

RESEARCH ARTICLE

Knowledge and Attitude on the Nurse Practitioner Role of Nurses and Physicians in Two Tertiary Hospitals in Metro Manila

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Abstract

The role of the nurse practitioner (NP) has been successfully implemented globally including in some Southeast Asian countries. However, the Philippines has yet to enact this expanded role, notwithstanding being faced with the common factors influencing the evolution of the NP role indicated in the literature. With the proposed repeal of the current Philippine Nursing Law to include Advanced Practice Nursing, this study aimed to determine the knowledge and attitudes of nurses and physicians in the Philippines on the NP role. Sixty-six participants (41 nurses and 25 physicians) completed the survey on the knowledge and attitude on the NP role, conducted in two tertiary-level hospitals in Manila. Nurses have statistically higher scores on items regarding general understanding of the NP role, and on the difference of the NP from senior nurses. However, the difference of overall survey scores on the knowledge and attitude on the NP role between nurses and physicians was statistically non-significant. These results support the need to raise awareness on the role of the NPs by educating nurses, physicians, and other healthcare professionals in the Philippine setting.

Keywords: *Advanced practice nursing, nurse practitioner, knowledge, attitudes*

Introduction

In the face of changing demographics created by an aging population, reforms to improve access and contain the rising cost of healthcare, the Nurse Practitioner (NP) role was perceived as a solution to these healthcare issues common to the developing and developed countries alike. The International Council of Nurses (ICN) defines a Nurse Practitioner/Advanced Practice Nurse (NP/APN) as a registered nurse (RN) who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which the NP/APN is credentialed to practice (ICN, 2001). The Nurse practitioner (NP) role is one of the four roles covered by the umbrella term Advanced Practice Nursing (APN) established in the United States (US) in addition to the Certified Nurse Anesthetist, Certified Nurse Midwife, and Clinical Nurse Specialist. These roles were successfully implemented in the United States (US) many decades ago, and the concept soon rippled across North America, United Kingdom, Australia and even some countries in Southeast Asia. It operationalized within

the framework of their own healthcare needs. The role is an application of an expanded range of practical, theoretical, and research-based competencies to phenomena experienced by patients within a specialized clinical area of the larger discipline of nursing (Hamric, 2005). There are nuances to the terms APN, APRN, NP, however, in this study, they are used interchangeably.

The evidence is mounting that the care provided by NPs is comparable to if not better than the usual care in terms of patient satisfaction (Agosta, 2009; Budzi, Lurie, Singh & Hooker 2010; Creech, Filter & Bowman 2011, Horrocks, Anderson, & Salisbury, 2002), quality outcomes, optimized cost and decreased wait times in the Emergency Department (Carter & Chochinov 2007), cost containment, and improved access to care (Barton & Bevan, 2012; Mundinger, et al. 2000). More importantly, APNs contribute to promoting wellness in the community, and continuity of care through inter-professional team planning for critically ill and complex care of in-patients (Bryant-Lukosius, DiCenso, Browne, & Pinelli, 2004).

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As healthcare reforms are shifting care from hospitals to the community, the demand for primary care services increased much more in the developed countries. Moreover, as physicians move towards more lucrative specialty practices, the demand for NPs to fill the shortage of physicians in primary care settings has increased (Fairman, 2010, Kaasalainen S, et al. 2010). A meta-analysis of studies on the impact of doctor-nurse substitution in primary care found no significant differences in patient health outcomes, the process of care, and resource utilization between physicians and nurses. However, patient satisfaction was higher with nurse-led care. Overall, nurses with appropriate education and training could produce high-quality care and good health outcomes for patients as primary care doctors (Laurant, et al. 2005).

In the Philippines, socio-economic challenges and systems issues have led to a lack of access to healthcare and inefficiency in meeting the primary healthcare needs (essential health care services) of Filipinos. The devolution of healthcare from national to local government in 1991 has created fragmentation of care posing tough challenges to gatekeeping in primary care (WHO, 2013). The dearth of human resources for health, particularly physicians has intensified the lack of access to primary care, especially among the marginalized and in the remote and rural areas (Romualdez, et al., 2011). Even with the mounting evidence in the literature regarding the positive outcomes of NPs such as high patient satisfaction, lower healthcare costs, decreased wait times and similar patient outcomes, the Philippines still has not tapped the potential of nurses, being the most numerous healthcare professionals in the country. Aside from this, there is a perceived oversupply of RNs in the Philippines with limited career options within a healthcare infrastructure plagued by a shortage of medical doctors (Romualdez, et al., 2011). The US, Canada and some countries in Southeast Asia have relied on APNs to alleviate these issues. However, whether or not the Philippine healthcare system and the various stakeholders, most especially the physicians who will be collaborative partners of APNs, are ready for this expanded role of the nurse, it is still unknown and waiting to be explored. In light of the Universal Health Care Act (RA 11223) and the proposed repeal, this paper aimed to determine the attitudes and knowledge of physicians and nurses in the Philippines regarding the NP role.

Methodology

Design

This study used an exploratory, quantitative design using one instrument to determine the knowledge and attitude of RNs and MDs practicing in the Philippines on APN role.

Sample and Sampling Procedure

The required sample size, computed using G*Power 3.0.10, using a large effect size of 0.8, α probability of error of 0.05, power of 0.8 and attrition rate of 20%, is 72 participants. Inclusion

criteria were either RN or MD employed in the hospital and willing to sign an informed consent.

A total of 100 questionnaires were distributed between two tertiary level hospitals in Manila, a nonprofit private medical center and a government-owned hospital, from mid-July to end of August 2015. Ninety questionnaires were completed, yielding a return rate of 90%. Twenty-four (24) questionnaires were incomplete; thus were excluded from data analysis.

Instrumentation

A survey questionnaire was adapted from the Northern Emergency Nurse Practitioner Staff Survey that was previously used in a similar study in Australia exploring the knowledge and attitudes of staff in Emergency Department regarding the implementation of a new Nurse Practitioner role (Considine & Martin, 2005). This 21-item instrument was constructed through a review of published literature, scope of practice documents and job descriptions. It consisted of 21 items rated on a 5-point Likert scale, with 1 (strongly disagree) as the lowest score, 5 (strongly agree) as the highest score, and 3 (no opinion) as a neutral option. A panel of key stakeholders in the Emergency Department (ED) reviewed the tool's content and validity index. The internal consistency of the entire scale was high, at 0.926. An exploratory factor analysis of the scale revealed a five-factor structure, with Cronbach's α ranging from 0.735 to 0.922 (Considine & Martin, 2005). The five factors examined were: ED Nurse Practitioner role; Requirements to become an ED Nurse Practitioner; Advanced Emergency Nursing Practice; Extensions to Emergency Nursing Practice; Collaborative practice.

After receiving a written consent for the use of the questionnaire, the tool was modified to align with this study's objectives. For the purposes of this study, the phrase "Emergency Department Nurse Practitioner" was replaced with "Advanced Practice Nurse" and phrases such as "Emergency Department" or "ED" were deleted to focus on the general NP role. This modification is similar to the revision done in Nasai's study on Primary Care NPs (2012). Two items (numbers 2 and 17) were deleted because they were not applicable in the Philippine setting. Due to the absence of NPs in the Philippines, an expert panel of five NPs with strong credentials practicing in the United States evaluated the content validity of the resulting 19-item tool. The content validity index was found to be excellent, at 0.979. The final tool was piloted to twelve nurses and six physicians for evaluation of clarity and relevance of each item in the instrument. Reliability was established by the test of internal consistency that resulted in an excellent Cronbach's alpha at 0.947. The pilot study confirmed the clarity and relevance of all questions and reflecting the study objectives. Similar to the original instrument, the modified version examined the following subscales: Nurse Practitioner role; Requirements to become a Nurse Practitioner;

Advanced Practice Nursing; Extensions to Nursing Practice; Collaborative practice.

Data Collection Procedure

A contact person was designated for each of the two study settings. The contact person explained the research objective, obtained informed consent, distributed the questionnaires and answered any study-related question from the participants. To be included in the study, potential participants signed an informed consent form. Participants were asked to rate their knowledge for each item using a five-point Likert scale: 1 = strongly disagree; 2 = disagree; 3 = no opinion; 4 = agree; 5 = strongly agree. The completed questionnaires were coded to ensure anonymity and confidentiality.

Data Analysis

Data was analyzed using IBM Statistical Package for Social Sciences Statistics version 23 (SPSS-23). The demographic profile of participants was presented using descriptive statistics. Independent T-test was used to compare the scores of the nurses and physicians. Pearson's *r* was used to determine the correlation of the scores to continuous variables such as age and years of practice.

Ethical Consideration

The University of the Philippines Manila Research Ethics Board (UPMREB) reviewed and approved the study protocol (Code 2015-069-01). Additionally, the ethics board of the two study settings also approved the protocol prior to the start of data collection. Participants provided their informed consent at the time of recruitment for the study after details regarding their participation was discussed. The confidentiality and anonymity of participant data were ensured. The investigators declared no conflict of interest in the study.

Results and Discussion

Of the respondents with completed responses ($n=66$), the mean age was 35.41 years ($SD=10.07$), while the mean years of experience was 10.31 years ($SD=8.37$), and with a predominance of female respondents ($n=40$, 60.6%). The study sample consisted of 41 nurses (62.1%) and 25 physicians (37.9%). Statistical analysis revealed that respondent's age and years of experience did not statistically correlate with the knowledge and attitude scores.

Table 1 showed the mean scores for each item in the instrument, as well as for the total score and each of the five subscales. Among the five subscales, the biggest difference noted between nurses and physicians was on their understanding of the nurse practitioner role, as it almost approached statistical significance

($p=0.052$). The other subscales also did not show any statistical significance in the knowledge and attitude among physicians and nurses on the APN role. This statistically non-significant result may reflect that physicians and nurses have the same level of awareness on these areas of the APN role. This was similar to the pre-intervention scores in the study of attitudes and knowledge of MDs and RNs in Australia before the assignment of a new NP role in the Emergency Department (Considine & Martin, 2005).

In the first subscale, nurses reported statistically higher scores on their understanding on the APN role ($p=0.035$) and on the difference of APNs from senior nurses ($p=0.016$), compared to their physician counterparts. Since nursing education in the Philippines has been highly US-based, it is possible that advanced practice nursing has been taught in their baccalaureate education. It is also interesting to note the items where physicians reported higher scores, such as on referral (item 10) and on collaboration (items 18 and 19), which they might have been doing with their daily encounter with staff nurses.

In this study, the physicians had a statistically lower level of understanding NP role compared to nurses. This finding was similar to the study of Nasaif (2012) in Bahrain, where almost 59% of primary care physicians disagreed that they understood the NP role. However, this study's sample of physicians had a higher mean score for the NP role subscale, compared to the Bahrain sample ($M=2.3$, $SD=1.1$).

The nurses and physicians in this study did not differ statistically on their attitudes regarding the prescriptive authority of NPs ($p=0.571$). In a study by Street & Crossman (2010), on a scale of 1-5, physicians in Mississippi had a mean score of 3.31 about their agreement to the statement "NPs should be allowed to prescribe commonly used drugs". Bigbee, et al. (1984) surveyed pharmacists, physicians, nurses and NPs regarding their agreement that NPs should have prescriptive authority. 32% and 70% of physicians and nurses, respectively, agreed to this statement.

However, these results must be interpreted with caution since none of the individual items were rated at a mean score of 4, equivalent to *agree* in the five-point Likert scale. In contrast, staff members in an Australian emergency department report a good level of knowledge on the NP role, with most items getting a median score of 4 (Lee, Jennings & Bailey, 2007). The mean scores for nurses (3.34) and physicians (3.13) barely surpass the *no opinion* option in the Likert scale, which may indicate the need for further educational intervention regarding the possible role of APNs, similar to the study of Lee et al. (2007). Nasaif (2012) found that the use of two documentary videos improved the knowledge and attitude scores of physicians on the NP role.

Table 1. Knowledge and Attitudes Scores of Nurses and Physicians on the NP Role (n=66)

Item/ Subscale	Nurses (n=41)	Physicians (n=25)	P-value
	Mean (SD)	Mean (SD)	
I. Nurse Practitioner Role	3.09 (0.989)	2.62 (0.881)	.052
1. I have good understanding of the APN role *	3.20 (1.167)	2.64 (0.907)	.035*
2. I have a good understanding of which patients are suitable for management by an APN	3.00 (1.072)	2.60 (0.913)	.126
3. I have a good understanding of the APN's scope of practice	2.98 (1.037)	2.60 (0.913)	.141
4. I have a good understanding of how the APN is different from senior nurses *	3.41 (1.161)	2.72 (1.021)	.016*
5. I have a good understanding of how the APN Clinical Practice Guidelines will form the basis for APN's practice	2.88 (1.077)	2.52 (0.963)	.178
II. Requirements to be a Nurse Practitioner	2.92 (1.083)	2.52 (0.941)	.137
6. I have a good understanding of the educational preparation required to become a APN	3.00 (1.162)	2.60 (1.000)	.158
7. I have a good understanding of the Nurses Board requirements for endorsement as APN	2.83 (1.138)	2.44 (0.961)	.158
III. Advanced Practice Nursing	3.63 (0.971)	3.53 (0.609)	.632
8. The APN has the skills and knowledge to provide appropriate care to specific patient groups	3.66 (1.087)	3.52 (0.823)	.585
9. The APN has the skills and knowledge to provide appropriate education to specific patient groups	3.76 (1.044)	3.68 (0.802)	.756
10. The APN has the skills and knowledge to appropriately refer specific patient groups	3.71 (1.031)	3.76 (0.663)	.820
11. The APN has the skills and knowledge to initiate diagnostic imaging	3.41 (1.024)	3.16 (0.688)	.232
IV. Extensions to Nursing Practice	3.43 (0.857)	3.32 (0.502)	.510
12. The APN has the skills and knowledge to prescribe medications from a limited formulary of drugs	3.29 1.146	3.16 .746	.571
13. The APN has the skills and knowledge to refer patients directly to outpatients or specialist clinics	3.46 1.051	3.36 .810	.675
14. The APN has the skills and knowledge to write absence from work certificates	3.17 .972	3.08 .759	.674
15. The APN has the skills and knowledge to discharge patients from a hospital	3.05 .947	2.80 .816	.280
16. The APN will make teamwork more effective	3.78 1.084	3.76 .663	.932
17. The APN will improve access to care	3.83 1.070	3.76 .663	.772
V. Collaborative Practice	3.51 (0.925)	3.70 (0.722)	.390
18. I am comfortable with being approached by the APN for advice regarding patient management	3.59 .999	3.60 .816	.951
19. Attending Physicians are the most appropriate professionals to supervise/ advise the APN regarding patient management issues	3.44 1.205	3.80 .866	.163
Overall Score	3.34 (0.816)	3.13 (0.500)	.212

* Significant at $p < 0.05$

Conclusion and Recommendations

Nurses and physicians did not have a statistically different understanding knowledge and attitudes on the NP role, based on their overall survey scores. However, nurses report statistically higher scores in two items: general understanding on the NP role, and on the difference of the NP from senior nurses. These results reflected the need for educational interventions to increase the knowledge and attitudes on the NP role among Filipino nurses and physicians in the Philippines, with the primary end of improving acceptability of NPs as primary health care providers in the context of Universal Health Care. Since this study had a small

sample size, it is highly recommended that a similar study be conducted on a bigger sample from representative areas in the country in order to improve generalizability of the results..

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