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Research Article

The Nurses' Attitudes Towards Research as influenced by their Research Competence in Private Healthcare Facilities in North Cotabato, Philippines

Helen Prieto Maglunsod[1], Mohammed Bien M. Kulintang[2,3]*

[1]Nursing Department, College of Health Sciences, University of Southern Mindanao, Kabacan, North Cotabato, Philippines
[2]Department of Nursing Administration and Education, Shaqra University – Dawadmi Campus King Abdulaziz Road Shaqra, Al Duwadimi 17464, Saudi Arabia
[3]College of Nursing, University of the Immaculate Conception, Fr. Selga St., Davao City, Philippines

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**Corresponding author:*
E-mail:
mkulintang@su.edu.sa

ABSTRACT

It is empirical that nurses must receive education and training to strengthen their research skills to apply evidence-based practice. This study aimed to ascertain how nurses' views toward undertaking research in private healthcare facilities correlated with their capacity for research. A predictive-correlational design was used in the study. 120 nurses were conveniently selected and included in the research. An adapted survey questionnaire from the study of Bostrom et al. (1989) and Perez et al. (2022) was used for data gathering. Results showed that majority of the respondents were female in their middle-age who had worked in the healthcare facility's ward for two years or less. Their attitude toward research undertaking and ability were both quite excellent. Nurses' attitudes regarding performing research and their research competence were significantly correlated. However, there was no discernible correlation between attitudes and the demographic profile. Furthermore, the nurses' research abilities greatly influence their attitudes toward performing research. These results show that nurses can undertake research and have a positive attitude toward it. The study emphasizes the need to strengthen these skills through education and training by highlighting the strong association between nurses' research capacities and their positive attitude toward undertaking research. Developing nurses' research abilities fosters an environment where practice is increasingly grounded on evidence.

Keywords: *Attitude and Capability in Research, Nurses, Healthcare Facilities, Research in Nursing, Predictive-Correlation, Philippines*

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Introduction

Research is essential to ensuring that patient care is helpful rather than detrimental to the patient. Improving patient care through applying evidence-based practice and research is stressed in nursing (Ea et al., 2021). Nonetheless, research-based treatments are necessary for nursing, which frequently depends on conventional wisdom and experiences (Powers, 2020). According to (Johnson & Rulo, 2019; Wu et al. 2019), the nurses' pessimistic attitude toward their research capacity suggested a lack of research skills and foundational knowledge. According to a study, a deficiency in formal education and training in research techniques may also be the cause of unfavorable attitudes, feelings of overload, or incapacity (Wang et al., 2022).

Due to insufficient teaching programs, nurses in Australia frequently feel unprepared for research, which results in negative attitudes regarding participating in research (Hines et al., 2022). Alandajani et al. (2022) found that negative attitudes similarly affect desire and confidence to participate in activities related to research among Saudi Arabian nurses. Dissatisfaction was observed among nurses in Southeastern Europe due to the same clinical research obstacle. Additionally, research training has been indicated as necessary for China's nurses, demonstrating the necessity to improve their competence in research to satisfy their specific needs (Barria, 2022). Nonetheless, most said they would be open to participating in clinical studies and that more education was necessary in the nursing field (Svjetlana et al., 2023). In addition, a recent analysis of research from several nations stressed how crucial it is for nurses to comprehend evidence-based practice and research procedures in order to enhance outcomes for patients (Portela Dos Santos et al., 2022). Nurses in the Philippines are beginning to view research differently, yet obstacles, including scarce resources and time restraints, still exist (Abun et al., 2019; Pasco & Lubos, 2019). Additionally, nurses need assistance understanding the importance of nursing research in the clinical setting (Oducado, 2021). According to recent studies, Filipino nurses need supplementary assurance to recognize clinical difficulties and turn them into inquiries for research over the evidenced-based practice (EBP) due to their moderate levels of skills needed in this area (Catu, 2021).

Several studies highlight the need for additional material that explicitly addresses how their research competence influences nurses' views toward performing research. The advancement of nursing, patient outcomes, and healthcare delivery are all impacted by this research gap in the field. It restricts nurses' ability to innovate, advocate, and shape healthcare policies and practices and impedes evidence-based practice (Svjetlana et al (2023); Qureshi et al (2019). Thus, with the above-mentioned literatures, the researchers inspired to conduct the study on the attitudes towards research among nurses as influenced by their research competence to investigates the link between their attitudes regarding performing research and their capacity for research in private healthcare institutions in North Cotabato, Philippines.

Methods

Research Design

A predictive-correlational approach was employed in this study to determine the nurses' attitudes towards research as influenced by their research competence, and demographic profiles. Nursing studies were instructed to primarily use quantitative study designs (Groove et al., 2022). By examining the relationships, correlational research enhances exploratory knowledge for nursing practice (Gray & Grove, 2020). Furthermore, the link between the two variables—the propensity for fluctuation in one variable to be related to another—will be ascertained by correlational design (Hassan, 2023).

The setting of the Study

In North Cotabato, Philippines, a subset of private healthcare institutions participated in the Study. These institutions were functioning under licenses from the DOH and PHIC. The location was chosen since one of the researchers had worked as a head nurse in a medical-surgical ward for 14 years at one of the private hospitals that had been chosen. It was also noted

that the organization lacked a research committee and projects, which is essential to maintaining its reputation for providing high-quality, safe services based on evidence.

Respondents of the Study

Respondents to the survey were registered nurses working in the said healthcare institutions. They were selected according to the following standards: 1. nurses employed by the selected hospital; 2. age range of 21 to 60; 3. no matter where they were assigned; 4. current license as an active nurse duly granted by the Professional Regulation Commission (PRC); and 5. willing to partake in the Study. Those who did not meet the criteria were excluded. Based on the A Priori power analysis, a minimum sample size of 109 must be included in the Study. The following data supports this: significance level = 0.05, power level = 95, and effect size = 0.15.

Nevertheless, nurses, with a total of 120, actively participated in the Study using a convenience sampling approach. When organizing a study, the researcher can determine the correct sample size to give enough statistical power by using a priori power analysis (Chen & Liu, 2019). As a result, it guarantees that research projects will be able to notice noteworthy effects (McKay et al., 2023).

Instrumentation

Three-part survey questionnaires were used in the Study to collect data from participants. The demographic characteristics comprised the following: age, sex, total work experience, and department.

The second section uses an accepted Bostrom et al. (1989) questionnaire with 46 items divided into three subscales. The purpose of the questionnaire was to ascertain nurses' views toward research. A reliability test has been conducted on every item in the questionnaire. Boothe (1981) reported the preliminary instrument reliability coefficient for subscale one (interest and environmental support – 21 items) at 0.913, for subscale two (payoff and benefits – 17 items) at 0.874, and for subscale three (barriers to conducting research – 8 items) at 0.716. These results suggest that the questionnaire is reliable (Boothe, 1981). In a subsequent investigation, the subscales were examined further for the reliability coefficient, which was greater than the instrument's alpha coefficient. The subscales range was 0.64 to 0.87 (Bostrom et al., 1989). A five-point Likert scale, ranging from "1" (strongly disagree) to "5" (strongly agree), is used to answer the questionnaire (SA). The last portion was adapted from the study of Perez et al. (2022) developed to assess the level of research competence, which comprised 30 items that underwent four validations, specifically face validity, content (expert) validity, criterion validity, and construct validity. The questionnaire's 30 items produced a high Cronbach alpha value of 0.89, indicating that it is a reliable tool (Perez et al., 2022). A 4-point Likert scale, ranging from "1" (strongly not evident) to "4" (highly evident), was used to answer the questionnaire (SE).

Data Gathering Procedure

For this research project, data collection followed a set of guidelines. The MA in Nursing Program permitted the Study's conduct, which the researchers requested. The researchers obtained a certificate from Davao Doctors College's Research Ethics Committee. The research questionnaire's validity and reliability were established through the validation process conducted by a panel of experts utilizing the CVI.

Prior to the process of gathering data, approval letters from the chosen healthcare institutions were obtained. Data collection was done by the researchers using a combination of pen and paper, as well as Google Forms. The Google Form included informed permission and explanations of the Data Privacy Act 2012 and anonymity, secrecy, and ethical issues.

The survey participants were granted sufficient time to complete the questionnaire. Following completion of the survey, the data was transmitted and kept in a database with encryption so that only the statistician and the researcher would have exclusive access to it and to prevent data leakage. Every piece of information was compiled, examined, and evaluated.

Results and Discussions

Reported in Table 1 are the respondents' demographic characteristics. In this survey, 120 respondents total—of whom 31.7% (n = 38) are between the ages of 35 and 39 and 0.8% (n = 1) are between the ages of 45 and 49. Just 27.5% (n = 33) of the responders are men, making up the majority of the sample (72.5%; n = 87). 35.8% of respondents said they have worked in a hospital for less than two years. Furthermore, nurses assigned to the ward comprised 40 (33.3%). Only 3.3% of the respondents (n=4) were from the outpatient unit respectively.

Table 1. Respondents' demographic profile

Demographic Profile	Frequency	Percentage
	n=120	%
Age		
20-24 years old	32	26.7
25-29 years old	9	7.5
30-34 years old	31	25.8
35-39 years old	38	31.7
40-44 years old	7	5.8
45-49 years old	1	0.8
50-54 years old	2	1.7
Sex		
Male	33	27.5
Female	87	72.5
Total Work Experience		
≤2years	43	35.8
2-5 years	18	15
5-8 years	16	3.3
8-12 years	23	19.2
≥12 years	20	16.7
Department		
Delivery Room	8	6.7
Emergency Room	18	15
Intensive Care Unit	20	16.7
Neonatal Care Unit	6	5
Nurse Administrator	5	4.2
Operating Room	6	5
Outpatient Unit	4	3.3
Hemodialysis Unit	13	10.8
Ward	40	33.3

Table 2 illustrates research capabilities of nurses demonstrating excellent (M=2.81) capability and participation in nursing research.

The study confirms the findings from Oducado (2021) and King et al. (2022) that structured and systemic training improves nurses' capacity for conducting research. In the Philippines, baccalaureate nursing programs also support this improvement (Ubas-Sumagasyay & Oducado, 2020). The findings confront current research, suggesting that most nurses require additional training and increased capacity for research (Ferreira et al., 2022; Wu et al., 2019; Hu et al., 2019). Additionally, Li et al (2019) reiterated that research competence can be influenced by several factors, including time allotted for research, teamwork, leadership support, and opportunities for retraining; it also declines with service duration and age.

Research ability is essential for growing the nursing field and improving patient care, claim

Chen et al. (2019). According to Da Silva Souza et al (2023), higher research competence scores are attained by nurses with research education and training. Alomari et al (2020) expressed in their study that increased capability in research and training enables nurses to implement research findings in clinical practice. Furthermore, to ensure that the advancement and application of research findings are successful, the focus should be on developing customized nursing research programs and strengthening implementation research capacities (Rojaye & Netangaheni, 2023; Ndubuisi et al., 2021).

With an aggregate mean of 3.58, it implies that nurses have a favorable view toward research. The report emphasizing patient care over research had the greatest mean score (3.88), while the statement regarding the availability of secretarial aid for research received the lowest mean score (3.35). The study supports other research by emphasizing the benefits of a good research culture and inspirational leadership for nurses' participation and happiness in hospital research. These results contrast with the findings of a study wherein nurses frequently need to prioritize patient care over research and see it as part of their duty (RojayeNetangaheni (2023)

Meanwhile, management and organizational support influenced Interest in and involvement in research. Although positive attitudes toward it do not eliminate obstacles to research, nurses who participate in activities and trainings related to research exhibit greater engagement level. Even with favorable sentiments, nurses frequently prioritize patient care above research activities, resulting in poor actual research engagement.

The cumulative mean of the nurses' views toward research regarding rewards and advantages was 3.70, which indicates a good attitude. Nurses will be engaged into research with sufficient resources and funding. It is essential to show how clinical nursing affects health outcomes since effective research requires financial support, people resources, and materials (Järvinen et al., 2023; Neema & Chandrashekar, 2021). The study's results are consistent with those of Pasco and Lubos (2019), who found that financial assistance and more resources improve nurses' favorable attitudes about research. However, stress and negative attitudes toward research are exacerbated by financial limitations, a lack of expertise and support, environmental concerns, and workload (Akingbade et al., 2023; Dagne & Ayalew, 2020). Additionally, according to Shu et al., (2019), if given greater free time and resources, nurses are more likely to conduct research, notwithstanding their favorable opinions.

Instead of increase on wages or promotion, nurses opt to have financial compensation, highlighting the necessity for institutional funding for activities related to research.

Additionally, mean score of 4.02 on the statement that affiliates of the healthcare team other than nurses should perform patient care-related research revealed a belief in including other members of the healthcare team in research, which is consistent with the findings in a study (Rojaye et al., 2023). Conversely, this study revealed that nurses who conducted research were being criticized by their colleagues (M=2.3). This result is similar with some study's findings (Lubos et al., 2019). This, however, runs counter to a study which discovered that nurses had favorable opinions of the support they received from their peers, including advice and training (Sodeify et al., 2021).

On the other hand, nurses' perceptions of research barriers showed favorable sentiments despite these barriers (M=3.52). These findings contradict with a study's result claiming that due to misunderstandings among colleagues and isolation, nurses revealed to have negative attitude and impeding recruitment in a study (Hernon et al., 2020). Research teams and nurses must have regular, productive communication to improve study promotion, staff engagement, and recruiting efforts. Nursing research is eagerly awaited, but several obstacles stand in the way of implementing it. The main obstacle—cited by more than two-thirds of nurses—is that the research was written in English. Positive attitudes were also mentioned by Akingbade et al. (2023), although they raised issues with the lack of encouragement and assistance from management. The result further suggested that nurses with ample backgrounf about research should lead the nursing education in the institution (M=3.78). Another

statement "only doctorate holders should conduct research" had the lowest mean (3.23), indicating that nurses do not believe this to be the case. According to Ayoubian et al. (2023), PhD holders felt more pressure to be competent and informed, which made starting research necessary. According to Pitsillidou et al., (2021), nurses with more research experience are probably more likely to perceive fewer barriers to research use since postgraduate courses provide more specialized training in research techniques.

Table 2. The Research Competence of Nurses

Domains	Mean & SD
Interest and Environmental Support	3.58 ± 0.60
Payoff and Benefits	3.70 ± 0.59
Barriers to Conducting Research	3.52 ± 0.62
Overall Mean	2.81± 0.58

Legend: 3.26-4.00 Very High Capability; 2.51-3.25 High Capability; 1.76-2.50 Low capability; 1.00-1.75 Very Low Capability

A Test of association is presented in table 3. Research Competence and Attitude in Doing Research. Spearman's rank order correlation was performed to ascertain the link between the two variables. The null hypothesis was rejected since there was a positive, statistically significant relationship (rs = 0.339, p = 0.000) between research competence and attitudes in performing research. The Spearman's rho coefficient showed that nurses' attitudes toward research and capacity for conducting research were positively correlated. According to this research, nurses more adept at conducting research also view the process more favorably. Combining the necessary degrees of practice, expertise, and optimism is essential for conducting research successfully (Albumijdad et al., 2022). Likewise, resources in learning about study findings, effort and time significantly build positive attitudes toward research (Basilio & Bueno, 2019). Furthermore, to guarantee the success of nursing research initiatives, nurses must have the requisite knowledge, abilities, readiness, and positive attitudes (Oducado, 2021; Qureshi et al., 2019).

Table 3. Research competence of Nurses and their Attitude in Doing Research, Test of the Relationship

	Attitude in Doing Research		
Independent Variable	r_s	p-value	Remarks
Research competence	0.339	< 0.001	Highly Significant

Note: Significant if p< 0.001; DV = Attitude in Doing Research

The relationship between age, years spent working in a hospital, and research attitude employing Spearman rho test is shown in Table 4. Age of the respondents (r_s=0.081) and total work experience (r_s=0.023) did not show a statistically significant link with nurses' research attitude, indicating that the nurses' opinions didn't significantly influence by the mentioned factors. This result contradicts the results which age affects attitudes toward research (Ross & Burrell, 2019). It is consistent with Wu et al.'s (2019) findings, meanwhile, that senior nurses (55+) were more likely than younger nurses (34 and below) to participate in research. In addition, the value of experience while implementing evidence-based practice (Hernon et al., 2019). However, Bashar et al. (2019) pointed out that favorable opinions of research could occasionally be applied to clinical settings.

Furthermore, the eta correlation indicates that attitudes are stable regardless of sex, with a tiny effect size (η=0.010) and sex and attitudes (p=0.101) revealed to have no significant

association. In contrast, a study discovered an association between male nurses and research knowledge (Al-Rossais et al., 2021), and more positive views about research were those female nurses (Svjetlana et al., 2023). Likewise, department and nurses' attitude in doing research revealed no significant association which was supported by the negligible effect size of η=0.037. This implied that constant attitudes were independent of hospital assignment.

Table 4. Nurses' Demographic Profile and their Attitude in Doing Research, Test of Association

	Attitude		
Demographic Profile	**Test**	**p-value**	**Remarks**
Age	r_s = 0.081	0.378	Not Significant
Total Work Experience	r_s = 0.023	0.800	Not Significant
Sex	**η** = 0.010	0.101	Not Significant
Department	**η** = 0.037	0.193	Not Significant

Legend: p<0.05 (Significant); r_s = Spearman rho; **η** *= ETA*

The impact of nurses' research competence on their views on research is presented in Table 5. Non-parametric, Kernel Regression Analysis was used to determine the relationship between variables. Research competence was assessed to have a mean value of about 3.603. The z-value is very high (65), and the bootstrap standard error is modest (0.554), giving a highly noteworthy estimate (p= 0.000). The correctness of the estimate was further supported by the confidence interval (3.497 to 3.721).

With an observed estimate of 0.334, interest and environmental support's favorable and considerable impact on research competence was clear. As evidenced by the positive and substantial effects of incentives and benefits (0.333) and barriers to conducting research (0.334), increasing these variables also boosts research competency. The three subscales' significant effects on nurses' attitudes toward research were validated by the 0.000 p-values for all effect estimations. These findings provide strong evidence of a notable impact. The data demonstrates that a nurse's aptitude for research can affect their attitudes. These findings provide strong evidence of a notable impact. The data demonstrates that a nurse's aptitude for research can affect their attitudes. These outcomes aligned with a study (La Torre et al., 2023) that indicated PhD nurses with a solid grasp of research are more likely to be optimistic and actively involved. However, only a few work in clinical settings, and many must understand the knowledge needed to translate study promise into practice.

Meanwhile, a study claimed that varying nurses' training requirements and research aptitudes can motivate them to undertake a project (Wu et al., 2019). Hines et al. (2022) have also reported that higher levels of engagement have been linked to favorable views toward EBP in conjunction with participation in research education and activities. Furthermore, to support early career researchers, Mundy and Pow (2021) stated that strong leadership, a supporting organizational architecture, and developing research skills among nurses are necessary.

Table 5. Nurses' Attitudes Towards Research as influenced by their Research Competence

Research competence	Observed Estimate	Bootstrap SE	Z	p-value
Mean				
Research competence	3.603	0.554	65.00	0.000**
Effect				
Interest and Environmental Support	0.334	0.001	330.73	0.000**

Research competence	Observed Estimate	Bootstrap SE	Z	p-value
Payoffs and Benefits	0.333	0.001	391.76	0.000**
Barriers	0.334	0.001	318.63	0.000**

Legend: Significant if p < 0.005; IV = Research competence, DV = Attitude in Doing Research

Limitations

This study has some methodological limitations. Respondents of the study were only focused on the nurses. Other healthcare professionals might be engaged into research as well. The study utilized a convenience sampling technique. This technique was not new in nursing research. In fact, history says that nursing research utilizes convenience sampling technique, a non-probability sampling, since then. However, in the context of generalizability, this might affect the study and its results. And lastly, this study was confined only among private healthcare institutions in North Cotabato.

Conclusion and Recommendation

The study concluded that improving a nurse's capacity for research can influence how they view it and improve patient care and clinical practice in the long run. The study's results also showed that their demographic profiles less influenced nurses' attitudes about research. Furthermore, nurses' attitudes toward performing research were greatly influenced by their capacity for research.

Subsequent research endeavors must incorporate both nurses and consumers via objective and subjective methodologies particularly the mixed methods approach. Through this approach, scholars can obtain comprehensive insights and opinions regarding evidence-based practice's research capacities, perspectives, and efficiency. In addition, the probability sampling technique may be taken into consideration. Furthermore, inclusion of other healthcare institutions from near provinces including the public sectors may bring new perspectives on nurses' research competence and engagement.

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