 = Highly Competent; 2.50 – 3.49 = Moderately Competent; 1.50 – 2.49 = Fairly Competent 1.00 - 1.49 = Not Competent

Presented in Table 4 is the level of competency of Public Health Nurses in relation to the Cognitive Domain of their Nursing responsibilities with the Hand Washing Principles and Concepts together with the Principles of Contact Tracing that obtained a weighted mean of 3.61 and 3.59 respectively which means that both of these two lessons and concept learned during the pandemic was retained by the respondents which had a huge effect during the COVID-19 Pandemic era which helped prevent the spread of the virus to other people. On the other hand, the least weighted mean obtained a value of 3.37 with the concept of Dietary Management among COVID-19 patients since COVID-19 patients tend to eat a lot more to regain their health. The Dietary Management of

COVID-19 patients was the least of their concerns according to the respondents while working during the pandemic era.

**Table 5**

*Level of Competency of PHN's in Relation to Psychomotor Domain of Nursing Responsibilities*

| As public health nurse, I have the SKILLS on the following:                                                                                | WM   | Verbal Interpretation | Rank |
|--------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------|------|
| 1.Implementation and application of policies and guidelines on IATF and DOH Protocols                                                      | 3.37 | Moderately Competent  | 9    |
| 2. Hand washing demonstration, mentoring and coaching                                                                                      | 3.43 | Moderately Competent  | 4.5  |
| 3.Mask utilization as to different types specific for the patient classification such as suspect, probable and confirmed COVID-19 patients | 3.43 | Moderately Competent  | 4.5  |
| 4.Social distancing implementation and monitoring of at least one meter away from each other in and out among household members            | 3.42 | Moderately Competent  | 6    |
| 5.Application of the isolation techniques and Precautionary measures depending on the severity of illness                                  | 3.39 | Moderately Competent  | 8    |
| 6.Recording, reporting ad records keeping of patients afflicted by COVID-19 virus                                                          | 3.51 | Highly Competent      | 3    |
| 7.Contact tracing                                                                                                                          | 3.54 | Highly Competent      | 2    |
| 8.Dietary and vitamin supplementations among COVID-19 patients                                                                             | 3.33 | Moderately Competent  | 10   |
| 9.Medications preparation and administration                                                                                               | 3.40 | Moderately Competent  | 7    |
| 10.Health education                                                                                                                        | 3.55 | Highly Competent      | 1    |
| Composite Mean                                                                                                                             | 3.44 | Moderately Competent  |      |

Presented in Table 5 are the level of competency of Public Health Nurses in relation to the Psychomotor Domain of their Nursing responsibilities with the Health Education, Contact Tracing, and Recording, reporting, and records keeping of patients afflicted by COVID-19 virus obtaining one of the highest weighted means of 3.55, 3.54 and 3.51 respectively. The results of Table 5 and Table 6 complement each other since for a public health nurse to know a concept must have the same significant skill in applying it in the actual event with a weighted mean of 3.33.

**Table 6**

*Level of Competency of PHN's in Relation to Affective Domain of Nursing Responsibilities*

| As public health nurse, I have the ATTITUDES towards patients manifested as: | Weighted Mean | Verbal Interpretation | Rank |
|------------------------------------------------------------------------------|---------------|-----------------------|------|
| Professional                                                                 | 3.87          | Highly Competent      | 1    |
| Compliant                                                                    | 3.57          | Highly Competent      | 10   |
| Positive approach                                                            | 3.71          | Highly Competent      | 8    |
| Supportive to clients needs                                                  | 3.63          | Highly Competent      | 9    |
| Participative in health care activities                                      | 3.79          | Highly Competent      | 4    |
| Respect to human dignity                                                     | 3.81          | Highly Competent      | 3    |
| Compassionate in dealing with clients                                        | 3.76          | Highly Competent      | 6    |
| Sound accountability in all my undertakings                                  | 3.74          | Highly Competent      | 7    |
| Fairness as I promote equal opportunity in delivering care                   | 3.77          | Highly Competent      | 5    |
| Commitment my work                                                           | 3.84          | Highly Competent      | 2    |
| Composite Mean                                                               | 3.75          | Highly Competent      |      |

Presented in Table 6 are the level of competency of Public Health Nurses in relation to the Affective Domain of their Nursing responsibilities with Professionalism and Commitment to my work gained the highest weighted mean with a numerical value of 3.87 and 3.84 respectively. This showed how serious and the dedication of the public health nurses were to the commitment and vows they made to serve the patients with utmost care which not only means that it was not only part of their work but a sign of their passion as well. Being compliant to the patients obtained the least weighted mean with a value of 3.57 which means that even though nurses have high commitment and respect towards the patients, self-care, and respect for themselves were assured when not treated right.

Shown in Table 7 is the summary of the composite mean for the Level of Competency of Public Health Nurses towards their responsibilities during their duties in the COVID-19 Pandemic. It can be observed that the Affective Domain obtained the highest composite mean with a 3.75 value which indicated how effective and

passionate were the respondents towards their duties and responsibilities to their patients. Furthermore, the Cognitive and Psychomotor Domain had a close composite mean with a value of 3.49 and 3.44 respectively which means that both the conceptual and actual experience that the nurses had during the pandemic were retained in their knowledge that will further be applied as the needs arise.

**Table 7**

*Summary Table on Level of Competency of PHN*

| Indicators     | Weighted Mean | Verbal Interpretation | Rank |
|----------------|---------------|-----------------------|------|
| Cognitive      | 3.49          | Moderately Competent  | 2    |
| Psychomotor    | 3.44          | Moderately Competent  | 3    |
| Affective      | 3.75          | Highly Competent      | 1    |
| Composite Mean | 3.56          | Highly Competent      |      |

**Table 8**

*Relationship Between Issues and Challenges encountered by public health nurses during the performance of duty during COVID- 19 and the Level of Competency of PHN*

| Issues            | rho-value | p-value | Interpretation     |
|-------------------|-----------|---------|--------------------|
| Cognitive         | 0.130     | 0.082   | Not Significant    |
| Psychomotor       | 0.071     | 0.342   | Not Significant    |
| Affective         | 0.245**   | 0.001   | Highly Significant |
| <b>Challenges</b> |           |         |                    |
| Cognitive         | 0.245**   | 0.001   | Highly Significant |
| Psychomotor       | 0.267**   | 0.000   | Highly Significant |
| Affective         | 0.208**   | 0.005   | Significant        |

As seen from the result, there was a significant relationship between issues encountered by public health nurses during the performance of duty during COVID-19 and the level of competency of PHN. However, this was only observed on issues and level of competency in terms of affective. This means that the more issues they faced, the more that they were competent in the affective domain. Meanwhile, there was a significant relationship between the challenges encountered and the level of competency. The results implied that the more challenges, the more they were competent.

## 5. Conclusions

Public health nurses positively identified that they experienced the different issues from social stigma due to lack of knowledge to support their clients and less support in the preparation and resources.. The biggest challenge that the respondents encountered during the global pandemic was the fear of acquiring the disease and risking their lives since the public nurses were so exposed to the virus. Public health nurses also retained conceptual and actual experiences that they encountered in performing their duties during the pandemic enhancing their skill set for future use. The level of competency among the respondents had a significant difference when it comes to the age and total work experience of the nurses since the computed p-values were less than the alpha value. This means the nurses with an age bracket of 31-40 years old and working for 6-10 hours encountered greater issues and challenges. Meanwhile, there was no significant difference between the level of competency of the public health nurses and their demographic profile which indicated that they had the same level of competencies. Lastly, there was no significant difference between the cognitive and psychomotor levels of competencies of the nurses when grouped with the issues and challenges that they experienced. However, the issues and challenges had a significant relationship with the level of competency of the nurses in terms of affective which implied that the nurses were more competent when faced with more challenges and issues.

### 5.1 Recommendations

Master's Degree holders may attend seminars, updates and lectures that will lead to their professional growth and development. The health authorities must provide the necessary guidelines and policies on the

protection and security measures for frontline health workers to ensure their protection and safety. A program for the sustainable mental and psychological well-being of nurses should be prioritized through strategic analysis of the situation to further safeguard the interest of the nurses. A program for competency enhancement in handling Infectious cases shall be designed and implemented for the welfare of the clients and community. Further, the proposed framework that shows the skill enhancement should be adopted by the community or public practicing nurses to set the direction of competency enhancement as part of their expanded role in the performance of Public Health Nursing.

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