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ARTICLES

RESEARCH

- Work Environment of Nurses in the Philippines: A Preliminary Study
- Nursing, Nightingale and Beyond: Voices, Dialogues and Talks of the Future
- Web-based Interventions Among Adults: Relevance to Anthropometric Indicators
- The Effect of Psychoeducation for Depression: A Meta-Analysis 2010-2016
- Technological Competence as Caring and Clinical Decision – Making Skills among ICU Staff Nurses
- Nurses' Familiarity on Disaster Preparedness in Hospitals

FEATURE

- The 3H Model of Holistic Care in Nursing
- The Silent Epidemic: Understanding the Concept of Workplace Bullying Among Nurses

NURSES' VOICE FROM THE FIELD

- The 3H Model of Holistic Care in Nursing
- Some Random Thoughts on Resilience

**ADVANCING
NURSING RESEARCH**
IN PRACTICE, ADVOCACY
AND POLICY



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PHILIPPINE NURSES ASSOCIATION, INC.

VISION

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Championing the global competence, welfare, and positive and professional image of the Filipino nurse.

CORE VALUES

- Love of God and Country
- Caring
- Quality and Excellence
- Integrity
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EDITORIAL

Advancing Nursing Research in Practice, Advocacy and Policy

Nursing research will always be committed to the advancement of nursing practice, advocacy and policy that affect people's quality of life. The researches nurses undertake continue to translate in the improvement of the quality of care as these reflect their commitment in the development of our nursing profession. I have seen how nursing researchers in our country have taken the trajectory of using multiple philosophical and theoretical underpinnings in their researches. This is a manifestation of the continuous search for various methods and/or methodologies, as a rigorous scientific inquiry in search for answers and/or finding effective strategies to achieve health goals for our people and profession. This issue of the Philippine Journal of Nursing illustrates the outputs of our nurses from various fields of practice.

Dones et al.'s Preliminary study on the *Work Environment of Nurses in the Philippines* describes work environment variables affecting Filipino nurses, and determines the degree of nurses' job satisfaction, as well as their intention of remaining in their present work environment. This study showed "that the lowest positive responses were in the Physiologic and Safety Needs but despite this result, the nurses reported high job satisfaction and intend to remain in their present work environment." Carsola and Palaganas' article, *Nursing, Nightingale and Beyond: Voices, Dialogues and Talks of the Future* explored and grounded the voices of nurses in contemporary times, and unraveled nurses' situations for the purpose of generating a substantive theory to guide and refine nursing practice. The study depicts a picture of struggles, successes, and potential solutions to the predicaments surrounding the nursing profession, thus having potential in improving nursing practice and policy based on the framework that emerged from the study.

Recent developments in nursing research reveal the increasing conduct of systematic literature reviews, meta-

analyses of published data, and meta-analyses of individual data (pooled reanalyses). These are means of jointly summarizing and assessing different studies on a single topic due to the rising number of scientific publications. A *Systematic Literature Review* provides an overview of the state of research on a given topic, and enables an assessment of the quality of individual studies. It also allows the results of different studies to be evaluated together when these are inconsistent (Bettaby-Saltikov, 2012; Whittemore & Knafl, 2005). This is exemplified by Serafica and Gatlin's work, as it summarizes the current recent literature in examining the effectiveness of web-based interventions to promote healthy lifestyles related to anthropometric measurements in adult individuals with various health conditions and status. Their article, *Web-based Interventions Among Adults: Relevance to Anthropometric Indicators* reported overall positive changes that "may prove useful information of effectiveness of web-based interventions relative to physiological outcomes such as anthropometric measurements. These programs can inform transformative practice and improvement of global health." On the other hand, a meta-analysis is a statistic method to pool effect estimates from individual studies to one 'meta' result (Cooper, H. et al., 2008). Based on the premise that mental health professionals need to develop interventions that are evidence-based and cost-effective, Lacalle's article, *The Effect of Psychoeducation for Depression: A Meta-Analysis 2010-2016* examined randomized controlled trials (RCTs) and the overall effectiveness of psychoeducation for depression. Results suggest that psychoeducation has low effect on depression indicating that longer and more interactive approach can be done to ensure its long-term and maximal effectiveness. The findings provide valuable information for future psychoeducation to improve content, design, quality, and process that will benefit patients with depression.

Researches geared towards the nurses themselves have always been a priority. We continue to assess our level of knowledge, competences and even attitudes as these redound to the quality of care we provide and to our commitment to leadership. Martinez' *Technological Competence as Caring and Clinical Decision – Making Skills among ICU Staff Nurses* determined the level of technological competence as caring skill and its relation to the clinical decision making skills among ICU staff nurses. The study showed that the ICU staff nurses not only have “very high” level of technological competence as caring skill, but also have a “high” level of clinical decision-making skill. It was also evident that ICU staff nurses in Panay Island have been integrating technological caring with technological knowing as a collective expression of care in professional nursing. However, technological competence of caring in nursing does not guarantee high level clinical decision-making skills among the respondents. On the other hand, Rabaya et al.'s article, *Nurses' Familiarity on Disaster Preparedness in Hospitals* determined the extent of familiarity on disaster preparedness of nurses in hospitals, and the significant difference when grouped according to years of experience, position and area of assignment. Findings revealed that nurses were moderately familiar on disaster preparedness and there was a significant difference in all variables revealing that nurses in hospitals have more to learn on disaster preparedness.

As part of our contribution in advancing nursing research, we continue to analyze theories and develop concepts and frameworks as we are confronted with the realities of our profession. *The 3H Model of Holistic Care in Nursing* by dela Peña, communicates and illuminates the value of caring to patient and nurses geared towards the improvement of nursing practices. He contextualized the “key defining attributes of caring into the 3H categories – the head, the heart, and the hands, which are very essential in the understanding and development of a categorical meaning of caring in the field of nursing.” Waldo's article on *The Silent Epidemic: Understanding the Concept of Workplace Bullying Among Nurses*, explored bullying among nurses, from its attributes, characteristics, and evidences on its consequences. With the findings that show personal and professional costs from the victims and the organization when work place bullying is practiced,

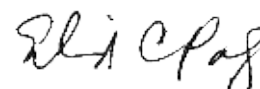
these can be rallying points for further research, advocacy and policy in nursing practice.

Reburon shares his perspectives on nursing resilience. Inspired by Roy's view of the individual's innate capacity for coping, he came up with a theory *Warrior Resilience: Springboard towards Quality Nursing Care*, which centered on the adaptation and resilience, not of patients, but of nurses. Reburon posits that “every failure carries a seed of an equivalent or greater benefit. Failures, challenges, and adversities must be accepted by every nurse with an open mind and a positive outlook. After all, these are the things which help us grow. The greater the fall, the greater the ascension.” Santos, on the other hand, shares her realization on her Random Thoughts On Resilience: “That it is not the word that gets to me. Rather, it is the fact that nurses are resilient by force. The question is, “What have nurses in the country done, out of their own initiative to help each other from not breaking?” This thought-provoking question leads us to ponder on our role in advancing nursing research in practice, advocacy and policy.

The culture of nursing research and the importance of a research-intensive environment and research productivity are here to stay. The challenge is to strengthen and sustain our embrace.

References

- Bettaby-Saltikov, J. (2012). *How to do a systematic literature review in nursing*. Open University Press, Berkshire.
- Cooper, H. M., Hedges, L. V., & Valentine, J. C. (2008). *The handbook of research synthesis and meta-analysis* (2nd ed.). New York: Russell Sage Foundation.
- Whittemore R. & Knafk K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing* 52(5), 546–553



ERLINDA CASTRO-PALAGANAS, PhD, RN
 Editor-in-Chief



President's Message

Advancing Nursing Research in Practice, Advocacy and Policy

Linking research, practice, advocacy and policy is a gargantuan reverie of manifold stratum nowadays but it is gaining support. Investigative study at different levels across young nursing professionals needs greater encouragement and reinforcement. Though, these nurses who are apt for developing policy out of scientific study need also bolstering to guarantee better outcome for use in advancing health and well-being of our people, the nation and the world.

Advancing the basic scientific knowledge and technological capabilities is the key to expansion and innovation. Expansion is inclusive of biobehavioral or sociocultural exploration of possibilities even if it is risky or at odds. This exemplifies connection to generate more enquiries for evidence of legitimacy and precision in particular areas of investigation. Since, absence of growth or development in a specific field may dawdle policy initiatives slowing progress as a result.

We must call on our nursing leaders in the nursing profession to lead us into the discovery of science in physical and natural phenomenon--- if we really want change in health practice, advocacy and policy. We must be entrepreneurs in health research and clinical practice for the preservation and recovery of lives that make the health care system more efficient, receptive, and successful. Both research and practice must be recognized first as tied equally and not be treated separately. Moreover, research and practice are fashioned by similar powers that control the public, as well as the geopolitical and socioeconomic circumstances. Hence, scientific research and clinical practice are intrinsically and dynamically linked to influence health and health care including environmental, educational, and economic policies.

Policy is an essential part of the health sciences gamut, and to help inform and shape public policy, research and advocacy once carried out, influences decision on practice within political, economic, and social systems or institutions. Similarly, a healthier society depends on excellent research findings and practice, and the better-quality of execution of the policies that support the activities. So nurses, let us realize the value and be aware of policy implications of scientific result and evidence-based clinical practice in facilitating the development of public health policies which may support advances to health and health care here and abroad. Let us join together in recognizing the interconnectivity between research, practice, advocacy and policy in advancing our nursing profession and the healthcare system – transforming to more skilled/trained nurses, and/or translating to more treatments and cures.

Finally, allow me to express my sincerest admiration and respect to the editorial team, authors, and peer reviewers of the 2016 2nd nursing journal issue. It's a way of PNA's inexorable commitment to give Filipino nurses with excellent source of scientific research references in their respective area of expertise.

Congratulations and more power. God Bless us all!


BGEN PAULITA B. CRUZ (Ret)
National President

RESEARCH ARTICLE

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Work Environment of Nurses in the Philippines: A Preliminary Study

Abstract

Work environment has been described as an important factor in the job satisfaction of nurses and their quality of service provided. However, little is known of the present work environment of Filipino nurses in the country. This study used a cross-sectional design to describe work environment variables affecting Filipino nurses; determine the degree of nurses' job satisfaction; and determine their intention to remain in their present work environment. A self-administered survey was developed by the study team and was distributed during the PNA national conference through the Chapter Presidents. This study discovered that the lowest positive responses were in the Physiologic and Safety Needs but despite this result, nurses reported high job satisfaction and intend to remain in their present work environment.

Keywords: *work environment, nurses, patient safety*

Introduction

The importance of a favorable workplace scenario and its implications to patient outcomes has been documented in many studies. A report by the American Nurses Association (ANA) in 2002, concluded that the unhealthy workplace environment of nurses led to their inability to protect their patients. The 'unholy trinity' of patient injuries and health care errors, staffing shortages, and nursing shortage, were identified as the root cause of unsafe workplaces. The report further described that a work environment where nurses are 'stressed, fatigued, unable to use their critical thinking skills' allowed for greater incidences of errors, failures, and injuries. A journal article by Cramer, Staggs and Dunton (2014) cited an extensive body of evidence that confirms the relationships among positive work environments, positive nurse outcomes of job satisfaction and retention and ultimately, positive patient outcomes. Positive patient outcomes, according to Ballard (2003), are associated with nurses' ability to maintain provision of quality care that can only be achieved with an optimum work environment sustained by continuous professional development, adequate number of competent staff, and presence of legislations that improve nursing care settings. With positive work environment, patient safety is enhanced and promoted.

Although patient safety is said to be a shared responsibility (Ballard, 2003), the study of Kirwan, Matthews, and Scott (2012) emphasized that effective nurse staffing levels, nurse education levels, and a positive work environment for nurses are factors that are known to impact on patient safety outcomes. Similar findings can be found in a US-based study in 2013, the National Database of Nursing Quality Indicators (NDNQI), where more than 315,000 direct-care registered nurses responded in the nationwide survey aimed at ‘understanding, assessing, and improving work environment’. The NDNQI study concluded that there are several factors that play significant roles in ensuring positive practice environment. Among these are leadership that fosters teamwork and support, shared-governance that promotes decision-making, staffing that corresponds to patient acuity changes, and the nurses’ continuing education and professional development opportunities. In order to address the lack of available data on work environment of nurses in the Philippines, the Philippine Nurses Association (PNA), the accredited professional association of nurses, through its Department of Research conducted a preliminary study to describe the state of Filipino nurses’ work environment. This study aims to describe work environment variables affecting Filipino nurses, determine the degree of nurses’ job satisfaction, and determine their intention to remain in their present work environment. This study will hopefully provide a basis for a full scale study, and recommend policies for better work environments for nurses in the country.

Background

Much has been written on the importance of a healthy work environment of nurses towards positive patient outcomes. Shirey (2006) views a healthy work environment as one that fosters an engaging attitude, organizational commitment, trust and collegiality resulting in a feeling of physical and emotional safety among nurses. This can be brought about by implementing “authentic leadership” described as the glue that holds together a healthy work environment. In a similar manner, Kupperschmidt et al (2010), maintains that a healthy work environment is a consequence of the nurse being a skilled communicator who can articulate needs or problems in the work area and sustain a positive interpersonal relationship with colleagues in order to work out collaborative actions to address specific concerns that may affect patient safety. Both articles agree that if a healthy work environment is not sustained, this leads to an unhappy and dissatisfied nurse who will eventually leave her job in search of a more caring environment. While nurse engagement is generally equated with nurses’ commitment to and satisfaction with their jobs, the study of Dempsey and Reilly (2016) provided evidence that nurse engagement is critical to safety, quality, and patient outcomes. Their study looked into factors that affect or impact on the nurse’s engagement including the potential impact of compassion fatigue and burnout.

Figure 1. Adapted from Groff Paris, L. & Terhaar, M. (2010). Using Maslow's Pyramid and the National Database of Nursing Quality Indicators™ to Attain a Healthier Work Environment. *The Online Journal of Issues in Nursing*, 16 (1).

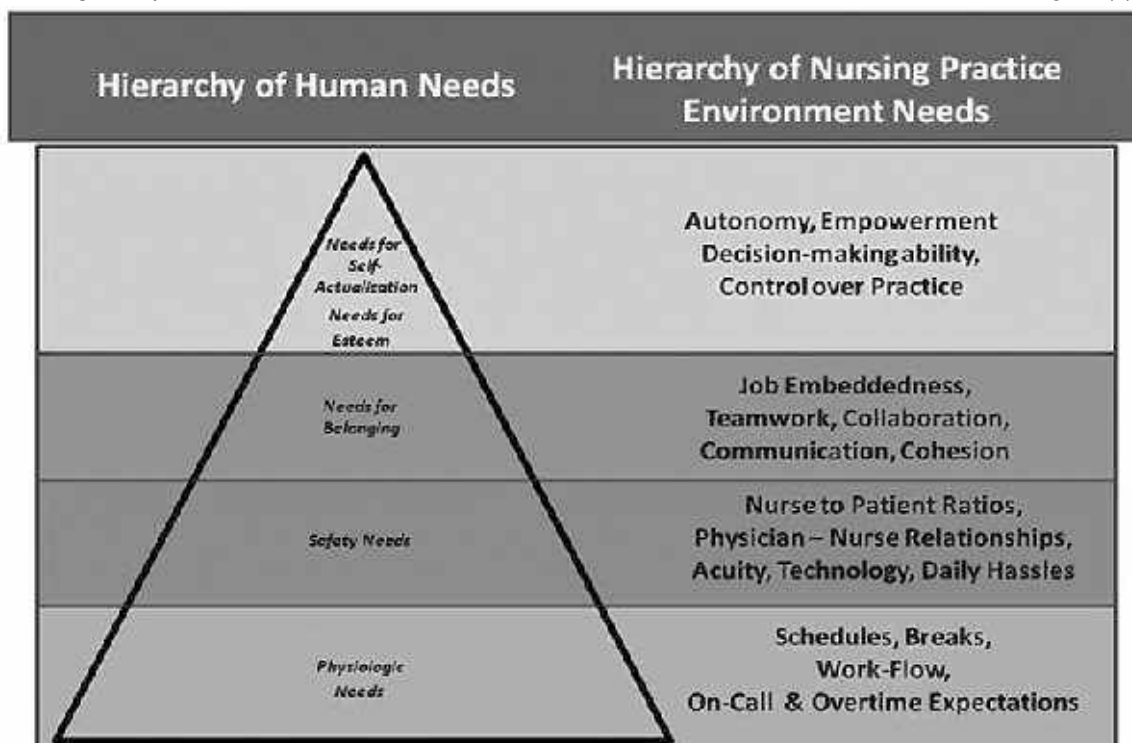
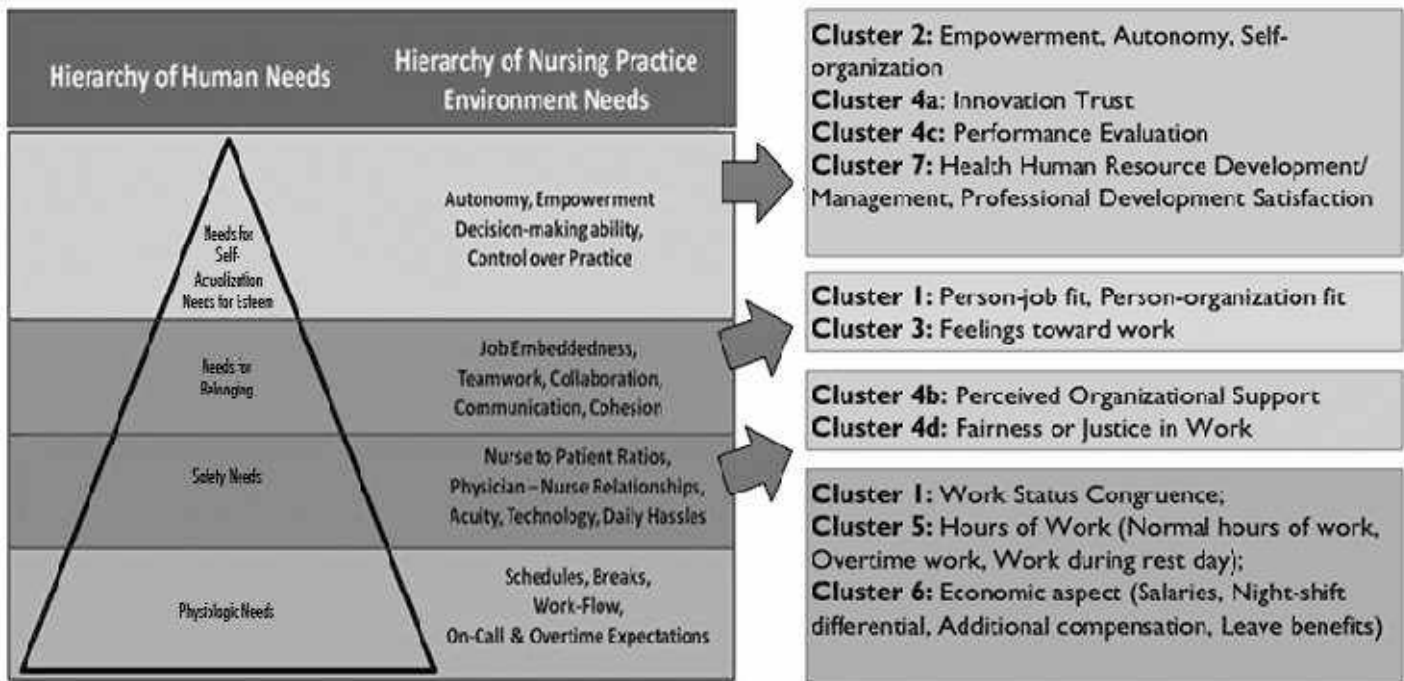


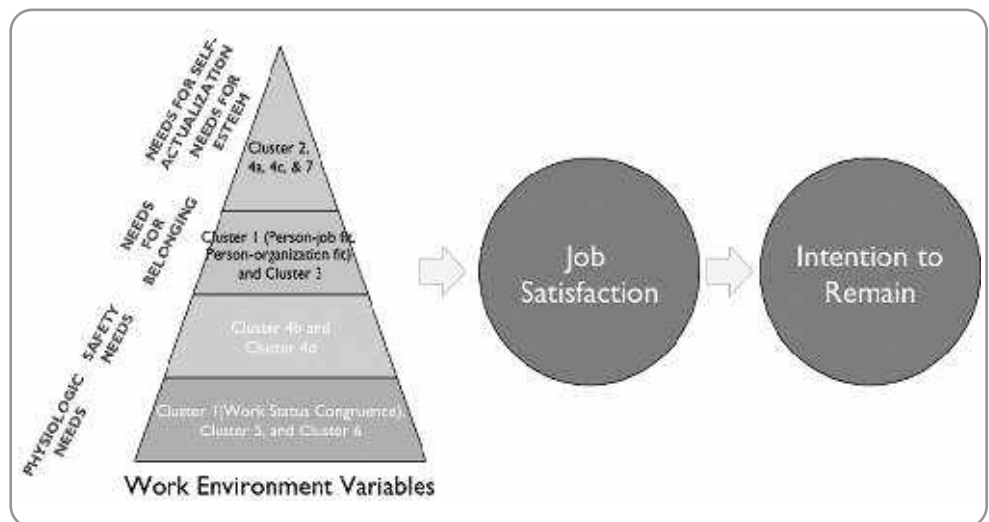
Figure 2. Cluster of themes of nursing practice environment needs vis-a-vis the Hierarchy of Nursing Practice Environment Needs



According to Groff Paris and Terhaar (2010), stress in the work or practice environment is the strongest predictor of job dissatisfaction and intent to leave. Job dissatisfaction is brought about by factors related to workload, interpersonal relationships in the unit, and perceptions of having unsafe conditions in the work environment. Groff Paris and Terhaar piloted a Performance Improvement Project designed to improve the nurses perception of their practice environment and promote delivery of safe patient care. The study used the Maslow's Hierarchy of Inborn Needs and the National Database of Nursing Quality Indicators™(NDNQI®) 2009 RN Survey with Practice Environment Scale. The authors showed the equivalence of the levels of Maslow's hierarchy of needs with the practice environment needs of nurses, illustrating that if the nurses perceive that their basic practice environment needs are not met, they become less motivated and will not likely move on to achieve higher tasks or functions. The authors recommend the use of Maslow's framework (Figure 1) on meeting basic practice environment needs in order for nurses' to achieve meaningful engagement and higher level performance.

Everyday in the practice setting, nurse engagement expect the nurse to create and maintain a work environment that is safe for the patient and where quality nursing care results in positive patient outcomes. The nurse who is able to deliver safe and quality nursing care perceives that if she is rewarded or affirmed by her organization, co-workers and patients, this situation results in job satisfaction and increased probability of remaining in the job (Figure 3).

Figure 3. The explanatory framework for the causes and consequences of the psychological contract and applying the psychological contract to the employment relationship. (Adapted from Guest & Conway, 2004) and (Iverson & Maguire, 2000)



Methodology

A cross-sectional design was used in this study to determine the work environment of nurses across the country. Convenience sampling was applied in data collection which took place during the PNA National Convention in Davao City in 2015 that was attended by 1,647 delegates (total number of attendees) active members of the PNA from various chapters in the country, working in different practice settings.

The self-administered survey tool was developed based on various literature regarding variables affecting work environment, such as: work status congruence, work autonomy, perceived organizational support, and components of the Magna Carta of Public Health Workers (RA 7305). The questionnaire consisted of several sections: Socio-Demographic Profile, Work Background, Work Environment variables, and Intention to Stay. The Work Environment items were measured by a four-point Likert Scale that consisted of 56 items where respondents marked a point on the scale depending on their degree of agreement or satisfaction. Intention to stay was measured using open ended questions to determine the respondents' plan to stay in their current work in the next six months and factors that influence their decisions.

Each work environment variable was determined by a cluster of items based on the framework described above. Cronbach's alpha was computed to determine the reliability of the cluster of items to reflect the work environment variables. A Cronbach's alpha of 0.70 was set as the acceptable reliability and was met by all of the Work Environment variables (Table 1).

Table 1. Reliability of the sub-items in the Work Environment Questionnaire

Sub-items	Cronbach's alpha
Physiologic needs	0.73
Safety needs	0.71
Love and belongingness needs	0.81
Self-esteem and actualization needs	0.86

Two data gathering procedures were applied to ensure adequate number of respondents and representation of chapters and regions. Survey questionnaires were distributed and collected during the PNA Annual Convention last October 20-22, 2015 at SMX Lanang, Davao City attended by 1,647 delegates. Survey questionnaires were also sent to Chapter Presidents who distributed to their members and were sent back to the research team. The respondents of the study came from the different parts of the country with the following distribution: 25% from the National Capital Region, 36% from Luzon, 17% from Visayas, and 22% from Mindanao.

Descriptive statistics was used to present the demographic characteristics of the respondents through frequency and percentage distributions. Percent of positive responses were determined for each work environment variable and set at 70% while those below are variables with greatest potential for improvement. Percent of positive responses was also used to determine the degree of job satisfaction and intention to remain in their present working environment among respondents. Data was analyzed using the International Business Machines (IBM) Statistical Package for the Social Sciences (SPSS) or IBM SPSS Statistics version 21.

Full disclosure was provided to respondents as reflected in the cover letter and consent form. Participation in the study was voluntary and at no cost. Respondents were assured that they can withdraw by not returning the questionnaire. Anonymity was preserved by coding questionnaires

Results and Discussion

Socio-demographic Profile

A total of 231 respondents completed the survey. Their socio-demographic profile show a mean age of 42 years (SD=12) majority were females (64%), 41% with BSN, 37% with Masters degrees, and 30% have ongoing postgraduate studies. (see Table 2).

Table 2. Socio-demographic Profile of Respondents

Characteristic	Frequency	Percentage
Age		
< or = 30	42	18.18
31 – 40	36	15.58
41 – 50	49	21.21
51 – 60	41	17.75
61 and over	14	6.06
No answer	49	21.21
Sex		
Female	149	64.50
Male	38	16.45
No answer	44	19.05
Highest Educational Attainment		
BS Nursing	95	41.13
Masters Degree	85	36.80
Doctorate Degree	21	9.09
No answer	30	12.99
On-Going Post Graduate Studies		
Yes	71	30.74
No	126	54.55
No answer	34	14.72

Work Background of Nurses

Majority of the respondents are working in the academe (44%), employed on a full time status (80%), and working for at most 8 hours/day (93.51%). The respondents also indicated that they are aware of their rights as an employee of their institution (90%) and of the provisions stated in the Magna Carta (87%). See Table 3.

Table 3. Work Background of Respondents

Characteristic	Frequency	Percentage
Current Work/Practice Setting		
Academe	101	43.72
Hospital	77	33.33
Community	36	15.58
Others	7	3.03
No answer	10	4.33
Employment Status		
Full Time	182	78.79
Part Time	6	2.60
No answer	43	18.61
Working Hours Per Day		
< or = 8 hours	216	93.51
> 8 hours 10	4.33	
No answer	5	2.16
History of Work Abroad		
Yes	27	11.69
No	160	69.26
No answer	44	19.05
Awareness of his/her rights as an em-ployee		
Yes	209	90.48
No	4	1.73
No answer	18	7.79
Awareness of the Magna Carta provi-sions		
Yes	201	87.01
No	14	6.06
No answer	16	6.93
Total	231	100.00

Work Environment Variables of Nurses

Table 4 shows the respondents' positive response to work environment variables.

The clusters corresponding to physiologic and safety needs had low % positive response at 55.64% and 61.97%. This points to a practice environment level where basic issues as compensation, benefits and compliance to provisions of the Magna Carta for Public Health Workers are not adequately met; and perceived

Table 4. Positive Response to Work Environment Variables

Variables	Percentage
Physiologic Needs	55.64
Safety Needs	61.97
Love and Belongingness Needs	70.40
Self-Esteem and Actualization Needs	89.46

organizational support is poor resulting in a practice environment where nurses are constantly subjected to stress and may not be able to provide safe care.

Clusters corresponding to needs for belonging and needs for self-actualization and esteem earned % positive response at 70.40% and 89.46% respectively. Paris and Terhaar (2010) consider the two clusters as higher level of practice environment and may imply job embeddedness which is a predictor of intention to remain. Job embeddedness includes parameters to which nurses' job and the community where nurses live are similar or fit with other aspects of their lives.

The high % positive response to these clusters can be related to the fact that the respondents belong to higher age group (above 30s), have acquired advanced educational degrees and occupying higher job positions. These characteristics contribute to the nurses' self-esteem and self-actualization.

Nurses' work environment has been defined by Kirwan et. al (2013) as the characteristics of the organization that either facilitate or limit the practice of nursing. The study even suggests that the practice environment is able to predict nurse-reported quality of care outcomes and that those working in more positive environments are in a better position to provide quality care. This is further emphasized by the International Council of Nurses (2008) in their Fact Sheet that 'Establishing positive practice environments across health sectors worldwide is of paramount importance if patient safety and health workers' well-being are to be guaranteed.'

As described in the conceptual framework of this study, the practice environment of the Filipino nurse respondents were clustered into four needs: Physiological Needs, Safety Needs, Needs for Belonging, and Needs for Self-Esteem and Self-Actualization. Among the four, it was apparent that Physiological and Safety Needs had the most potential for improvement. The Physiologic Needs variable cluster reflect the work status incongruence, poor work hours, poor benefits such as salary, compensation, leave benefits and night shift differentials. On the other hand, the unmet Safety Needs are those that reflect poor organizational support and unjust work environment such as poor nurse-patient ratio and acuity, lack of available support for the basic needs of nurses and the exclusion of nurses in decision-

making for their own welfare. These results are in complete opposite of the basic elements cited by the ICN (2008) of a Positive Practice Environment (PPE). These elements include: (1) Occupational health, safety, and wellness policies that address workplace hazards, discrimination, physical and psychological violence and issues pertaining to personal security; (2) Fair and manageable workloads and job demands/stress; (3) An organizational climate is reflective of effective management and leadership practices, good peer support, worker participation in decision-making, shared values; (4) Work schedules and workloads that permit healthy work-life balance; (5) Equal opportunity and treatment; (6) Opportunities for professional development and career advancement; (7) Professional identity, autonomy and control over practice; (8) Job security; (9) Decent pay and benefits; (10) Safe staffing levels; (11) Support, supervision and mentorship; (12) Open communication and transparency; (13) Recognition programmes; and (14) Access to adequate equipment, supplies and support staff. This inability to meet the most basic needs of the nurses' practice environment may greatly affect achievement of positive patient- and nurse-sensitive outcomes.

Job Satisfaction Among Nurses

The items pertaining to Job Satisfaction showed high reliability (Cronbach's alpha 0.9540). The respondents indicated that they are satisfied in their present work condition (75.14%) and that they intend to remain in their institutions (91.24%). Seventy-five percent (75%) of the respondents claim that they are satisfied with their jobs. Only 7% claimed negative satisfaction.

Studies have shown that in clinical settings, organizational support and quality of relationships (with nurse managers and among the staff) have consistently been associated to job satisfaction (Warshawsky and Havens, 2014). In the academe, leadership factors strongly influences nursing faculty job satisfaction (Gormley, 2003). In this study, even if the lower levels of practice environment (physiologic and safety needs) has low % positive response, the respondents still claim job satisfaction. We can only assume possible reasons for this: that the nurses despite low compensation, undelivered benefits, and poor organizational support still manage to find satisfaction because they have no other job options if they leave their current jobs. Another reason could be, there are other family members who are earning more and they are not expected to be the main provider.

Despite the low positive responses for the two most basic needs, the Physiological and Safety Needs did not seem to deter the high positive responses on the Needs for Belonging and Need for Self-Esteem and Self-Actualization and did not appear to have caused poor job satisfaction and desire to leave their present employment. Indicators that were included in the latter needs some of the elements listed by the ICN for a PPE. This is supported by the study of Dempsey and Reilly (2016) describing the concept of nurse

engagement. Similarly, nurse engagement has been found to directly correlate to patient safety, quality care, and patient outcomes. They defined nurse engagement as the 'nurses' commitment to and satisfaction with their jobs' and adds that other considerations for level of nurse engagement are 'level of commitment to the organization that employs them and their commitment to the nursing profession.' The authors assessed for the factors that contribute to nurse engagement and found that two factors contributed most. One of these is the nurses' feelings about their work in terms of meaningfulness and enjoyment, while the other was the teamwork they experience and the effectiveness of their work unit. This is significant because similarly in the present study, although the basic needs of the respondents were not met, the sense of meaning, enjoyment, and belongingness in the work environment were still high and may have even contributed to the high job satisfaction and intention to stay in their present work environment.

Nurses' Intention to Remain

Among the respondents, 91% claimed they intend to remain in their present job within the next six months. Studies cited burnout, career change, retirement, and promotion as common reasons for intent to leave (Warshawsky and Havens, 2014). In the study, most common reasons for intending to remain that were cited include: satisfaction/enjoyment/love with their job, awaiting retirement, salary/monetary compensation and security of tenure, no other job opportunities or "no choice", and commitment to work, ability to share/educate knowledge and skills to other nurses, and commitment to family. Consequently, the top reasons for intending to leave the job are as follows: low salary/insufficient compensation, opting to work abroad, retirement, better opportunities, change profession (faculty to clinician, change of career), and improve skills.

Limitations of the Study

Compared to nurses with direct patient care in the hospital and community setting, nurses from the academe were a significant proportion of the sample of study. This may imply that the conclusions made in the study may not be representative of the practice environments of nurses with direct patient care. However, literature reviews concur that practice environments have a significant effect on both patient- and nurse-sensitive outcomes. This is supported by the presentation of a study made by Doringan et al (2014) that the 'Nursing practice environment has a strong impact in the job satisfaction and safety climate in the reduction in burnout levels', while 'A median impact on the intention to stay in the job and on the intention to stay in nursing'. This may explain why despite the low positive responses from the two most basic needs of the nurse, the respondents still had high job satisfaction and wanted to remain in their present work.

Conclusions/Recommendations

The nurses' practicing in varied work environments in the country rated the Physiologic and Safety Needs with the greatest potential for improvement. These low positive responses may have implications for patient safety and quality care if not met. Despite this finding, job satisfaction is still high and nurses still intend to stay in their present work environments.

The study recommends future examination on the areas of Physiologic and Safety Needs and how these needs can be met to ensure a positive practice environment. This may take into account the variables analyzed by the NDNQI or the ICN to capture the variables independently and examine their relationship with nurse- and patient-sensitive outcomes with due consideration for a good representation of nurse practice environments. Finally, the concept of nurse engagement is an area worth investigating in itself. While Dempsey and Reilly (2016) generally refers to nurse engagement as commitment to and satisfaction with their jobs, it has implications to issues of patient safety. A physically exhausted nurse who went on double shifts to cover for an absent colleague can not be excused for committing a medication error.

Other external but otherwise relevant variables that affect job satisfaction and intent to leave such as the social, political, and cultural climate need to be considered in future studies as well.

References

- Ballard, KA. (2003). Patient Safety: A Shared Responsibility. *The Online Journal of Issues in Nursing*, 2003;8(3):4. Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume82003/No3Sept2003/PatientSafety.html>
- Cramer E, Staggs V, & Dunton N. (2014). Improving the nurse work environment: using NDNQI Data, leaders can promote changes that lead to sustained work environment improvement. *American Nurse Today*, 2014; 9(1). Retrieved from <https://www.americannursetoday.com/improving-the-nursing-work-environment/>
- Dempsey C. & Reilly B. (2016). Nurse Engagement: What are the Contributing Factors for Success? *The Online Journal of Issues in Nursing*, 2016; 21(1):2 Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-21-2016/No1-Jan-2016/Nurse-Engagement-Contributing-Factors-for-Success.html>
- Dorigan, G., Alves, D. D., & Guirardello, E. D. (2016, August 29). Impact of Nursing Practice Environment on Job Outcomes and Safety Climate: Testing a Model. Reading presented at Virginia Henderson, Global Nursing E-Repository. Retrieved from https://www.nursinglibrary.org/vhl/bitstream/10755/618532/1/1_Dorigan_G_p79483_1.pdf
- Gormley D. (2003). Factors affecting job satisfaction in nurse faculty: a meta-analysis. *Journal of Nursing Education*. 2003; 42(4):174-8. Retrieved from https://www.researchgate.net/publication/10790740_Factors_affecting_job_satisfaction_in_nurse_faculty_A_meta-analysis
- Groff Paris L. & Terhaar M. (2010). Using Maslow's Pyramid and the National Database of Nursing Quality Indicators™ to Attain a Healthier Work Environment. *The Online Journal of Issues in Nursing*, 16(1). Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-16-2011/No1-Jan-2011/Articles-Previous-Topics/Maslow-and-NDNQI-to-Assess-and-Improve-Work-Environment.html>
- International Council of Nurses (2008). Fact Sheet: Positive practice environments for health care professionals. Retrieved from http://www.whpa.org/ppe_fact_health_pro.pdf
- Kirwan M, Matthews A, & Scott P. (2013). The impact of the work environment of nurses on patient safety outcomes: A multi-level modelling approach. *International Journal of Nursing Studies*. 2013; 50(2):253-63. Retrieved from https://www.researchgate.net/publication/232764624_The_impact_of_the_work_environment_of_nurses_on_patient_safety_outcomes_A_multi-level_modelling_approach
- Shirey M (2006). Authentic leaders creating healthy work environments for nursing practice. *American Journal of Critical Care*. 2006;15(3):256-67. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.939.7269&rep=rep1&type=pdf>
- Warshawsky E. & Havens D. (2014). Nurse manager job satisfaction and Intent to leave. *Nursing Economics*. 2014 Jan-Feb; 32(1): 32-39. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4330008/>

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Nursing, Nightingale and Beyond: Voices, Dialogues and Talks of the Future

Abstract

Purpose: This research explored the voices of nurses in contemporary times and unraveled nurses' situations for the purpose of generating a substantive theory to guide and refine nursing practice.

Method: The grounded theory methodology of qualitative research was utilized patterned mainly in the works of Glaser and Strauss. Criterion sampling was used in the selection of 31 participants and the basis for selection was employment in the hospital, academe, and community and being part of different levels of management (nurses from top, middle, first, and staff levels). Theoretical sampling also informed the final list of study informants and was conducted by snowballing that consisted of 10 participants. The data gathering procedures included the combination of interviews, observations, and document and literature analysis.

Findings: The study revealed three major themes: (1) nursing as a profession, (2) Nightingale in the 21st century: life of a nurse in today's context, and (3) the challenges and opportunities to quality of nursing care.

Conclusion: Nursing is dynamic, complex, diverse, expanding and highly contextualized. Nursing is a field that grows with time and nurses are adaptive to the widening demands of their profession. The goal of nursing remains a Nightingale's pledge and an endeavor amidst nurses' constant battle between motivations and challenges. The Integrated Systems Approach to Nursing Care model was developed to be used as a framework for sound decision-making in nursing practice. Nursing, nightingale and beyond is a picture of struggles, success, and potential solutions to the predicaments surrounding the nursing profession.

Clinical Relevance: The study has potential to help health managers and policy implementers in providing assistance to nurses in enhancing their knowledge and skills, increasing their emotional and psychological resilience and in revitalizing their commitment to the nursing profession. It may also aid in the reconsideration of

institutional policies and set-ups toward collaborative and enabling work environment. In addition, it may serve as a guide in creating proactive health governance, in facilitating nurses' work motivation and retention through the due implementation of nursing law and other statutes for the welfare of health workers, in providing additional plantilla position for nurses in the country, and in increasing funding for health programs to create more learning and practice environment for nurses. Lastly, the utilization of the theory can be used in developing a more responsive nursing practice.

Keywords: *Concept of nursing, nurses today, relationship of nurses, quality of nursing care, nursing career advancement, nurses' compensation, benefits and incentives, nurses' safety measures for occupational hazards, nursing job satisfaction, nurses' challenges and motivation.*

Introduction

Nursing is variously described as an indispensable profession, discipline, and occupation (Walker and Avant, 2011). Nurses play vital roles in upholding people's right to health (Mason, 2011). Over the past 50 years, nurses have worked to extend and develop the professional image and practice base of nursing. This endeavor has produced training schools, clinical specializations, the legal regulation of practice, a growing body of research on clinical practice, university education, and the nurse practitioner and advanced practiced movement (Nelson and Gordon (n.d) as cited by Reed and Shearer, 2009). In contemporary times therefore, nursing reaches further and influences deeper the health care sector.

In the past years, the Philippine health care system witnessed the unparalleled influx of registered nurses where more than 400,000 Filipino nurses were not gainfully employed in 2011 and 80,000 board passers join this rank annually (Abelgas, 2013). The proliferation of nursing schools in the country and the subsequent transformation of nursing education into an opportunity to escape poverty through migration are traceable the growing international demand for nurses during the said period (Cheng, 2009). Accordingly, the quality of education varied significantly as nursing colleges and enrolled students were increasing, which prompted some physicians to take up nursing studies in order to emigrate for employment.

However, migrant Filipino nurses suffer from a myriad of downside scenarios. Migrant Filipino nurses have become victims of unfair labor practices and illegal recruitment agencies. Pratt (2008) for instance found that highly skilled female Filipino nurses under the auspices of the Canadian Live-in Caregiver Program usually

become members of the most occupationally segregated groups in Vancouver.

Deprofessionalizing from nursing to become domestic workers, migrant Filipino nurses end up being supplicant, pre-immigrants, and inferior housekeepers and within the Filipino community, 'husband stealers' (p.215-236). Albeit unfavorable experiences overseas and because of perceived non-viability of the socio-political and economic conditions in the country, many Filipino nurses are forced to leave and seek the proverbial greener pasture. New nursing graduates are also pre-disposed to the belief that the only way to have a better future as a health professional is by working overseas (Palaganas, Spitzer, Caricativo, and Sanchez, 2014). Families, including relatives abroad, also pressure their children to take up nursing so they can go abroad to improve their families' economic condition.

Thus, Filipino nurses are in a state of contradictory positions. Nursing is described as one of the noblest professions, yet Filipino nurses remain in the margin in terms of recognition and remuneration for their contributions to people's health rights. The above situations of the continuing mobility of our nurses, the sustained rate of unemployment and underemployment locally, plus the extensive practice of hiring paying volunteer nurses in exchange of training experience, according to Ruiz (n.d) make evident the inability of the Philippine health care system to provide viable environment for its renowned nursing health professionals.

These were my beliefs and observations regarding the phenomenon being studied, thus form part of my biases. Nursing is invisible in the Philippines. The government does not prioritize nursing as a profession in our country; nursing leaders face plenty of issues when it comes to "plantilla" positions and compensation of nurses whether in the academe, hospital or in the community; nurses who work in the hospital on a contract of service status (contractual) receive 3000 pesos as their monthly compensation and yet handle 50-100 patients per shift.

The voice of nurses shapes the policy seed that will eventually be planted and implemented; ensuring nurses' condition and perspectives to be heard is an important factor in influencing the effectiveness and efficiency of the health sector (Benton, 2012). It is imperative, therefore, to understand deeper, from the voice of nurses, what it means to be a Florence Nightingale and what vision they see for the profession.

By exploring the lives of nurses in contemporary times and documenting their evaluations of and aspirations for the nursing profession through grounded theory, this study will make

important contributions to the development of a substantive theory to guide and refine nursing practice.

Statement of Purpose

This study explored the voices of nurses in contemporary times and unraveled nurses' situations for the purpose of generating a substantive theory to guide and refine nursing practice. The definite objectives of the study were to highlight nurses' perspectives on (1) nursing as a profession, (2) Nightingale in the 21st century: life of a nurse in today's context, and (3) challenges and opportunities to quality of nursing care.

Significance of the Study

This study is significant for its exposition of present nursing health care knowledge and practice. By articulating nurses' voice and experiences and revealing the health care systems' current predicaments and possibilities, this study provides additional guide to service managers and policy makers towards better health care decisions, the ensuring of quality nursing care, and due treatment of nursing professionals. As Speziale and Carpenter (2003) articulated, grounded theories in nursing can help elucidate theoretical gaps among theory, research and practice and can increase substantive understanding of the philosophy and practice of nursing health service.

Methodology

This study utilized the grounded theory method of qualitative research.

Participants of the Study

The participants of the study are forty-one (41) registered nurses in Region 1 specifically from the provinces of Pangasinan, La Union, Ilocos Sur, and Ilocos Norte. I selected Region 1 because I believe that specific events in nursing such as joblessness, underemployment, and underpayment are prevalent in the area. Criterion sampling was used in the selection of participants, and the basis for selection was employment in the hospital, academe, and community and being part of different levels of management. Hence, informants include nurses from top, middle, first, and staff levels. The participants were aged from 24 to 56 years old.

Theoretical sampling also informed the final list of study informants. Participants who were not in the initial list were identified using a method of participant inclusion that is guided by emerging themes or analytic constructs (Rubin and Rubin, 1995). These theoretical samples or emergent informants were identified through snowballing or the identification of subsequent potential respondents by asking previous respondents or by

obtaining names in the field of nurses who may be able to provide data relevant to the study objectives. This was conducted on the assumption that snowballing will make the study more inclusive as it tried to capture the voices of nurses from the different levels of management and fields of work. As Table 1 shows, I completed 31 interviews based on the break (sex, place of work, and position) and control (experience in nursing) characteristics and 10 key informant interviews from theoretical samples.

Data Generation

Data Gathering Instruments

Instruments used in this study included the researcher, field notes, and a semi-structured interview guide. Field notes were made to document observations during the interview. The semi-structured interview consisted of a series of open-ended questions designed to describe and explore the voices of nurses in contemporary times. The questions were divided into general and probing questions on the concept of nursing, life of nurses in today's context, relationship of nurses, quality nursing care, career advancement, compensation, benefits and incentives, safety measures for occupational health hazards, job satisfaction, challenges, and motivation. Interview questions were general at first, followed by questions tailored to the particular expertise of each key informant (KI). Hutchinson (2001) as cited by Speziale and Carpenter (2003) said that a truly accurate research question is impossible to ask before beginning a grounded theory because the focus of the study may change on the data generated, hence, the original question just lends the focus of the study. Mason (2004) writes that semi-structured interview is flexible and fluid structure because it contains themes, topics or areas that are covered in the interview rather than questions that are standardized.

Data Gathering Procedures

The data gathering procedures included the combination of interviews, observations, and literature scoping. Notes were made before, during, and after each interview to record observations and impressions following Speziale and Carpenter (2003) that daily journals, participant observation, formal or semi-structured interviews are valid means of generating data.

In my first institution visits, I gave a background of myself and the rationale of the study and also read or gave copies of the consent form for potential informants' review. Upon getting consent, I conducted interviews based on the informants' time and venue preference. In the 6-month span of the data gathering, I

Table 1

Position	Management Category	Institution	Sex	Code
Dean	Top Level	Academe	Female	TLAF_01
Program Head-Community	Middle Level	Academe	Male	MLAM_01
Nurse 1	Staff	Community	Male	SCM_02
Senior Nurse	First Level	Hospital	Male	FLHM_03
Nurse 1	Staff	Hospital	Female	SHF_02
Nurse 1	Staff	Hospital	Male	SHM_04
Supervisor	Middle Level	Hospital	Male	MLHM_05
Dean	Top Level	Academe	Male	TLAM_06
RLE Coordinator	First Level	Academe	Male	FLAM_07
Nurse II-Program Coordinator	Top Level	Community	Male	TLCM_08
Coordinator	Middle Level	Community	Male	MLCM_09
Nurse 1(in charge)	First Level	Community	Male	FLCM_10
Chief Nurse	Top Level	Hospital	Female	TLHF_03
Nurse IV(Area Manager)	Middle Level	Hospital	Female	MLHF_04
Senior Nurse	First Level	Hospital	Female	FLHF_05
Program Coordinator	Middle Level	Academe	Female	MLAF_06
Senior Faculty	First Level	Academe	Female	FLAF_07
Clinical Instructor	Staff	Academe	Female	SAF_08
Public Health Nurse	Top Level	Community	Female	TLCF_09
Head- Community Health Office	Middle Level	Community	Female	MLCF_10
Nurse 1 (Senior)	First Level	Community	Female	FLCF_11
Nurse 1 (Staff)	Staff	Community	Female	SCF_12
Nurse IV	Top Level	Hospital	Male	TLHM_11
Clinical Instructor	Staff	Academe	Male	SAM_12
Nurse 1	Staff	DSWD*	Female	TSF_13
Civil Defense Officer	Staff	Civil Defense*	Male	TSM_13
		Unemployed*	Male	TSM_14
Coordinator	First Level	Academe	Female	FLAF_14
Clinical Instructor	Staff	Academe	Female	SAF_20
Staff Nurse	Staff	Red Cross*	Female	TSF_23
Jail Officer	Staff	BJMP*	Female	TSF_22
Senior Police Officer	Top Level	PNP*	Male	TSM_16
School Nurse	Middle Level	Dep. Ed*	Female	TSF_19
Nurse 1	Staff	Hospital	Female	SHF_18
Senior Nurse	First Level	Hospital	Female	FLHF_21
Dean	Top Level	Academe	Female	TLAF_17
Clinical Instructor	Staff	Academe	Female	SAF_16
Clinical Instructor	Staff	Academe	Female	SAF_15
Fire Officer	First Level	BFP*	Male	TSM_15
		Unemployed*	Male	TSM_17
		Unemployed*	Male	TSM_18

Legend: (*) Theoretical Samples

interviewed 41 participants, 26 of whom chose to be interviewed on my first visit. Most interviews took place in the participants' offices, the rest were in the informants' home. All interviews were digitally recorded using a smart phone. Immediately after each interview, recordings were transferred to digital computer files for security purposes. To ensure the accuracy of information gathered and prior to verbatim transcription, recordings were listened to and compared with detailed manual notes taken during interviews. In cases when transcript review signaled some answers not properly explored, I requested second rounds of interviews which five (5) informants gladly permitted. Data coding and analyses were performed at various levels by customizing Speziale and Carpenter (2003) data management procedure. Interviews continued until all categories were saturated and no new data emerged.

Literature scoping included the review of printed and electronic research materials on the following search terms: grounded theory and nursing research, concept of nursing, nurses today, relationship of nurses, quality of nursing care, nursing career advancement, nurses' compensation, benefits and incentives, nurses' safety measures for occupational hazards, nursing job satisfaction, nurses' challenges and motivation. These terms are consistent with the key themes explored in the KII. Similar to the approach I adopted in the interview conduct and transcript analysis, I also took notes of the emergent themes from the reviewed literature and performed cross referencing as necessary.

Transcript Digest and Levels of Analysis

According to Speziale and Carpenter (2003) concept formation will be the first part of transcript analysis which will include level I coding (substance codes) that is done by examining data line by line to identify the process in the data; level II coding (categorization) which requires use of constant comparative method and assign the data to clusters or categories according to obvious fit; level III (Basic Social- Psychological Process Identified) which will compose the title given to the central themes that emerge from the data. Then, concept development will be done to expand and define the emerging theory. This includes reduction, selective sampling of literature, and selective sampling of data. Reduction is made to reduce the number of categories by clustering these to form a category of broader scope.

The next step would be selective sampling of data to develop hypotheses and identify properties of the main categories.

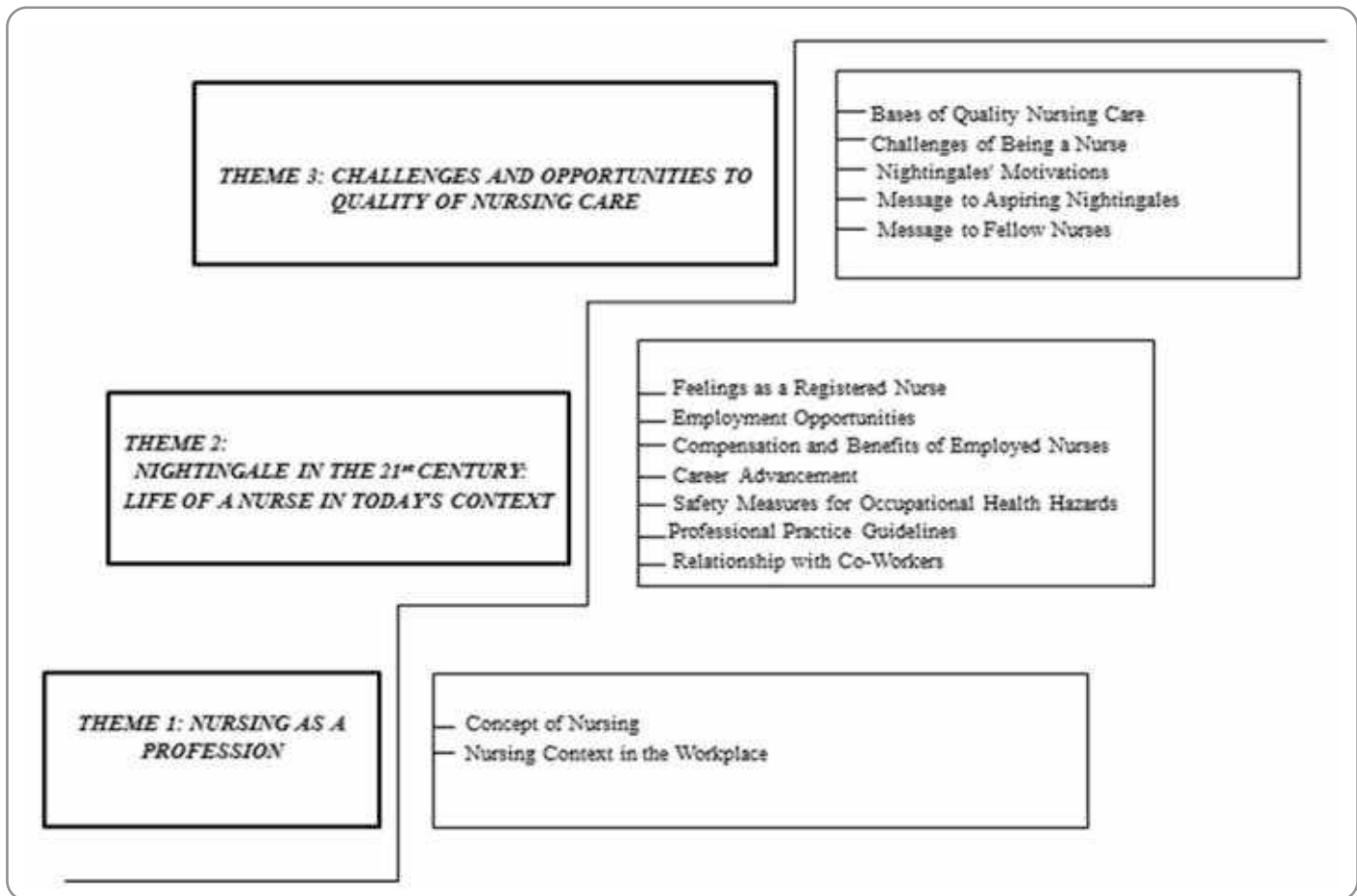
Stern, et al. (1982) as cited by Speziale and Carpenter (2003) stated that through selective sampling, saturation of the categories occurs. After the process of reduction and comparison, the core variable for the investigation emerges. Consistent with the purposes of grounded theory and being conscious of reflexivity, a model emerged from the data and the theory was developed.

Although the data gathering procedures were patterned from Speziale and Carpenter's, I altered some of the process parts as I also utilized the qualitative data management tool NVIVO 10. Using the software, I analyzed KII data simultaneously via systematic, documented procedures of thematic and constant comparative analysis. I initially developed a coding scheme based on the key themes of the interview guide; I likewise used mother and child nodes to show the relationship of codes and themes to the research queries and objectives.

I manually performed Level II coding (categorization) or the constant comparative method and cluster or category assignment by digesting the aggregated data from NVIVO 10. I moved each NVIVO node summary to word file. I re-analyzed aggregated transcripts and recategorized responses and quotations in tabulated forms. From the tabulation, I reclustered data into categories and themes for the Basic Social- Psychological Process Identification. Figure 2 summarizes the levels of data analysis I performed using NVIVO and manual processes.

Ethical Considerations

Ethics review for this study was obtained from the Saint Louis University Ethics Committee. The conduct of interviews and the research methodology itself were guided by the study's ethical protocol. Consent forms were duly explained to and signed by participants prior to the actual interview conduct. Actual measures I followed are as follows: protection of privacy and confidentiality of research information; vulnerability of research participants; risks of study involvement and participation compensation; informed consent process and recruitment procedures; and establishing trustworthiness of the data. Speziale and Carpenter (2003) said that the goal of rigor in qualitative research is to accurately represent study participants' experiences. Furthermore, Guba (1981) and Guba and Lincoln (1994) identified credibility, dependability, confirmability and transferability as operational techniques supporting the rigor of the study.



Findings: Empirical Grounding of the Study

This section provides the Key Informant interview results conducted for the study. The three themes explored and the subthemes and concepts that emerged are provided in Figure 1.

The findings of the study revealed three major themes: (1) nursing as a profession, (2) Nightingale in the 21st century: life of a nurse in today's context, and (3) the challenges and opportunities to quality of nursing care.

Theme 1: Nursing as a Profession

This section provides the captured Nightingale voices on the following: concept of nursing and nursing context in the workplace. Furthermore, it gives a picture of participants' perception of what nursing is and what nursing should be.

A. Concept of Nursing

Nursing is an art of caring. For nurses working in hospitals, nursing revolves around the provision of services to patients and their family. Nursing was likewise expressed as a form of

sacrifice as nurses attend to sick people even with the risk of acquiring communicable diseases.

Nursing is generally about giving care to the clients, pero yong clients natin ngayon, hindi nalang only the patients, expanded, kasama na doon yong significant others nila, yung mga taong pumpunta para bisitahin sila (*Our clients now are not just the patients, they have already expanded to include their relatives and their significant others*) (Key Informant MLHF_04).

The participants shared their concept of nursing as an art and vocation. Nursing was also expressed as a form of servitude and of being sensitive to patients' needs. For some, nursing is all about caring and being considerate; nursing is a life of commitment, mentoring, multi-functioning, and being resilient and available at all times. Nursing was expressed by some informants as a channel for role modeling and continuing learning process. Conversely, one participant thought that nursing would make him rich but found out that landing on a job suited for his training is difficult. Nurses in the academe perceive nursing as a channel for affecting students and committing to health service. Nursing also aims to touch the lives of learners.

B. Nursing Context in the Workplace

Nursing context in the workplace includes the environment or setting and duties of nurses in their respective institutions. Nursing in the academe has transitions, and being a nurse educator requires the updating of knowledge through continuing education.

Nursing (nowadays) compared when we were students, sabali tattan ta latest trends in the provision of and the whole concept of nursing. Ado dagidiy integration na i-tattan nga haan nga kasla idi nga no MS, MS lang latta ket adda didiay, uray adda nursing process met idi kwa a ngem much tatta nga differ, differ tattan (*There are a lot of changes in the nursing trends today. There is already an integration of other concepts unlike before*) So, as an educator, you have to update yourself with the latest trends by continuous learning and reading (Key Informant SAF_20).

Nursing is dynamic and is being influenced by internal and external factors. The context of nursing varies among the informants. On a general note, participants view nursing in their workplace as interesting. Likewise, while the need to adjust to the changing world of nurses is a challenge; the adaptation process is a venue for work and self-reformation. For nurses in the academe, work is less stressful. Nursing in the academe has transitions, and being a nurse educator requires the updating of knowledge through continuing education.

Theme 2: Nightingale in the 21st Century: Life of a Nurse in Today's Context

This section features how it is to be Nightingale in the 21st century in terms of nurses' emotions in terms of employment, employment and career advancement opportunities, work benefits and compensation, safety measures, practice guidelines, and peer relations. Moreover, it provides a clearer spectacle of the actual world where nurses fulfill their duties and responsibilities.

A. Feelings as a Registered Nurse

The life of a registered nurse is fulfilling and employment allows nurses to have greater financial capability for themselves and their family. Informants shared "For me, becoming a nurse is a fulfillment because that was my dream" (Key Informant SAF_20); "Idi naemploy nak as a nurse, syempre naragragsakanak, nagkaroon nak iti stability," (When I was employed as a nurse, I was happy and became stable). (Key Informant TSM_15). "Naragragsak manen ah ta

naiyaplikar mo didiay binasam, makatulong ka met kadagidiy nagrigrigat kinyamun," (I am happy to apply what I learned from school and be able to help those who supported me) (Key Informant TLHF_03).

Most of the participants, especially those who are employed in the government, articulated their employment as fulfillment of personal and professional aspirations and the gratification of life dreams and independence. While some participants forwarded that they are having mixed-emotions because of limited time for their family and inadequate training. Furthermore, other participants particularly those who were not employed, shared that they feel sad, insecure and worthless.

B. Employment Opportunities

Employment opportunities refer to nurses who were hired or were not hired to work in the hospital, academe, community and, other government agencies. Informants have divergent views on the availability of opportunities for nurses. On the positive end, informants cited continuous recruitment, hospital expansion, resignation and succession, and demand for nurses in other fields as factors. As shared, "They are now hiring more manpower, so far so good" (Key Informant MLHM_05) "The availability of opportunities for nurses? As of now, yes, our hospital is expanding" (Key Informant FLHF_21). "Adu latta met, adequate latta met kasi diretso iti recruitment" (*There are adequate opportunities because of continuous recruitment*) (Key Informant TSM_15).

Nurses who were employed in government agencies have adequate employment because of continuous hiring, hospital expansion and resignation and, succession. While other informants expressed that there are inadequate employment opportunities due to lack of budget and plantilla positions, giving priority to influential backing and reduced teaching load. Furthermore, male nurses are preferred by some agencies because of limited number of leave credits and they can work best at the E.R, ICU and, far flung areas.

Compensation and Benefits of Employed Nurses

Compensation and benefits refers to the salary and other aids for nurses provided by their institution. The following viewpoints were expressed by the informants who are affirmative of the availability of monetary and non-financial benefits in their institutions:

Wala naman po tayong masasabi sa sa benefits at tsaka incentives kasi lahat naman ay naibibigay. So kung saang salary grade pare-parehas lang, wala naman tayong masasabi (*All benefits are given and salary grades are*

equal). We're still on the (top din naman), mas mataas naman (*top or much higher*) than other agencies ang sa government (Key Informant FLHM_03).

Half of the informants expressed satisfaction with the kinds and amount of incentives they receive, the other half voiced out discontent. The plights of the temporarily hired and volunteer nurses are also among the voices captured in this study section. The availability of incentives differs among Nightingales as determined by their organization type, rank, and tenure status.

C. Career Advancement

Career advancement refers to availability or unavailability of training opportunities for nurses across institutions. An informant from a hospital shared that "Every highly specialized area like the operating room, HDU, intensive care units offers more than adequate advancement for a nurse's career. Likewise, only nurses with adequate and appropriate training programs are assigned to these areas" (Key Informant TLHM_11).

Data revealed that across institutions, career trainings are available for nurses. However, the access to these advanced learning opportunities remains to be barred by various elements like inability to counterpart, constrained by work schedule, and job orders are not being prioritized.

D. Safety Measures for Occupational Health Hazards

Safety measures for occupational health hazards are safety protocols/benefits and equipment provided for nurses. Data suggest the following standpoints of nurses on the availability of safety measures: different safety measures are available for nurses depending on their line of work and tenure status; in some institutions, nurses are not covered by safety measures nor are given appropriate safety benefits and legal frameworks, resource allocation, and institutional policies are barriers to ensuring nurses' safety.

Kasla nu adda kuma met ti contagious kada kwa ah ket ikkan da kami met ti advice kada kwa instructions tapnu maprotektaan mi ti bagbagi mi (*They give instructions whenever there are contagious diseases so that we can protect ourselves*) (Key Informant TLCF_09).

According to the participants, the safety measures available for nurses depend on their scope of work and tenure status. In the case of hospital nurses, they are provided with Personal Protective Equipment and biomaterials against communicable diseases. Hospitals, likewise have programs and committees that ensure the availability of programs and paraphernalia to secure nurses. Community workers covered by the safety

programs of the local government and are given guidance on communicable diseases.

E. Professional Practice Guidelines

Professional practice guidelines are set of procedures or rules that must be followed by every nurse in their corresponding institutions. The informants shared different viewpoints on the availability of professional practice guidelines (PPGs) in their institutions. Various policies and materials were identified as forms or substitutes of PPGs.

Informants shared that "Upon employment, nu sumrek dan ket ma-orient da panggep ti policies" (*upon entry, they will be oriented with the policies*) (Key Informant TLHF_03). Likewise, nurses are given pertinent information related to contract of service, code of ethics and values, and manual of procedures and standards.

Nurses who were employed in government hospitals, uniform service, and at the DOH were provided with manual of procedures and standards, institutional policies, and implementing guidelines. Likewise, nurses in the academe were provided with memorandum and job description. While in some other government agencies, clinical instructors and contractual nurses forwarded that they do not have work-orientation, institutional PPG's, regulatory guidelines and clear job description.

F. Relationship with Co-Workers

Interview data point to the presence of good working relationship among nurses. For nurses in the community, a friendly relationship characterizes their ties with their colleagues, as Key Informant FLCM_10 stated, "We have a friendly relationship, we treat each other professionally in the way na may respect at nagtutulungan kami sa workplace." (*We have a friendly relationship with each other; we treat each other professionally in a way that we respect and help each other in the workplace.*)

Across institutions, the participants shared that their relationship with their co-workers is generally good. Nonetheless, the occurrence of occasional conflict cannot be avoided. The participants forwarded that conflicts need to be resolved for them to have a harmonious working relationship and good work-outcomes.

Theme 3: Challenges and Opportunities to Quality of Nursing Care

As this section reveals, despite the struggles and contradictions nurses faced, their passion to render quality patient care keeps nurses' passion ablaze.

A. Bases of Quality Nursing Care

Informants offered varying perspectives on what constitutes quality nursing as contextualized in their field and institutional affiliations. In the academe, students' performance in the Nurse Licensure Examination was commonly forwarded as the parameter of quality nursing education and service. Informants, likewise, take pride in their contribution in making their students succeed in the national nursing aptitude test. An Informant also articulated school accreditation and compliance with the standards of the Board of Nursing and Commission on Higher Education as proofs of a nursing school's quality of service. "Our way of life as nurses is excellence. Commendable (performance in the) board exam is one way of evaluating the quality of nursing care that we have in our institution" (Key Informant MLAF_06).

The bases for quality nursing care for nurses who work in the academe are student performance in the NLE, CHED, and BON compliance standard, and accreditation. On the other hand, participants who were employed in the hospital and uniform service articulated that adhering to national standards, constant supervision of colleagues, attendance to seminars and trainings, using patient feedback are ways done to attain quality nursing care. Nurses who work in other government agencies, uniform service, and in the hospital narrated that the barriers in attaining quality nursing care are understaffing, lack of incentives, benefits and skills training, lack of facilities, weak health governance and limited national funding.

B. Challenges of Being A Nurse

Nurses confront various challenges as individuals and as parts of the health work force. Among the trials associated with patient care is the daily encounter of suffering and possible and actual deaths. What makes it more challenging, according to some informants, is when nurses themselves witness the pain of their own family members or the agony of patients' relatives. One informant shared, "Mahirap talaga pag relatives mo (ang pasyente) pero kahit yung mga pasyente mo nag aagaw- buhay, diay kamag anak na, parang, ang hirap-hirap sa pakiramdam dimo talaga magwang ngumiti kasi nakikita mo silang umiiyak (*It is really difficult when the patient is your own relative. Likewise, seeing your patients dying or his or her relatives grieving gives you a heavy heart.*) (Key Informant SHF_02).

The participants narrated the challenges and most difficult situation case experienced as health professionals. Yet, their commitment to the nursing profession keeps them fervent in facing their responsibilities.

C. Nightingales' Motivations

Data revealed the following motivations for nurses: the opportunity to share skills and do responsibilities as a nurse in uplifting and saving the lives of clients such as being able to help those who are in need; client's recovery and expression of gratitude; commitment to one's family; serving God by serving clients; seeing students graduate and succeed in their career; employment compensation; staying in the country and serve Filipinos; supervisor or job superior's appreciation and affirmation of nurse's work; helping patients and providing their needs are the sources of motivation commonly cited by the study's nurse informants and the source of engrained passion to save lives that inspires nurses as health professionals.

D. Message to Aspiring Nightingales

Ang masasabi ko lang (all I can say) especially those who are thinking to enter nursing professional is that hindi siya madali pero (it's not easy but) at the end of the day, at the end of your journey as a nursing student, it will be worth it. In any course naman siguro mahirap sa umpisa pero (It would probably be difficult at the beginning) but as long as you embrace the field that you have chosen, at the end of the day mamahalin mo siya, nag-eejoy ka (you'll love and enjoy it). I think yun yung pinakaimportante yung mahal mo at nag eenjoy ka sa ginagawa mo (That to me is the most important- loving and enjoying what you are doing) and at the same time nakakatulong ka sa ibang tao (you are helping other people). I think yun naman ang purpose ng bawat isa sa atin yung makapag (that is the purpose of each one of us) to serve not only God, pero para makapag serve (sa but also serve) the human race. Nagseserve ka, nag eenjoyka, minamahal mo yung ginagawa mo. (You serve, enjoy, and love what you are doing.)

-Key Informant TSM_14

The participants forwarded that aspiring nurses should love and enjoy nursing because it is not a job for the weak-hearted. Furthermore, the participants expressed that nursing requires sacrifice, so aspiring nurses must revisit their purpose before enrolling and pursue nursing if it is really their dream to serve.

E. Message to Fellow Nurses

For the informants, there are key values and perspectives that current nurses must revitalize or uphold as they continue in their trajectory as health professionals. First of this is, "No adda commitment mo nga agbalin nga maysa a nurse. Kasi tay kunada (*if you have the commitment to become a nurse, as*

they say,) it is your humanity being a nurse, to serve people, being a nurse is to care for people, being a nurse is to be of service to people" (Key Informant SAF_20). "Nurses must continue providing care; Nurses must continue rendering service to the sick" (Key Informant TLHM_11).

Across institutions, the participants voiced that nurses must have the heart and passion for patient care; avoid discrimination; uphold competence and continue the search for knowledge.

Discussion

This section analyzes the perspectives of Nightingales' on (1) nursing as a profession, (2) Nightingale in the 21st century: life of a nurse in today's context, and (3) the challenges and opportunities to quality of nursing care. "The public views of nursing and nurses are typically based on personal experiences with nurses, which can lead to a narrow view of a nurse often based only on a brief personal experience. This experience may not provide an accurate picture of all that nurses can do to provide in the healthcare delivery process" (Finkelman and Kenner, 2012, p. 86). Veering away from public opinion to highlight the voices of nurses, this section reveals what it means to be a Nightingale at present time and the visions nurses see for their profession. At the end of this section, a substantive theory to guide and refine nursing practice shall be proposed.

Nursing as a Profession and the Virtue of Keeping Nightingale Lamp's Ablaze

The voices captured in this study consistently define nursing not only as a profession but as a vocation chosen from one's heart. Statements such as "Nurses are special; we are angels on earth" (Key Informant FLAF_14) and "Nursing is a calling that will totally change you from being self-centered to being compassionate; you become the person that wants to give everything" (Key Informant FLCF_11) reveal the dignified perception of nurses of themselves and their chosen field.

Despite the changing scenario of nursing, data point that modern day Nightingales still consider quality care through compassionate service and dedication to patients' health as the goal of the profession. Regardless of which work context nurses are, "Nu nurse ka, agserbi talaga ti oath ken commitment nga tinanggap mo" (*As a nurse, you have to serve and be committed to the oath you received*) nurse informants commonly voiced out. This is consistent with the assertion of Selanders and Crane (2012) that "Modern nursing is complex, ever changing, and multi focused. Since the time of Florence Nightingale, however, the goal of nursing has remained unchanged, namely to provide a safe and caring environment that promotes patient health and well-being"

Nightingale in the 21st Century: Life of a Nurse in Today's Context

Interview data corroborate literature review results from the presence of various motivations and challenges to nurses and the nursing profession. Examining data on the profession's impact to the nurses, informants revealed the following as positive contributions of nursing to their lives:

- Learned the value and inviolability of life.
- Appreciated compassion and care over financial gains
- Developed decision making skills
- Adopted service to other people as life's essence
- Acquired greater skills in managing self and family's health
- Developed the ability for self- motivation aside from financial compensation
- Learned to commit to other people regardless of their income and social status
- Discovered one's purpose: knowing one's personal and professional values and changing towards one's betterment a professional
- Overcame the fear of blood, procedures, and emergency situations
- Succeeded on complicated tasks and responsibilities
- Gained better time and task management skills
- Maximized opportunities to integrate, help, and affect communities
- Experienced continuing learning opportunities with colleagues
- Enhanced communication and people skills
- Became part of a team and a family
- Gained professional recognition
- Attained financial independence
- Earning for one's self and family.

These positive contributions are consistent with the findings of O'Shea (2006) on the satisfying aspects of nursing such as feeling appreciated, feeling like a member of the team, getting respect, making a difference and earning money. Items on the above list are likewise consistent with Utriainen and Kynga (2009) on the value of communal aspects of nursing work such as interpersonal relationships, social interaction and communication with peers and Janssen, Jonge and Bakker (1999) proposition on autonomy, social contacts, skill variety and opportunities to learn as intrinsic motivations of nurses. The life of a nurse is beset with challenges and concerns, and the findings of the study corroborate existing literature on the presence of internal and external challenges to nurses' practice of and dedication to the nursing profession. Informants' voices are consistent with Lim, Bogossian, Ahern (2010) on the role of heavy workload, work conflict and ambiguity in nurses' daily stress experiences; likewise with Zangaro and Soeken (2007)

on negative workplace relationship, demanding aspects of work, and unmet career expectations as contributors to nurses' exhaustion.

The Challenges and Opportunities to Quality of Nursing Care

The challenges and motivations in the personal, institutional, and health system are 3 sets of interrelated dimensions that dictate nurses' life as health workers. The resolution of the contradictions and predicaments within and among these three spheres is the dynamics that form and strengthen nurses' commitment to the profession (Palaganas, 2009).

The physical and psycho-social trials are weighed against personal benefits and motivations. Institutional conflicts and work place issues are balanced with work benefits and collegial ties. The wider socio-political issues of the land are counteracted with patriotism and service. These findings are similar to Palaganas (2009), Tourangeau and Cranley (2006), and Vanaki and Vagharseyyedin (2009) on the roles of personal and professional dreams and community and organizational commitment in the retention of nurses in community and facility-based health delivery systems.

Substantive Theory Proposal

This study forwards The Integrated Systems Approach to Nursing Care as a framework for balancing the challenges and opportunities in nursing health care. The conceptual model also illuminates that majority of the participants are certain with their concept of nursing and their beliefs of what nursing should be. However, in the real world, they are confronted with struggles and contradictions that need to be balanced.

Integrating the proposition of the *Care Circle of the Three Cs Theory of Lydia Hall and adopting the concept of environment, stressors, and reconstitution* from Betty Neuman's Systems Model, the proposed theory posits that the provision of safe and caring environment for patients and their families is dependent on the resolution of nursing professionals' predicaments as individuals and as subjects of institutional policies and wider health management concerns of the country.

As an output of this research, the proposed theory is grounded on the following assumptions:

- Nurses are certain of what nursing is and what nursing should be.
- The provision of nursing care is never simple and must be understood against the multifaceted and complicated backdrop where services are provided by nurses.
- The challenges and opportunities in ensuring the quality

nursing care are present at the providers, institutional, and health systems' level.

- Quality nursing care cannot be attained without locating the relationship of the issues and concerns and the opportunities and solutions at these three levels.
- Only through the resolution of nurses' struggles and contradictions will nurses be at a favorable condition and in turn make guarantee quality health care delivery.

According to the Care, Core, and Cure Theory, nurses are focused on and dedicated to performing the noble task of nurturing patients and ensuring comfort and well-being. However, motivations, and stressors abound the system affecting nurses and their commitment to their noble tasks. Hence, to reconstitute nurses back to their care circle or patient dedication, "the return and maintenance of system stability, following treatment of stress" must be ensured" (Gonzalo, 2011). This, as discussed in the previous sections, is the resolution of the multi-level struggles that nurses face (See Figure 2).

The Integrated Systems Approach to Nursing Care model can be used as a critical tool or guide for nurse managers and policy implementers to discover what is really going on in their area of practice. This is vital for them to intervene with confidence and help resolve the concerns of nurses.

Conclusions and Recommendations

Nurses are essential workforce in ensuring people's welfare, and Nightingales' perspectives are among the powerful evidence and tools for the refinement of health systems and policies. Using grounded theory, this study explored nursing as a concept and as a profession. Nightingale in the 21st century: life of a nurse in today's context, and their views on issues confronting their field and the potential direction of nursing were likewise explored.

This study concludes that nursing is dynamic, complex, diverse, expanding and highly contextualized. Despite modernity and change, the goal of nursing remains concentrated on the provision of safe environment and quality care. This objective remains a Nightingale's pledge and endeavor amidst nurses' constant battle between motivations and challenges. Given the explored voices in the paper, nurses, health care managers and policy implementers should therefore concentrate on:

- Helping nurses help themselves by providing assistance in nurses' endeavor for continuing education and skills enhancement, implement intervention programs for monitoring and increasing nurses' emotional and psychological resilience, conducting reflection activities to help revitalize their commitment to the nursing profession.
- Revision of institutional policies and set-ups toward

collaborative and enabling work environment by adopting participatory form of management and open system of communication, increase room for team work, reduction of workload, provide clearly defined practice scope and guidelines, and institutionalize financial and non-monetary forms of benefits and incentives, and ensuring occupational safety.

- Proactive health governance by facilitating nurses' work motivation and retention through the due implementation of nursing law and other statutes for the welfare of health

workers, provide additional plantilla position for nurses in the country, increase funding for health programs to create more learning and practice environment for nurses.

Lastly, the utilization of the theory is suggested in developing a more responsive nursing practice. And further research must be done to explore a wider scope of the problems that Nightingales face and the potential solutions to the issues surrounding the nursing field.

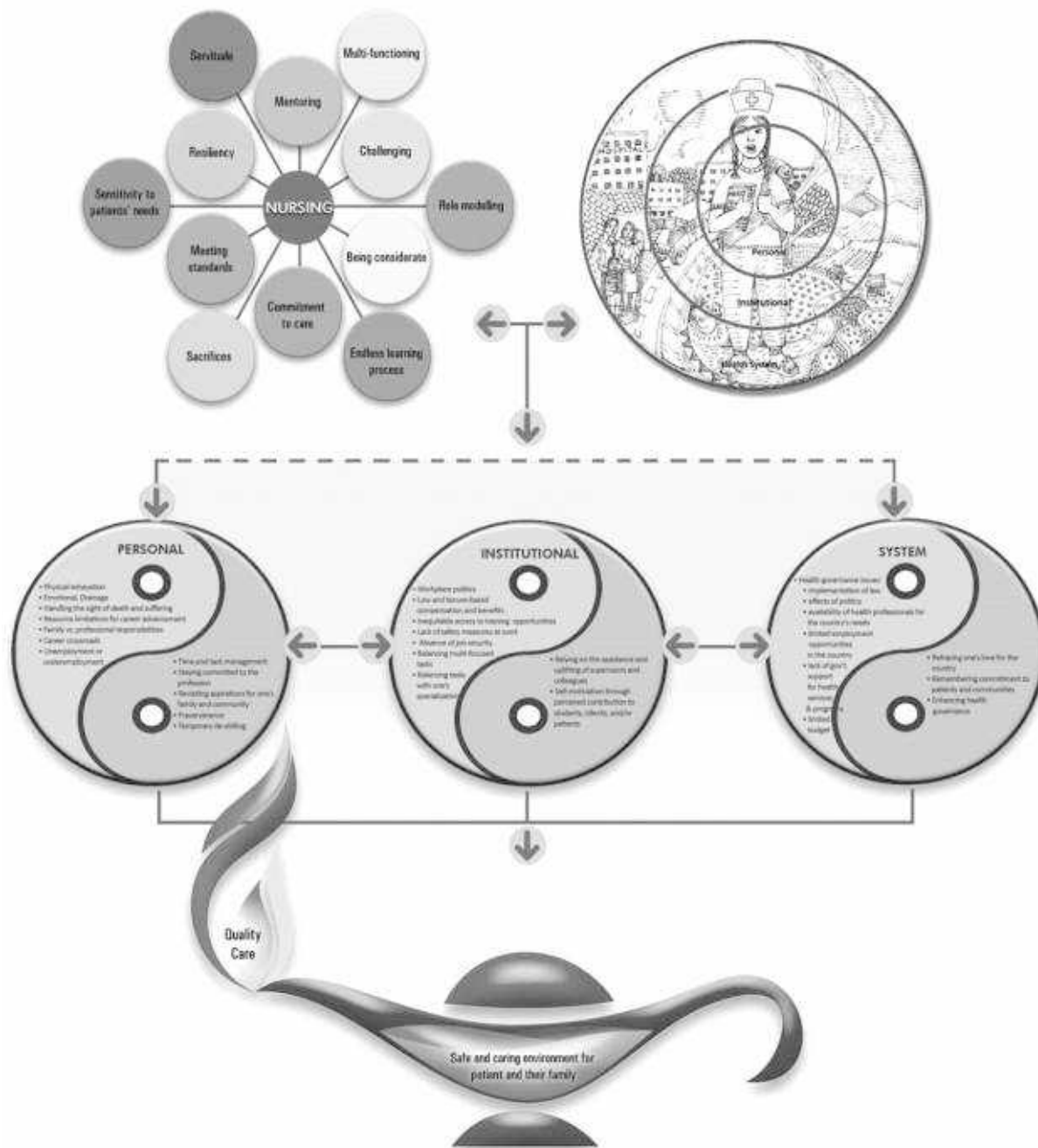


Figure 2. Integrated Systems Approach to Nursing Care

References

- Abelgas, V. (2013). The growing ranks of the unemployed - Manila Standard Today. The growing ranks of the unemployed - Manila Standard Today. Retrieved October 3, 2014, from <http://manilastandardtoday.com/2013/03/20/the-growing-ranks-of-the-unemployed>
- Benton, D. (2012). Advocating Globally to Shape Policy and Strengthen Nursing's Influence. Retrieved May 2, 2015, from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-17-2012/No1-Jan2012/Advocating-Globally-to-Shape-Policy.html>
- Cheng, M. H. (2009). The Philippines' health worker exodus. *The Lancet*, 373(9658), 111-112. Retrieved June 1, 2011 from [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(09\)60022-2/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60022-2/fulltext)
- Finkelman, A. and C. Kenner. 2012. Professional Nursing Concepts: Competencies for Quality Leadership 2nd Edition. Jones & Bartlett Publishers
- Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. New York: Aldine
- Gonzalo, A. (2011). Betty Neuman's The Neuman Systems Model. <http://nursingtheories.weebly.com/betty-neuman.html>
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-92.
- Guba, E. G., & Lincoln Y. S. (1994). Competing paradigms in qualitative research. In N. K.
- Hutchinson, S. (2001). Grounded theory: The method. In P.L. Munhall (Ed.), *Nursing research: A qualitative perspective* (pp. 209-243). Sudbury, MA: Jones and Bartlette
- Janssen, P., De Jonge, J., Bakker, A., & Booth (1999). Special determinants of intrinsic work motivation, burnout and turnover intentions: A study among nurses. Retrieved June 24, 2015 from <http://www.ncbi.nlm.nih.gov/pubmed/2567>
- Lim, B., Bogossian, F., & Ahern, K., (2010). Stress and coping in Australian nurses: A systematic review. Retrieved May 7, 2015, from <http://www.ncbi.nlm.nih.gov/pubmed/20487471>
- Mason, D., Isaacs, S., & Colby, D. (2011). Google Books. *Google Books*. Retrieved Mason, J. (2011). Semi structured Interview. Retrieved November 7, 2014, from <http://srmo.sagepub.com/view/the-sage-encyclopedia-of-social-science-research-methods/n909.xml>
- O'Shea, M., & Kelly, B. (2006). The lived experiences of newly qualified nurses on clinical placement during the first six months following registration in the Republic of Ireland. Retrieved May 24, 2015 from <http://www.ncbi.nlm.nih.gov/pubmed/204884>
- Palaganas, E. (2009). The World of Community Health Nursing: A Life of Contradictions and Struggles. Unpublished.
- Palaganas, E, Spitzer, D., Sanchez, M., & Caricativo, R. (2014) Philippine Source Country Perspective on the Migration of Highly Skilled Health Professionals: Causes, Consequences, and Policy Implications. Unpublished.
- Pratt, G. (2008). From Registered Nurse to Registered Nanny: Discursive Geographies of Filipina Domestic Workers in Vancouver, B.C. ReadCube for Researchers. Retrieved August 26, 2014, from <http://www.readcube.com/articles/10.2307>
- Reed, P., & Shearer, N. (2009). The Rhetoric of Rupture: nursing as a practice with a history. *Perspectives on Nursing Theory* (pp. 69-78). Philadelphia: Lippincott Williams & Wilkins.
- Ruiz, C. (n.d) "Is There a Real Shortage of Nurses?" *International Nursing Review* 5 (1958): 18- 19.
- Selanders, L., & Crane, P., (2012). The Voice of Florence Nightingale on Advocacy. Retrieved May 23, 2015, from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-17-2012/No1-Jan-2012/Florence-Nightingale-on-Advocacy.html>
- Speziale, H., & Carpenter, D. (2003). *Qualitative Research in Nursing*. Philadelphia: Lippincott Williams & Wilkins.
- Tourangeau, A., & Cranley, L. (2006). Nurse intention to remain employed: Understanding and strengthening determinants. Retrieved May 13, 2015 from <http://www.ncbi.nlm.nih.gov/pubmed/804884>
- Utrianen & Kynga. (2009). Hospital nurses' job satisfaction: A literature review. Retrieved December 23, 2014, from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2834.2009.01028.x/abstract>
- Vanaki, Z., & Vagharseyyedin, S. (2009). Organizational commitment, work environment conditions, and life satisfaction among Iranian nurses. Retrieved May 6, 2015 <http://www.ncbi.nlm.nih.gov/pubmed/8034>
- Zangaro, G., & Soeken, K. (2007). A Meta-Analysis of Studies of Nurses' Job Satisfaction. Retrieved June 24, 2015 from <http://www.ncbi.nlm.nih.gov/pubmed/176578762>

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RESEARCH ARTICLE



Dr. Reimund C. Serafica



Dr. Tricia K. Gatlin

Web-based Interventions Among Adults: Relevance to Anthropometric Indicators

Abstract

Purpose: Web-based interventions offer low cost and practical strategies to promote self-care for adult individuals with various health conditions and status issues around the globe. The purpose of this review was to summarize the current recent literature in examining the effectiveness of web-based interventions to promote healthy lifestyles related to anthropometric measurements in adult individuals with various health conditions and status.

Design: A systematic review of literature was conducted. Search of the literature was employed to web-based intervention studies in refereed journals written in the English language. The databases searched were PubMed, Ovid MEDLINE, CINAHL, and Google Scholar, with a search period of 2004–2014. In addition to these databases, a manual search was also used.

Methods: All studies were examined by three reviewers for eligibility using the Jadad scoring system. Thirteen randomized controlled trial (RCT) studies (n=13) met criteria in this review and revealed significant associations between the utilization of web-based health promotion interventions on anthropometric measurements in adult populations with health related conditions.

Findings: Seven studies reported overall positive changes in the participants' anthropometric measurements at the completion of each study. Four out of seven studies reported that adult participants' in the intervention groups had greater weight loss as compared to the control groups. In addition, one study out of the seven studies reported a larger reduction in BMI of the participants in the intervention group. Two studies out of 13 studies reported positive changes in BMI, waist circumference, body fat, and waist-hip-ratio in the control groups.

Conclusions: The outcomes from this review may prove useful information of effectiveness of web-based interventions relative to physiological outcomes such as anthropometric measurements. These programs can inform transformative practice and improvement of global health.

Introduction

Studies have consistently documented alarming rates of rapid weight gain, excess weight and obesity worldwide (Hossain, Kavar, & El Nahas, 2007; Malik, Willett, & Hu, 2013; Skinner & Skelton, 2014), and excess weight has been linked to multiple diseases. Excess weight and obesity are characterized by extreme or abnormal accumulation of fat in the body that may affect the overall health (Diabetes Prevention Program Research Group, 2002; Williams, Hamm, Shulhan, Vandermeer, & Hartling, 2014). Individuals with or at risk for diabetes and cardiovascular disease (CVD) are at particular risk for adverse effects of overweight and obesity (Gudzune, Hutfless, Maruthur, Wilson, & Segal, 2013). Overweight and obesity also increase blood pressure, which, in turn, contributes to development of hypertension and related complications, including congestive heart failure and even death.

Numerous lifestyle modification nursing and non-nursing studies have examined anthropometric outcomes such as weight, body mass index (BMI), waist circumference (WC), hip circumference (HC), waist-hip-ratio (WHR) and percentage of body fat (Esposito et al., 2004; Hoeger et al., 2004; Serafica, Lane, & Ceria-Ulep, 2013; Wadden, Webb, Moran, & Bailer, 2012). BMI is a standard indicator for body fat (Serafica et al., 2013; Shah & Braverman, 2012). In most adult individuals, a high BMI is illustrative of overweight status, and a higher BMI signifies obesity. Increases in anthropometric indicators and prevalence of overweight calls for an alarm since comorbidities tend to occur at higher BMI. As stipulated by the Centers for Disease Control and Prevention, classification of BMI is as follows: BMI is classified as follows: BMI < 18.5 (underweight), BMI \geq 18.5 < 24.9 (normal weight), BMI \geq 25 < 29.9 (overweight), and BMI \geq 30 (obese). Other organizations have also established anthropometric reference patterns of BMI with cut-off points to define overweight and obesity in Asian populations (Serafica, 2014; Serafica et al., 2013).

Although most lifestyle modification studies have concentrated on general obesity, abdominal obesity has been argued being is also considered to be an independent predictor of myriad risks factors (Grothe & Park, 2000; Gudzune et al., 2013; Serafica et al., 2013). Waist circumference (WC) is a risk factor of intra-abdominal fat mass (Iacobellis, 2008; Serafica et al., 2013). According to the Centers for Disease Control and Prevention, any waist circumference above 102 cm (40 inches) for men as well as 88 cm (35 inches) for non-pregnant women can as an antecedent to the development of Type 2 diabetes, hypertension, and coronary artery disease. Waist-hip ratio (WHR) has also been used as an indicator of health and - of the risk of developing serious health

conditions. Research exemplify how individuals with apple-shaped bodies (with weighty waists) are prone to higher health risks (Serafica et al., 2013) in comparison to those having pear shaped bodies (with weighty hips; Price, Uauy, Breeze, Bulpitt, & Fletcher, 2006). Men should have a WHR of \leq 0.9, and women should have a WHR of \leq 0.8. A WHR \geq 1.0 indicates an increased risk for heart disease, diabetes, and cancer (Serafica et al., 2013; Tol, Swinkels, De Bakker, Veenhof, & Seidell, 2014).

The weight-gain and obesity epidemic has prompted health researchers and nurse scientists around the globe to develop innovative, web-based strategies to address the problem. The multiple benefits of using web-based or Internet to promote self-care and lifestyle change programs are well established (Cruz et al., 2014; Neubauer et al., 2013). Web-based interventions have shown promise as effective and accessible solutions to lifestyle interventions (Warmerdam, Smit, van Straten, Riper, & Cuijpers, 2010). Additionally, using web-based approaches other than traditional face to face lifestyle interventions can let populace health involvements to be conveyed, upheld, and extensively disseminated at reasonably low cost (Warmerdam et al., 2010; Watson, Bickmore, Cange, Kulshreshtha, & Kvedar, 2012). The advantages of using web-based technology as part of health interventions are numerous. Users can access the web 24/7 and can use interventions anonymously and at any pace. Furthermore, web-based interventions might grasp adult individuals who otherwise would not receive the intervention that they need and can mimic costly face-to-face sessions (Kohl, Crutzen, & de Vries, 2013; Tang, Abraham, Greaves, & Yates, 2014; Warmerdam et al., 2010).

Background and Purpose

Many studies have found that the use of web-based technologies (Maon, Edirippulige, Ware, & Batch, 2012) with health interventions, such as diet and physical activity behaviors (Bacigalupo et al., 2013; Collins et al., 2012; Manzoni, Pagnini, Corti, Molinari, & Castelnuovo, 2011), generated encouraging peer-support and behavioral consequences. However, what is not yet clear is the effectiveness of web-based interventions on study participants' measured anthropometric indicators. In some studies, authors have indicated concern about the reliability and quality control of self-reported changes in anthropometric measurements (Cruz et al., 2014; Harvey-Berino, Pintauro, Buzzell, & Gold, 2004; Nawaz, Chan, Abdulrahman, Larson, & Katz, 2001). The recent proliferation of web-based intervention studies on lifestyle modifications suggests the need to further explore the effect of technology on the anthropometric measurements of the study participants.

Although some evidence suggests that web-based interventions address psychological outcomes more effectively than lifestyle interventions alone, what is less clear is whether web-based interventions are more effective in producing and maintaining weight reduction or whether such interventions can significantly modify anthropometric outcomes. A systematic review of literature is conducted to methodically integrate research evidence that involves narrative integration at the end of the review.

The purpose of this systematic review is to describe the efficacy of using the web-based delivery platform on anthropometric indicators. This study presents a systematic review of recent, randomized controlled trials (RCTs) that examined the use of web-based interventions.

This review summarizes the current literature examining the effectiveness of web-based interventions intended to support healthy lifestyles related to anthropometric measurements in adult individuals with various health conditions and statuses. Specifically, the objectives were to

1. identify recent RCT studies that used web-based interventions that address changes in anthropometric indicators as one of the outcomes and
2. conduct a quality appraisal of selected RCT studies using the Jadad scoring system.

Material and Methods

Design

A systematic search of the literature was considered to web-based intervention studies in refereed journals and in the English language. The databases searched were PubMed, Ovid MEDLINE, CINAHL, and Google Scholar, with a search period of 2004–2014. In addition to these databases, a manual search was also employed. Key words for the search were anthropometric measurements, web-based technology effectiveness, web-based interventions, internet, e-health, self-care, adults, and randomized controlled trial. There were no precise health conditions listed in the review of literature and search. The two authors performed the review of the findings accordingly.

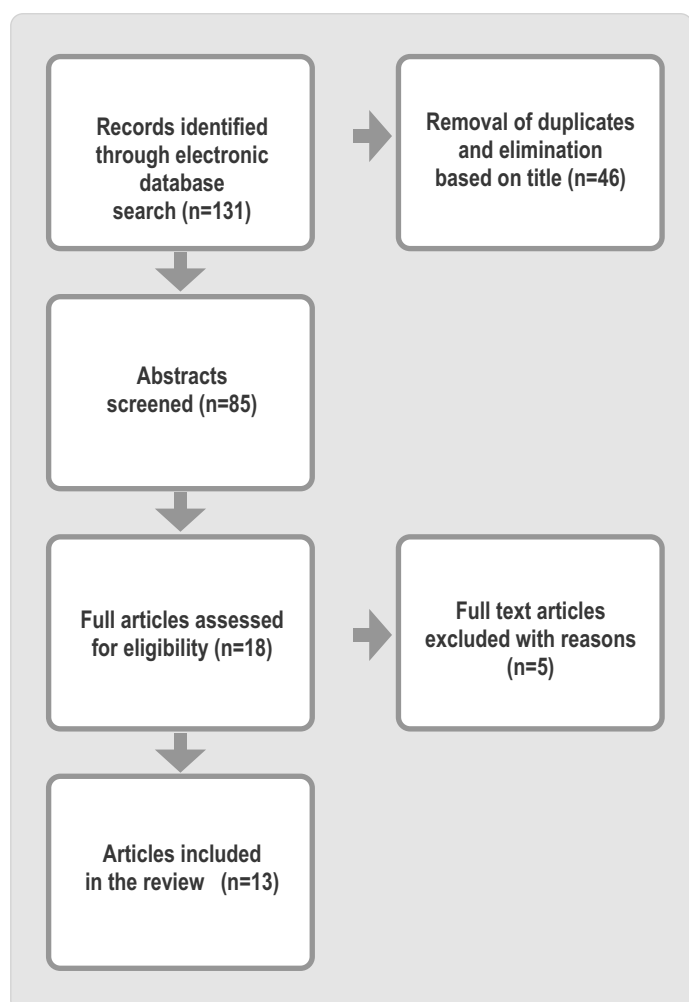
Sample and Inclusion and Exclusion Criteria

Web-based interventions with adults and RCTs of such interventions were chosen for inclusion in this study. Studies that focused on web-based interventions with children (below 18 years of age) or psychologically ill individuals were excluded because a broader set of interventions tends to be used with participants in

such studies. Studies involving major health issues such as cancer patients or studies involving pregnant women were also excluded for similar reasons. Studies involving self-reported anthropometric measurements were excluded for consistency. Studies involving the use of social media and smartphones were also eliminated due to a recent systematic review publication in this area (Williams et al., 2014).

The initial search generated a total of 131 papers from all search databases. To obtain rigorous scientific evidence, only RCT studies on key outcomes and interventions were selected for inclusion. One reviewer screened the study title and abstract as the first screening stage and narrowed the articles to 18 papers. Duplicate studies that appeared in multiple data bases were also eliminated. Based on the inclusion criteria, three reviewers examined the full papers and identified 13 studies that met the inclusion criteria. Figure 1 shows the process of selecting the studies included in the systematic review.

Figure 1. Flowchart of the systematic review



Instrument

The key instrument engaged in this analysis was the Jadad Scoring of Quality of Reports of Randomized Clinical Trials (JSQRRC; Inouye, Braginsky, & Kataoka-Yahiro, 2011; Jadad et al., 1996; Moher, Jadad, & Tugwell, 1996). The instrument (JSQRRC) has been widely used in appraising the methods and quality of clinical trial studies (Inouye et al., 2011). We also used the 13-point JSQRRC scoring method to determine the quality of the RCTs in this review. The Jadad tools is comprised of 11 items as shown in Table 1.

Table 1. *Jadad's 11 item appraisal tool.*

Jadad's criteria
Was the study design randomized and appropriate?
Was the study design double blind and appropriate?
Was there a description of withdrawal and dropouts?
Were the objectives of the study defined?
Were the outcome measures defined clearly?
Was there a description of the inclusion and exclusion criteria?
Was the sample size justified (e.g., power calculation)?
Was there a clear description of the intervention?
Was there at least one control (comparison) group?
Was the method used to assess adverse effects described?
Were the methods of statistical analysis described?

Analyses of Jadad Scores

Evaluation of the data included a detailed analysis of the study characteristics (such as country of origin, age, gender, and health conditions), methodology (total methodological score using JSQRRC and contextual analysis of RCT methods), and outcomes. The reviewers examined the articles collected and extracted and reviewed each manuscript independently. The reviewers rated each study using the JSQRRC to assess the methodological quality score for the studies. In the case of any disagreement in scores among reviewers, a face-to-face meeting was held to achieve consensus with the presence of an additional external reviewer.

Findings

Jadad Analysis

Thirteen randomized controlled trials were included in this systematic review. A description of included studies can be found in Table 2. Six studies were based in the United States (Bennett

et al., 2010; Carr et al., 2009; Patrick et al., 2011; Rosal et al., 2014; Thorndike et al., 2012; Watson et al., 2012), two in United Kingdom (Carter, Burley, Nykjaer, & Cade, 2013; Tapper, Jiga-Boy, Maio, Haddock, & Lewis, 2014), and five in other countries (Castelnuovo et al., 2011; Collins et al., 2012; Imanaka, Ando, Kitamura, & Kawamura, 2013; Pressler et al., 2010; van Genugten et al., 2012). The anthropometric measures met the inclusion criteria for all 13 studies, which consisted of male and female participants (Bennett et al., 2010; Carr et al., 2009; Carter et al., 2013; Castelnuovo et al., 2011; Collins et al., 2012; Imanaka et al., 2013; Patrick et al., 2011; Pressler et al., 2010; Rosal et al., 2014; Tapper et al., 2014; Thorndike et al., 2012; van Genugten et al., 2012; Watson et al., 2012). Two studies were gender specific: one included only male participants (Collins et al., 2012), and the other included only female participants only (Rosal et al., 2014). Additionally, two studies were conducted involving minority and other ethnic group (Imanaka et al., 2013; Rosal et al., 2014).

The 13 studies reviewed used a variety of outcome measures. Among these, our review focused on weight-related measures (i.e., BMI, WC, central adiposity, WHR). Other outcome measures reviewed here include percentage of body fat, central adiposity, physical activity level, physical fitness, dietary intake, fruit and vegetable consumption, and psychosocial variables). In this review, the effectiveness of the studies' interventions was determined by reviewing the anthropometric results. The Jadad scores range from 8 to 11, and the average score is 9.4.

Description of the studies

Participants' characteristics. Studies included participants with various health conditions, such as hypertension (Bennett et al., 2010), hyperlipidemia (Bennett et al., 2010), type 2 diabetes (Castelnuovo et al., 2011; Rosal et al., 2014), obesity (Bennett et al., 2010; Castelnuovo et al., 2011; Imanaka et al., 2013; Watson et al., 2012), overweight (Carr et al., 2009; Carter et al., 2013; Collins et al., 2012; Imanaka et al., 2013; Pressler et al., 2010; Tapper et al., 2014; van Genugten et al., 2012; Watson et al., 2012), and mixed conditions (Bennett et al., 2010; Carr et al., 2009; Castelnuovo et al., 2011; Imanaka et al., 2013; Watson et al., 2012). The overall mean age of the participants was 54, with a range from 45 to 70. Only one study cited regarding participants' familiarity on the usage of computers and/or internet technologies (Carter et al., 2013). In the 13 reviewed studies, both experience in computer and web-based or internet usage use were assessed with different types of self-reported questionnaires, ranging from hours per week to number of years of experience; this multiplicity in assessments made it challenging to appraise measures of the reviewed studies.

Table 2. Study Characteristics

Author (year), country	JADAD Score	Aim of study	Population (total enrolled/complete), intervention (n), control (n), W, age of participants	Web-based Intervention	Other intervention (s)	1. Duration of intervention period (months) 2. Intervention time and amount; 3. Data collection time	Assessment of study aim outcome measures Other outcomes	Outcomes- Study aim: significant outcome (s); Changes in Anthropometric measurements, Conclusions
Bennett et al. (2010), USA	8	To evaluate the short-term efficacy of a web-based behavioral weight loss intervention .	101, 85 intervention (51) control (50) W, 16 (25-65 years)	interactive weight loss approach	Behavioral skills training; regular health coach support	1.3 months 2. at least 3x weekly for 3 months; 3. baseline, 3 months	Changes in body weight (kg) at 12 weeks Other outcomes: Changes in BMI, BP, WC	Intervention group lost a greater % of baseline bodyweight (-2.6% +- 3.3%); Intervention participants lost a larger reduction in BMI(-0.94)+- 1.16 kg/m ²) No change in BP
Carr et al. (2009), USA	8	To determine whether increased PA following the 16 week internet based intervention is maintained 8 months later in sedentary and overweight rural adults	32, 19 Intervention (9) Control (10) W, 8* (21-65 years)	website access	workbook; interactive activities, behavior modification strategies	1. 16 weeks (3 months) 2. Weekly email/phone contact for the first 2 weeks with email contact every other week thereafter for 16 weeks 3. One week before baseline, 3 months, and 8 months	PA levels have relapsed (-1340 steps/days) Other outcomes: Total cholesterol, triglycerides, and central adiposity	From the end of the intervention to 8 months, HDL levels decreased, and total cholesterol and triglyceride levels were lower at 8 months. Central adiposity was reduced and maintained 8 months later; waist circumference was not statistically significant but was maintained at 8 months.
Carter et al. (2013), United Kingdom	9	To determine acceptability and feasibility outcomes of a self-monitoring weight management intervention delivered by website and paper diary	128, 79 Intervention (42) Control 1 (42) Control 2 (43) W, 49 (18-65 years)	Weight Loss Resources- web based	Web-based Paper Diary	1.6 months 2. not stated 3. baseline, 6 weeks, 6 months	The web-based is feasible and acceptable weight loss intervention.	At 6 months, weight change was statistically significantly greater compared to the diary group.
Castelnuovo et al. (2011), Italy	9	To examine the effectiveness of a 12 month multidisciplinary tele care intervention for weight loss provided to obese patients with type 2 diabetes	72, 12 (12 months); 34 (3 months); 21 (6 months). Intervention(37) Control (39) W , 23 (45-60 years)	TECNOB program	Dietary software into cellular phones; electronic armband	1. 13 months 1 month inpatient intensive; 12 months outpatient 2. nutrition- 45 minutes each 2x a week; psychological counseling 3. baseline, 6 months, 12 months	Weight change (kg); energy expenditure, glycated hemoglobin, Other outcomes: Disordered eating behavior and cognition	Significant outcomes in Interpersonal distrust at 12 months in control group. No significant differences in weight change between control and intervention group at 3, 6, 12 months. The inpatient program has a very high effect in the first month after discharge.

Imanaka et al. (2013), Japan	10	To compare the effect of weight change between WSHS (web-based) and EHS (e-mail).	193, 165 Intervention, 87 Control, 88 W, 18 (35-65 years)	Intervention –personal communication with own Control- can only email the dietician and no access to their peers' health status	Motivation level and photograph of meal	3 months Baseline, 12 weeks	Changes in the body weight Other outcomes: Quality of Life	The WSHS group is more effective than EHS group The loss in body weight was significantly greater in the WSHS group than in EHS group.
Morgan et al. (2012), Australia	10	To evaluate the impact of workplace-based weight loss for male shift workers	127, 110 Intervention=65 Control 45 W, 17	Workplace POWER (WP) Web-based program	Physical activity	1.3months 2. once a week reporting of daily weight diaries (feedback provided) Baseline, 3 months	Significant effect of change of weight at 14 week Other outcomes: Sleepiness, quality of life, workplace productivity, injuries at work, absenteeism	There was a significant difference in percentage weight loss between groups. More participants in the WP group had lose more than 5% of their baseline weight compared to the control group. The study resulted in significant improvement work domains, quality of life, and on the job injuries.
Patrick et al. (2011), USA	9	To test the efficacy of a Web- based intervention designed for overweight and obese men.	441, 309 Intervention, 224 Control, 217 W, 132 (25-55 years)	Web-based interventions of diet and PA	Behavioral targets Individualized feedback	1.12 months 2. weekly web-based activities/ not stated 3. baseline, 12 months	No significant effect on intervention group on BMI	Outcome (not significant) for web-based group- showed no significant improvement compared to the control group at end of intervention No changes in the anthropometric measurements Several weight related diet and PA behaviors were improved.
Pressler et al. (2010), Germany	10	To evaluate the effect of structured vs. non-structured internet-delivered exercise.	N-140, 77 Intervention-50 Control=27 W, 63 (25-60 years)	Internet based interventions	Structured exercise	1.12 weeks 2. Intervention= 3 workouts per week (105-165 minutes/wk.) Control- no structured schedule 3. baseline, 12 weeks	Significant changes in BMI in control group	Outcomes Significant changes in BMI, WC, and body fat in control group. A reduction in WC was seen in a majority (80%) of participants (control and intervention).
Rosal et al. (2014), USA	11	To examine the feasibility of delivering a group-based diabetes intervention via a virtual environment	89, 84 Intervention, 46 Control, 43 W, 5 (48-59 years)	Web-based intervention	Not stated	1.8 week 2. 90 minute group sessions weekly 3. baseline, 8 weeks	No changes in Body weight, BMI, WC Other outcomes: behavioral and psychosocial outcomes	Outcome (not significant) for web-based group No significant changes in anthropometric The web- based and face to face interventions were both comparable.

Tapper et al. (2014), United Kingdom	9	To examine the effects of an internet based intervention on consumption of fruit and vegetables, saturated fat, and added sugar over a 6 month period.	N= 100, 95 Intervention, 50 Control, 50 W= 5 Mean age for control, 37.7 Mean age for intervention, 41.1	Web-based, email	Health Values Healthy Eating Program	1. 24 weeks 2. once every week 3. baseline, 3 months, 6 months	Changes in F and V consumption, smoking, alcohol, PA, dietary behavior	Outcome (reductions in BMI and WHR) in control. Other outcome: BMI, WHR.	Significant reductions in BMI and WHR in control but no interaction within groups.
Thorndike et al. (2012), USA	9	To determine if a 9 month maintenance intervention would prevent/regain of the weight loss	N=406, 302 Intervention= 157 Control=145 W, 104	Web-based, email	Personal contact with nutritionist, personal trainer and or attending a seminar.	1. 9 months 2. Weekly logs of exercise, nutrition, and weight goals. 3. Baseline, 10 weeks, 12 months	Weight, WC	Outcomes- all study participant maintained a mean weight loss of 3.0 lbs. Other outcomes: nutritional goals and PA	Weight, BMI, waist were lower for both groups at 10 weeks and 1 year.
van Genugten et al. (2012), Netherlands	9	To evaluate the efficacy of the computer-tailored intervention in weight related anthropometric measures and energy balance-behaviors in a RCT.	N=539, 313* (312) Intervention=161 Control=151 W, 226 (18-65)	Web-based, computer tailored intervention (TI)		1. 6 months 2. Once a week (90 minutes in total). 3. baseline, 6 months	BMI, WC, and skinfolds	Outcomes- not significant Other outcomes: PA, and dietary behaviors	BMI did not change, and there was no difference between the two groups. The results of the study showed that weight remained stable over time.

Intervention characteristics. The study characteristics for the intervention and control groups are also described in Table 2. The degree of detail provided about the web-based interventions varied extensively. In particular, the frequency, design, delivery, and duration of the interventions differed widely. For instance, duration varied between 1 month and 12 months. The intended frequency or the intensity of the interventions was not overt in most studies. A schedule for intervention use was mentioned in two studies (Collins et al., 2012; Imanaka et al., 2013) such as twice a week or three times a week, whereas in other studies, only evidence about the value of interventions was reported (Tapper et al., 2014; Thorndike et al., 2012). Regardless of the disparity among the intervention content, most studies reported the significance of adding the web-based interventions. A combination of web-based intervention and other types of technology was also highlighted, and additional interventions was merged in various approaches.

All studies revealed a decrease in web-based program utilization throughout the intervention phase, while a number of studies portrayed common attrition rates (Carr et al., 2008;

Castelnuovo et al., 2011; Collins et al., 2012; Pressler et al., 2010). Many studies also used an intention-to-treat analysis; however, of the 13 studies with an attrition rate greater than 50%, only three studies used this analysis method (Collins et al., 2012; Pressler et al., 2010; Watson et al., 2012). Furthermore, several studies accredited the feasibility of web-based technologies intervention, and three studies suggested more research to expand ways to determine standard dosage of intervention and to foster completion of engagement participation among participants (Carr et al., 2008; Pressler et al., 2010; van Genugten et al., 2012).

Employment of web-based technology. Although the interventions varied highly, they were generally attempted by implementing simple to multifaceted interventions utilizing a web-based platform as the technology element. Most of the interventions integrated education components for the sample and individual-report record of food intake, together with a complimentary support component using dietician support, coach support, and virtual support (Bennett et al., 2010; Castelnuovo et al., 2011; Imanaka et al., 2013; Rosal et al., 2014). Only a single study excluded the engagement of any support nature and

facilitated a standalone internet-based program to its sample (Tapper et al., 2014).

Effectiveness of web-based technology to health conditions. Two studies showed that web-based interventions showed minimal improvements in health outcomes. Study populations consisted of participants with hypertension, hyperlipidemia, and diabetes. One study observed no significant changes between control and virtual intervention group in measures of blood pressure and total cholesterol, and, when an analysis of within-group change was conducted from baseline to a 6-month follow up. The groups also revealed a non-statistically significant reduction in HbA1C in the virtual intervention group (Rosal et al., 2014). Another study did not show any group difference on blood pressure, in both systolic and diastolic readings, between the control and intervention groups (Bennett et al., 2010).

Effectiveness of web-based technology to secondary outcomes. Other outcomes of the studies reviewed consisted of changes in physical activity intensities (Carr et al., 2009; Tapper et al., 2014; Thorndike et al., 2012; van Genugten et al., 2012; Watson et al., 2012); behaviors related to dietary self-monitoring (Carter et al., 2013; Castelnovo et al., 2011; Tapper et al., 2014; van Genugten et al., 2012); eating-related behaviors and cognition (Castelnovo et al., 2011; Rosal et al., 2014; Thorndike et al., 2012); quality of life (Collins et al., 2012; Imanaka et al., 2013); sleepiness, workplace efficiency, occupational accident, not showing to work (Collins et al., 2012); performance at the lactate anaerobic threshold (Pressler et al., 2010); psychosocial outcomes (Rosal et al., 2014); vegetables and fruit intake, saturated fats and added sugar, heart rate variability, smoking habits (Tapper et al., 2014); and self-efficacy (Watson et al., 2012). Web-based interventions showed promising effects on improving the participants' quality of life (Collins et al., 2012; Imanaka et al., 2013). Nevertheless, other studies found no nonsignificant enhancements in nutritional behaviors or physical activities (Carter et al., 2013; Castelnovo et al., 2011; Pressler et al., 2010).

Effectiveness of web-based technology to anthropometric measurements. Seven studies reported an overall positive change in the participants' anthropometric measurements at study completion (Bennett et al., 2010; Carr et al., 2009; Carter et al., 2013; Collins et al., 2012; Imanaka et al., 2013; Pressler et al., 2010; Tapper et al., 2014). Four studies reported that adult participants in the intervention groups had greater weight loss than adults in the control group (Carter et al., 2013; Collins et al., 2012; Imanaka et al., 2013). In addition, one study reported a significant change in BMI of the participants in the intervention

group (Bennett et al., 2010). Two studies reported moderate alterations in BMI, WC, body fat, and WHR in the control groups (Pressler et al., 2010; Tapper et al., 2014). Short-term effects of web-based interventions were found (fewer than 12 months of follow-up) in all six studies. Although the other five studies reported other positive outcomes, no changes were reported in the anthropometric findings of the participants (Castelnovo et al., 2011; Rosal et al., 2014; Thorndike et al., 2012; van Genugten et al., 2012; Watson et al., 2012).

Discussion

The purpose of this review was to present the literature published in 2004 to 2014 addressing the effectiveness of web-based interventions to promote healthy lifestyles related to anthropometric outcomes in adults. Seven studies reported moderate to significant changes on anthropometric measurements among the participants. Four out of seven studies reported that adult participants' in the intervention groups had greater weight loss as compared to the control groups. One study out of the seven studies reported a larger reduction in BMI of the participants in the intervention group. Also, two studies out of 13 studies reported positive changes in BMI, waist circumference, body fat, and waist hip ratio in the control groups. These results further support the idea of potential benefits of web-based modalities in promoting health interventions. Although the interventions varied in terms of frequency, duration, intensity, delivery, and study design, it can be suggested that web-based design are encouraging specifically from the studies that generated significant results. Reflecting on the study designs as well as the control group requirements considered in this systematic review, uncertainties exist regarding the overall functionality of web-based interventions compared to face to face lifestyle modification modalities. On the other hand, there exist sufficient evidence from these studies regarding positive clinical outcomes towards BMI and overall weight reduction. Specifically, web-based interventions exhibit firm indication of efficiency when utilized as concurrent treatment resources. Most of the studies used in the review generated positive results upon being merged with social support, feedback, educational information, and counseling by virtual facilitators. Such interventions have demonstrated to facilitate virtual interactive engagement between facilitators and participants in several settings.

These results support previous research on lifestyle modification and its effect on anthropometric variables. There are also possible explanations with regards to moderate effect of web-based interventions to anthropometric indicators. For

instance, participants might have reduced their overall physical activity or increased their food intake, or the physical activity stimulus might have been insufficient. Additionally, sedentary participants might have increased their muscle mass without changing weight. Future studies could address this issue by employing accurate measures of body composition.

Despite the varying levels of effectiveness and even the neutral results in several studies, web-based interventions continue to grow in popularity among researchers in health field because they can be implemented in diverse populations in many settings. The recent web-based intervention studies reviewed herein have provided a fountain of knowledge for improving anthropometric indicators, but much still needs to be learned about web-based interventions for improving health status such as those participants with chronic conditions. Several studies have also found that increased frequency of personal contact and the amount of interaction should be considered a key element for successful implementation of web-based interventions; however, most studies in this review did not explicitly report the number of times that participants interacted with their facilitators online or with one another.

Attrition was high in several studies and could have biased the findings. However, participants' engagement is a universal problem in most studies; an initial step in tackling attrition in weight related intervention studies is to widely account for the adherence rate (van Genugten, van Empelen, & Oenema, 2014). More participants' engagement during the development of the interventions could be tried in research designs to assist with the attrition rates. Similarly, it is crucial to argue that such engagement ought to have equally been affected by previous web-based knowledge usage and regular web access utilization by the participants (Williams et al., 2014). There is also a need to extend the study period as well as the post-treatment assessment in order to evaluate the enduring effects of healthy-diet and physical-activity on maintaining weight loss due to potential relapse that can hinder positive health outcomes in the long term.

Although the RCT method was used in all studies, it is still difficult to determine which intervention's components or sections added up to the impact of anthropometric indicators and health conditions presented in this review. None of the studies compared the results of the intervention and control groups in terms of quality intervention. In many cases, the web-based modality was used to supplement psychosocial components of

the treatment delivery, in addition to face-to-face interactions, and, in most studies, various components in the treatment delivery were used as a whole.

Finally, only two studies (Imanaka et al., 2013; Rosal et al., 2014) in the systematic review included minority groups or vulnerable populations. There is the need to offer consideration and attention to these groups since weight gain, and obesity concerns equally have detrimental impact on minorities especially those at risks for developing central adiposity. Nurse researchers in the Philippines and overseas need to consider this type of modality in lifestyle interventions that targets Filipinos with various health conditions here and abroad. Broader samples would enrich web-based intervention research and better inform models that, to date, are mostly based on general populations, which makes them inappropriate or limited to deliver in many settings.

Limitations

This review has some limitations. First, the authors searched the literature in five major bibliographic databases between 2004 and 2014, but other similar studies might have been found in other databases. Second, only constrained importance amid-group results were recognized.

This may have been a consequence of some participants might have changed their behavior due to improper blinding technique which ultimately affected the change in their anthropometric outcomes because they knew that they were being studied. Third, although anthropometric measures were typically measured by the authors and not self-reported, some studies did not indicate the standard they followed when recording the participants' biometrics. Also, the reviews differed substantially in terms of study populations, locations, intervention components, comparison groups, and outcome measures. Therefore, it is difficult to identify which participants' groups are likely to benefit from which specific intervention. Fourth, publication bias may have been the result of the exclusion of social media and smartphones intervention studies and small individual studies with negative results, which could lead to overestimation of overall benefits. Finally, due to the diversity of the studies in terms of using different and complex variables, a meta-analysis was inappropriate for statistical integration and therefore using a common metric for combining evidence was a drawback.

Implications for Nursing Practice and Research

Nursing practice implications include utilization of these findings in planning lifestyle modifications using web-based platforms. In situations where the nurses are obliged to promote lifestyle modification, they need to provide other options such as the use of web-based interventions as an alternative form of health promotion specifically to patients who have access to this modality and those who cannot commit to face-to-face interventions. Future nursing research in the area should prioritize well-designed efficacy trials comparing web-based interventions with the traditional methods of delivering lifestyle interventions (e.g. individual and group-based counseling) or to waiting list controls. In addition, studies should be designed to determine which components of web-based interventions are critical in achieving positive anthropometric changes.

Conclusions and Future Directions

This review systematically searched for the RCT studies to identify published accounts of web-based interventions and their efficacy on anthropometric measurements of different adult populations. An appraisal of the selected RCT studies was also carried out using the Jadad scoring system. Although web-based interventions show great potential for improving anthropometric measurement outcomes in health-promotion and disease-prevention programs, more research is clearly needed. Predominantly, due to their reputation, they can attain a huge and varied audience. Additionally, compared to face-to-face interventions, web-based interventions tend to be more feasible and more accessible to adults with various health conditions. However, studies that have examined web-based interventions' effects on anthropometric outcomes have tended to show low levels of participation and also adherence. Only by first addressing these methodological flaws will it be possible to develop web-based interventions that are more sustainable and effective.

As web-based technologies are constantly changing, future studies are pertinent for the purposes of investigating their anthropometric indicators efficacy as another intervention approach that can be more engaged, more so when combined with other lifestyle health promotion and modifications modalities. These can be supplemented by peer support, expert support, and facilitator support. It is also imperative to the strength of web-based interventions to include culturally tailored interventions for minority groups and vulnerable populations in future studies due to the scarcity of literature in this regard. This

review is timely and provides an overview of the field's current merits regarding the effectiveness and benefits of web-based technologies as promising intervention tool.

References

- Bacigalupo, R., Cudd, P., Littlewood, C., Bissell, P., Hawley, M., & Buckley Woods, H. (2013). Interventions employing mobile technology for overweight and obesity: An early systematic review of randomized controlled trials. *Obesity Reviews*, *14*(4), 279-291.
- Bennett, G. G., Herring, S. J., Puleo, E., Stein, E. K., Emmons, K. M., & Gillman, M. W. (2010). Web-based weight loss in primary care: A randomized controlled trial. *Obesity*, *18*(2), 308-313. doi:10.1038/oby.2009.242
- Carr, L. J., Bartee, R. T., Dorozynski, C., Broomfield, J. F., Smith, M. L., & Smith, D. T. (2008). Internet-delivered behavior change program increases physical activity and improves cardiometabolic disease risk factors in sedentary adults: Results of a randomized controlled trial. *Preventive Medicine*, *46*(5), 431-438. doi:10.1016/j.ypmed.2007.12.005
- Carr, L. J., Bartee, R. T., Dorozynski, C. M., Broomfield, J. F., Smith, M. L., & Smith, D. T. (2009). Eight-month follow-up of physical activity and central adiposity: Results from an internet-delivered randomized control trial intervention. *Journal of Physical Activity and Health*, *6*(4), 444-455.
- Carter, M. C., Burley, V. J., Nykjaer, C., & Cade, J. E. (2013). Adherence to a smartphone application for weight loss compared to website and paper diary: Pilot randomized controlled trial. *Journal of Medical Internet Research*, *15*(4), e32. doi:10.2196/jmir.2283
- Castelnuovo, G., Manzoni, G. M., Cuzziol, P., Cesa, G. L., Corti, S., Tuzzi, C., . . . Molinari, E. (2011). TECNOB study: Ad interim results of a randomized controlled trial of a multidisciplinary telecare intervention for obese patients with type-2 diabetes. *Clinical Practice and Epidemiology in Mental Health*, *7*, 44-50. doi:10.2174/1745017901107010044
- Collins, C. E., Morgan, P. J., Jones, P., Fletcher, K., Martin, J., Aguiar, E. J., . . . Callister, R. (2012). A 12-week commercial web-based weight-loss program for overweight and obese adults: Randomized controlled trial comparing basic versus enhanced features. *Journal of Medical Internet Research*, *14*(2).
- Cruz, V. T., Pais, J., Ruano, L., Mateus, C., Colunas, M., Alves, I., . . . Araújo, I. (2014). Implementation and outcomes of a collaborative multi-center network aimed at web-based cognitive training—COGWEB Network. *Journal of Medical Internet Research Mental Health*, *1*(1), e2.
- Diabetes Prevention Program Research Group. (2002). Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *New England Journal of Medicine*, *346*(6), 393.
- Esposito, K., Giugliano, F., Di Palo, C., Giugliano, G., Marfella, R.,

- D'Andrea, F., . . . Giugliano, D. (2004). Effect of lifestyle changes on erectile dysfunction in obese men: A randomized controlled trial. *JAMA*, 291(24), 2978-2984.
- Grothe, B., & Park, T. J. (2000). Structure and function of the bat superior olivary complex. *Microscopy Research and Technique*, 51(4), 382-402. doi:10.1002/1097-0029(20001115)51:4<382::AID-JEMT7>3.0.CO;2-7
- Gudzune, K., Hutfless, S., Maruthur, N., Wilson, R., & Segal, J. (2013). Strategies to prevent weight gain in workplace and college settings: Systematic review. *Preventive Medicine*, 57(4), 268-277. doi:http://dx.doi.org/10.1016/j.ypmed.2013.03.004
- Harvey-Berino, J., Pintauro, S., Buzzell, P., & Gold, E. C. (2004). Effect of internet support on the long-term maintenance of weight loss. *Obesity Research*, 12(2), 320-329.
- Hoeger, K. M., Kochman, L., Wixom, N., Craig, K., Miller, R. K., & Guzick, D. S. (2004). A randomized, 48-week, placebo-controlled trial of intensive lifestyle modification and/or metformin therapy in overweight women with polycystic ovary syndrome: A pilot study. *Fertility and Sterility*, 82(2), 421-429.
- Hossain, P., Kawar, B., & El Nahas, M. (2007). Obesity and diabetes in the developing world—a growing challenge. *New England Journal of Medicine*, 356(3), 213-215.
- Iacobellis, G., Singh, N., Wharton, S. and Sharma, A. M. (2008). Substantial changes in epicardial fat thickness after weight loss in severely obese subjects. *Obesity*, 16, 1693-1697. doi:10.1038/oby.2008.251
- Imanaka, M., Ando, M., Kitamura, T., & Kawamura, T. (2013). Effectiveness of web-based self-disclosure peer-to-peer support for weight loss: Randomized controlled trial. *Journal of Medical Internet Research*, 15(7), e136. doi:10.2196/jmir.2405
- Inouye, J., Braginsky, N., & Kataoka-Yahiro, M. (2011). Randomized clinical trials of self-management with Asian/Pacific Islanders. *Clinical Nursing Research*, 20(4), 366-403. doi:10.1177/1054773811417708
- Jadad, A. R., Moore, R. A., Carroll, D., Jenkinson, C., Reynolds, D. J. M., Gavaghan, D. J., & McQuay, H. J. (1996). Assessing the quality of reports of randomized clinical trials: Is blinding necessary? *Controlled Clinical Trials*, 17(1), 1-12. doi:http://dx.doi.org/10.1016/0197-2456(95)00134-4
- Kohl, F. M. L., Crutzen, R., & de Vries, K. N. (2013). Online prevention aimed at lifestyle behaviors: A systematic review of reviews. *Journal of Medical Internet Research*, 15(7), e146. doi:10.2196/jmir.2665
- Malik, V. S., Willett, W. C., & Hu, F. B. (2013). Global obesity: Trends, risk factors, and policy implications. *Nature Reviews Endocrinology*, 9(1), 13-27.
- Manzoni, G. M., Pagnini, F., Corti, S., Molinari, E., & Castelnuovo, G. (2011). Internet-based behavioral interventions for obesity: An updated systematic review. *Clinical Practice and Epidemiology in Mental Health*, 7, 19.
- Maon, S., Edirippulige, S., Ware, R., & Batch, J. (2012). The use of web-based interventions to prevent excessive weight gain. *Journal of Telemedicine and Telecare*, 18(1), 37-41.
- Moher, D., Jadad, A. R., & Tugwell, P. (1996). Assessing the quality of randomized controlled trials: Current issues and future directions. *International Journal of Technology Assessment in Health Care*, 12(02), 195-208.
- Nawaz, H., Chan, W., Abdulrahman, M., Larson, D., & Katz, D. L. (2001). Self-reported weight and height: Implications for obesity research. *American Journal of Preventive Medicine*, 20(4), 294-298.
- Neubauer, K., von Auer, M., Murray, E., Petermann, F., Helbig-Lang, S., & Gerlach, A. L. (2013). Internet-delivered attention modification training as a treatment for social phobia: A randomized controlled trial. *Behaviour Research and Therapy*, 51(2), 87-97. doi:http://dx.doi.org/10.1016/j.brat.2012.10.006
- Park, E., & Drake, E. (2015). Systematic review: Internet-based program for youth smoking prevention and cessation. *Journal of Nursing Scholarship*, 47(1), 43-50.
- Patrick, K., Calfas, K. J., Norman, G. J., Rosenberg, D., Zabinski, M. F., Sallis, J. F., . . . Dillon, L. W. (2011). Outcomes of a 12-month web-based intervention for overweight and obese men. *Annals of Behavioral Medicine*, 42(3), 391-401. doi:10.1007/s12160-011-9296-7
- Pressler, A., Knebel, U., Esch, S., Kolbl, D., Esefeld, K., Scherr, J., . . . Leimeister, J. M. (2010). An internet-delivered exercise intervention for workplace health promotion in overweight, sedentary employees: A randomized trial. *Preventive Medicine*, 51(3-4), 234-239. doi:10.1016/j.ypmed.2010.07.008
- Price, G. M., Uauy, R., Breeze, E., Bulpitt, C. J., & Fletcher, A. E. (2006). Weight, shape, and mortality risk in older persons: Elevated waist-hip ratio, not high body mass index, is associated with a greater risk of death. *American Journal of Clinical Nutrition*, 84(2), 449-460.
- Rosal, M. C., Heyden, R., Mejilla, R., Capelson, R., Chalmers, K. A., Rizzo DePaoli, M., . . . Wiecha, J. M. (2014). A virtual world versus face-to-face intervention format to promote diabetes self-management among African American women: A pilot randomized clinical trial. *Journal of Medical Internet Research Protocols*, 3(4), e54. doi:10.2196/resprot.3412
- Serafica, R. C. (2014). Dietary acculturation in Asian Americans. *Journal of Cultural Diversity*, 21(4), 145-151.
- Serafica, R. C., Lane, S. H., & Ceria-Ulep, C. D. (2013). Dietary acculturation and predictors of anthropometric indicators among Filipino Americans. *SAGE Open*, 3(3), 1-15. doi:10.1177/2158244013495543
- Shah, N. R., & Braverman, E. R. (2012). Measuring adiposity in patients: The utility of body mass index (BMI), percent body fat, and leptin. *PloS One*, 7(4), e33308.
- Skinner, A. C., & Skelton, J. A. (2014). Prevalence and trends in obesity and severe obesity among children in the United States, 1999-2012. *JAMA Pediatrics*, 168(6), 561-566.
- Tang, J., Abraham, C., Greaves, C., & Yates, T. (2014). Self-directed interventions to promote weight loss: A systematic review of

- reviews. *Journal of Medical Internet Research*, 16(2), e58. doi:10.2196/jmir.2857
- Tapper, K., Jiga-Boy, G., Maio, G. R., Haddock, G., & Lewis, M. (2014). Development and preliminary evaluation of an internet-based healthy eating program: Randomized controlled trial. *Journal of Medical Internet Research*, 16(10), e231. doi:10.2196/jmir.3534
- Thorndike, A. N., Sonnenberg, L., Healey, E., Myint, U. K., Kvedar, J. C., & Regan, S. (2012). Prevention of weight gain following a worksite nutrition and exercise program: A randomized controlled trial. *American Journal of Preventive Medicine*, 43(1), 27-33. doi:10.1016/j.amepre.2012.02.029
- Tol, J., Swinkels, I. C., De Bakker, D. H., Veenhof, C., & Seidell, J. C. (2014). Overweight and obese adults have low intentions of seeking weight-related care: A cross-sectional survey. *BMC Public Health*, 14, 582-582. doi:10.1186/1471-2458-14-582
- van Genugten, L., van Empelen, P., Boon, B., Borsboom, G., Visscher, T., & Oenema, A. (2012). Results from an online computer-tailored weight management intervention for overweight adults Randomized controlled trial. *Journal of Medical Internet Research*, 14(2), e44. doi:10.2196/jmir.1901
- van Genugten, L., van Empelen, P., & Oenema, A. (2014). Intervention use and action planning in a web-based computer-tailored weight management program for overweight adults: Randomized controlled trial. *Journal of Medical Internet Research Protocols*, 3(3), e31. doi:10.2196/resprot.2599
- Wadden, T. A., Webb, V. L., Moran, C. H., & Bailer, B. A. (2012). Lifestyle modification for obesity new developments in diet, physical activity, and behavior therapy. *Circulation*, 125(9), 1157-1170.
- Warmerdam, L., Smit, F., van Straten, A., Riper, H., & Cuijpers, P. (2010). Cost-utility and cost-effectiveness of internet-based treatment for adults with depressive symptoms: Randomized trial. *Journal of Medical Internet Research*, 12(5).
- Watson, A., Bickmore, T., Cange, A., Kulshreshtha, A., & Kvedar, J. (2012). An internet-based virtual coach to promote physical activity adherence in overweight adults: Randomized controlled trial. *Journal of Medical Internet Research*, 14(1), e1. doi:10.2196/jmir.1629
- Williams, G., Hamm, M. P., Shulhan, J., Vandermeer, B., & Hartling, L. (2014). Social media interventions for diet and exercise behaviours: A systematic review and meta-analysis of randomised controlled trials. *BMJ Open*, 4(2), e003926. doi:10.1136/bmjopen-2013-003926

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Every great personal story you have to tell involves overcoming adversity. If you shy away from adversity, you take away your ability to tell new stories.

Farrel Droke

RESEARCH ARTICLE



Rainier C. Moreno-Lacalle, RN, MSN¹

The Effect of Psychoeducation for Depression: A Meta-Analysis 2010-2016

Abstract

Background/Objective: Depression is a global mental health problem. Therefore, mental health professionals need to develop interventions that are evidence-based and cost-effective. One of the psychosocial interventions is psychoeducation. However, a recent Google search on the effect of psychoeducation for depression suggests conflicting results calling for an analysis of studies to establish psychoeducation effectiveness. The goal of the meta-analysis is to examine randomized controlled trials (RCTs) overall effectiveness of psychoeducation for depression.

Methods: EBSCOhost, PsychINFO, and Science Direct databases were searched using the keywords 'psychoeducation,' 'group psychoeducation,' 'mental health education,' 'depression,' 'depressive disorder,' and 'dysthymia' with year restriction of 2010-2016. In this meta-analysis, the effect size (using Hedges' g value), Q statistics, and I^2 were calculated under the random effects model aided by CMA v.3. To test for publication bias, trim-and-fill analysis, and fail-safe N were computed too.

Results: A total of 1,560 patients from 11 studies were included in this analysis. Post-intervention results had Hedges' g -value of -0.293 (95% CI= -0.552—0.035) of psychoeducation for depression meaning low effect. Although notably, the overall effect size leans towards psychoeducation. The p -value is significant at .05 level, favoring psychoeducation ($p=0.026$). The studies were also found to be highly heterogeneous ($Q_{(10)} = 55.467, p<.05, I^2 = 81.971$) under the random effects model, suggesting high inconsistency on the studies included in this meta-analysis. In testing for publication bias, the imputed effect size using trim-and-fill approach was -0.38558 (95% CI= -0.64926- -0.12189) while the result of fail-safe N suggested that 48 nil or null results would be needed to increase the p -value associated with the average effect above an alpha level of 0.05.

Conclusions: This meta-analysis may suggest that psychoeducation has low effect on depression. Longer and more interactive approach can be done to ensure its long-term and maximal effectiveness. Publication bias is unlikely in this meta-

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analysis. The findings provide valuable information for future psychoeducation to improve content, design, quality, and process that will benefit patients with depression.

Keywords: *Psychoeducation, Mental Health Promotion, Depression, Depressive disorders*

Introduction

Depression is a global health problem. In the Philippines, depression continues to be a common mental disorder. Global school-based health survey among Filipino adolescents found out that 42% felt sadness and hopelessness in two weeks or more in 2003, 17.1% of these teenagers have suicidal ideation, and 16.7% had concrete plans for taking one's own life (Miguel-Baquilod, 2004). Tellingly, Perlas, Briones-Querijero, Abcede, Buot, Elma-Chua *et al.* (2004) documented that of 774 patients screened in selected tertiary hospitals in the Philippines, 32% suffers from depression. Regardless of age and health conditions, similar situation can be found in the following selected countries: 7.2 % in the United States (Pratt & Brody, 2014), 23.9% in China (Wang, Feng, Yang, Yang, Wang *et al.*, 2016), 23.5% in Thailand (Wongpakaran & Wongpakaran, 2012), and in Malaysia ranges from 3.9-46% (Mukhtar & PS Oei, 2011). WHO (2017a) revealed that 300 million people suffer from depression worldwide, averaging to approximately 18% between 2005-2015 (WHO, 2017b).

The above staggering statistics have much more problem to it, that is, less than 10% receives effective and evidence-based interventions (WHO, 2017a). Arguably, one of the cost-effective, evidence-based, integrative, preventive, and collaborative nursing interventions that can be done is psychoeducation (van Zoonen, Bundrock, Ebert, Smit, Reynolds *et al.*, 2014; Lukens & McFarlane, 2006). For this reason, nurses need to design and implement interventions that are proven to be promising and cost-effective. The contention of this meta-analysis is the effect of psychoeducation for depression. The rationales for this meta-analysis are: (1) a recent Google search done on meta-analysis of psychoeducation for depression was done six years ago (Donker, Griffiths, Cuijpers, and Christensen, 2009) and 18 years ago (Cuijpers, 1998), which might need an update. In their meta-analysis, both of these studies did not zero-in to randomized controlled trials which could produce more credible research findings. (2) At the same time, after the publication of those meta-analysis mentioned, there has been surge of studies examining the effectiveness of psychoeducation for depression. (3) Since the advent and increasing acceptance of psychoeducation for depression, the results were not consistent in all studies. (4) Few studies have investigated the effect of psychoeducation on other

types of depression like postnatally or comorbid chronic health conditions. Therefore, the purpose of this study was to perform a meta-analysis on reliable and valid randomized controlled trials conducted between 2010-2016 on the topic of psychoeducation for depression. It was hoped that using a more scientific and precise method; this study could provide greater insight into the effect of psychoeducation for depression.

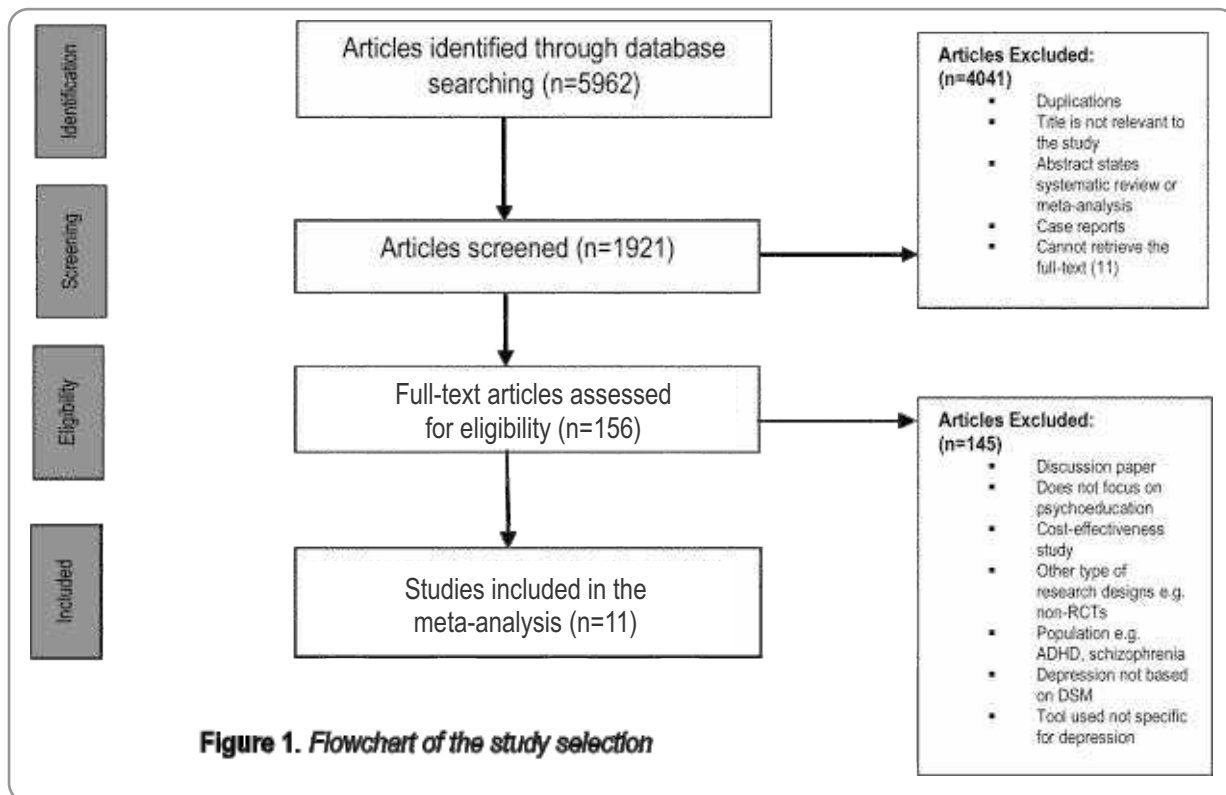
Methodology and Methods

Search

The study employed meta-analysis which is the quantitative method of examining and combining the results of multiple studies (Borenstein, Hedges, Higgins, & Rothstein, 2011). Searching and study selection process is patterned after van Zoonen *et al.* (2014) which are: identification, screening, eligibility, and inclusion. The studies collected were published from 2010-2016 on the topic of psychoeducation for depression. The databases search are EBSCOhost, PsychINFO, and Science Direct. In the EBSCOhost, Cochrane central register of controlled trials, Database of Abstracts of Review of Effects (DARE), CINAHL, and MEDLINE databases was housed. The studies were searched using the following search terms: psychoeducation, group psychoeducation, mental health education, depression, dysthymia, and depressive disorders. As shown in Figure 1, a total of 5,962 studies were initially identified. Notably, during screening, help from the authors' university librarian was sought to retrieve eleven full-text articles to no avail (see Figure 1). The process of searching and study selection was reviewed by two independent reviewers who suggested studies that have been overlooked but can be substantially included in this meta-analysis.

Study Selection

The study derived its criteria for inclusion by consulting with other meta-analysis (Donker *et al.*, 2009; Feng, Chu, Chen, Chang, Chou *et al.*, 2012) plus this papers objective. The criteria for inclusion are: (1) Subjects were diagnosed with depression using the criteria set forth by the Diagnostic and Statistical Manual of Mental Disorders IV, IV-TR, or V; (2) The study is a randomized controlled trial; (3) The experiment includes two group: one is experimental, and the other is the control, of which the intervention includes psychoeducation or mental health promotion; (4) The study was written in English; (5) Interventions delivered via the internet, phone, or face-to-face; and (6) The study has sufficient data to warrant meta-analysis (e.g., sample size, percentage, t-test, p-value, and standard deviation). Studies whose outcome measurement that does not pertain to alleviating depression were excluded.



Validity Assessment

The quality of the studies was evaluated using Cochrane Collaboration Guidelines, similar to those of Brodaty, Green, and Koschera (2003). The highest possible score is 11 with the following criteria: design, subjects, outcomes, statistics, results, and the quality as shown in Table 1. Only studies that score 7 and above are included in this meta-analysis. During analysis, the author looked to find the data that pertains to decreasing depression using psychoeducation. Leading to the deletion of certain items, outcomes, or characteristics variables if they did not appear to most of the articles. Studies were appraised by other two masters-prepared nurses (see acknowledgments) of which the Kappa value was used. Polit and Beck (2008 p. 756) defined Kappa as an “index to measure interrater agreement” of which the number of agreement is divided by number of an agreement plus disagreements. The Kappa value is 0.72 which means good reliability. After this, studies were plotted on Table 2 which has six columns: study, instrument, outcome measure, the number of subjects randomized, intervention type, and quality.

Table 1. Criteria for Rating Quality of Studies

CRITERION	SCORE
Design	
Randomized	1
Controlled (or comparison group used)	1
Subjects	
Use of standardized diagnostic criteria	1
All subjects accounted for/ withdrawals noted	1
Outcomes	
Well-validated, reliable measures (patient)	1
Objective outcome (decrease of depression symptoms)	1
Questionable/ unreliable outcome measures	0
Statistics	
Statistical significance considered	1
Adjustment for multiple comparisons	1
Evidence of sufficient power	1
Results	
Blind ratings	1
Follow-up assessment 6 months or beyond	1
Good quality	>7
Poor quality	<5

Note: The guidelines were based on the Cochrane Collaboration Guidelines in the study of Brodaty et al. (2003)

Statistical Analysis

The Comprehensive Meta-Analysis software version 3 (Biostat, Englewood, NJ) was used to conduct the meta-analysis. Specifically, the software aids to calculate the overall effect size of psychoeducation for depression. Borenstein *et al.* (2011 p. 17) defined effect size as the “standardized mean difference.” To determine the effect of psychoeducation to depression in both the experimental and control group, the author adopted the Hedges' g value (i.e., the difference of averages divided by pooled standard deviation) by Hedges and Olkin (1985). In the same manner both homogeneity (through Q statistics) and heterogeneity (through I^2) scores were computed. Borenstein *et al.* (2011 p. 105) expound that Q statistics is the “measure of weighted squared deviations” while I^2 “measures the degree of inconsistency across studies in a meta-analysis” (Higgins, Thompson, Deeks, & Altman, 2003 p. 560). To address the issue of statistical heterogeneity raised by Higgins, Thompson, Deeks, and Altman (2002), the author used the following parameters: 0% as not heterogeneous, 25% as low, 50% moderate, and 75% as high (Higgins *et al.*, 2003). Because it is assumed that study effect size is assumed to vary from one to another, the author used random-effects model where the “summary effect is [the] estimate of the mean of the distribution of the effect sizes (Borenstein *et al.*, 2011). Duval and Tweedie's (2000) trim-and-fill analysis and Rosenthal's (1979) fail-safe N were used, computing the effect of publication bias. Trim-and-fill analysis involves removing small, extreme studies from the favorable to intervention part of the funnel plot and recomputing the effect size so as to appear symmetrical (Duval and Tweedie, 2000). The removal is the “trim” while the recomputation is the “fill” resulting to the new effect size. Lastly, Fail-safe N allows computing how many more studies are needed to be included in the meta-analysis before the p -value will become not significant (Rosenthal, 1979).

Results

Study Characteristics

The 11 randomized controlled trials involved 1,560 patients suffering from depression. Most studies are conducted in Europe: three in Netherlands, two in Germany, one in UK and Sweden. Also, USA, Australia, India, and Singapore had one study each included in this meta-analysis. As can be gleaned in Table 2, three studies used Beck Depression Inventory-II (BDI-II) to measure depression and two utilized Centre for Epidemiological Studies Depression Scale (CES-D). The quality of the studies was relatively high. Three studies met five Cochrane Collaboration Guidelines criteria, three met the four criteria, and three met the three criteria (see Table 2).

The collective name for the interventions done is called psychoeducation, although there are notable variations. There are studies that used the combination of cognitive behavioural therapy i.e., correcting distorted belief about the situation, self, or the world including positive (adding something good) or negative (taking away something aversive) reinforcement, and psychoeducation which includes treatment seeking, counselling, and/or mental health education (Barnhofer, Crane, Brennan, Duggan, Crane *et al.*, 2015; Kumar & Gupta, 2015; Nordmo, Sinding, Carlbring, Andersson, Havik, & Nordgreen, 2015; Stangier, Hilling, Heindenreich, Risch, Barocka, Schlosser *et al.*, 2013; Seekles, van Stratem, Beekman, van Marwijk, & Cuijpers, 2011). Ekkers, Korrelboom, Huijbrecchts, Smits, Cuijpers, and van der Gaag (2011) packaged all of these cognitive-behavioral constructs which they called Competitive Memory Training or COMET. A corollary to this, Newby, Lang, Seidler, Holmes, and Moulds (2014) developed a diary-based psychoeducation for seven days, and processing was done on the ninth-day. Different to that, Feinberg, Jones, Rotegger, Hostetler, Sakuma *et al.* (2016) instituted a partner-based psychoeducation that addresses emotional regulation, problem-solving therapy, development of constructive coping skills and determining social support system. This type of partner-based psychoeducation is substantiated by Shorey, Chan, Chong, and He (2014) adding family dynamics topics and self-efficacy. Uniquely, psychoeducation now can also be delivered through a combination of face-to-face and web-based self-help intervention, which is a multimedia, an interactive online intervention that discusses behavior and problem-solving therapy (Bundrock, Ebert, Lehr, Smit, Riper *et al.*, 2016). Finally, Meyer, Bierbrodt, Schroder, Berger, Beevers *et al.* (2015) developed an Internet-based psychoeducation for depression called 'Deprexis.'

Synthesis of the Results

Eleven post-intervention results were included in the analysis, and it was found that psychoeducation for depression had Hedges' g -value of -0.293 (95% CI= -0.552—0.035), which has a low effect (see Figure 2). Although notably, the overall effect size leans towards favoring psychoeducation. The studies were also found to be highly heterogeneous ($Q_{(10)} = 55.467$, $p=.05$, $I^2 = 81.971$; see Table 3) under the random effects model, suggesting high inconsistency. The author opted the random effects model because of the high heterogeneous results, even though under fixed effects model the significance level is $p<0.01$, this seems inappropriate to be used in the analysis. As Borenstein *et al.*, (2011 p. 6) reasoned, fixed effects model “assume that all studies in the analysis share the same true effect size, and the summary effects [is] are our estimate of this common effect size.” To highlight, the p -value is significant at .05 level (using random effects model), favoring the psychoeducation ($p=0.026$); see Table 3.

Table 2. Characteristics of Included Studies

Study	Instrument*	Outcomes Measure	Number of Subjects Randomized†	Intervention type [‡]	Quality
Barnhofer <i>et al.</i> 2015	BDI-II SCS	Depression Suicide risk	80 (tmt=54, ctrl=26)	I, T, eighth-2hour weekly	8
Buntrock <i>et al.</i> 2016	CES-D	Depression (primary)	406 (tmt=202, ctrl=204)	I, W, six-30 minute sessions	10
Ekkers <i>et al.</i> 2011	QIDS-SR RRS	Depression Rumination	91 (tmt= 53, ctrl= 38)	M, G, seven-90 minute sessions	9
Feinberg <i>et al.</i> 2016	CES-D	Depression Maternal/ neonatal outcomes	259 (tmt= 124, ctrl= 135)	P, T, nine sessions weekly	9
Kumar & Gupta 2015	HDRS PGWBI	Depression Psychological well-being	80 (tmt=40, ctrl= 40)	L, T, C, four module-based sessions	7
Meyer <i>et al.</i> 2015	PHQ-9 SF-12	Depression Life satisfaction	118 (tmt= 57, ctrl= 61)	C, W, SMS daily for 3 months	10
Newby <i>et al.</i> 2014	BDI-II	Depression	40 (tmt= 20, ctrl= 20)	C, CB, D, one-week follow-up	8
Nordmo <i>et al.</i> 2015	BDI-II	Depression (secondary)	21 (tmt= 10, ctrl= 11)	C, CB, T, 90 minutes session	7
Seekles <i>et al.</i> 2011	IDS SF-20	Depression Quality of Life	107 (tmt= 54, ctrl= 53)	SH, T, 30 minutes for 4 weeks	8
Shorey <i>et al.</i> 2014	EPDS	Depression (secondary)	112 (tmt= 61, ctrl= 61)	I, P, T, , 90 minutes session weekly for 6 weeks	9
Stangier <i>et al.</i> 2013	HDRS	Depression	180 (tmt= 90, ctrl= 90)	C, CB, T, 16- 20 minutes individual sessions for 8 months	10

* BDI-II= Beck Depression Inventory-II; CES-D= Centre for Epidemiological Studies Depression Scale; EPDS= Edinburgh Postnatal depression; HDRS= Hamilton Depression Rating Scale; IDS= Inventory of Depressive Symptomatology; PHQ-9= Patient Health Questionnaire- 9; PGWBI= Psychological General Well-Being Index; QIDS-SR= Quick Inventory of Depressive Symptomatology- Self-Report; RRS= Ruminative Response Scale; SCS= Suicide Cognitions Scale; SF- Short-form general health survey versions 12 & 20; SH= Self-help.

†tmt=treatment; ctrl= control

‡ C= counselling-based, CB= cognitive-behavioral psychoeducation, D- diary + processing; G= group (6-8 patients); I= interview; L= lecture-based; P- Partner-based; T= treatment seeking focus, cognitive change, & problem-solving therapy; W= Web-based guided; M= Memory competitive training.

Table 3. Overall effect size of psychoeducation for depression

Effect Size	95% CI		Null Hypothesis		Homogeneity (two-tailed test)					
	No. of Studies	Hedges' G/RD	Upper	Lower	Z	P	Q	P	I ²	TAU ²
Level of Depression	11	-0.293	-0.552	-0.35	-.225	0.026	55.467	<0.05	81.971	0.381

Figure 2. Forest plot of overall effect size of psychoeducation for depression

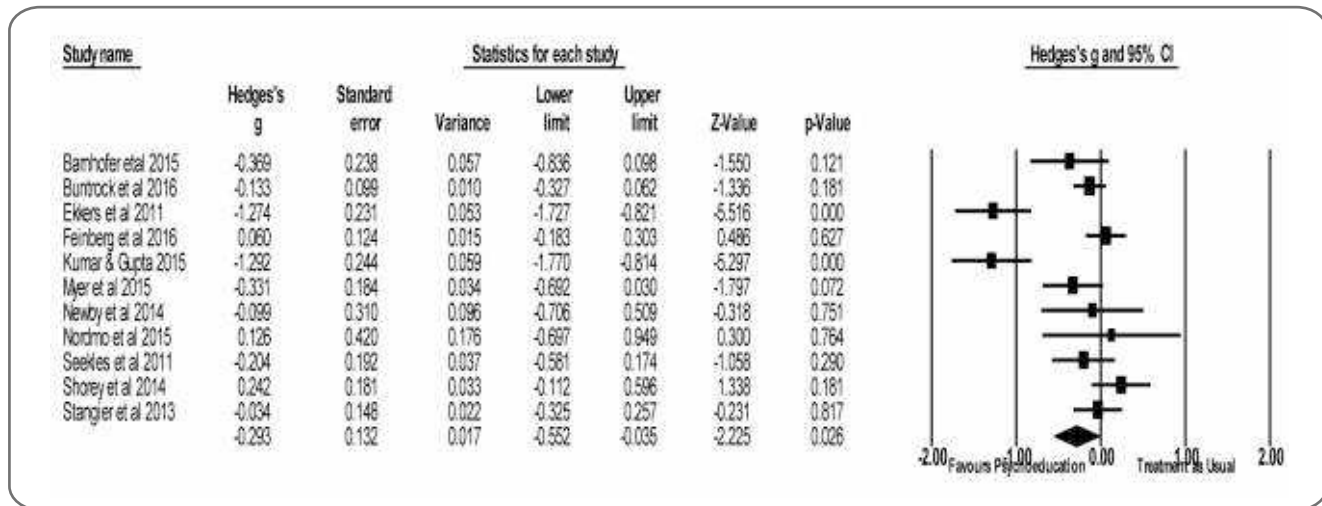
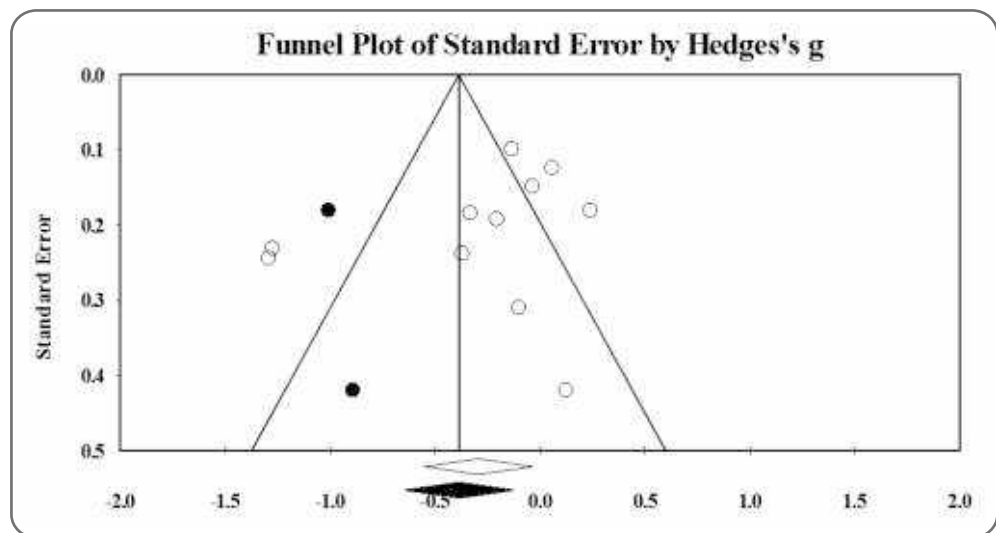


Figure 3. Trim and Fill method using random effects model



To address possible publication bias suggesting that small studies with negative results might not have been published. Duval and Tweedie's (2000) trim-and-fill analysis shows a symmetrical effect. At first, the author expected that studies would be more towards the left suggesting more positive findings (favoring psychoeducation) were included in the analysis, rather it weighs more heavily on the right suggesting many published studies weighs against the effectiveness of psychoeducation for depression (refer to Figure 3). The imputed effect size using trim-and-fill approach was -0.38558 (95% CI= -0.64926 - -0.12189), more so the two studies with filled circles in Figure 3 suggests needs for further studies favoring those of psychoeducation. The result of fail-safe N indicated that 48 nil or null results would be required to increase the p-value associated with the average effect above an alpha level of 0.05. The results of these two tests suggest less influence of publication bias.

Discussion

The studies included in this meta-analysis showed a low difference in the post-intervention depression scores of the control group and the experimental group. The finding suggests that psychoeducation can be used and is proved to decrease depression but to a little effect. Studies that have longer psychoeducation (Ekkers *et al.*, 2011; Kumar & Gupta, 2015) are

found to be more effective than studies that have shorter intervention span (Newby *et al.*, 2014). Implying that longer psychoeducation could leave a more permanent imprint and impact to the patient, in other words the longer and intensive psychoeducation implemented by mental health professionals to patients with depression can produce better positive outcomes. Development of constructive coping skills and awareness of social support might take time to be realized. Abrupt disconnection might be futile and could easily lead to retract to former maladaptive coping skills thus resulting in depression.

Despite its low effects findings, this meta-analysis proves that depression can be prevented, as van Zoonen *et al.* (2014) claims. Maybe not curing but more of alleviating the symptoms that beleaguer people with depression. Fortifying their coping skills,

ensuring availability of the support system, and correcting their cognitive distortions are major features of psychoeducation. This way the recurrence or relapse of depression could somehow be prevented. Corroborating the meta-analysis by Donker *et al.* (2009) saying that psychoeducation has low effect on depression further attributing their result to the type of delivery, teaching modalities, a small number of studies, and larger between-group effect sizes. More so, Tursi, Baes, Camacho, Tofoli, and Juruena (2013) in their systematic review suggests highly heterogeneous application of psychoeducation ranging from individual to group or short to long distance sessions. However, the meta-analysis by Cuijpers (1998) suggests different findings. That is, psychoeducation is effective as a therapy for depression. These studies imply that the method of delivery, quality, duration, and some patients may be important as to the effect of psychoeducation for depression.

The small number of studies may have contributed to the high heterogeneity of the findings. One plausible explanation for this heterogeneous result is the lack of consensus among mental health professionals as to the content, delivery methods, strategies, and direction of psychoeducation. The studies reviewed found out that some mental health professional uses face-to-face, others web-based, while some are self-help format which could call for a clearer demarcation of psychoeducation. For example, Luken and McFarlane (2006) acknowledges the seemingly broad applications and context-dependent properties of psychoeducation. This reasoning could open multiple doors as to the fractured delivery, faulty implementation, mismatch evaluation, and miscommunication of psychoeducation to patients with depression. Simple questions like, when are we going to relay message regarding good coping skills? How do we deliver that they have people to talk with? What are the connections between the cognitive distortions and the symptoms of depression? These questions might not be effective to patients at the apogee of their depression since they lack the cognitive devices to process them nor energy to put psychoeducation in action (Videbeck, 2014). Which is to say that proper timing, impeccable assessment, and responsive interventions might be put on the table for discussion first.

There are some limitations in this study. First, there is a high heterogeneity of the studies included. Some of these variations are the duration of the treatment, whether the patient is taking antidepressant medication or otherwise, or the cultural differences affecting the view of depression as an illness. Second, the variety of tools used to measure depression makes it prone to measurement error. Third, it is not well established in the studies included whether the patient with depression is on recovery, remission, or at episode. The stage of depression is important

because a more aggressive treatment could be needed during the depressive episode while a more logical can be more relevant during the recovery phase. Finally, the limited literature search to three major databases might have resulted to the high heterogeneity and low effect size.

Conclusions

This meta-analysis may suggest that psychoeducation has low effect on depression. Longer and more interactive approach can be taken to ensure its effectiveness. Varied content (aside from face-to-face, counselling-based) and use of innovative approaches such as web-based or self-help psychoeducation is now gaining momentum as a diversification of mental health promotion. The author suggests incorporation of additional variables (such as exclusive web-based meta-analysis, stage or type of depression, with or without adjunct antidepressants, and other associated symptoms including suicide or rumination). The findings provide important information for future psychoeducation to improve content, design, quality, and process that will benefit patients with depression.

References

- Barnhofer, T. Crane, C., Brennan, K., Duggan, D. S., Crane, R. S., Eames, C., Bradford, S., Silverton, S., Fennel, M., & Williams, J. M. G. (2015). Mindfulness-based cognitive therapy (MBCT) reduces the association between depressive symptoms and suicidal cognitions in patients with a history of suicidal depression. *Journal of consulting and clinical psychology, 83*(6), 1013.
- Borenstein, M., Hedges, L., Higgins, J., & Rothstein, H. (2011) *Introduction to Meta-Analysis*. West Sussex: John Wiley & Sons
- Brodaty, H., Green, A., & Koschera, A. (2003). Meta-analysis of psychosocial interventions for caregivers of people with dementia. *Journal of the American Geriatrics Society, 51*(5), 657-664.
- Buntrock, C., Ebert, D. D., Lehr, D., Smit, F., Riper, H., Berking, M., & Cuijpers, P. (2016). Effect of a web-based guided self-help intervention for prevention of major depression in adults with subthreshold depression: a randomized clinical trial. *JAMA, 315*(17), 1854-1863.
- Cuijpers, P. (1998). A psychoeducational approach to the treatment of depression: a meta-analysis of Lewinsohn's "Coping with Depression" course. *Behavior Therapy, 29*(3), 521-533.
- Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: a meta-analysis. *BMC medicine, 7*(1), 79.
- Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*(2), 455-463.
- Ekkers, W., Korrelboom, K., Huijbrechts, I., Smits, N., Cuijpers, P., & van der Gaag, M. (2011). Competitive Memory Training for treating depression and rumination in depressed older adults: A randomized controlled trial. *Behaviour Research and Therapy, 49*(10), 588-596.
- Feng, C. Y., Chu, H., Chen, C. H., Chang, Y. S., Chen, T. H., Chou, Y. H., Chang, Y.C. & Chou, K. R. (2012). The effect of cognitive behavioral

- group therapy for depression: A meta-analysis 2000–2010. *Worldviews on Evidence-Based Nursing*, 9(1), 2-17.
- Feinberg, M. E., Jones, D. E., Roettger, M. E., Hostetler, M. L., Sakuma, K. L., Paul, I. M., & Ehrenthal, D. B. (2016). Preventive effects on birth outcomes: Buffering impact of maternal stress, depression, and anxiety. *Maternal and child health journal*, 20(1), 56-65.
- Hedges, L., & Olkin, I. (1985) *Statistical methods of meta-analysis*. New York: Academic Press
- Higgins, J., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *British medical journal*, 327, 557-560.
- Higgins, J., Thompson, S., Deeks, J., & Altman, D. (2002). Statistical heterogeneity in systematic reviews of clinical trials: a critical appraisal of guidelines and practice. *Journal of health services research & policy*, 7(1), 51-61.
- Kumar, K., & Gupta, M. (2015). Effectiveness of psycho-educational intervention in improving outcome of unipolar depression: Results from a randomised clinical trial. *East Asian Archives of Psychiatry*, 25(1), 29.
- Lukens, E. P., & McFarlane, W. R. (2006). Psychoeducation as evidence-based practice. *Foundations of evidence-based social work practice*, 29(1), 205-25.
- Meyer, B., Bierbrodt, J., Schröder, J., Berger, T., Beevers, C. G., Weiss, M., Jacob, G., Spath, C., Andersson, G., Lutz, W., Hautzinger, M., Lowe, B., Rose, M., Hohagen, F., Caspar, F., Greiner, W., Moritz, S., & Klein, J. (2015). Effects of an Internet intervention (Deprexis) on severe depression symptoms: Randomized controlled trial. *Internet Interventions*, 2(1), 48-59.
- Miguel-Baquilod, M. (2004) Global school-based student health survey (GSHS) in the Philippines 2003-2004 A Component Project of the World Health Organization and the U.S. Centers for Disease Control and Prevention's Global School-based Health Surveillance System. Retrieved from http://www.who.int/chp/gshs/2004_GSHS_PHL_Final_Report.pdf
- Mukhtar, F., & PS Oei, T. (2011). A review on the prevalence of depression in Malaysia. *Current Psychiatry Reviews*, 7(3), 234-238.
- Newby, J. M., Lang, T., Werner-Seidler, A., Holmes, E., & Moulds, M. L. (2014). Alleviating distressing intrusive memories in depression: A comparison between computerised cognitive bias modification and cognitive behavioural education. *Behaviour research and therapy*, 56, 60-67.
- Nordmo, M., Sinding, A. I., Carlbjörk, P., Andersson, G., Havik, O. E., & Nordgreen, T. (2015). Internet-delivered cognitive behavioural therapy with and without an initial face-to-face psychoeducation session for social anxiety disorder: A pilot randomized controlled trial. *Internet Interventions*, 2(4), 429-436.
- Pelras, A., Briones-Querijero, M., Abcede, D., Buot, M., Elma-Chua, L., Demetrio, J., Diokno, G., Espanola, H., de la Fuente, E., Pagaduan-Lopez, J., Paradela, A., Tronco, A., & Sarol, J. (2004) The prevalence of psychiatric disorders among the chronically-ill medical patients in selected tertiary hospitals in the Philippines. *The Philippine Journal of Psychiatry*. 28 (1)
- Polit, D. & Beck, C. (2008) *Nursing Research Generating and Assessing Evidence for Nursing Practice* (8th edition). Philadelphia: Lippincott Williams & Wilkins
- Pratt, L. & Brody, D. (2014) Depression and Obesity in the U.S. Adult Household Population, 2005–2010. Retrieved from <https://www.cdc.gov/nchs/data/databriefs/db167.htm>
- Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological bulletin*, 86(3), 638-641
- Seekles, W., van Straten, A., Beekman, A., van Marwijk, H., & Cuijpers, P. (2011). Effectiveness of guided self-help for depression and anxiety disorders in primary care: a pragmatic randomized controlled trial. *Psychiatry research*, 187(1), 113-120.
- Shorey, S., Chan, S. W. C., Chong, Y. S., & He, H. G. (2015). A randomized controlled trial of the effectiveness of a postnatal psychoeducation programme on self-efficacy, social support and postnatal depression among primiparas. *Journal of advanced nursing*, 71(6), 1260-1273.
- Stangier, U., Hilling, C., Heidenreich, T., Risch, A. K., Barocka, A., Schlösser, R., Kronfeld, K., Ruckes, C., Begeer, H., Roschke, J., Weck, F., Volk, S., Hambrecht, M., Serfling, R., Erkwow, R., Strin, R., Strin, A., Sobanski, T., & Hautzinger, M. (2013). Maintenance cognitive-behavioral therapy and manualized psychoeducation in the treatment of recurrent depression: a multicenter prospective randomized controlled trial. *American Journal of Psychiatry*, 170(6), 624-632.
- Tursi, M. F. D. S., Baes, C. V. W., Camacho, F. R. D. B., Tofoli, S. M. D. C., & Juruena, M. F. (2013). Effectiveness of psychoeducation for depression: a systematic review. *Australian & New Zealand Journal of Psychiatry*, 47(11), 1019-1031.
- van Zoonen, K., Buntrock, C., Ebert, D. D., Smit, F., Reynolds, C. F., Beekman, A. T., & Cuijpers, P. (2014). Preventing the onset of major depressive disorder: a meta-analytic review of psychological interventions. *International journal of epidemiology*, 43(2), 318-329.
- Videbeck, S. (2014) *Psychiatric-Mental Health Nursing* (6th edition). Philadelphia: Lippincott Williams & Wilkins
- Wang, L., Feng, Z., Yang, G., Yang, Y., Wang, K., Dai, Q., Zhao, M., Hu, C., Zhang, R., Liu, K., Guang, Y., & Xia, F. (2016). Depressive symptoms among children and adolescents in western China: An epidemiological survey of prevalence and correlates. *Psychiatry Research*, 246, 267-274.
- WHO (2017a) *Depression*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs369/en/>
- WHO (2017b) *Mental health*. Retrieved from http://www.who.int/mental_health/en/
- Wongpakaran, N., & Wongpakaran, T. (2012). Prevalence of major depressive disorders and suicide in long-term care facilities: a report from northern Thailand. *Psychogeriatrics*, 12(1), 11-17.

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RESEARCH ARTICLE



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Technological Competence as Caring and Clinical Decision – Making Skills among ICU Staff Nurses

Abstract

The purpose of this descriptive-correlational study was to determine the level of technological competence as caring skill and its relation to the clinical decision-making skills among ICU staff nurses. 129 ICU staff nurses in selected hospitals in Panay Island participated in this study. Ethics review and approval from the West Visayas State University's Unified Bio-Medical Research and Ethics Review Committee were acquired prior to the conduct of the study. Data-gathering utilized both the Technological Caring in Nursing Instrument, as well as, the researcher's modified Clinical Decision-Making in Nursing Inventory. Findings of the study revealed that the ICU staff nurses not only have "very high" level of technological competence as caring skill but also have a "high" level of clinical decision-making skill. It was also evident that ICU staff nurses in Panay Island have been integrating technological caring with technological knowing as a collective expression of care in professional nursing. Finally, this study manifested that technological competence of caring in nursing does not guarantee high level clinical decision-making skills among ICU staff nurses in Panay Island.

Keywords: *technological competence, clinical decision-making, caring in nursing, technological caring, technological knowing*

Introduction

Intensive care is the multidisciplinary healthcare specialty that cares for patients with acute, life-threatening illness or injury (American Association of Critical Care Nursing, n.d.) wherein the nurse integrates data from hemodynamic devices, mechanical ventilators, bedside testing devices, and observations from direct patient assessments to form a comprehensive picture of the patient's status and the effect of care (Saba & McCormick, 2006). The nurse in the

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intensive care setting is a practitioner who can work with advanced technology (Wiles & Daffurn, 2002) and make multiple decisions (Bucknall, 2000) in a high pressure environment.

The intensive care unit (ICU) is also one of the areas in which human errors occur most frequently. In their seminal paper, Donchin et al. (1995) estimated that the error rate was 1.7 per patient per day in the ICU. On the other hand, the ICU is also a place where nurse practitioners are perceived to be less caring. Phillips and Benner (1994) identified a “crisis in caring” in present-day society. A large proportion of healthcare professionals nowadays rely only on the benefits of technological advancement, departing from the fundamentals of the nursing profession which is the philosophy and science of caring.

The challenge of bridging together the culture of caring through the use of technology and clinical decision-making skills of ICU nurses has become essential. Nurses and other health professionals agree that such culture change to bridge the said gap in the provision of care is crucial to the meaningful use of technology in facilitating effective clinical decision-making. Hence, ICU staff nurses' endeavor to value technological competence as a caring skill in nursing may then be clarified and consequently, empower them to develop a defining characteristic with caring as the core of nursing. Unless key issues are addressed and specific strategies are implemented, the results of this technological dilemma and lapses clinical decision-making may have a negative impact on the delivery of quality care.

Based on the foregoing premises, this study could establish baseline information and therefore, initiate and enhance nursing care, initially at the ICU, and eventually encompass the whole of nursing practice.

This study aimed to determine the relationship between technological competence as caring skill in nursing and the clinical decision-making skills among intensive care unit staff nurses in selected hospitals in Panay.

Specifically, the study also sought answers to the following questions:

1. What is the level of technological competence as caring skill in nursing among the ICU staff nurses in selected hospitals in Panay when grouped according to sex, age, level of education, length of service, and the type of hospital where they are affiliated?
2. What is the level of clinical decision-making skills among the ICU staff nurses in selected hospitals in Panay when grouped according to sex, age, level of education, length of service and to the type of hospital where they are affiliated?
3. Is there a significant relationship between technological

competence as caring skill and the clinical decision-making skills among ICU staff nurses in selected hospitals in Panay?

In view of the preceding problems, the following hypotheses were tested:

1. There is no significant relationship between technological competence as caring skill and the clinical decision-making skills among ICU staff nurses in selected hospitals in Panay.

Methodology

The main purpose of this descriptive–correlational study was to determine the relationship between technological competence as caring skill and the clinical decision-making skills in nursing practice among ICU staff nurses in selected hospitals in Panay.

Participants of this study were 129 randomly selected ICU staff nurses in seven (7) hospitals in Panay. Stratified random sampling method was employed in the selection of the study's participants. The strata used in the study were selected hospitals that are government–owned and privately–owned in the four provinces of Panay particularly in Aklan, Antique, Capiz, and Iloilo. Only hospitals in these said provinces that were willing to participate were included in the study.

This study utilized the Technological Caring Inventory (Locsin, 1999) to measure technological competence as caring skill in nursing. The purpose of the instrument was to integrate technological caring and technological knowing as a collective expression in professional nursing. Data derived from the Technological Caring Inventory facilitate the recognition of technological caring in nursing.

The researcher-modified Clinical Decision Making in Nursing Inventory (Jenkins, 1985) to assess and to evaluate clinical decision-making in nursing was also used. Five items were deducted from the original inventory to make the instrument applicable to the local setting. Validity and reliability test of the instrument was also conducted to determine its applicability in the local setting.

Ethics review and approval from the West Visayas State University's Unified Bio-Medical Research and Ethics Review Committee (WVSU UBMREB) was acquired prior to the conduct of the study. Moreover, permission for the conduct of the study was obtained too from the hospital director and chief nurse of each of these respective hospitals. All ICU staff nurses were invited without coercion to participate in this study. The participants were given an informed consent statement.

To describe the data gathered, the investigator utilized the mean scores for descriptive statistics. For inferential statistics, the

Pearson r was used to determine the relationship between technological competence as caring skill in nursing and the clinical decision-making skills. All inferential statistics were set at 0.05 alpha level of significance. All statistical computations were processed using the Statistical Package for the Social Sciences (SPSS) Software.

Results

Level of Technological Competence as Caring Skill in Nursing among ICU Staff Nurses in Selected Hospitals in Panay when grouped according to the Study's Variables

Table 1 presents the level of technological competence as caring skill in nursing among ICU staff nurses. The ICU staff nurses had a

Table 1. Level of Technological Competence as Caring Skill in Nursing among ICU Staff Nurses

Category	Mean	Description
A. Age		
21 – 30 years old	4.85	Very High
31 – 40 years old	4.88	Very High
41 – 50 years old	5.00	Very High
51 years old and above	5.00	Very High
B. Sex		
Male	4.89	Very High
Female	4.85	Very High
C. Level of Education		
Bachelor's degree	4.85	Very High
Master's degree	5.00	Very High
E. Length of Service		
0 – 3 years	4.84	Very High
4 – 6 years	4.86	Very High
7 – 9 years	5.00	Very High
10 years and above	4.92	Very High
F. Type of Hospital		
Privately-owned	4.90	Very High
Government-owned	4.84	Very High
Total	4.86	Very High

Legend:

Weight	Score Range	Interpretation
5	4.20 - 5.00	Very high technological competence as caring in nursing
4	3.40 - 4.19	High technological competence as caring in nursing
3	2.60 - 3.39	Moderate technological competence as caring in nursing
2	1.80 - 2.59	Low technological competence as caring in nursing
1	1.00 - 1.79	Very low technological competence as caring in nursing

“very high” ($M=4.86$) level of technological competence as a caring skill in nursing when grouped according to age, sex, level of education, length of experience, and type of hospital affiliation.

Further scrutiny of the means indicated, in terms of age, the ICU staff nurses aged 40 – 50 years old ($M=5.00$) and 50 years old and above ($M=5.00$) had a higher level of technological competence as caring skill in nursing compared to ICU nurses aged 31 – 40 years old ($M=4.88$), and ICU nurses aged 20 – 30 years old ($M=4.85$). In terms of sex, male ICU staff nurses ($M=4.89$) had a higher level of technological competence as a caring skill in nursing compared to female ICU staff nurses ($M=4.85$). As to level of education, ICU staff nurses with master's degree ($M=5.00$) had a higher level of technological competence as a caring skill in nursing compared to bachelor degree holders ($M=4.85$).

On the other hand, in terms of length of service, ICU staff nurses with 7 to 9 years of work experience ($M=5.00$) had a higher level of technological competence as a caring skill in nursing compared to ICU staff nurses with more than 10 years of work experience ($M=4.92$), ICU staff nurses with 4 - 6 years of work experience ($M=4.86$), and ICU staff nurses with 1 to 3 years of work experience ($M=4.84$). When it comes to the type of hospital affiliation, ICU staff nurses affiliated with privately-owned hospitals ($M=4.89$) had a higher level of technological competence as a caring skill in nursing compared to ICU staff nurses affiliated with government-owned hospitals ($M=4.84$).

Level of Clinical Decision-Making Skills among the ICU Staff Nurses in the Selected Hospitals in Panay when grouped according to the Study's Variables

Table 2 presents the level of clinical decision-making skills among ICU staff nurses in selected hospitals in Panay. The ICU staff nurses when grouped according to sex, age, level of education, length of service, and to the type of hospital where they are affiliated has a “high” ($M=4.14$) level of clinical decision-making skills. This means that the intensive care nurse practitioner usually performs sound clinical decision-making.

The data in Table 2 further indicated that in terms of age, ICU staff nurses aged 20 – 30 years old ($M=4.15$) had a higher level of clinical decision-making skills compared to ICU nurses aged 31 – 40 years old ($M=4.06$), ICU nurses aged 41 – 50 years old ($M=4.33$), and ICU nurses aged 50 years old and above ($M=4.00$). In terms of sex, female ICU staff nurses ($M=4.15$) had a higher level of clinical decision-making skills compared to male ICU staff nurses ($M=4.14$).

Moreover, as to level of education, ICU staff nurses with master's degree ($M=4.29$) had a higher level of clinical decision-making

skills compared to bachelor degree holders (M=4.13). In terms of length of service, ICU staff nurses with 0 – 3 years of work experience (M=4.17) had a higher level of clinical decision-making skill compared to ICU staff nurses with 4 - 6 years of work experience (M=4.05), ICU staff nurses with 7 - 9 years of work experience (M=4.17), and ICU staff nurses with 7 – 9 years of work experience (M=4.08). As to the type of hospital affiliation, ICU staff nurses affiliated with privately-owned hospitals (M=4.18) had a higher level of clinical decision-making skills compared to ICU staff nurses affiliated with government-owned hospitals (M=4.12).

Table 2. *Level of Clinical Decision-Making Skills in Nursing among ICU Staff Nurses*

Category	Mean	Description
A. Age		
21 – 30 years old	4.15	High
31 – 40 years old	4.06	High
41 – 50 years old	4.33	High
51 years old and above	4.00	High
B. Sex		
Male	4.15	High
Female	4.14	High
C. Level of Education		
Bachelor's degree	4.13	High
Master's degree	4.29	Very High
E. Length of Service		
0 – 3 years	4.17	High
4 – 6 years	4.05	High
7 – 9 years	4.17	High
10 years and above	4.08	High
F. Type of Hospital		
Privately-owned	4.18	High
Government-owned	4.12	High
Total	4.12	High

Legend:

Weight	Score Range	Interpretation
5	4.20 - 5.00	Very high technological competence as caring in nursing
4	3.40 - 4.19	High technological competence as caring in nursing
3	2.60 - 3.39	Moderate technological competence as caring in nursing
2	1.80 - 2.59	Low technological competence as caring in nursing
1	1.00 - 1.79	Very low technological competence as caring in nursing

Relationship between the Level of Technological Competence as Caring Skill in Nursing and the Clinical Decision - Making Skills among ICU Staff Nurses in the Selected Hospitals in Panay.

Table 3 displays the relationship between the level of technological competence as caring skill in nursing and the clinical decision - making skills among ICU staff nurses in the selected hospitals in Panay. Results suggest that there was a negative correlation between technological competence as caring skill in nursing and the clinical decision-making skills among ICU staff nurses which was statistically insignificant (r = .162, n = 129, p < .066). ICU staff nurses having “very high” level of technological competence as caring skill in nursing may not guarantee “high” level clinical decision-making skills.

Table 3. *Relationship between Technological Competence as Caring Skill in Nursing and Clinical Decision-Making Skills*

	Pearson Coefficient	p-value
Technological Competence as Caring in Nursing and Clinical Decision – Making Skills	.162	.066

Discussion

From the findings of this study, it was revealed that the intensive care nurse practitioner constantly integrates technological caring and technological knowing as a collective expression of caring in professional nursing. According to Locsin (1998), technological competency as caring is a nursing framework guiding the practice of nursing in which technologies are continuously used to know persons as whole and complete in the moment. Entering the world of the other is coming to know the other as a person more fully through the competent use of technology. Using this process, nursing becomes meaningful to the person from moment to moment.

This result may be attributed to the better quality of nursing schools that are producing competent nursing graduates and adequate in-service staff development activities and programs in hospitals and other healthcare agencies where the participants are affiliated with. The use of technology in the delivery of health care services is rapidly increasing. Rapid uptake of technological modalities and dynamic evolution of technologies has outpaced the generation of empirical knowledge to support nursing

practice in this emerging field, specifically in relation to how nurses come to know the person and engage in holistic care in a virtual environment (Nagel et al., 2013). This development may also be reconciled with Watson's Philosophy of Human Caring where the practice of caring is central to nursing and is the unifying focus for practice (Watson, 1988). The art of nursing practice is not task orientated, but an establishment of a therapeutic interpersonal relationship that is based on caring, warmth, congruence, and empathy.

The findings of the study also indicate that ICU staff nurses usually perform a certain sound decision on clinical decision - making. ICU nurses regularly make clinical decisions on direct patient care, which included providing basic nursing care and psychological support, and teaching patients or family members (Bakalis & Watson, 2005). Nurses are expected to use the best available evidence for the most efficacious therapies and interventions in particular instances, to ensure the highest-quality care, especially when deviations from the evidence-based norm may heighten risks to patient safety (Benner et al., 2008). Evidence-based decision making for nurses involves combining the knowledge arising from one's clinical expertise, patient preferences, and research evidence within the context of available resources (Thompson et al., 2004).

Moreover, the results of the study on the relationship between technological competence as caring skill in nursing and the clinical decision-making skills of ICU staff nurses, support the study of Hagbaghery et al. (2004) that two groups of internal and external variables can facilitate or inhibit the nurses' clinical decision making. According to the said study, competence and self-confidence of a nurse were the internal factors and being supported, process of nursing education, and structure of the health care institutes were the external factors that can enhance or inhibit nurses' clinical decision-making. Hence, the most effective decision-making process requires an interplay or integration of both internal and external factors.

Finally, ICU nurses utilize of a range of reasoning strategies and criteria in their clinical decision-making process. This may be related to different patients' situations, nurses' knowledge and their previous experiences, interdisciplinary professional relationships, and kinds of decisions included determining the patient's problems, selecting appropriate care, and deciding whether or not to perform decisions of care (Ramezani-Badr et al., 2009).

Conclusions

ICU staff nurses in the selected hospitals in Panay constantly integrate technological caring and technological knowing as a

collective expression of caring in professional nursing. This result may be attributed to the better quality of nursing schools producing competent nursing graduates and adequate in-service staff development activities and programs in hospitals and other healthcare agencies where the participants are affiliated with. Furthermore, the ICU staff nurses in the selected hospitals in Panay usually perform sound and comprehensive decisions on their clinical decision-making. This finding means that the ICU staff nurses are equipped with the expertise to make sound and rapid clinical judgments within the intensive care environment through their ability to recognize and deal with the issues and challenges inherent in such an environment. However, the level of technological competence as caring skill in nursing does not guarantee the level of clinical decision-making skills among ICU staff nurses in selected hospitals in Panay.

Recommendations

Despite the results of having "very high" level of technological competence as caring skill in nursing and "high" level clinical decision-making skills, continuous in-service trainings and programs should still be implemented in enhancing and augmenting the technological competence as caring skill and the clinical decision-making skills among professional nurses. ICU staff nurses should also pursue adequate training or acquire a specialist post-qualification education as an entry to the intensive care unit. Likewise, nurses not only in the ICU but in general nursing practice should undergo continuing professional education (i.e. obtaining a master's degree) and professional trainings and staff development activities. Through such undertakings, the nursing profession can guarantee the quality of care rendered to the clientele. Thus, nurse administrators must continuously implement in-service programs and activities in enhancing the technological competence as caring skill in nursing and clinical decision - making skills of professional nurses through in-service staff development activities and programs for the formation of a holistic, competent, and caring nurse. Adequate training in managing healthcare technologies in patient care should also be continuously conducted. In addition, formation of a specialist post-qualification education as an entry in the intensive care unit must be considered as part of the preparation and training of ICU nurses not only in the Island of Panay but in the whole country as well. Also, nursing educators should implement evocative and up-to-date curriculum and learning experiences for nursing students to enable them to become competent and fully responsive agents of the nursing profession with particular focus on technological competence as caring skill in nursing and their clinical decision-making skills.

Nursing students should also be updated with the necessary requisites in the nursing profession towards becoming more competent, caring, and dedicated caregivers through a better understanding of technological competence as caring skill and clinical decision-making skills in nursing. Future researches should further validate the findings of this investigation. A similar research utilizing the same or other variables such as the level of self-confidence, structure of the healthcare institute, and ICU-related trainings acquired by the ICU nurse be conducted in another setting involving nurses working with high-end technologies in the intensive care unit as part of their routine nursing care to generate more information and from where greater generalizations could be made. Other internal variables such as self-confidence and external variables such as being supported, as well as, the structure of the health care institute should also be investigated. The researcher also recommends further research studies utilizing Locsin's technological competence as caring skill in nursing theory to broaden the understanding and acceptance of nurses of the said theory and to use this as a framework for nursing practice especially for those who are exposed in technologically demanding practice environments.

References

- Association of Critical Care Nursing. (no date). About Critical Care Nursing. Retrieved March 9, 2014, from <http://www.aacn.org/wd/publishing/content/pressroom/aboutcriticalcarenursing>.
- Bakalis, N. A., & Watson, R. (2005). Nurses decision-making in clinical practice. *Nursing Standard (Royal College of Nursing (Great Britain))*, 19(23), 33–39. <https://doi.org/10.7748/ns2005.02.19.23.33.c3805>
- Benner, P., Hughes, R. G., & Sutphen, M. (2008). Clinical Reasoning, Decision-making, and Action: Thinking Critically and Clinically. In R. G. Hughes (Ed.), *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville (MD): Agency for Healthcare Research and Quality (US). Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK2643/>
- Bucknall, T. K. (2000). Critical care nurses' decision-making activities in the natural clinical setting. *Journal of Clinical Nursing*, 9(1), 25–35.
- Donchin, Y., Gopher, D., Olin, M., Badihi, Y., Biesky, M., Sprung, C. L., Cotev, S. (1995). A look into the nature and causes of human errors in the intensive care unit. *Critical Care Medicine*, 23(2), 294–300.
- Hagbaghery, M. A, Salsali, M., and Ahmadi, F. (2004). "The Factors Facilitating and Inhibiting Effective Clinical Decision-Making in Nursing: A Qualitative Study." *BMC Nursing* 3: 2. Doi:10.1186/1472-6955-3-2.
- Jenkins, H. M. (1985). A research tool for measuring perceptions of clinical decision making. *Journal of Professional Nursing*. U4). 221-229.
- Locsin, R. (1998). Technologic competence as expression of caring in critical care settings. *Holistic Nursing Practice*, 12(4), 50-56.
- Locsin, R. C. (1999). Development of an instrument to measure technological caring in nursing. *Nursing & Health Sciences*, 1(1), 27–34.
- Nagel, D. A., Pomerleau, S. G., & Penner, J. L. (2013). Knowing, caring, and telehealth technology: "going the distance" in nursing practice. *Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association*, 31(2), 104–112. <https://doi.org/10.1177/0898010112465357>
- Phillips, S. & Benner, P. (1994). *The Crisis of Care: Affirming and Restoring Caring Practices in the Helping Professions*. Washington DC: Georgetown University Press.
- Ramezani-Badr, F., Nasrabadi, A. N., Yekta, Z. P., & Taleghani, F. (2009). Strategies and criteria for clinical decision making in critical care nurses: a qualitative study. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau*, 41(4), 351–358. <https://doi.org/10.1111/j.1547-5069.2009.01303.x>
- Saba, V. K., McCormick, K. A. (2006). *Essentials of Nursing Informatics*, Fourth Edition. McGraw-Hill Companies, Inc.
- Thompson, C., Cullum, N., McCaughan, D., Sheldon, T., & Raynor, P. (2004). Nurses, information use, and clinical decision making—the real world potential for evidence-based decisions in nursing. *Evidence Based Nursing*, 7(3), 68–72. <https://doi.org/10.1136/ebn.7.3.68>
- Watson, J. (1988). Response to "Caring and practice: Construction of the nurse's world." *Scholarly Inquiry for Nursing Practice*, 2, 217–221.
- Wiles V. & Daffurn K. (2002). *There's A Bird in My Hand and a Bear in My Bed – I Must Be in ICU: The Pivoted Years*. Australian Critical Care Nursing. Sydney: Southwood Press.

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RESEARCH ARTICLE

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Nurses' Familiarity on Disaster Preparedness in Hospitals

Abstract

Disasters are frequently experienced in the Philippines with detrimental impact to hospitals and its vulnerable population. Nurses, who are front liners in hospitals during disasters, must be familiar in disaster management. This study determined the extent of familiarity on disaster preparedness of nurses in hospitals, and the significant difference when grouped according to years of experience, position and area of assignment. A quantitative descriptive method was employed, wherein the EPIQ (Emergency Preparedness Information Questionnaire) was used. Nurses with more than one year of experience were selected using simple random sampling. T-test and F-test were employed. Findings revealed that nurses were moderately familiar on disaster preparedness and there was a significant difference in all variables. Nurses in hospitals have more to learn on disaster preparedness. The need for continuing education is recommended. Future researches may be done on unaccounted for factors from this study like gender or type of institution using objective-type questionnaire.

Keywords: Hospital nurses, nurses' familiarity, disaster preparedness, disaster management, patients' safety

Introduction

The Philippines is one of the most frequently-visited countries by various calamities such as earthquakes, volcanic eruptions, and super typhoons. Additionally, the warm ocean waters, low-lying coasts and economic instability contribute to the archipelago's difficulty in managing disasters like super typhoons

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(Vergano, D. 2013). Typhoon Haiyan killed nearly 6,300 (NDRRMC, 2013) when it hit the country, while earthquakes are equally damaging. The 1990 earthquake has the highest rate of mortality, taking 2,412 lives (PHIVOLCS, 2001). These incidents pose great responsibility in hospital institutions where victims were being brought. Hence, it is very crucial, especially for hospitals, to be familiar with disaster preparedness. According to Senate S.B. No. 2992 introduced by Sen. Legarda, healthcare institutions are vulnerable to the risks presented by hazardous phenomena. And in the health institution, there is an emphasis of conducting safety drills on a monthly basis. It is then assumed that every hospital should have at least a disaster plan in response to the guidelines for safe hospitals set by the DOH, because in a disaster, health care personnel maybe outnumbered by the injured victims (DOH, 2009). This poses a great responsibility to primary response providers especially nurses.

Since nurses are considered as front liners in disaster management at a hospital setting, they should have the knowledge on what is to prioritize during disaster, i.e., the patient's safety (Magnaye, Muñoz S., Muñoz M., Muñoz R. & Muro, 2011). They should know the scope of their responsibility and they should be able to define the significant role in preparing for, responding to, managing and recovering from disasters impacts (Magnaye, Muñoz S., Muñoz M., Muñoz R. & Muro, 2011). However, nurses lack perception regarding their role during a disaster, which interferes with effective disaster management (Rokkas, P., Cornell, V., & Steenkamp, M., 2014). In a study, nurses in hospitals have shown moderate familiarity on disaster preparedness (Baack, 2011) and neutral familiarity with emergency preparedness (Ibrahim, 2014). Additionally, hospital nurses are unlikely to familiarize themselves with disaster preparedness because disasters do not occur every day. As a result of this narrative, the necessity for nurses to be familiar with disaster preparedness is often undermined. This is supported by a study which posits that nurses are not aware of existing protocols of disaster management in the workplace, nor are they sufficiently prepared for disasters (Labrague, L., Yboa, B., McEnroe-Petitte, D., Lobrino, L., & Brennan, M., 2016).

Although there are adequate literatures delving on disaster preparedness of nurses, these are usually exclusive to nurses outside the hospital setting. Moreover, patients' safety during a disaster is significantly dependent on nurses, who are the frontliners in these events. Thus, there is supplementary need to investigate the disaster preparedness of nurses in hospitals. Moreover, hospital nurses are confronted with the demand to attend to patients injured by disasters (Chapman, K & Arbon, P.,

2008) Hence, they are expected to work together in a disaster situation despite their differences in position and lengths of experience. They are also assigned in different areas of the institution. In this case, it is then imperative to assess their familiarity on disaster preparedness. The study also aims to determine if there is a significant difference in the extent of familiarity on disaster preparedness of nurses in hospitals when grouped according to years of experience, position and area of assignment.

This study utilized Albert Bandura's Social Cognitive Theory which explains how familiarity is gained and how it develops. According to the theory, humans have the capacity for observational learning that enables them to widen their familiarity and skills rapidly through information shown by different models. The acquisition of familiarity is affected by three interrelated factors: personal, behavioral, and environmental factors (McLeod, 2011). Bandura's Social Learning theory was also used to explain a study which explored nurses' perceptions and values in best-practice guidelines and assessment. According to the study, confidence of nurses in using the validated assessment tool increased immediately after they underwent a workshop (O'Farrell, B. & Zou, G., 2008). This is supported by another study which states that axial coding of the learning strategies have concepts which are congruent to Bandura's theory on self-efficacy of modeled behaviors found in clinical practice (Vega, Al., 2007).

In this study, the personal factors pertain to the length of experience, position of nurses in the hospital and the environment of assignment. Length of experience refers to the span of time a nurse has been exposed to the clinical area. A person is able to acquire behavior when he/she is able to observe it for a period of time. Familiarity is acquired through the process of giving attention to the behavior and retaining it. In this study, the longer the experience of nurses, the more skills on disaster preparedness they have observed and, thus became familiar with. Position refers to the ranking or hierarchal status of the nurse in the hospital institution. Individuals that are observed are called models. These models provide examples of behavior to observe and imitate. In this study, nurse managers serve as models who have the ability to influence staff nurses. Due to this fact, they acquired familiarity on disaster management in order to set a good example and for the staff nurses. Environment, which is another factor in gaining familiarity, refers to the external factors that can affect a person's behavior. In this study, the area of assignment is referred to as the environment. Area of assignment is the ward where a nurse is currently assigned. The area of assignment may be a factor because hospital nurses may be assigned to wards where it is crucial to have the critical thinking skills necessary to respond to emergencies such as disasters, and are therefore obliged to be familiar with these skills. Whereas, other nurses may be assigned

to general wards which do not need as much familiarity with the skills on disaster preparedness.

Methods and Procedures

Design

A quantitative descriptive design was used for the study to describe the familiarity of hospital nurses on disaster preparedness and the relationship of their familiarity with variables, such as position, length of experience and area of assignment.

Participants

Two hundred ninety one nurses from the three hospitals with the largest bed capacity in Baguio and Benguet were chosen through simple random technique. In order to get the number of staff nurses, Yamane's formula was employed, which yielded a total of 259 participants: 158 from hospital A, 65 from hospital B and 36 from hospital C. Meanwhile, enumeration was done to get the total number of 32 nurse managers from the three hospitals.

Tool

The participants were assessed using the Emergency Preparedness Information Questionnaire with ten competency dimensions of emergency preparedness which includes the aspects, Overall Familiarity, Decontamination, Incident Command System, Ethical Issues in Triage, Disease Outbreak, Epidemiology and Surveillance, Special Population, Psychological Issues, Communication and Connectivity, and Assessing Critical Resources, by Garbutt, Peltier & Fitzpatrick (2008), with the content validity index of 0.94. The questionnaires were retrieved after an agreed upon time of completion with the respondents.

Statistical treatment

Weighted mean was used in measuring the extent of familiarity of nurses. Unrelated t-test was utilized to measure for the significant difference on the extent of nurses' familiarity when grouped according to position and length of experience, which both compare two variables namely; staff nurse vs. nurse managers, and more than five years vs. less than five years, respectively. Meanwhile f-test was used to measure for the significant difference on the extent of nurses' familiarity when grouped according to the area of assignment, which has more than two variables namely; special care unit, non-admitting unit, critical care unit and general ward. Post hoc analysis, using Scheffe's test was utilized thereafter.

Risk of bias in the study

This study used self-rate questionnaire in assessing nurses' familiarity on disaster preparedness, which may be susceptible to biased answers, as a result of social desirability.

Table 1. Extent of familiarity of nurses on disaster preparedness (N=291)

		Results	
RANK	ASPECT	X	I
1	Overall Familiarity	3.40	MF
2	Decontamination	3.32	MF
3	Incident Command System	3.30	MF
4	Ethical Issues in Triage	3.30	MF
5	Disease Outbreak	3.28	MF
6	Epidemiology and Surveillance	3.26	MF
7	Special Population	3.26	MF
8	Psychological Issues	3.20	MF
9	Communication and Connectivity	3.19	MF
10	Assessing Critical Resources	3.16	MF
Overall Mean		3.27	MF

Legend:

X-Mean I- Interpretation

Scale of Interpretation:

1-1.80=Low familiarity (LF)

1.81-2.60=Fair familiarity (FF)

2.61-3.40=Moderate familiarity (MF)

3.41-4.20=High familiarity (HF)

4.21-5=Very High familiarity (VHF)

Table 1 presents the familiarity of nurses on disaster preparedness in hospitals. Nurses obtained an average mean of 3.27 interpreted as moderately familiar. It also presents that the aspects nurses are most familiar with are Overall Familiarity with disaster preparedness, Decontamination, Incident Command System (ICS) and Ethical Issues in Triage consequently. The three aspects where the nurses had the least familiarity were Communication and Connectivity, Psychological Issues, and Accessing Critical Resources consequently.

Table 2 presents the familiarity of nurses according to the variables. When grouped according to position, nurse managers obtained a mean of 3.92, interpreted as highly familiar, while staff nurses obtained a mean 3.20, interpreted as moderately familiar. When grouped according to the length of experience, nurses with more than five years of experience obtained a mean of 3.49, interpreted as highly familiar, while nurses with less than five years of experience obtained a mean of 3.13, interpreted as moderately familiar. And lastly, when grouped according to the area of assignment, Special care unit obtained the highest mean of 3.55, interpreted as highly familiar, followed by Non-admitting area with the mean of 3.44, interpreted as highly familiar, then by Critical Care Unit with the mean of 3.18, interpreted as moderately familiar and by General Ward with the mean of 3.10, interpreted as moderately familiar, consequently. All variable have significant differences.

Table 2. General familiarity of nurses when grouped according to variables

Aspect	Staff nurse		Nurse managers		5> years		<5 years		Special Care		Non-Admitting		Critical Care		General Ward	
	X	I	X	I	X	I	X	I	X	I	X	I	X	I	X	I
Overall Familiarity	3.33	MF	3.96	HF	3.37	MF	3.33	MF	3.57	HF	3.72	HF	3.51	HF	3.17	MF
Decontamination	3.22	MF	4.23	HF	3.58	HF	3.10	MF	3.65	HF	3.55	HF	3.11	MF	3.11	MF
Incident Command System	3.23	MF	4.13	HF	3.79	HF	3.15	MF	3.57	HF	3.50	HF	3.21	MF	3.18	MF
Ethical Issues in Triage	3.24	MF	3.82	HF	3.49	HF	3.16	MF	3.55	HF	3.45	HF	3.17	MF	3.14	MF
Disease Outbreak	3.24	MF	3.83	HF	3.55	HF	3.12	MF	3.56	HF	3.48	HF	3.26	MF	3.10	MF
Epidemiology and Surveillance	3.18	MF	3.96	HF	3.48	HF	3.08	MF	3.56	HF	3.46	HF	3.18	MF	3.08	MF
Special Population	3.19	MF	3.91	HF	3.44	HF	3.31	MF	3.51	HF	3.34	MF	3.27	MF	3.07	MF
Psychological Issues	3.14	MF	3.86	HF	3.46	HF	3.0	MF	3.51	HF	3.35	MF	3.09	MF	3.04	MF
Communication and Connectivity	3.13	MF	3.78	HF	3.45	HF	2.97	MF	3.54	HF	3.29	MF	3.03	MF	3.06	MF
Assessing Critical Resources	3.10	MF	3.76	HF	3.32	MF	3.07	MF	3.48	HF	3.28	MF	2.99	MF	3.01	MF
Overall Mean	3.20	MF	3.92	HF	3.49	HF	3.13	MF	3.55	HF	3.44	HF	3.18	MF	3.10	MF

Discussion

General Familiarity of Nurses on Disaster Preparedness

Findings offer insights into the insufficiency of education preparation. Most nurses receive little, if any, disaster preparedness education in nursing school (Ibrahim, 2014). Consequently, they lack confidence to contribute effectively during disaster (Ibrahim, 2014). Therefore, there is a need for further research into appropriateness of education and training of nurses due to their low knowledge on disasters (Baack, 2011) and the need for nurses to be educated and to attend trainings on disaster management to prepare them for future misfortunes (Putra, Petpichetchian & Maneewat 2011). The research findings imply the need for a continuing education in hospitals and consistent drills to improve knowledge and self-efficacy for disaster management.

Given the result, the aspect, overall familiarity on disaster preparedness gained the highest mean in the familiarity scale since it covers the general familiarity in response to emergency events, such as activity in the involvement and commitment regarding disaster preparedness in the hospitals. This may be attributed to basic or general drills, which are a part of hospital protocols. This implies for the nurses' need to take initiative in familiarizing themselves with disaster management beyond the conventional protocols of the hospitals.

Assessing critical resources had the lowest mean among the ten aspects. This implies that hospitals may not have programs that would increase or that would make nurses familiar with this aspect in disaster preparedness. However, there is a need for valuable lessons on critical assessment and resources for disaster outbreak (APHN, 2013). This implies that hospital administrators must therefore update their programs on disaster management by including this aspect in their protocols.

Familiarity of Nurses According to Variables

Nurse managers vs. Staff nurses

Results reflect that administrative functions of nurse managers, such as generation of knowledge especially on clinical trends like disaster preparedness, give them the upper hand over staff nurses on disaster preparedness. Hence, they must lessen the gap between them and their subordinates through shared governance. Additionally, they must coordinate with staff nurses to empower them, especially on clinical trends like disaster management (Porter-O'Grady, 2001). The information from the experience of the nurse managers and staff nurses in their shared governance may be used to provide knowledge of empowerment for staff nurses. They are responsible for both ward management and delivery of quality clinical care to patients, as a result of the generation and dissemination of knowledge to their subordinates (Locke, Leah, Fleur & Griffith, 2011). Moreover, nurse managers

must promote an environment that minimizes work-related illness and injury (Chasedelivery (Pegram, 2014).

The outcome of the study also implies that nurse managers' hospital performance depends on the behavior they learn. One possible ground on why nurse managers are well-informed on disaster preparedness is that they, as being on the higher part of the service hierarchy, are expected to be innately familiar about it, because disasters are always anticipated to happen. With this same reason, they should also be conditioned to prepare for disastrous events. Furthermore, because of conditioning, they are able to acquire schema on disaster management. This can be explained by Watson's Behavioral Theory, which posits that emphasis must be put on external behavior of people and their reactions on given situations because it is only behavior that could be observed, recorded and measured. Nurse Managers are mostly accustomed on their administrative and budgeting roles. Hence, the need for them to go beyond what is expected from their subordinates, like familiarity disaster of preparedness that is often undermined.

The result may also be attributed to social desirability or the tendency for people to present a favorable image of themselves on questionnaires (Van de Mortel, 2008). Nurse Managers hold a position on the higher level of the administrative hierarchy in hospitals. This particular hierarchal position may also be associated with an expectation of higher level of familiarity on different trends such as disaster preparedness; thus, prompting them to answer questionnaires with bias.

Nurse managers were revealed to have the highest familiarity on decontamination. This infers that nurse managers perceive decontamination or the process of removing or neutralizing contaminants that have accumulated on personnel and equipment as critical to health and safety, especially in hospitals where hazardous waste materials can affect the vulnerable population. The result may also be attributed to the fact that decontamination protects both the health care providers and the patients by preventing and minimizing uncontrolled transportation of contaminants from one site to another. This implies that decontamination is a crucial skill in a disaster. This is further supported by the study, which also suggested that development of decontamination formulations is essential as it can help minimize or mitigate chemical, biological, radiological and nuclear disasters (Kumar, Goel, Chawla, Silambarasan, & Sharma, 2010).

Nurse managers were revealed to be least familiar with the aspect of accessing critical resources. This may be attributed to the fact that a critical resource is a resource that can only be in use, at most one process at any one time. Familiarity is least in this aspect; critical resources are only deployed during a state of national emergency. In addition to the fact that provision of these

resources, such as national stockpile, is the responsibility of the governor of each province.

Overall familiarity on disaster preparedness is highest among staff nurses. This aspect refers to the general or the basic disaster management, and as nurses being in the frontline during a disaster, entails that they need to have the basic knowledge on disaster response. This is further supported by Hynes (2006) wherein nurses must be active in interdisciplinary teams that are engaged in decision-making regarding basic emergency response. This aspect, ethical issues in triage, has the next highest mean. This may be attributed to the fact that nurses must have good assessment skills in order to make quick and critical thinking in prioritizing patients seeking for care. This is further supported by Smith & Cone (2010), wherein triage is an essential skill for nurses because it is the basis of appropriate decision in making through the process of fast initial assessment.

The aspect, accessing critical resources is the least familiar among staff nurses. This may be attributed to the same factors attributed to result of nurse managers' result regarding this aspect.

More than 5 years of experience vs. Less than 5 years of experience

Findings show that nurses with more than five years of experience are more familiar on disaster preparedness than nurses with less than five years of experience. Nurses with longer clinical experience may have developed certain techniques to perform better, thus, they are more familiar than nurses with lesser experience. Nurses with longer experience have more knowledge and have developed better techniques in duty performance compared to ones with less experience (Magnaye, Muñoz S., Muñoz M., Muñoz R., & Muro, 2011). The finding is congruent in a study wherein nurses with less than five years of experience in emergency disaster and knowledge regarding response to disaster situation, indicates inefficiency in the current system (Ibrahim, 2014). Previous experiences and trainings of nurses affect their preparedness, increase their awareness, self-confidence and skills in disaster response, and decrease their vulnerability to unpredictable events (Seyedin, Dolatabadi & Rajabifard, 2015). In another journal, adequacy of knowledge and practice, and portraying positive attitude is driven by being involved in disaster response and attending disaster-related education (Ahayalimudin, Ismail & Saiboon, 2012).

Overall familiarity on disaster preparedness is a general term, which refers to the basic knowledge on disaster preparedness. This knowledge is commonly gained in schools, as drills are

conducted in this institutions. Hence, this may be the reason why staff nurses, even if they have less than five years of experience have the highest familiarity on this aspect of disaster preparedness.

The aspect of Communication and Connectivity is least familiar among nurses with less than 5 years of experience. This implies the lack in dissemination of information regarding the agencies that need to be contacted in times of a disaster. During a disaster, it is critical that rescue workers and government officials coordinate their efforts and locate victims who may be injured or trapped through communication and connectivity. However, relief efforts can be paralyzed or severely delayed if the responding agencies are unable to communicate with one another. This is detrimental to the population, specifically to the vulnerable one.

Incident command system is highest among nurses with more than five years of experience. Nurses are already well-informed with regards to their position in the incident command system. Due to the same reason, they have already integrated organizational structure equal to the complexity and demands of any single incident or multiple incidents without being hindered by jurisdictional boundaries.

Accessing critical resources is also revealed to be the least in terms of familiarity among nurses with more than five years of experience. This may be due to the fact that local authorities are the one who deliver these resources in their respective provinces.

Area of Assignment

The results reveal that when grouped according to the area of assignment, Special Care unit and Non-admitting unit are highly familiar on disaster preparedness, while Special Care Unit and General Ward, are moderately familiar. This may suggest that nurses in the different areas of assignment underestimate the scope of disaster preparedness and they lack acceptance on disaster management competencies. According to a study, the lack of acceptance of core competencies and the absence of disaster preparedness in nursing curricula are largely expected causes of the insufficient knowledge on disaster preparedness among nurses (Al Thobaity, Plummer, Innes, & Copnell, 2015). Nurses must be able to identify the impacts of a disaster and must be aware of the range of their responsibilities, thereby being able to deliver care even in dangerous conditions and being able to manage the consequences of such events, irrespective of their areas of assignment (Magnaye, Muñoz S., Muñoz M., Muñoz R. & Muro, 2011). At this instant, it may be suggested that it is a necessity to incorporate disaster preparedness skills into workplace.

Decontamination is the most familiar aspect among nurses in special areas. Patients in special areas are at high risk for

infections; therefore, it is imperative for nurses in this area to become familiar with the proper decontamination technique in order to reduce the contaminants to a minimum level, as this may affect the general healing process of patients.

In the Non-admitting areas, Overall familiarity to disaster preparedness obtains the highest mean in the familiarity scale. This aspect refers to the general familiarity of nurses on disaster management, which suggests that all nurses must be familiar with it to be prepared in a disaster situation. This aspect is followed by Decontamination, which refers to the process of preventing or lowering the possibility of contamination. This is mandated in every hospital, thereby making nurses familiar with this aspect. It is especially important for nurses in the non-admitting area to cut down the contaminant through the process of contamination, as their goal is to avoid longer stay of the patients in the hospital.

In the Critical Care area, Overall familiarity obtains the highest mean in the familiarity scale. Attributing factors to this may be the same as that of the non-admitting area. This aspect is followed by Special Population, which generally refers to a disadvantaged group, such as patients with disabilities (Davis, Wilson, Glove, Brock-Martin, & Svendsen, 2010). The result may be grounded on the reason that patients being taken care of in critical care area are more underprivileged than patients in the other wards.

In the General ward, the aspect, Incident Command System obtained the highest mean in the familiarity scale. Nurses recognize that it is essential for nurses to be familiar with their organizational structure in order to know what command to follow and from whom it will come. This is necessary to facilitate organized and efficient actions in a disaster situation.

In all four areas, it is revealed that nurses are least familiar with the aspect Accessing Critical Resources. This aspect refers to health insurance conditions, which are structured differently than the common hospitals, and is therefore not a part of the usual hospital protocols

Conclusion

In the light of findings of this research study, it can be validated that nurses in hospitals lack sufficient familiarity on hospital disaster preparedness, which is very necessary when a disaster occurs, given its unpredictable nature. This also confirms that hospital nurses' familiarity on disaster preparedness is crucial in preventing patient injury and promoting patient safety. The factors, position, length of experience and area of assignment influence the extent of familiarity on disaster preparedness. Hospital nurses should be given the opportunity for continuing education on emergency communication systems, technology used in disasters, psychological and sociological impact, emergency information

resources and legal and ethical principles for the special populations involved in the disaster. Moreover, updates and trainings are also recommended. Nurse Managers should possess the initiative to prioritize allocation of resources and funds disaster management trainings. Future researches can be done on unaccounted for factors from this study such as regional coverage, gender, type of institution, utilizing a quiz-type questionnaire.

References

- Ahayalimudin, N., Ismail, A., & Saiboon, I. (2012). Disaster management: a study on knowledge, attitude and practice of emergency nurse and community health nurse. *BMC Public Health*, 12(Suppl 2), A3. <http://dx.doi.org/10.1186/1471-2458-12-s2-a3>
- Al Thobaity, A., Plummer, V., Innes, K., & Copnell, B. (2015). Perceptions of knowledge of disaster management among military and civilian nurses in Saudi Arabia. *Australasian Emergency Nursing Journal*, 18(3), 156-164. <http://dx.doi.org/10.1016/j.aenj.2015.03.001>
- Al, V. (2007). Learned experiences of specialty nurses of human immunodeficiency virus: Identifying and Exploring Successful Learning Strategies. *University of Phoenix*, 159 p-159 p.
- Association of Public Health Nurses (APHN). (2013). The role of the public health nurse in disaster preparedness, response and recovery. Retrieved on May 13, 20 from http://www.achne.org/files/public/APHN_RoleOfPHNinDisasterPRR_FINALJan14.pdf
- Baack, S. (2011). Analysis of Texas' nurses' preparedness and perceived competence in managing disasters. *The University of Texas at Tyler*, pp. 40-67.
- Chapman, K., & Arbon, P. (2008). Are nurses ready? Disaster preparedness in the acute setting. *Australasian Emergency Nursing Journal*, pp. 135-144.
- Chase, L. K. (2010). Nurse manager competencies. *Iowa Research Online*, p. 167. Retrieved from <http://ir.uiowa.edu/etd/2681>
- Davis, J. R., Wilson, S., Brock-Martin, A., Glover, S., & Svendsen, E. R. (2010). The impact of disasters on populations with health and health care disparities. *Disaster Med Public Health*, 30-38.
- Department of Health. (2009). *Hospitals Should be Safe from Disasters (Reduce Risk, Protect Health Facilities, Save Lives)*. Philippines: department of health-health emergency management staff and national center for health facility development.
- Garbutt, S., Peltier, J., & Fitzpatrick, J. (2008). Evaluation of an instrument to measure nurses' familiarity with disaster preparedness. *Military Medicine*, pp. 1073-1077.
- Ibrahim, F. A. (2014). Nurses knowledge, attitudes, practices and familiarity regarding disaster and emergency. *American Journal of Nursing Science*, 3(2), pp. 18-25.
- Kumar, V., Goel, R., Chawla, R., Silambarasan, M., & Sharma, R. (2010). Chemical, biological, radiological, and nuclear decontamination: recent trends and future perspective. *Journal Of Pharmacy And Bioallied Sciences*, 2(3), 220. <http://dx.doi.org/10.4103/0975-7406.68505>
- Labrague, L., Yboa, B., McEnroe-Petitte, D., Loblino, L., & Brennan, M. (2016). Disaster preparedness in Philippine nurses. *Journal of Nursing Scholarship Vol. 48 Issue 1*, pp. 98-105.
- Locke, R., Leah, C., Fleur, K., & Griffith, J. (2011). The impact on the workload of the ward Manager with the Introduction of Administrative Assistants. *Journal of Nursing Management*, pp. 177-185.
- Magnaye, B., Muñoz, M. S., Muñoz, M. A., Muñoz, R. G., & Muro, J. H. (2011). The Role preparedness and management of nurses during disasters. *E-International Scientific Research Journal*, 3(4), pp. 269-294.
- McLeod. (2011). Bandura-social learning theory. Retrieved on June 23, 2016 from <http://www.simplypsychology.org/bandura.html>.
- NDRRMC. (2013). *Final report re effects of typhoon "Yolanda" (Hayan)* (pp. pp. 1-13). Quezon City, Philippines. Retrieved on February 03, 2016 from <http://www.citethisforme.com/cite/report?searchTitle=final+report+re+effects+of+typhoon+%22Yolanda%22&from=guide>
- O'Farrell, B., & Zou, G. (2008). Implementation of the Canadian neurological scale on an acute care neuroscience unit: a program evaluation. *Journal of Neuroscience Nursing*, PP. 201-211.
- Pegram, A., Grainger, M., Sigsworth, J., & While, A. (2014). Strengthening the role of the ward manager: A review of the literature. *Journal of Nursing Management*, pp. 685-696.
- PHIVOLCS (2001). The July 16 Luzon earthquake. Retrieved on January 15, 2016 from http://www.phivolcs.dost.gov.ph/html/update_SOEPD/1990LuzonEQ_Monograph/foreword.html
- Porter-O'Grady, T. (2004). Overview and summary: shared governance: is it a model for nurses to gain control over their practice? *Online Journal of Issues in Nursing*, 9(1), pp. 92-95.
- Putra, A., Petpichetchian, W., & Maneewat, K. (2011). Perceived ability to Practice in disaster management among public health nurses in Aceh, Indonesia. *Nurse Media Journal of Nursing*, 1(2), pp. 169 – 186.
- Rokkas, P., Cornell, V., & Steenkamp, M. (2014). Disaster preparedness and response: challenges for Australian public health nurses. *Nursing and Health Sciences*, pp. 60-66.
- Seyedin, H., Abbasi Dolatabadi, Z., & Rajabifard, F. (2015). Emergency nurses' requirements for disaster preparedness. *Trauma Monthly*, 20(4). <http://dx.doi.org/10.5812/traumamon.29033>
- Smith, A. & Cone, K. (2010). Triage decision-making skills. *Journal For Nurses In Staff Development (JNSD)*, 26(1), E14-E19. <http://dx.doi.org/10.1097/nnd.0b013e3181bec1e6>
- Van de Mortel, T. F. (2008). Faking it: social desirability response bias in self-report. *Australian Journal of Advanced Nursing* 3(4), pp. 40-48.
- Vergano, D. (2013). 5 Reasons Why the Philippines is so disaster prone? Retrieved on May 6, 2017 from <http://news.nationalgeographic.com/news/2013/11/131111-philippines-dangers-haiyan-yolanda-death-toll-rises/>
- Watson, J. (1928). *The ways of behaviorism*. New York, NY: Harper & Brothers Pub.
- World Health Organization. (2010). *WHO Global code of practice on the international recruitment of health personnel* (pp. 1-7). 63rd World Health Assembly. Retrieved on May 13, 2016 from



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The 3H Model of Holistic Care in Nursing

Abstract

Several theories and philosophies of nursing prove that caring is the fundamental aspect to nursing discipline and profession. However, the diversity of these theories and philosophies may lead nurses into uncertainty and difficulty in understanding the best way to deliver holistic care to patients. There is a need to contextualize these philosophies into a perspective that will enable nurses to better understand caring in nursing in order to provide an efficient and quality care to patients. The 3H Model of Holistic Care in Nursing communicates and illuminates the value of caring to patient and nurses geared towards the improvement of nursing practices. It contextualizes the key defining attributes of caring into the 3H categories – the head, the heart, and the hands, which are very essential in the understanding and development of a categorical meaning of caring in the field of nursing.

Keywords: *holistic caring in nursing, 3H model, head, heart and hands*

Introduction

The nursing profession remains practical and hands-on; however, it has been continuously developed by conceptual and theoretical knowledge through art and science-based application. These nursing theories are used as a platform in research and education in order to identify and achieve goals of nursing practice. As an established and evolving profession, modern nursing is still developing a body of knowledge, in terms of theoretical support for practice. In actual practice, nurses do not and should not follow one particular theory in providing care. They draw from a rich and constantly evolving theoretical base that assists them in addressing diverse patient needs (Johnson and Webber, 2005). Currently, most nursing theory is generated through research and logical adequacy. Its value has been continuously tested on its on-going ability to help answer questions, solve problems, explore phenomena and generate new theory (Johnson and Webber, 2005).

The theoretical demonstration that “all persons are caring” (Boykin and Schoenhofer, 1993) signifies the essence of caring to human existence. It describes the characteristics, feelings and behaviors commonly associated with nursing and other

human services professions (Johnson and Webber, 2005). Thus, caring has been established as the heart of therapeutic nursing approach throughout the history of nursing (e.g. Watson, 1979:1999; Muetzel, 1988; Ersser, 1988). It exhibits the desire, intent and obligation to apply relevant knowledge, skills, values, meanings and experience (KSVME) for, with, or on behalf of those requiring or requesting assistance in achieving and maintaining their desired state of health and well-being (Bevis, 1997). The nurse should recognize the nursed as a caring person and should focus on nurturing that person as he or she lives and grows in caring. It is that caring exists and is demonstrated within the context of applying KSVME in nursing, which is distinct to other professions. This constancy forms essential assumptions upon which a significant amount of nursing theory is based – the assumption that nurses care about the safety and well-being of their patients, value them as human beings and individuals and have the KSVME to help them achieve their health-related goals (Johnson and Webber, 2005).

Similarly, several authors conform that caring in nursing offers the intellectual, psychological, spiritual and physical aspects of human being to facilitate and enhance patients' ability to do and decide for themselves (i.e., to promote their self-agency) (Scotto, 2003). The intellectual aspect of nurses consists of an acquired, specialized body of knowledge, analytical thought and clinical judgment, which are used to meet human health needs. The psychological aspect of nurses includes the feelings, emotions and memories that are part of the human experience. The spiritual aspect seeks to answer the questions, "Why? What is the meaning of this?". The physical aspect shows the action taken by nurses like going to the patients' homes, their bedside or a variety of clinical settings where they offer strength, abilities and skills to attain the desired goal (Scotto, 2003). It is necessary that nurses must have competencies in these four aspects in order to realize the true caring in nursing. Also, the model of Boykin and Schoenhofer (2001) speaks more directly to nursing behaviors that caring includes being honest, connecting with patients, entering into their worlds and being in the moment. These behaviors should be included to technical competencies of caring in nursing to form a complete package competence along with demonstrated interest, acknowledging vulnerability and reaching out to comfort. However, the model of Mustard (2002) that categorized caring in nursing into four perspectives argued that it is not necessary to perform all the aspects of caring to demonstrate caring in nursing. The four perspectives described by Mustard (2002) are the following: (a) sense of caring that emphasizes compassion or being concerned about another person; (b) doing for other people what they cannot do for themselves; (c) care for the medical problem that requires knowledge of the problem, interventions and expertise to provide the needed care (i.e. providing wound care or

administering medications); and (d) competence in carrying out personal and technical procedures with true concern for providing the proper care at the proper time in the proper way (Mustard, 2002). Furthermore, the American Association of Critical-Care Nurses (2011) identified caring practices in nursing in the organization's synergy model for patient's care as nursing activities that create a compassionate, supportive and therapeutic environment for patients and staff, with the aim of promoting comfort and healing and preventing unnecessary suffering.

Process

Before I was able to come up with my own nursing theory, I had to undergo a step by step process. It was not easy but it was definitely worth it. First, I had had to undergo an activity called, projective technique. This is a tool to help reflect one's concept of nursing. I had to answer 40 questions and most of my answers were "caring". After which, I started making my concept analysis on caring and my basis for my concept analysis was Walker and Avant. It was then followed with the main theory development process. Based on my concept analysis on caring and my own philosophical views, I was able to come up with my own assumptions, key concepts, propositions, nursing's metaparadigm and model on holistic care in nursing.

Philosophical Underpinnings

This theory was drafted using a postmodernistic philosophical perspective. I subscribe to the philosophy of knowledge discovery that draws principles from postmodernism (discovery-pursuit method of science) and proposes breaking down boundaries and meanings that currently shape nurses' perspectives on themselves as human beings and as professionals, as well as citizens within society. The author was guided by his values of compassion, empathy and selflessness. Inspired by Jean Watson's Human Caring/Caring Science, the author came up with a theory centered on holistic caring in nursing. Her conceptual models' values and assumptions reflect a metaphysical, phenomenological-existential and spiritual orientation that draws upon Eastern philosophy. As a result, the author was able to come up with a theory called, "The 3H Model of Holistic Caring in Nursing."

The above discussions are among the several theories and philosophies of nursing that prove that caring is the fundamental aspect to nursing discipline and profession. However, there is a need to contextualize these philosophies into a perspective that will enable nurses to better understand caring in nursing, in order to provide holistic care to patients. Hence, consistent with the values and philosophy of the author, this paper contextualize the

key defining attributes of holistic caring into the 3H categories – the head, the heart and the hands.

The head is the “thinking aspect” of caring in nursing that provides nurses the ability to independently think in times of critical situations. It consists of an acquired, specialized body of knowledge, analytical thought and clinical judgment, which are used by nurses to meet human health needs. It is the thinking aspect where the nurses utilize an evidence-based scientific and humanistic knowledge in the application of therapeutic interventions. It is their duty and honor to step forward and act as a patient advocate when patients themselves are unwilling and/or unable to perform patient-related-activities. They also have the duty to help patients understand their illness and the pending procedures, as well as to educate them so that they could understand these concerns and could take care of themselves.

Secondly, the heart is the “feeling aspect” of caring in nursing that drives the concern and devotion of nurses to help their patients. Though nurses specialize in the physical aspects that are primarily observed, they are also concerned with the feeling aspects. Nurses perform their duties and responsibilities with tender loving care to their patients and not only for the sake of earning a living. Nurses use their care and compassion to interpret the fears of patients and offer them support services. Most of the time, patients are experiencing physical, emotional, mental and spiritual agony that needs the help and guidance of nurses. Since nurses offer both their skills and heart in caring, they provide patients a comfort in times of uncertainty and crisis with a friendly smile, a reassuring hand to hold on and a shoulder to cry on.

Lastly, the hands refer to the “doing” aspect of caring in nursing. It uses the nurses' extra pair of hands in the actual performance of their duties and responsibilities that provide the management care, delivery care and fundamental care to patients. Nurses go to the patients' homes, their bedside and a variety of clinical settings where they offer strength, abilities and skills to attain a goal. For instance, the sequential activities performed by nurses in hospitals and communities, like helping patients in doing their personal hygiene.

These 3H stand-alone attributes of holistic caring are very essential in the understanding and development of a categorical meaning of caring in the field of nursing. It offers a meaningful perspective that is appropriate to nurses in order to understand the concept of holistic caring in nursing.

The 3H Model of Holistic Caring in Nursing has been formulated to provide illumination on the value of holistic caring to patient and nurses geared towards the improvement of their nursing practice.

Description of the Theory

The 3H Model of Holistic Caring in Nursing is a middle range theory. It addresses the more concrete and more narrowly defined phenomena. The descriptions, explanations and predictions in this theory are intended to answer questions about a nursing phenomenon and do not cover the full range of concern phenomena of the discipline. Also, the middle-range theory provides a perspective from which to view complex situations and a direction for interventions (Fawcett, 2005).

This theory emphasizes that caring is the core of the nursing discipline and profession. Furthermore, it may serve as a framework and platform for nurses to become competent provider of holistic and quality care to patients. As a middle range theory, it is simple and straightforward. Hence, it would be easy for nurses and the public in general to understand.

Assumptions

The study operates under five particular assumptions. First, that a caring nurse has the capability to deliver holistic care regardless of patient's age, gender, race, color, socioeconomic status, health status or condition and setting (i.e. hospital and community). The second assumption is that holistic caring in nursing supports the advancement of career and development goals of nurses. Next, that holistic caring in nursing promotes the feeling of satisfaction to patient and nurse. The fourth assumption is that holistic caring in nursing serves as the fundamental core of the nursing profession. Finally, that holistic caring in nursing improves the nursing knowledge and nursing practice of nurses.

Key Concepts

The key concepts of the 3H Model of Holistic Caring in Nursing are Head, Heart and Hands. Before these three are defined, holistic caring needs to be explained first. This refers to the rendition of holistic nursing care using the 3H: head, heart and the hands.

The Head is the “thinking aspect” of caring that uses the scientific and methodological process of understanding health care systems. Meanwhile, the Heart refers to the “feeling aspect” of caring that involves the concern and commitment of nurses to help patients. Finally, Hands is the “doing aspect” of caring which includes the sequential activities that nurses perform in the hospital and community setting (e.g. different nursing skills and procedures).

Propositions

The above key concepts are the building blocks of the 3H Model of Holistic Caring in Nursing and are linked together by the following propositions, which are correspondingly represented through graphical representation in this paper. The first proposition states that the more knowledgeable the nurse in the use of 3H of holistic caring in nursing, the better he/she is in rendering holistic and quality care. The second proposition follows that the higher the use of 3H of holistic caring in nursing, the easier to achieve the ultimate goals of nursing: patient healing, nurse-patient satisfaction, career growth and personal development. The third proposition states that the better the utilization of the 3H of holistic caring in nursing, the more holistic the approach to care. Finally, the last proposition means to say that the higher the level of holistic care competencies (the thinking aspect, feeling aspect and doing aspect), the more versed he/she is in the use of 3H of holistic caring in nursing.

Nursing's Metaparadigms

- 1. Person:** The individual patient being provided with care by nurses. The nursing profession primarily focuses on the physical, emotional and psychological needs of the person (Thorne, 1998). The person in this theory would be the recipient of holistic care who is composed of physiological, emotional, psychological, sociological and spiritual components.
- 2. Health:** The wellness-illness states that are being experienced by an individual (Fawcett, 1985). The experience of health, or lack thereof, is considered a reflection of the whole person (Thorne, 1998), which strongly connects the metaparadigm concept of health with the metaparadigm concept of person. Health in this theory refers to physical, psychological, emotional, spiritual and social condition/state of the patient and health is viewed holistically.
- 3. Environment:** It encompasses the surroundings and significant others that may facilitate or impede the person's ability to obtain a state of health (Fawcett, 1985). This metaparadigm concept places "the individual within the context of their surrounding environment rather than considering them in isolation" (Fawcett

1984). In this theory, environment is both an external and internal milieu of the patient.

- 4. Nursing:** The study of human health and illness processes. Nursing practice facilitates, supports and assists individuals, families, communities and/or societies in enhancing, maintaining and recovering health and reducing and ameliorating the effects of illness. (Thorne 1998). Nursing in this theory is viewed as both a science and an art. Nursing is the use of knowledge, skills and values/attitude in delivering holistic patient care.

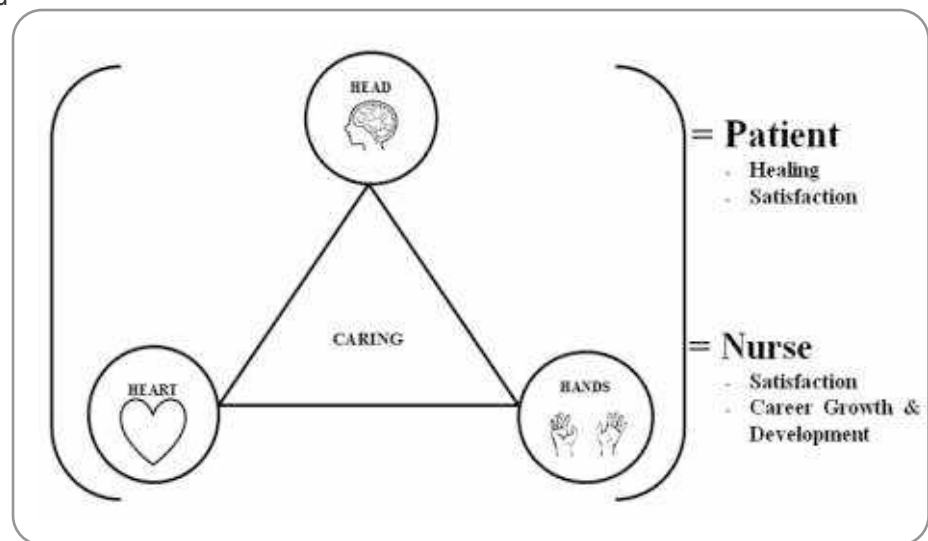


Figure 1. 3H Model of Holistic Caring in Nursing

The conceptual framework in this paper explains the application of 3H in rendering holistic nursing care to patients. The triangle model represents the aspect of caring as the core of the nursing discipline and profession. The three circles around the triangle represent the equally important defining attributes of holistic caring – the head, the heart and the hands, whereas the double bracket and equal sign demonstrate the consequences to patient and nurse in applying the 3H Model of Holistic Caring in Nursing.

Nurses can increase their knowledge and skill as they care for patients when they consider lessons learned from prior experiences in similar situations. When nurses are in a plateau, they may be caring for patients as if each is a new and separate experience, rather than using past experiences to plan and give improved care. They need to individualize and improve care for patients by being alert to their observations of patient problems

and responses. When they incorporate new ideas into their knowledge base, both nurses and patients benefit.

Conclusion

The heterogeneity of theories and principles on caring in nursing may mislead nurses to effectively render and deliver holistic and quality care to patients. Furthermore, modern technology has greatly affected nurses on how they care for their patients. With the formulation of the 3H (HEAD, HEART, HANDS) of holistic caring in nursing theory, it can offer nurses a framework that will serve as a basis for providing integrated and quality nursing care. Hence, this may empower nurses to become competent providers of holistic and quality care to patients.

References

- American Association of Critical-Care Nurses. (2011). *The AACN synergy model for patient care*. Retrieved November 08, 2015, from <http://www.aacn.org:88/wd/certifications/content/synmodel.pcms?pid=1&menu=>
- Bevis, E. O. (1997). *Caring, expertise, and fire in the belly*. Unpublished manuscript.
- Boykin, A., and Schoenhofer, J. (1993). *Nursing as caring: A model for transforming practice*. New York: National League for Nursing.
- Boykin, A. and Schoenhofer, S.O. (2001). *Nursing as Caring. A Model for Transforming Practice*. Jones and Bartlett, Sudbury, MA
- Ersser, S. 1988. 'Nursing Beds and Nursing Therapy.' In A. Pearson (ed.) *Primary Nursing*. London: Chapman & Hall.
- Fawcett, J. (1984). *The metaparadigm of nursing: present status and future refinements*. *Image: J. Nurs. Sch.* 16 (3), 84e87. Retrieved November 18, 2015, from <http://dx.doi.org/10.1111/j.1547-5069.1984.tb01393.x>.
- Fawcett, J. (1985). *Theory: basis for the study and practice of nursing education*. *J. Nurs. Educ.* 24 (6), 226e229. Retrieved November 21, 2015, from <http://www.healio.com/nursing/journals/jne>.
- Fawcett J. (2005). *Contemporary nursing knowledge: analysis and evaluation of nursing models and theories*. 2nd ed. Philadelphia: F. A. Davis.
- Johnson, B., and Webber, P. (2005). *Introduction to theory and reasoning in nursing*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Muetzel, P.A. (1988). 'Therapeutic Nursing.' In A. Pearson, (ed.) *Primary Nursing*. London: Chapman & Hall.
- Mustard, L. (2002). *Caring and competency*. *JONA's Healthcare Law, Ethics, and Regulation*, 4(2), 36–43.
- Scotto, C. (2003). *A new view of caring*. *Journal of Nursing Education*, 42, 289–291.
- Thorne, S. (1998). *Nursing's metaparadigm concepts: disimpacting the debates*. *Journal of Advance Nursing*. 27, 1257e1268.
- Watson, J. (1979). *Nursing: The philosophy and science of caring*. Boston, MA: Little, Brown.
- Watson, J. (1999). *Post-modern nursing and beyond*. Edinburgh: Churchill Livingstone.

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When we tackle obstacles, we find hidden reserves of courage and resilience we did not know we had. And it is only when we are faced with failure do we realize that these resources were always there within us. We only need to find them and move on with our lives.

A. P. J. Abdul Kalam

FEATURE ARTICLE



Alfred D. Waldo, RN, RGC, MSN^{1,2}

The Silent Epidemic: Understanding the Concept of Workplace Bullying Among Nurses

Abstract

The concept of workplace bullying has been explored extensively in other disciplines but not in nursing. This paper is a concept analysis that explores what workplace bullying is among nurses, looks at its attributes and characteristics, and matches previous evidence on the consequences of this incidence. Review of literature was conducted using the EBSCO and Google Scholar databases. Findings suggest that there are personal and professional costs from the victims and the organization when workplace bullying is practiced. Thus, examining this topic further may develop nursing research and education, benefiting nursing workplace and work environment.

Introduction

Workplace bullying between nurses has been a subject of ongoing concerns for decades. Its enduring impact is reflected throughout numerous articles and statements in nursing journals. Moreover, it is now viewed as a vital concern as it is increasingly visible and prevalent in this century. This paper aims to illuminate workplace bullying among nurses, examine its attributes and characteristics, and compile previous evidence of the significance of this incidence. Further, implications are provided that maybe of use in determining this workplace problem.

Definitions

Universally, there is no agreed upon accepted definition of workplace bullying. However, there are considerable amount of surrogate terms used to describe the phenomena. For instance, authors called it workplace aggression (Edward, Ousey, Warelow, & Lui, 2014), relational aggression (Ruler, 2015; George & Davis, n.d.),

horizontal violence (Becher & Visovsky, 2012), lateral violence (Embree & White, 2010), workplace violence (Park, Cho, & Hong, 2014), and workplace harassment (Vessey, DeMarco, & DiFa, 2011) to name a few. In this paper, the term, “bullying” is chosen over other terms since it is well understood by the general public.

In the legal and industrial relations literature, the incidence includes three elements: frequency, impact on health, and mistreatment (Workplace Bullying Institute, 2009). Similarly, Einarsen, Hoel, Zapf, & Cooper (2004) positioned that bullying at work means harassing, offending, socially excluding someone or negatively affecting someone's work tasks. In order to label bullying, the process has to occur repeatedly and regularly (e.g. weekly) and over a period of time (e.g. about six months), in which the victim ends up in an inferior position and becomes the target of systematic negative social acts. In addition, it does not count as workplace bullying if the incident is an isolated event or if two parties of approximately equal 'strength' are in conflict.

Nursing organizations characterizes it as mistreatment that undermines the nurse's ability to succeed leaving them feeling hurt, frightened, angry or powerless (American Nurses Association, 2015); repeated unreasonable behavior that creates a risk to the psychological, physical health or safety of the nurse (Australian Nursing Federation, 2011); and can be in the forms of be overt, such as in physical, verbal (i.e., threats that result in personal injury or harm and intimidation), financial and sexual behaviors; or they can be covert, such as in neglect, rudeness, humiliation in front of others and withholding information (CNA & CFNU, 2008). Nurse authors, Becher & Visovsky, (2012) considers this as “hostile, aggressive, and harmful behavior by a nurse or group of nurses toward a co-worker or group of nurses need not to be in equivalent power since this harmful behaviors can be expressed via attitudes, actions, words and/or behaviors.

Clearly, all of the above definitions of workplace bullying revolve around the presence of a perpetrator and a victim. The repeated, cumulative, and patterned form of negative behaviors results in a profound negative impact on the victim and organization.

Literature Review

The concept of workplace bullying in nursing surfaced in the late 1970s. Kohnke & Duld (as cited from Szutenbach, 2013) spoke of the vulnerability of nurses in low-level positions, who were often recipients of verbal abuse. These nurses felt unable to defend themselves because of fear of losing their jobs. A decade later, nursing professor, Helen Cox (as cited in Lutgen &

Sypher, 2009), began studying verbal abuse in medical settings when it appeared to be driving away gifted nursing students. Around the same time, highly visible occurrences of workplace bullying sparked a flood of research that extended into the next two decades. Johnson (2013) later concluded that this problem is prevalent in nursing at a higher rate than the general population of workers and Murray (2009) named this as “the silent epidemic” in nursing.

Research on the prevalence of bullying among nurses had limited generalizability as seen in many nursing journals. Arguably, the influence of culture, government-controlled or fragmented and competitive health systems, fears of litigation, or acceptance of longstanding attitudes (e.g., “nurses eat their young”) and roles of professional nurses in the larger society cannot be discounted (Vessey et al., 2011). Additionally, workplace bullying among nurses often goes unrecognized and under-reported because of the non-existence of policies to resolve the issue (American Nurses Association, 2015), fruitless standards of practice within the organization (CNA & CFNU, 2008), lack of organizational support (Becher & Visovsky, 2012); and vulnerability to abuse of contract basis nurses (Nelson, Azevedo, Dias, de Sousa, & de Carvalho, 2014).

Literature however, revealed multidimensional factors of the incidence. Nonetheless, these were limited to correlation of workplace bullying to stress, anxiety and depression (El-Houfey, El-Maged, Elserogy, & El Ansari, 2015); association of trust, justice and work demand with workplace violence (Park, Cho, & Hong, 2014), frequency and exposure to verbal abuse from co-nurses (NasrEsfahani & Shahbazi, 2014); relationship of bullying and low wage structure (Nelson et al. 2014); gender difference on the frequency and severity of physical assaults and aggressive encounters among nurses (Edward et al., 2014); domains and organizational factors that enable bullying acts among nurses (Hutchinson, Wilkes, Jackson, & Vickers, 2010); and the impact on the quality of care provided by bullied nurses (Vessey, DeMarco, & DiFa, 2011). Despite differences in methodology, most agreed that the higher frequency of bullying is common in young nurses, due to lack of experience, poor organizational conditions, such as role ambiguity, role conflict, work-overload, staff shortages, long working hours, and lack of control or gaps in communication networks. Incidentally, most of these studies lack the rigor of instruments and methodology that really capture what workplace bullying is in nursing.

Without a doubt, nurses are less likely to perform at their best skill level perpetuated by workplace bullying (Ruler, 2015). Instead of the compassion, respect and dignity that they would provide to patients, workplace bullying brings poor quality patient care and outcomes. In effect, workplace bullying can lead to

medication errors (Stelmaschuk, 2010), unsafe patient care and adverse patient outcomes (Johnson, 2013) and increased operational costs through liability (Adams & Maykut, 2015). Certainly, the need for interventions and presumptive actions on the incidence is greatly acknowledged. Efforts such as implementation of zero tolerance policy and professional code of conduct (Center for American Nurses, 2008); implementation of multistage (primary, secondary, tertiary) prevention programs (Vessey, DeMarco, & DiFa, 2011); assessments and meditative actions to diffuse conflict (Szutenbach, 2013); addressing policies, training's and employers liability (Australian Nursing Federation, 2011); promotion of code of ethics, labor codes, and inclusion of workplace bullying and violence to the occupational, health regulations (CNA & CFNU, 2008) are among the developments recommended to address the incidence.

Internet based review of literature was conducted using the EBSCO and Googlescholar search databases. By doing so, the prerequisite, characteristics, similarities or variances, and consequences of workplace bullying were identified.

Prerequisite to Bullying

Antecedents are the events that need to take place prior to the occurrence of the concept (Walker & Avant, 1999).

There has to be a perpetrator for an incident to be identified as workplace bullying. Einarsen et al. (2004) expounded that "individual antecedents" may also involve the personalities of bullies and victims. This standpoint presents a wide range of concepts relating to personality factors. For instance, in literature 'abrasive' and 'authoritarian' personality were used to describe bullies. Victims on the other hand, were described as cautious, sensitive, quiet, anxious, and insecure. However, there is no monotony of personality such as the "victim personality" or the "bully personality" for every case of bullying.

Defining Characteristics/Attributes

Defining attributes are a list of characteristics of a concept that appear repeatedly when reviewing the literature. They help you name the occurrence of the concept as differentiated from a similar concept (Walker & Avant, 1999).

Research has repeatedly demonstrated misuse of power as a mechanism through which bullying acts are initiated. In nursing where hierarchy and seniority is valued, nurses with

administrative functions are often the perpetrators. Also, the repetition of unreasonable or inappropriate behavior from an individual or group is an equally important ingredient in the incidence. Acts are intentional or unintentional but are expected to victimize, humiliate, undermine or threaten an employee. Lastly, organizational actions explain how bullying is addressed in the workplace. Apparently, bullying reports among nurses are either trivialized or disbelieved. It is considered as simply a part of the job of nurses. Moreover, it is feasible that other workers may be socialized into norms tolerant of the bullying which enable repetitive, patterned and even escalates the situation (Hutchinson et al., 2010) For instance, bystanders or witnesses in association with other factors are willing to tolerate or engage in bullying (Einarsen et al., 2004).

Consequences

Consequences are the events or incidents that occur as a result of the occurrence of the concept (Walker & Avant, 1999). Summarizing what the literature had presented, personal and professional costs were identified.

Bullied nurses experience low self-esteem, depression, self-hatred, and feelings of powerlessness (Australian Nursing Federation, 2011); high levels of stress and anxiety (El-Houfey et al. , 2015); physical symptoms such as chronic stress, high blood pressure, and increased risk of coronary heart disease (Lutgen & Sypher, 2009). Evidently, victims reduce their participation and avoid involvement in activities (Hutchinson et al., 2010) and experience disastrous effects on their family functioning, relationships, communication leading to negative patient outcomes.

Professional costs involve the victim and the organization. For the victim, it involves impediment of skills, technical knowledge, and experience because of distress and career avoidance. For the organization, costs could be in terms of employees, who enter and then leave shortly afterward or having less confident cadre of workers with fewer occupational options and fewer organizationally valued assets.

Case Presentation 1: Model Case

This case, including all the defining attributes and no other attributes, is an absolute instance of the concept (Walker & Avant, 1999).

A nurse was hired on a contractual basis in the pediatric oncology unit. Despite her expertise and a history of excellence in the area of practice, she is accused by her co-workers of being incompetent. In terms of patient assignments, she was given workloads that she could not handle, when she tried to talk it over to her supervisor, she was told that she should be able to handle it because she has master's degree. One day, her co-worker teasingly called her "taga-sundo" (grim reaper) after coincidentally, there have been higher incidence of patient mortality on her shift. The name eventually was attached to her and soon everyone on the unit called her that. The nurse eventually would withdraw from the patients' rooms during code and would stay on the nurses' station or keep herself busy with stable patients. The supervisor who observed this behavior eventually got angrier and accused the nurse of not doing her job. One particular day, on a staff meeting the unit supervisor addressed that her behavior is not acceptable and that she should be able handle dying patients because it's all a part of the job. She tearfully stated that the name calling and the unfair staff practices were deeply affecting her and her performance. The supervisor eventually stated that "talagang ganyan dito masanay ka na" ("that's how things work here better get used to it"). The supervisor narrated that this is the custom of the unit and that she herself and the regular staff members had gone through it. In the open her fellow staff agreed to the supervisors comment while laughingly continuing to call her Ms. "Tagasundo". Without a word, the nurse waited for the meeting to be over and filed for her resignation the next day.

Case Presentation 2: Contrary Case

A contrary case is a clear example of what the concept is not (Walker and Avant, 1999).

Lorena, a newly graduate nurse was hired in a psych-rehab institution. In orientation, she admits she had self-doubt and fears dealing with psychiatric patients and drug dependents. Her co-workers provided reassurance and assisted her in interventions she had difficulty with. In times of difficult endeavors with her personal and professional life, her superiors and co-workers were there to support her. She was amazed by how her superiors dealt with issues surrounding the members of the healthcare team. She felt safe, belongingness, empowerment and found contentment in her work. In the years that went by, she was promoted as nursing supervisor; she employed the leadership strategies from

those who were before her. She felt that she truly is making a difference.

Case Presentation 3: Borderline Case

A borderline case is a case that contains some of the defining attributes of a concept but not all of them (Walker & Avant, 1999).

Al, a new graduate nurse was doing a volunteer work in the public health unit. He was assigned to a preceptor who is well known to be lazy and demanding. Al patiently gave in to the demands of his preceptor who would sometimes ask for favors that are not related to the job. A co-worker observed this incident and reported it to the medical health unit officer. The officer immediately resolved the problem. The staff was given a warning and necessary sanction. The officer recognized this problem stating that this behavior is not tolerated in his unit. Al was reassigned to a new preceptor and was able to complete his volunteer work. Later on he was offered a job order status, which he gladly accepted.

Case Presentation 4: Related Case

Related cases are instances of concepts that are similar to the concept being studied but do not contain the critical attributes (Walker & Avant, 1999).

The following case is an example of bullying but not in the workplace. A teenager with autism is enrolled by his parents in a regular school because of financial difficulties maintaining him under special education requires. Often, the child is teased by his classmates because of his odd ways of presenting his tantrums. This went on for months; in one particular school event, a classmate punched the child for no apparent reason. The teacher saw this problem and reported it to the school supervisor. A meeting was set where the parents of both the victim and the bully were invited. During the meeting, the bully's father got angry and told the other parent to "man-up" his child. The supervisor intervened and told the other parent that this child is a "special child". The child was invited and the parents of the bully apologized for their child's behavior. The solution sought was to return the autistic child to a special education school, with the financial aid from a non-government organization referred by the school supervisor.

Case Presentation 5: Invented Case

An invented case is a case that uses the ideas of the concept but outside our own experience (Walker & Avant, 1999).

Cinderella was orphaned by her parents and left in the guardianship of her stepmother. She felt unloved as her stepmother and stepsisters took advantage of her kindness and obedience by making her perform alone all the household and farm chores. When a particular task is not performed, she is reprimanded and punished. However, when it does, it was never enough to satisfy her stepmother and sisters. Her home, that was once where she used to feel secured, loved, and cared, turned to a dreadful place of work and unjust environment of shame and belittlement.

Implications to Nursing Practice

Firstly, we must address the bullying is existent in any organization and profession but in nursing it has become a culture. Generation after generation, this incidence repeats itself as a cycle, and we have to acknowledge the fact that certain actions and interventions unique to the profession and distinctive to the characteristics of workplace bullying must be made, reinforced and acted upon. Secondly, research should create a consensus definition and characteristics of what workplace bullying is in the profession. This way, the incidence and prevalence of workplace bullying is monitored. Perhaps, future studies, may strengthen its methodological rigor, clear its definitions, include the full scope of the bullying cycle, use instrumentation with sufficient psychometric evaluation, and increase response rates. Lastly, given the consequences, no single intervention is likely to resolve workplace bullying, especially if it has become cemented and widespread in the workplace culture. Possibly, the abundance of recommendations from past studies, nursing organizations and policy makers may serve as benchmark for trial and adaptation.

Conclusion

Workplace bullying in nursing remains a complex issue that needs further exploration. On the whole, recognition of the problem among managers, hospital administrators and nurses themselves is greatly needed. Therefore, creating a safe working environment where nurses thrive and not merely survive, should be required.

References

- Adams, L. Y., & Maykut, C. A. (2015). *Bullying: The Antithesis of Caring Acknowledging the Dark Side of the Nursing Profession*. Retrieved from http://www.internationaljournalofcaringsciences.org/docs/28_Adams_special_8_3.pdf
- American Nurses Association. (2015). Bullying and workplace violence. Accessed at: <http://www.nursingworld.org/Bullying-Workplace-Violence>.
- Australian Nursing Federation. (2011). *ANF - Policy: Bullying in the Workplace*. Retrieved: http://anmf.org.au/documents/policies/P_Bullying.pdf: Australian Nursing Federation.
- Becher, J., & Visovsky, C. (2012). *Horizontal Violence in Nursing*. Retrieved from <https://www.amsn.org/sites/default/files/documents/practice-resources/healthy-work-environment/resources/MSNJ-Becher-Visovsky-21-04.pdf>
- Center for American Nurses. (2008). *Lateral Violence And Bullying In The Workplace*. Retrieved from https://www.mc.vanderbilt.edu/root/pdfs/nursing/center_lateral_violence_and_bullying_position_statement_from_center_for_american_nurses.pdf
- CNA & CFNU. (2008). *Joint Position Statement: Workplace Violence and Bullying*. Retrieved from http://cna-aaic.ca/~!media/cna/page-content/pdf-en/Workplace-Violence-and-Bullying_joint-position-statement.pdf
- Edward, K.-I., Ousey, K., Warelou, P., & Lui, S. (2014). Nursing and aggression in the workplace: a systematic review. *British Journal of Nursing*, Vol 23, No 12, 653-659 doi: 10.12968/bjon.2014.23.12.653.
- Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. L. (2004). *Bullying and Emotional Abuse in the Workplace: International perspectives in research and practice*. New York: Taylor & Francis Inc.
- El-Houfey, A. A., El-Maged, N. S., Elserogy, Y. M., & El Ansari, W. (2015). Workplace Bullying Against Medical and Nursing Team Working At Emergency Departments in Assiut University Hospital. *Journal of Nursing and Health Science*, 1-9, doi: 10.9790/1959-04250109.
- Embree, J. L., & White, A. H. (2010). Concept Analysis: Nurse-to-Nurse Lateral Violence. *Nursing Forum*, 166-173 doi: 10.1111/j.1744-6198.2010.00185.x.
- George, T. P., & Davis, K. M. (n.d). *Bullying in Nursing: Issues and Solutions*. <http://nurse-practitioners-and-physician-assistants.advanceweb.com/Features/Articles/Bullying-in-Nursing-Issues-Solutions.aspx>.
- Hutchinson, M., Wilkes, L., Jackson, D., & Vickers, M. H. (2010). Integrating individual, work group and organizational factors: testing a multidimensional model of bullying in the nursing workplace. *Journal of Nursing Management*, 173-181 DOI: 10.1111/j.1365-2834.2009.01035.x.
- Johnson, S. L. (2013). *An Exploration of Discourses of Workplace Bullying of Organizations, Regulatory Agencies and Hospital Nursing Unit Managers*. Washington: Accessed:<https://digital.lib.washington.edu/researchworks/handle/1773/23598>.
- Lutgen, S., & Sypher, B. D. (2009). *Destructive Organizational Communication*. Retrieved from http://samples.sainsburysebooks.co.uk/9781135856403_sample_513837.pdf

- Murray, J. S. (2009). *Workplace Bullying in Nursing: A Problem That Can't Be Ignored*. Retrieved from https://www.amsn.org/sites/default/files/documents/practice-resources/healthy-work-environment/resources/MSNJ_Murray_18_05.pdf
- NasrEsfahani, A., & Shahbazi, G. (2014). Workplace bullying in nursing: The case of Azerbaijan province, Iran. *Iranian Journal of Nursing and Midwifery Research*, 409-415.
- Nelson, S. A., Azevedo, P. R., Dias, R. S., de Sousa, S. M., & de Carvalho, L. D. (2014). The influence of bullying on the well-being of Brazilian nursing professionals. *Public Money & Management*, vol. 34, no. 6, pp. 397-404. <http://doi.org/10.1080/09540962.2014.962364>.
- Park, M., Cho, S. H., & Hong, H. J. (2014). Prevalence and Perpetrators of Workplace Violence by Nursing Unit and the Relationship Between Violence and the Perceived Work Environment. *Journal of Nursing Scholarship*, 87-95 doi: 10.1111/jnu.12112.
- Ruler, A. (2015). Bullying, relational aggression and nursing. *Australian Nursing & Midwifery Journal*, 35.
- Stelmaschuk, S. (2010). *Workplace Bullying and Emotional Exhaustion among Registered Nurses and Non-nursing, Unit-based Staff*. Retrieved from <https://kb.osu.edu/dspace/handle/1811/45566>
- Szutenbach, M. P. (2013). Bullying in Nursing: Roots, Rationales, and Remedies. *Journal of Christian Nursing*, 16-23.
- Townsend, T. (2012). Break the bullying cycle: We can do it through individual accountability, a mentoring culture, and support for nursing peers. *American Nurse Today*, 12-15.
- Vessey, J. A., DeMarco, R., & DiFa, R. (2011). Bullying, Harassment, and Horizontal Violence in the Nursing Workforce: The State of the Science. In *Annual Review of Nursing Research* (pp. 133-157). Springer Publishing Company DOI: 10.1891/0739-6686.28.133.
- Walker, L. O., & Avant, K. C. (1999). *Strategies for theory construction in nursing 3rd ed.* Englewood Cliffs, NJ: Prentice Hall.
- Workplace Bullying Institute. (2009, Accessed November 2). Definition. Retrieved from: <http://www.workplacebullying.org/targets/problem/definition>.

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Jeff Leigh Reburon, RN, MAN

Warrior Resilience in Nursing

Nursing is a tough job. Many people think that nursing is as simple as giving medications, helping the doctor do his rounds, writing on patients' charts, and then calling it a day. Amidst the glamour and heroism that come with wearing an all-white uniform, nursing is not at all a bed of roses. Nurses have to endure countless hours standing up during a surgical procedure. They are tasked to handle bodily fluids and excreta. More often than not, they have to deal with demanding clients. Sometimes, nurses hold their bladder in agony just to finish their charting on time. Most nurses only have two days off every week. Frequently, they miss important family gatherings and events because of their strict schedule. With the prestige of being a nurse comes an unbearable amount of stress of epic proportions.

Nurses are meant to be resilient. When they are faced with adversity, they push harder and continue with determination, tenacity, and drive. Giving up and breaking down is not an option when you are a nurse. Nurses understand the importance of bouncing back up after every mishap. Like the bamboo, it is imperative that nurses know how to sway and dance with the wind. We bend, but we do not break.

Resilience in nursing is defined as "the ability of an individual to cope with and adapt positively to adverse circumstances" (Hunter and Warren, 2013 as cited by Murray, 2014). Sullivan, Cooper, Mammen and Pulia (2012) believe that resilience in nursing is "the capacity to keep functioning physically and psychologically in the face of stress, adversity, trauma, or tragedy". Resilience has been identified as comprising personality/behavioral traits such as optimism, self-efficacy and hardiness which enable individuals to cope with increased adversity.

In the military, the concept of resilience is a common and familiar territory. Resilience is known to enhance soldiers' ability to manage the rigors and challenges of their demanding profession. Resilience is believed to combine mental, emotional, and physical skill to generate optimal performance in combat, healing after injury, and in managing work and home life. Resilience is sometimes referred to as "mental toughness". To be mentally tough, one needs to resist the urge to give up in the face of failure, maintain focus and determination in pursuit of one's goals, and emerge from adversity even stronger than before. Seligman (2011) posits that mental toughness comes from thinking like an optimist, and learning to analyze one's beliefs and

emotions about failure, and to avoid describing failure as permanent, pervasive, and out of control. In addition, developing resilient character strengths and virtues allows one to thrive and to expect and prepare for adversity. He further discussed resilient character components to include endurance, resilience, character, thriving, and post-traumatic growth (Jarrett, 2013).

Having been raised by a policeman for a father (who I look up to as my first hero), I developed a belief that policemen and soldiers have many things in common with nurses. They are all self-sacrificing individuals who work in stressful environments to improve the lives of the general populace. Given this credence, I was able to draft a middle-range theory called "Warrior Resilience of Nurses" in my Philosophy class under Dr. Anabelle R. Borromeo. Juxtaposing warrior and nursing concepts of resilience and transforming it into a usable theory which can be utilized to guide nurses' growth in the profession was the aim of my theory that I call "Warrior Resilience: Springboard towards Quality Nursing Care".

Inspired by Roy's view of the individual's innate capacity for coping, I came up with a theory which centered on the adaptation and resilience, not of patients, but of nurses. My theory aims to provide a structure of growth and development for nurses in their journey as care providers. Combining both military and nursing concept of resilience, I was able to develop a theory which aimed to illuminate the importance of nurses' personal and professional sense of resilience in improving their nursing practice, and ultimately, helping patients to attain optimum health. Impetus to Warrior Resilience is adversity, which may come in the form of internal or external conflict, physical exhaustion, psychological strain, personal or professional crisis, emotional stress, inconvenience, discomfort, difficulty, and shortcomings. Warrior resilience in nursing is both a skill and a process. Possessing Warrior Resilience means having the ability to confront stress or adversity without "breaking" or crumbling down, harness endurance, to "hunt for the good stuff", and to recognizing the adversity as an opportunity for growth. Consequent to having Warrior Resilience are character development, thriving and post-traumatic growth.

I believe that every failure carries a seed of an equivalent or greater benefit. Failures, challenges, and adversities must be accepted by every nurse with an open mind and a positive outlook. After all, these are the things which help us grow. The greater the fall, the greater the ascension.

References

- Jarrett, T. A. , (2013). Warrior Resilience and Thriving (WRT): Rational Emotive Behavior Therapy (REBT) as a Resiliency and Thriving Foundation to Prepare Warriors and Their Families for Combat Deployment and Posttraumatic Growth in Operation Iraqi Freedom, 2005–2009. *J Rat-Emo Cognitive-Behav Ther*, 31, 93107 DOI 10.1007/s10942-013-0163-2
- Murray, K. (2014). Building Resilience in Midwifery and Nursing Staff. from <http://blogs.bmj.com/ebn/2014/03/31/building-resilience-in-midwifery-and-nursing-staff/>
- Seligman, M.E.P. (2011). Building resilience: What business can learn from a pioneering army program for fostering post-traumatic growth. *Harvard Business Review*, April 2011, 100-106
- Sullivan, P., Cooper, M., Mammen, K., & Pulia, K. (2012). Grace under fire: Surviving and thriving in nursing by cultivating resilience - *American Nurse Today*. Retrieved from <http://www.americannursetoday.com/grace-under-fire-surviving-and-thriving-in-nursing-by-cultivating-resilience/>

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Resilience isn't a single skill. It's a variety of skills and coping mechanisms. To bounce back from bumps in the road as well as failures, you should focus on emphasizing the positive

Jean Chatzky



Marian G. Santos, RN, MAN¹

Some Random Thoughts on Resilience

Nurses. Whenever people see nurses in their uniform, there is this deep regard felt. It is as if they know the hardships that nurses go through daily--- giving their lives for others. Literally and non literally, it is true.

As a documentor of the national convention where RESILIENCE of nurses was the focal point of discussion, I looked around and saw the absence of nurses who are working in the hospitals despite poor pay and conditions, nurses who are forced by circumstances to stay at home because there is no opportunity available for employment, and nurses who are currently into other kinds of work that are completely different from what they are supposed to do. And the reality hit me: nurses are resilient now, but until when can they endure the forces that confine them and worse, lead them to forget nursing practice?

As a member of the APO, the crucial need to act on present circumstances has at times forced me to lose sleep. In national conventions of PNA, there is supposed to be that felt connection that overall--- everyone is "alright". Yet this feeling does not come. Despite my own experience of the hotel accommodations, the sumptuous meals, and all the other luxuries that a national conference can offer, my heart felt that it was missing something. Can it possibly be that unshaken guilt that not all nurses can afford to enjoy the privilege of learning and getting together? Have standards become too wordly that suddenly what is simple and practical cannot suffice, even among those who practice a noble profession?

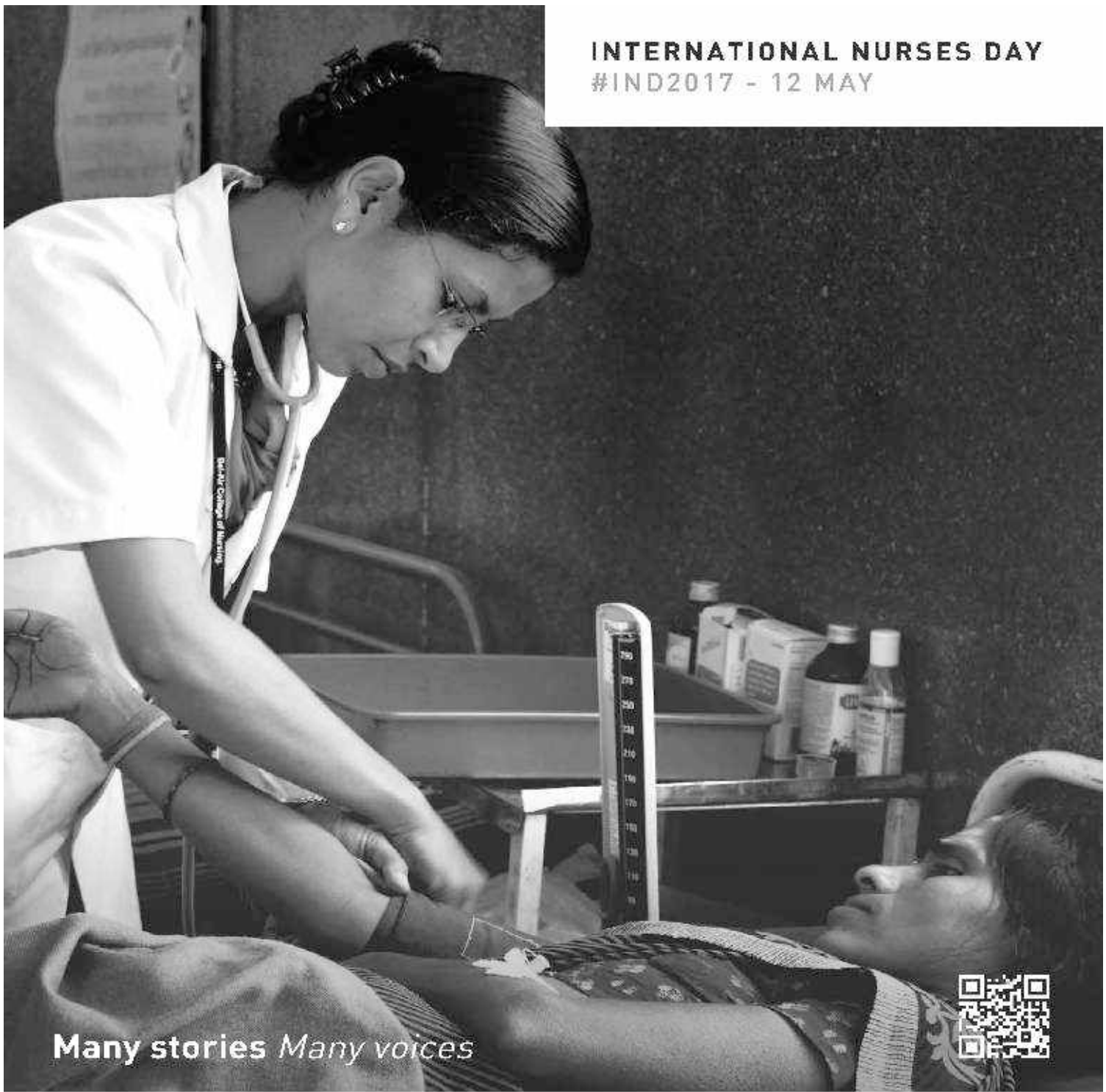
Resilience. Whenever I see this word spelled out in the last national convention, I realize something.

That it is not the word that gets to me. Rather, it is the fact that nurses are resilient by force. The question is, "What have nurses in the country done, out of their own initiative to help each other from not breaking?"



¹Maan or Marian is presently the Executive Director of the Philippine Nurses Association.

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With our tender care

We pray the Lord to guide our way
To carry on our work each day
And grant us grace to serve the sick
And love to help the weak

About the Cover

The image depicts the foci of nursing research – practice, advocacy and policy – surrounded by a laurel wreath. The presence of the laurel wreath symbolizes the characteristics nurse researchers ought to have: creativity, peace and protection, and achievement (Allen, 2007). Laurel leaves are also thought to have cleansing properties and magical attributes (Allen, 2007). I would like to think that through nursing research, our ignorance is 'washed' or cleansed away, which leads to the magical attribute that is wisdom and knowledge. The pointing finger, directed upwards, indicates progress that the profession, in particular, and the society, from a broader perspective, achieve through knowledge development and acquisition of wisdom. (Dr. Edward Cruz)



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