

## Shortage of Nurses: A Challenge to Health Care Setting

Jomarie Artificion, Dianne Guce, Catherine Ilagan  
Dr. Leonila M. Adarlo<sup>1</sup>  
College of Nursing, Lyceum of the Philippines University Batangas  
[lmadarlo@lpubatangas.edu.ph](mailto:lmadarlo@lpubatangas.edu.ph)<sup>1</sup>

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**Abstract** – *The roles of nurses are becoming more visible, appreciated, and addressed during times of scarcity. A nursing shortage occurs when the demand for competent nursing professionals exceeds the supply of qualified nurses. This study aimed to determine the impact of nursing shortage to healthcare setting in Batangas province, identify effects on the care rendered to client and to propose measures that lessen the impact of nursing shortage. A quantitative-descriptive research design was utilized to describe the effects of nursing shortage in the health care settings. A questionnaire was used among the two hundred forty-three (243) registered nurses working in fulltime private hospitals in Batangas province. The answers provided were tallied, tabulated and analyzed with the use of weighted mean. The entire indicators provided by the researchers were agreed by the respondents and having employment competition among hospitals nationwide got the highest weighted mean in the impact of nursing shortage to healthcare setting. Whereas, in effects of nursing shortage to care rendered to client, the increase of nurse-patient ratio got the highest weighted mean. Thus, the researchers concluded that nursing shortage greatly affects the employment nationwide. Nurses should be careful in their performance, inadequate nurse staffing leads to poor quality care given that it is a threat to face legal issue in nursing profession. Finally, the researchers recommended measures in lessening the impact of this shortage in Batangas health care setting.*

**Keywords** – *Challenges, health care setting, nursing shortage*

### INTRODUCTION

Nursing has always been used synonymously and interchangeably with caring and promoting comfort. Nurses are those who are responsible for maintaining and ensuring that the highest quality of care is rendered. However, the responsibilities and workload of nurses are not only limited to bedside care, but it is also far more complicated. They are in the front line, tending to the sick throughout the shift, counseling and educating patients, functioning as health advocates, manager, and supervisor. In their daily lives, nurses are faced and bombarded with tasks of improving and developing and strengthening professional competence and commitment. The challenge is that they are expected and required to highest maintain the highest of care despite these said tasks and responsibilities the nurses are carrying in their shoulders.

The roles of nurses are becoming more visible, appreciated, and addressed during times of scarcity. Even though nursing is one of the largest groups constituting health care professionals, nursing vacancy and shortage is still prevalent. A nursing shortage occurs when the demand for competent nursing professionals exceeds the supply of qualified nurses. Ironically, as the top exporter of Nurses in the world,

the health care setting in this country is still facing the challenge of this crisis. According to the record of the Philippine Regulation Commission, there are around 700, 000 Registered Nurses in the Philippines. The ideal nurse to patient ratio set by the Department of Health as 1:12 seems unattainable, despite this high number of Registered Nurses [1].

Nursing shortage and scarcity may seem like a simple supply and demand equation, but the actual cause and projected effects are much more complicated. This pattern is a persisting cycle of increased vacancies and a continuous decreasing supply of nurses. The effect of this crisis is multifaceted and has a domino effect. The burden of this crisis has a huge impact both on the health care receiver and the health care system. The immense decrease of employment and understaffing leads to stressful conditions and burden to those nurses who remained working on the field which then would lead to job exhaustion and decreased skilled nurses' retention. An unfortunate outcome and consequence of this crisis is that they become more short-handed, they are at higher risk for committing medical errors, putting safety and quality care at risk [2].

Hospitals started to struggle with the challenges brought about by the nursing shortage since

1998. Yet, in comparison with this crisis in the early 1990s, this issue was not resolved quickly; instead, it remained and continuously existed by 2002 as its fifth year. This worsens and progresses negatively as an outcome of economic, workplace, social and demographic factors that joint in the mid to late 1990s; these issues are described elsewhere. There was no origin for this crisis thus no answer was provided to resolve it. Healthcare facilities who are interested have concluded varying solutions to resolve factors arising from this crisis. As the strategy, employment and retention programs, the utilization of more short-term and traveling RN's aiming to increase staffing levels, float pools, developed relationships with local nursing education programs to hire more people into nursing, offered sign-on and varying hiring bonuses, and started to take significant steps to better the work environment of nurses [3]. Many predictions on registered nurses' supply and demand have been taken into an address in the past few years. It expected a national scarcity of almost one million RNs by 2030. Approximations of the supply and demand of health professionals are tools to supervise policy about how the world would be in the future. Dramatically heightened salary during the scarcity of nurses that occurred since the early 2000s attracted more people to pursue a nursing degree. Nursing schools expanded resulting in a double number of Nursing graduated between the years 2000-2010 [4].

This study is linked to the theory of Francis Aguilar's PESTLE analysis, which provided a foundation for analysis and exploration of strategies that healthcare may use to prevail in the nursing shortage. PESTEL analysis helps to determine all the different external factors that might affect the shortage. It will help to identify just how various factors influence the nurses' performance. Using PESTLE analysis, it aids to describe how healthcare system benefits opportunities and lessen risks and threats.

PESTLE analysis stands for political, economic, social, technological, environmental, and legal which serves as a framework for the study since it provides an assessment of the various factors that cause the problems in nursing shortage. Healthcare leaders will gain ideas that will help in addressing nursing shortages. Also, having enough nurses to efficiently do their jobs will make patients satisfied with the service and care given.

The shortage of Nurses has been long addressed for the past years. Challenges arise as the production of qualified nurses continues to decrease, which then leads to a low quality of care. As they are

bombarded with several workloads, nurses have several problems in terms of time management, quality of care, job satisfaction and job retention and many other challenges. Meanwhile, as almost all healthcare providers, they are expected and required to overcome these challenges as they are instilled with the fact that they are dealing with lives. Improvement of managerial aspects must be built to find appropriate measures suitable to compensate and cope up with the effects of a shortage of nurses. The researchers' interests are caught by the fact that this crisis is still prevalent today despite the high number of nursing graduates for the past years. And as for future nurses who might go through these situations in the future, the researchers wanted to explore this relevant topic and understand the measures to lessen the impact of nursing shortages. Identifying the contributory factors that lead to the shortage must be understood and addressed to devise appropriate solutions. These solutions are needed to be addressed as the effects of this crisis are worsening.

#### **OBJECTIVES OF THE STUDY**

This study aims to determine the shortage of nurses and a challenge to the healthcare setting. Specifically, it will identify the impact of nursing shortage to the healthcare setting; determine the effects of nursing shortage to the delivery of care to clients; determine the significant difference of respondents on the impact of nursing shortage in healthcare setting and effects of nursing shortage to care rendered to clients when surveyed accordingly to hospitals. Finally, develop measures that will lessen the impact of a nursing shortage in healthcare settings.

#### **MATERIALS AND METHODS**

##### **Research Design**

The investigation used was descriptive non-Experimental research design. This was utilized to be able to observe, describe and record parts of circumstances as it normally or naturally happens and to serve as the initial point for the conclusion of the study. This was an innovative tool in further understanding the causes and effects of the shortage of nurses on the quality of care provided as the participants move and act under normal and environment [5].

##### **Participants of the Study**

The study involved two hundred forty-three registered nurses working in fulltime private hospitals in Batangas province. A non-probability Quota Sampling method was used to focus on the

characteristics of a population of interest. The population was identified first, and the needed participants were determined. Registered Staff Nurses are knowledgeable enough about the issue and are best able to answer the prepared questionnaires and verbal questions. Their desired characteristics best served the need of the purpose of the study [5].

#### **Research Instruments**

A modified questionnaire was utilized in this study to help further assess the experiences of the target population and participants under study. It served as a guide in gathering vital data related to the study and its objectives. First part of the instrument identifies the impact of nursing shortage to the healthcare setting while the second part of the instrument is to determine the effects of nursing shortage to the delivery of care to client's Direct observation was also utilized to evaluate the validity and reliability of the data being collected in case some data would be manipulated by the participants [5].

#### **Data Gathering Procedure**

For the completion of this study, a review of the literature was done first to identify relevant references of information and data through journals, published reports, scholarly literature and the use of the internet and web to identify a problem the researchers wish to study. Then, the gathered related literature was identified and grouped per variable in line with the proposed objectives. An instrument was utilized through conceptualizing a modified questionnaire that was adopted from a source in the related literature. The questionnaire was composed of a set of questions that were vital in gathering relevant information that the participants can provide. These set of questions helped the researchers in determining the impact of a nursing shortage. The approved questionnaire was then disseminated among the target participants, which are the nurses working fulltime in the hospitals in Batangas province. The gathered data from the participants were comprehensively interpreted. The interpreted result was analyzed to come up with the proposed recommendation and conclusion of the study [5].

#### **Statistical Treatment of Data**

Each item answered by two hundred forty-three respondents on the questionnaire were promptly tallied and analyzed. Weighted mean and ranking were utilized in determining the most perceived impacts of a

nursing shortage in the health care setting, and the most experienced effects of it to care rendered to its client. Composite mean as well, determined the overall perception of respondents to a nursing shortage. For a more comprehensive analysis, ANOVA or analysis of variance was utilized.

#### **Ethical Considerations**

To protect the study participants and the organization that was involved the ethical aspect of the research was served and considered. The researchers were instilled with the principle that respect for the human dignity of the participants is the priority. Full consent containing the purpose of the study without any deception, disclosure, and concealment was obtained from the participants before the study. Discussion with the research was done with honesty and transparency. Voluntary participation was acknowledged. Moreover, the right of the participants to withdraw from the study if they wish to do so was also considered. The protection of confidentiality or anonymity of the individuals and organizations participating in the research was ensured as well.

#### **RESULTS AND DISCUSSION**

Table 1 presents the impact of a nursing shortage in the health care setting. The obtained composite means of 3.22 indicates that the respondents agreed on the impact of a nursing shortage. Nurses felt the degree of its effect on the quality of the care given to the patient, the shortages of health care workers nurses post a great risk of performing under care and commission of mistakes during the act of duty. Although these indicators are the least, it is still considered as a problem faced by nurse professionals.

Presently, employment propositions for enlisted medical caretakers are among the best 20 dynamic opportunities in the Philippines in comparison with the situation a couple of years back when RNs needed to pay emergency clinics or medical centers for "humanitarian effort." That fantasy of a superior paying activity proportionates to the staggering expense of getting a nursing degree and permit is approaching in the skyline, brilliant neon lights toward the part of the bargain, dull, burrow. Given the information from the Philippine Overseas Employment Agency (POEA) right around 19,000 attendants leave each year: an aggregate of 92,277 medical attendants have left the nation to work abroad since 2012 [6].

**Table 1. Impact of Nursing Shortage in Health Care Setting**

Indicators	WM	VI	Rank
1. Nurses need to work long hours to finish all the workload assigned beyond the expected time	3.13	Agree	12
2. There is an increased record of absences among staff due to over fatigue and burnout	3.37	Agree	3
3. Nurses become dissatisfied with their work thus resulted to decrease in performing the quality nursing task	3.16	Agree	11
4. Inadequate nurse staffing leads to poor quality care and becomes a threat to face legal issue in nursing profession	3.43	Agree	2
5. There is a delay in executing doctors order and other patient care	3.19	Agree	9.5
6. Nurses are subjected to risk in violence and exploitation in the work place such as suffering from insults, & verbal abuse	3.21	Agree	8
7. Shortage of nurses resulted to high turnover rate	3.31	Agree	6
8. Work environment become stressful and post conflicts among co-workers, patients and relatives	3.27	Agree	7
9. It posts decrease in physical stamina and emotional well-being among nurses	3.34	Agree	4
10. Provision of quality patient care is altered	3.31	Agree	5
11. Bioethical conscience of nurses is affected when performing the nursing duties and responsibilities	3.01	Agree	14
12. A high number of mortality and morbidity cases and failure to recover rates were recorded	2.87	Agree	15
13. Lack of development of mentoring relationship among novice and experienced nurses during probationary period	3.10	Agree	13
14. There is an employment competition among hospitals nationwide	3.44	Agree	1
15. It hinders nurse's opportunity to continue the higher education, professional growth and career development	3.19	Agree	9.5
<b>Composite Mean</b>	<b>3.22</b>	<b>Agree</b>	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

All items were rated agree, but there was an employment competition between hospitals nationwide got the highest weighted mean score of 3.44. This event simply means that respondents perceived that competition between hospitals in hiring nurses is evident and hospital administrations are doing their best, exerting all effort to attract nurses to work in their hospital. These outcomes have resulted in an industry of hospitals to have different approaches in hiring nurses. The demand for nurses nationwide leads various hospitals to offer higher benefits and competitive salaries to encourage more nurses in job applications. Moreover, even the government was open in hiring nurses to different government facilities and even in the community setting.

Following employment competition between hospitals nationwide is inadequate staff nurses leading to poor quality care and post threat among nurses to face legal issues in the nursing profession (3.43). Health care services are essential in various hospital settings to satisfy patients, and their significant others for the care provided in all aspects. The quality of health care rendered by nurses to patients is significant in the well-being of the patients. However, it is affected when there is a problem in nurse staffing that will lead to dissatisfaction among health care seekers, and it can also post danger to commit errors among nurses that can direct them to face legal issues for negligence. When the quality of care is altered, patients' perception of the health care services rendered becomes pessimistic and distrustful.

With this, nurses as the biggest health care workforce in the healthcare setting practiced with appropriate knowledge, skills, and expertise to care for different dynamic needs of patients. Performances of nurses are gauged on how they transcribe care to the

patient. Further, if care is not ideal, whether because of resource allocation (e.g., shortage in the workforce and required medical equipment) or lack of correct policies and standards, nurses were blamed and take all the responsibility even nurses are doing their best to provide quality care. This mirrors the ongoing misconception of the results of the numerous, difficult health care system and their work environment components. Complications of the work environment and having strategies in improving its outcomes is important to higher-quality, safer care. Reliable organizations that carry security and maximize on evidence-based practice make proper working conditions to nurses and are obligated to improving the security and quality of care. Health care services are given to clients in an environment with various interactions among many components, such as the disease process, clinicians, technology, rules, practices, and resources. When these various components relate, unsafe and unforeseen effects can exist [7].

The last item that most respondents agreed is an increased record of absences among staff due to over fatigue and burnout (3.37). The shortage of nurses affects the health condition of nurses by having long hours of work and being bombarded with workload thus, resulted to over fatigue and burnout. When nurses' health condition is affected, it can also affect nurse's ability to perform the assigned task for them. Burnout and fatigue can alter their ability to think, work and use good judgement. If their physical, mental, and social well-being is affected, it can post risk for inaccuracy in performing their duties.

Significant reasons for absenteeism were determined as well in the impact of the nursing shortage, which includes minor illness and fatigue identified with over-burden work. Low work

satisfaction, working beyond standard working hours, acute care works as well as working full time was determined to be related with the incrementing rates of absenteeism. Absenteeism among enlisted medical caretakers is a noteworthy worry for employers; it is costly and results in diminished gauges of care. Despite the global enthusiasm for and inquire about absenteeism, there is moderately scant information regarding its determinants. Absence was characterized as a time far from work barring occasions, strike, or cutback [8].

Also, work pressure and burnout stay remarkable issues in nursing, it affects both individuals and institutions. For nurses, despite whether the pressure is seen positively or negatively, the response of neuroendocrine allows physiologic responses that may importantly result to sickness. Absenteeism and turnover due to work pressure may result for health care institutions, these decrease the quality of health care. A crisis can be perceived mostly in hospitals. The demand for short term care services is growing simultaneously with changing career outlooks among possible health care workers and increasing shortcomings among existing hospital staff. Changing the poor work environment into a positive workplace, researchers and head nurses think that changes to improve can be realized in employment and retention of nurses, job compensation to health care staff and patient outcomes specifically the security of patients [7].

However, items such as lack of development of a mentoring relationship between novice and experienced nurses during a probationary period garnered a mean of 3.10. Results revealed that among the least indicators, mentoring relationship is considered essential in the development of novice nurses' ability to become proficient in the practice of the profession. As a beginner in the nursing profession, even though they were nurses by profession, novice nurses are still in need of mentoring and training to achieve competencies needed in providing quality care among its clientele.

A study proposes that tormenting and bullying are an underlying impact of new nurses departing their units that can intensify and aggravate the nursing shortage. As a convincing process to address worsening in the perioperative setting, training benefits the nursing profession. Mentoring can affect nurses' service in a health care organization, by making the nursing workforce better. Magnet-designated clinics help in the importance of coach mentee relations for good maintenance of nursing retention. A standout amongst the most significant role of a mentor is to be a

guide and pose as a good example. Setting up a culture of tutoring requires credible initiative, real thinking about workers, and open correspondence. The whole nursing profession profits by a culture of coaching, as do the patients and families who receive the care. Training can impact nurses' longevity in a health care organization, thereby strengthening the nursing workforce. Magnet-designated medical clinics support the significance of coach mentee connections for positive maintenance of nursing retention. A standout amongst the most significant role of a mentor is to be a guide and pose as a good example. Setting up a culture of tutoring requires credible initiative, real thinking about workers, and open correlation. The profession of nursing benefits from a culture of training, as well as patients and families who get the care [9].

The bioethical conscience of nurses is affected when performing the nursing duties and responsibilities (3.01). Nurses are guided by an ethical principle in the practice of the profession as well as the RA 9173, otherwise known as Philippine nursing Law. These two important elements serve as the bible of nurse and guiding principle in the practice of the nursing profession. Ethics is considered as a basic component of all healthcare professions also nursing. Consequently, it has a central job in nurses' ethical conduct toward patients, which firmly impacts on patients' wellbeing improvement. However, these days, healthcare settings are evolving quickly. Along these lines, nurses are confronting moral difficulties in healthcare that put them at risk for ethical conflicts. Although gathering the requirements of professional ethics in patients' care is essential, studies uncovered that the guidelines of professional ethics are not seen in nursing practices [10].

Last among the indicators is the recorded high number of mortality and morbidity cases and failure to recover rates (2.87) obtaining the lowest mean score and rated the least among the mentioned indicators. Although this item is the least among the indicators, it is still alarming that the quality of care provided suffers due to a lack of competent and regular staff. This result is related to the kind of care provided to the client; the quality suffers when there is a great deal of clients catered under the nurses' care, especially if the patients outnumbered an appropriate nurse-patient ratio.

It was found that missed nursing care, which is profoundly related to nurse staffing may be a critical indicator of patient mortality following surgery. Variety in post-operative mortality rates has been related with contrast in registered nurse staffing levels. It is associated with increased chances of patients dying

in hospital after common surgical strategies. When nurse staffing levels are lower, there is a higher frequency of incidence of missed nursing care. The analyses support the speculation that missed nursing care intercedes the relationship between registered staffing and the risk of patient mortality. Measuring

missed care may give an 'early warning' marker of higher risk for poor patient outcomes [11]. Hence, an unfortunate outcome and consequence of this crisis is nurses become more short-handed, and a chance of committing medical errors, thus putting client safety at stake and the quality at risk due to the shortage [2].

**Table 2. Effects of Nursing Shortage to Care Rendered to Client**

Indicators	WM	VI	Rank
1. There is an increase of nurse-patient ratio	3.49	Agree	1
2. Patient's complaints increase due to limited attention given by nurses	2.89	Agree	8
3. Nurses' inability to respond immediately on the patient's call because of too much workload	3.33	Agree	2
4. Increased patient wait time in the completion of nursing procedure and tests	3.28	Agree	3
5. It affects nurse-patient relationship and lessen interaction with the client	3.27	Agree	4
6. It Increase chances of committing medication error and dose miscalculation	3.11	Agree	5
7. Fails to closely monitor the patient's condition in accordance with the physician's order	3.09	Agree	6
8. Less time to do health teaching to client	2.77	Agree	9
9. Lack of time to explain patient's diagnosis, treatment, procedure and prognosis of illness	3.07	Agree	7
10. Nurses fail to perform task assigned on time	2.70	Agree	10
<b>Composite Mean</b>	<b>3.10</b>	<b>Agree</b>	

*Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree*

Based on the results, it can be gleaned that in table 2, it relatively shows the effects of a nursing shortage to care rendered to clients with the obtained composite mean of 3.10 indicating that the respondents agree on the presented effects and all items were rated agreed by the respondents. Nurses are a vital part of health care. They oversee administering medications, providing health education to patients, promoting health, giving daily needs of patients and other responsibilities that require nursing skills. However, these activities agitated when there is a shortage on the number of nurses who will perform the nursing care to the patients. Nurse-patient interaction is reduced when nurses are bombarded with a workload that is caused by a shortage of nurses. Interacting with patients allows the accumulation of information needed in health care. Also, it enables the development of establishing rapport with nurses.

Deteriorating fundamental personnel supply specifically, of the Registered Nurses, is viewed as a major stressor for medical clinics. This struggle of deficient nurses started in 1998. A developing collection of research, considering state and medical clinic regulatory information, has built up a connection between lacking nurse staffing and expanded risk of unfavorable patient results. Drawn out deficiencies likewise may lessen the amount of patient consideration and decline the productivity and viability of consideration gave [12].

Among the highest mean obtained that affects the provision of care by nurses are as follows; an increase nurse-patient ratio (3.49). Those mentioned indicators have a direct effect on the services rendered by nurses among their patients, the care that should be provided to the clients was sometimes delayed especially if more clients are catered beyond the expected and accepted number of patients per nurse. Nurses are performing several tasks and ensure that quality care is not at stake however, these nursing interventions are disturbed when accurate staffing ratios are not met. To be able to achieve standard nursing care, health care institutions must follow the desirable nurse-patient ratio.

In a high level of staffing, a great number of nurses are available for assigned patients. On the contrary, low staffing is known as few nurses accessible for the number of appointed patients. When there is a high level of nurses, it will reduce the number of hospital mortality. Patients were 14 percent less probable to encounter hospital mortality for every increase of one nurse. Also, a client has a lesser chance of having a negative occurrence in units with a high nurse-patient ratio. This fact has significant signs for clinical practice and improvement of patient outcomes. Furthermore, it is also important to include the skill combine within an intensive care unit specifically when fixing shifts of staff [13].

The inappropriate nurse-patient ratio is relatively related also to the delayed response of nurses

to patients' calls. Answering the call of the patients is vulnerable since it is used to promptly communicate with the patient's needs to the nurse. When nurses are short-staffed, the workload for the attending nurse is increased, and the ability of nurses to answer immediately on the patient's call. This alteration influences the patient's satisfaction and quality of response.

Likewise, emergency medical response services were the choice of response for most of the average and high risk calls the same caller types. Older adult callers preferably demand non-emergency medical service responders in average emergent situations. By evaluating the quantity of spoken words per minute and turn-length-in-words for the initially spoken utterance of a call, older adult and healthcare provider callers could be determined with average accuracy. Moderate call, taker answer was measured using the number of speakers turns and time in seconds measures. Healthcare providers and older adults utilized various communication techniques when answering call takers [14].

Reported cases of increased patient wait time in the completion of nursing procedures and tests are also related to those above-mentioned variables. Nursing care is as important as the tests needed by health care providers in determining the appropriate step for caring for patients. Along with the nursing process are goals such as specific, measurable, attainable, relevant, and timely. The goal of every procedure has clearly defined a time frame including a deadline. Similarly, tests allow physicians to assess effective treatment based on the test results of patients. The value of time is greatly connected to the lives of each patient.

In a like manner, time waited in the physician's waiting room presents a significant factor in the healthcare experience. Data were analyzed on 21 million outpatient visits acquired from electronic health record systems, enabling to weigh the time spent in the waiting room past the appointment time that has been set.. Moreover, patients who have experienced waiting for the physician for her appointment to start must have realized whether her experience was common [15].

On the contrary, respondents' least perceived items Nurses fail to perform the task assigned on time (2.70). The performing task assigned on time for nurses is necessary to allow them to give proper care for their patients. Nurses need effective time management to settle their nursing tasks. Also, it aids in prioritization

like when there is an urgency or a patient needs healthcare immediately, a nurse can respond and prioritize on time.

The assurance of appropriate nurse-patient ratio and working hours is important to improve the quality and the performance of tasks on time. An increased number of nurse-patient ratios due to nursing shortage was significantly associated with higher odds of reporting poor quality of care and of performing care and other tasks on time which leaves it undone due to the lack of time. Compared with RNs who did not work overtime, RNs working overtime reported a 45% increase in a fair or poor quality of nursing care and an 86% increase in care left undone [16].

One of the most significant roles of nurses is patient education. It is beneficial for patients to become aware of their responsibility for their own health. At the same time, patients should be concerned about their well-being. This idea implies that they need to understand their condition to prevent complications or illnesses. Health teaching is nursing intervention that allow patients to comprehend and improve themselves.

Concern of patients give an important perception of safety-problems within healthcare organizations. Patients are fragile too, and able to identify various problems in healthcare delivery, others of which are not determined by traditional systems of healthcare monitoring. Complaints of patients can present significant and further information to healthcare organizations in developing patient safety. Moreover, examining cases on adverse patient outcomes rises the number of the potential of healthcare organizations to perceive systematic problems in care. This event was recently seen in the UK through the Francis record on 1200 unimportant mortality deaths that happened over 3 years at Mid-Staffordshire NHS Foundation hospital. The case found that, the length of the incident, written patients' concerns identified the concerns of abandonment and poor care at the trust. Yet, the shortfall in addressing concerns meant intensive signs were missed, and challenges in the utilization of patient complaint data to improve the safety of patients were emphasized [17].

Table 3 presents the comparison of responses on the impact of nursing shortage in health care and its effects. Based on the result, it was observed that there was a significant difference observed on the impact (p-value = 0.002) and effects (p-value = 0.000) since the obtained p-values were less than 0.05 alpha level.

**Table 3. Difference of Responses on the Impact of Nursing Shortage in Health Care Setting and Effects of Nursing Shortage to Care Rendered to Client When Grouped According to Hospitals**

		Mean	F-value	p-value	Interpretation
Impact of Nursing Shortage in Health Care Setting	Hospital A	3.21	3.872	0.002	Significant
	Hospital B	3.15			
	Hospital C	3.62			
	Hospital D	3.16			
	Hospital E	3.28			
	Hospital F	3.12			
Effects of Nursing Shortage to Care Rendered to Client	Hospital A	2.45	14.718	0.000	Highly Significant
	Hospital B	3.30			
	Hospital C	3.22			
	Hospital D	3.04			
	Hospital E	3.31			
	Hospital F	3.10			

*Legend: Significant at p-value < 0.05*

This result means that the responses differ significantly and based on the post hoc test conducted, it was found out that Hospital C had a greater impact on nursing shortage while Hospital E encountered greater effects on nursing shortage. Different hospital has their own program & approaches to keep the health care facilities functioning to the best they can to ensure that they are providing only the quality care among its clientele, although from the results obtained it shows that in hospital F, there was a significant impact of nursing shortage in the health care setting, where nurses experience working beyond the expected number of hours, not attending immediately to the patient's concern, and failure to perform the task on time.

Hospitals utilized a combination of short-term and long-term approaches to approach with the shortage of nurses, specifically efforts highlighting nurse education, decent compensation, and short-term staff. Responses of hospitals to the shortage of nurses have shown to general categories: a short-term approach that responds to urgent needs of staffing; and long-term approach that take longer to execute or have a more consistent effect by addressing components that add on the shortages over the longer run. Yet, these categories are not definite: Some approaches could have a mix of immediate and long-term effects [18].

On the other hand, hospital experienced the effects of a nursing shortage to care rendered to clients and had high significant results. In this hospital, there was a significant effect in the health care setting due to a shortage of nurses. This issue is primarily related to the nurse's turnover who are in one way, or another are quitting their job because of a greener pasture or due to the undesirable hospital condition due to overwork and other related work burn out that leads to work dissatisfaction. Therefore, the hospital always looked for nurses or hire nurses only to ensure that they can continue the hospital operations without putting the patients care at risk.

In 1998, hospitals started to face the nursing shortage of the decade for the second time. Even so,

compared to the shortage that happened in the early 1990s, this shortage did not settle quickly; instead, it remained and by 2002 was its fifth year. The on-going shortage progressed as an outcome of economic, workplace, social, and demographic factors that joint in the mid to late 1990s; these issues are described elsewhere. There was no root of the shortage, there is no answer to settle it. Hospitals and other same parties who are interested have developed various responses to factors resulting in the nurse shortage. Hospitals began employment and retention programs, utilized more short-term and traveling RNs to increase staffing levels, raised their utilization of float pools, developed relationships with local nursing education programs to hire more people into nursing, offered sign-on and other kinds of hiring bonuses, and started to take significant steps to better the work environment of nurses [3].

**Measures in Reducing the Impact of Nursing Shortage in Health Care Setting in Batangas**

*1. Enhancing Work Environment*

- Providing nurses' accommodation (particularly for those who cannot go home due to transportation problems) where they can sleep and rest for free with meal allowance only during working days.
- A team leader must see to it that all nurses are comfortable within the work area through a constant meeting and follow-up.
- There may be a provision for recreational activities for nurses like fitness center, Zumba, indoor and outdoor activities

*2. Promotion, Recognition, Compensation, & Benefits*

- Give monetary incentives and certificate of recognition for the staff with the following: perfect attendance for the month, the highest evaluation obtained.
- Recognize "Best Employee of the Month" during a flag-raising ceremony or staff meeting.
- Free hospitalization for nurses who are in the service for 2 years among immediate family members like



mother, father, husband, children, and hospital discounts for siblings.

- Access to house and lot car and business loans among the staff who are in service for 5 years and above
- Educational support among regular nurses who wish to continue higher education
- A good salary scheme may be developed to ensure that nurses will not choose to leave the hospital that soon

### 3. Patient-nurses ratio

- Adequate staffing in every shift through support from pulling out other staff from the area that is not busy and allot on-call nurses to cover up with lack of staff
- A contact or list of registered nurses must be available to augment the number of staff for a temporary basis

### 4. Recruitment

- A good recruitment package that will attract nurses to apply in the hospital must be included during promotional activities that will include the following: benefits of working in the hospital, insurance access, security of tenure and a good salary scheme.

## CONCLUSION AND RECOMMENDATION

After the results were analyzed, the following are thus concluded: Nursing shortage has become one of the struggles the nation is facing and has a greater impact on the health care setting. Nursing became one of the outstanding professions as there is an employment competition among the hospitals nationwide. Having a scarcity of nurses, the care rendered to the clients was also affected. Nurses become fully loaded on work and become incapable of responding to other clients. They may have a chance of committing failures and errors as they become exhausted in their work. Lack of nurses in the industry is highly considerable as it not only affects health care settings but mostly due to its greater effect on clients needing their professional service. Developing measures to overcome the problem in the nursing shortage is a big help in the society as nurses would be more encouraged and interested in providing health care to the people. Future researchers may conduct similar study investigating on the influence of foreign countries benefit to the nursing shortage in the Philippines.

## REFERENCES

[1] Asian Pacific Post (2017) "Philippines is Nursing a Crisis". URL: <https://www.asianpacificpost.com/article/8108-philippines-nursing-crisis.html>

[2] Salmond, S. & Echevarria, M. (2017). Healthcare Transformation and Changing Roles for Nursing. *Orthopedic nursing*, 36(1), 12.

[3] Buerhaus, I., Staiger, O., & Auerbach, I. (2003). Is The Current Shortage of Hospital Nurses Ending? *Health Affairs*, 22(6), 191–198.

[4] Spetz, J. (2015). Too many, too few, or just, right? Making sense of conflicting RN supply and demand forecasts. *Nursing Economics*, 33(3), 176.

[5] Polit, F., & Beck, T. (2017). *Nursing research: generating and assessing evidence for nursing practice* (Ninth). Philadelphia: Wolters Kluwer.

[6] Aranda, R. (2018, September). "Nurses, nurses wanted everywhere". The Manila Times. Retrieved July 14, 2019

[7] Hughes, R. G. (2008). Nurses at the "Sharp End" of Patient Care.

[8] Zboril, R. (2016). Why nurses are calling in sick: the impact of health-care restructuring. *Canadian Journal of Nursing Research Archive*, 33(4).

[9] Frederick, D. (2014). Bullying, mentoring and patient care. *AORN Journal*, 99(5), 587593

[10] Dehghani, A., Mosalanejad, L., & Dehghan-Nayeri, N. (2015). Factors affecting professional ethics in nursing practice in Iran: a qualitative study. *BMC Medical Ethics*, 16(1), 61

[11] Ball, J., Bruyneel, L., Aiken, L. H., Sermeus, W., Sloane, D. M., Rafferty, M., & RN4Cast Consortium. (2018). Post-operative mortality missed care and nurse staffing in nine countries: A cross-sectional study. *International Journal of Nursing Studies*, 78, 10-15

[12] Buerhaus, I., Donelan, K., Ulrich, T., Norman, L., DesRoches, C., & Dittus, R. (2007). Impact of the nurse shortage on hospital patient care: Comparative perspectives. *Health Affairs*, 26(3), 853-862.

[13] Driscoll, A., Grant, M. J., Carroll, D., Dalton, S., Deaton, C., Jones, I., & Astin, F. (2018). The effect of nurse-to-patient ratios on nurse-sensitive patient outcomes in acute specialist units: a systematic review and meta-analysis. *European Journal of Cardiovascular Nursing*, 17(1), 6–22

[14] Young, V., Rochon, E., & Mihailidis, A. (2016). Exploratory analysis of real personal emergency response call conversations: considerations for personal emergency response spoken dialogue systems. *Journal of Neuroengineering and Rehabilitation*, 13(1), 97.

[15] Oostrom, T., Einav, L., & Finkelstein, A. (2017). Outpatient Office Wait Times and Quality of Care for Medicaid Patients. *Health affairs (Project Hope)*, 36(5), 826–832

[16] Cho, E., Lee, J., Kim, Y., Kim, S., Lee, K., Park, O., & Sung, H. (2016). Nurse staffing level and overtime associated with patient safety, quality of care, and care left undone in hospitals: a cross-sectional study. *International Journal of Nursing Studies*, 60, 263-271.

[17] Reader, W., Gillespie, A., & Roberts, J. (2014). Patient complaints in healthcare systems: a systematic review and coding taxonomy. *BMJ Qual Saf*, 23(8), 678-689.

[18] May, H., Bazzoli, J., & Gerland, M. (2006). Hospitals' responses to nurse staffing shortages. *Health Affairs*, 25(4)

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