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## Factors Affecting Nursing Students' Attitudes Toward Research: A Survey in a Philippine Higher Education Institution

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### Abstract

**Introduction:** Research is one of the competencies expected of a beginning professional nurse. While research attitude has been widely explored among nursing students internationally, there is limited published research among nursing students in the Philippines.

**Objective:** This study was conducted to find out the factors affecting the attitudes towards research among nursing students.

**Method:** The design of this study was cross-sectional with 79 undergraduate third-year nursing students in one higher education institution in the Philippines as participants. The Attitudes Toward Research scale was the primary data collection tool. Differences in research attitude were tested using t-test and one-way ANOVA.

**Results:** The results indicated that nursing students generally had a positive attitude toward research. Graduates of public junior and senior high schools, those who had experience researching in junior high school, and those who had presented in a research conference outside their school had significantly better research attitudes. Also, differences in research attitude were noted based on the self-rated level of research knowledge, competence, and readiness.

**Conclusion:** Type of high school, prior experience, knowledge, competence, and readiness in conducting research were significant factors influencing nursing students' research attitude. Nursing schools should continue to raise and cultivate the positive attitudes of students toward scientific investigation.

**Keywords :** attitude, nursing, Philippines, research, students

### Introduction

Research is recognized as a major output of higher educational institutions and incorporating research evidence is fundamental to the delivery of nursing practice.<sup>1-3</sup> It is useful in creating new knowledge or in validating and refining existing knowledge to ensure current practices are based on scientific and reliable evidence.<sup>4</sup> In baccalaureate nursing programs in the Philippines, research is considered an expected curricular outcome and one of the entry competencies of a professional nurse.<sup>5-7</sup> The 2012 National Nursing Core Competency Standards of the Philippines specifies that being a researcher is among the three roles of a beginning nurse.<sup>6,8</sup> The International Council of Nurses emphasized that

it is important to include research in the education of nursing students so that students can learn to conduct research, enhance students' research capacity, and students can gain knowledge of and be skilled in critically appraising research evidence.<sup>9</sup>

Equipping students with a strong foundation in research is vital for the future of the nursing profession.<sup>5,10</sup> Given the remarkable influence of research on the present-day and future professional nursing practice renders research a crucial component in the undergraduate nursing program.<sup>11</sup> Besides, it is only through actual or hands-on experience that the students can better understand the concept and appreciate the importance of nursing research.<sup>11,12</sup> However, it has been documented that nurses have difficulty understanding the value of nursing research in the course of their clinical practice.<sup>5</sup> A study also revealed that research was rated lowest from among the 11 core competency standards assessed with newly graduated registered nurses in the Philippines.<sup>7</sup> Moreover, attention to the nursing research course is necessary as prior research indicated the least performance in the nursing research subject among professional nursing courses in the undergraduate program.<sup>13</sup> There are also reports that teachers of senior high school students in the Philippines noted students lacking motivation and interest in research writing.<sup>14</sup>

Attitudes toward research are linked with research practice, evidence-based nursing practice, research involvement, and motivation to conduct research.<sup>2,10,15</sup> Fostering favorable attitudes to scientific research and introducing students into the research culture during their undergraduate education are necessary with the end view of improving the nursing profession as these students will play a vital role in ensuring the future of nursing research.<sup>16</sup> While it remains a challenge, nurse educators have a pivotal role in stimulating interest and in promoting positive attitudes toward research.<sup>9,15,17</sup> The International Council of Nurses recognizes that undergraduate nursing education helps students to acquire a basic viewpoint about research.<sup>9</sup>

Although research attitude has been widely explored among nursing students internationally, there is a paucity of published literature on Filipino nursing students' attitudes toward research. To the researcher's knowledge, no prior research in the Philippines addresses the attitudes of Filipino nursing students toward research and the factors associated with it. A review of the literature study suggested that there is a need to understand the different factors that affect nursing students' attitudes toward nursing research.<sup>18</sup> Given that students' attitudes toward nursing research have been studied in several countries shows the importance of studying this topic within the local context.<sup>10</sup> Efforts to better understand students' appreciation of research should be given support and attention.<sup>19</sup> This study was conducted to fill that gap in the literature and contribute to the existing body knowledge concerning nursing students' research attitude. Hence, this study was conducted to identify the factors influencing the attitudes toward research among undergraduate third-year nursing students in a nursing school in the Philippines.

## Methods

A cross-sectional research design was utilized in this study. The data for this study were gathered from a sample of 79 third-year undergraduate nursing students in a higher education institution in the Philippines who responded to the survey administered in September 2020. The students were currently enrolled in the Nursing Research subject in the first semester of 2020. The Nursing Research course is requisite in the Bachelor of Science in Nursing curriculum. The samples of this study were the first graduates of the K to 12 program of basic education in the Philippines that entered the university. The survey was administered before the start of the course. Full disclosure about the purpose of the study was given before the survey. Participants were reminded that completing the survey indicates consent to participate in the study. Confidentiality and anonymity were

maintained throughout the entire course of the study. The Attitudes Toward Research (ATR) scale was the primary data collection tool.<sup>20</sup> The ATR scale consisted of 32-items listed on a 7-point Likert scale with responses ranging from “1-strongly disagree” to “7-strongly agree”. Higher scores indicated a better research attitude. Each of the five subscales of the ATR scale had acceptable reliability.<sup>20</sup> For this study, the overall scale had a Cronbach’s alpha of .93 while each subscale had the following reliability index: research usefulness for profession ( $\alpha = .93$ ), research anxiety ( $\alpha = .83$ ), positive attitudes toward research ( $\alpha = .92$ ), research relevance to life ( $\alpha = .80$ ), and research difficulty ( $\alpha = .57$ ). Nursing students were also asked to rate their level of research knowledge, competence, and readiness on a scale of one to 10 and was categorized as low (1.00-3.99), moderate (4.00-7.99), and high (8.00-10.00). Demographic profiles and prior research experience were also collected. Data analysis for this study was carried out using SPSS version 23. The normality test suggested that scores in the ATR scale do not deviate significantly from normal distribution hence differences in the research attitude were tested using the t-test for independent samples and one-way ANOVA. Alpha level of significance was set at .05 alpha

## Results

A total of 79 third-year nursing students responded to the survey. As shown in Table 1, the mean age of the students was 20.42 (SD=.52) years. The majority were females (70.5%) and were graduates of public junior (64.1%) and senior (67.9%) high schools.

**Table 1.** Profile of participants

	M	SD	f	%
Age	20.42	.52		
Sex				
Male			23	29.5
Female			55	70.5
Type of junior high school graduated				
Public			50	64.1
Private			28	35.9
Type of senior high school graduated				
Public			53	67.9
Private			25	32.1

It can be gleaned from Table 2 that all (100%) students had experience doing research in senior high school and the majority (76.9%) had experience researching even in junior high school. More than half had conducted the following different types of research designs: descriptive, quantitative, or correlational study (59%), descriptive, qualitative study (62.8%), and experimental or quasi-experimental study (71.8%). A little over one-fourth (28.2%) had presented at a research conference outside their school. The majority of nursing students had a moderate level of self-rated research knowledge (65.4%), competence (76.9%), and readiness (71.8%).

**Table 2.** Prior research experience, self-reported research knowledge, competence, and readiness

	f	%
Have you experienced doing research in junior high school?		
Yes	60	76.9
No	18	23.1

Have you experienced doing research in senior high school?		
Yes	78	100
No	-	-
What type of research/es have you conducted?*		
Descriptive, quantitative, or correlational study	46	59
Descriptive, qualitative study	49	62.8
Experimental or quasi-experimental study	56	71.8
Have you presented research at a conference outside your school?		
Yes	22	28.2
No	56	71.8
How would you rate your knowledge about research?		
High	24	30.8
Moderate	51	65.4
Low	3	30.8
How would you rate your competence in doing research?		
High	16	20.5
Moderate	60	76.9
Low	2	2.6
How would you rate your readiness in conducting research?		
High	17	21.8
Moderate	56	71.8
Low	5	6.4

Note: \*Multiple Response

Presented in Table 3 are the attitudes toward research of nursing students with a composite mean score of 4.91 (SD=.67). The mean scores obtained in the five subscales were: research usefulness for profession (M=6.57, SD=.61), research anxiety (M=2.71, SD=.97), positive research attitude (M=5.30, SD=.93), research relevance (M=5.62, SD=1.01), and research difficulty (M=3.82, SD=1.12).

**Table 3.** Attitudes toward research

	M	SD
Research usefulness for profession	6.57	.61
Research anxiety	2.71	.97
Positive attitudes toward research	5.30	.93
Research relevance to life	5.62	1.01
Research difficulty	3.82	1.12
Composite score	4.91	.67

Table 4 shows that there were significant differences in the nursing students' attitude toward research grouped according to the type of junior high school from which they graduated ( $t=2.419$ ,  $p=.018$ ), type of senior high school from which they graduated ( $t=2.782$ ,  $p=.007$ ), the experience of doing research in junior high school ( $t=2.162$ ,  $p=.042$ ), and if they had presented their research at a conference outside their school ( $t=3.356$ ,  $p=.001$ ). However, there was no significant difference in the attitude toward research of the students classified according to sex ( $t=-.007$ ,  $p=.994$ ). One-way ANOVA result also revealed significant differences in nursing students' research attitude grouped according to the self-rated level of research knowledge ( $F=14.238$ ,  $p=.000$ ), competence ( $F=17.800$ ,  $p=.000$ ), and readiness ( $F=18.197$ ,  $p=.000$ ).

**Table 4.** Differences in research attitude

Variables	Mean	T statistics	p-values
Sex		-.007	.994
Male	4.91		
Female	4.91		
Type of junior high school graduated		2.419	.018
Public	5.04		
Private	4.67		
Type of senior high school graduated		2.782	.007
Public	5.05		
Private	4.62		
Experience of doing research in junior high school		2.162	.042
Yes	5.02		
No	4.55		
Presented at a research conference		3.356	.001
Yes	5.29		
No	4.76		
Self-rated research knowledge		14.238	.000
High	5.92		
Moderate	5.10		
Low	3.75		
Self-rated research competence		17.800	.000
High	6.09		
Moderate	5.16		
Low	3.00		
Self-rated research readiness		18.197	.000
High	6.11		
Moderate	5.18		
Low	3.88		

## Discussion

This study assessed nursing students' attitudes toward research and whether differences existed on selected independent variables. This study found that nursing students were generally positive about research. A review study also indicated a generally positive attitude toward research among nursing students.<sup>18</sup> Similarly, prior research conducted among nursing students in other countries like Saudi Arabia,<sup>2,10</sup> Jordan,<sup>15</sup> Turkey,<sup>16</sup> Pakistan,<sup>21</sup> and the United States<sup>22</sup> reported positive attitudes toward research. This is a noteworthy finding given that having positive attitudes encourages students' involvement and participation in research.<sup>10</sup>

This study also demonstrated that nursing students who were graduates of public high schools in their junior and senior years had better attitudes toward research compared to graduates of private high schools. There is limited published research comparing the research attitude of students in public and private schools. It could be possible that since some public high schools in the country have special science classes and students are required to conduct investigatory projects and scientific investigations, this could have fostered positive attitudes to research among the students. This is particularly true to our sample wherein students admitted to the program are typically coming from the special science classes of public high schools. The sudden exposure to the research methodology

of students not previously exposed to research-related courses in their pre-university education typically results in negative attitudes and feelings.<sup>1,2</sup> Nevertheless, additional research is required to validate the finding of this present investigation.

Moreover, students who had experience doing research even in junior high school had better attitudes toward research than those who had not conducted research in their junior high school. Additionally, students who had experience presenting in a research conference outside their school had better attitudes toward research compared to those who had no experience in research conference presentations outside their school. The exposure and engagement of students to research-related activities could have impacted students' views about research positively. Similarly, a study found that students who had prior research experience and participated in scientific activities showed more positive attitudes toward research than those without prior experience in conducting research.<sup>16</sup> Having completed a research course was associated with attitudes toward research.<sup>10</sup> Likewise, writing a thesis had a positive influence on students' research attitudes.<sup>23</sup> It was also noted that active involvement in research-related activity and engagement in a research course improved attitudes toward nursing research.<sup>18</sup> The introduction of research courses at the pre-university level appears to have been beneficial to students.<sup>2</sup> The findings of this current study suggest that the introduction of the research course in senior high school to inculcate research culture among learners<sup>24</sup> may have been advantageous for students. With the implementation of the K to 12 program in basic education in the country, senior high school students are now required to conduct scientific inquiry processes and draft experiments.<sup>14</sup> It is not anymore surprising to note that all students in this study had experience researching in their senior high school. The current science curriculum aims to develop the scientific literacy of high school students through scientific investigations.<sup>19</sup>

This study also demonstrated that nursing students who had higher self-reported research knowledge, competence, and readiness had significantly better attitudes toward research. This result finds support in another study wherein understanding of science is related to more positive attitudes toward science.<sup>25</sup> Also, a significant relationship was found between the level of competencies and attitudes toward motivation to research engagement.<sup>26</sup> A study likewise noted that students' self-efficacy was related to their attitudes toward research and the number of research courses taken was associated with research anxiety.<sup>27</sup> The findings suggest that improving students' knowledge about research along with their competence and readiness to conduct research may result in positive feelings about research and influence students' attitude or stance toward research. It is necessary to cultivate positive attitudes toward research among students so that the next generation of nurses will be encouraged to utilize research findings in their practice settings.<sup>28</sup>

This study has limitations. This study concentrates only on the self-report research attitude of undergraduate nursing students in one nursing school in the Philippines. Assessment of the research knowledge, competence, and readiness of students in this study did not also use instruments with robust psychometric properties. Caution is warranted when using and applying the findings of this study.

## **Conclusion**

This study discovered that nursing students generally have positive attitudes toward research. Moreover, the type of high school, prior experience, knowledge, competence, and readiness in conducting research were significant factors affecting nursing students' research attitudes. The introduction of research courses at the pre-university level of education seems to have played an important role in developing students' attitudes toward research. Inculcating the right attitude and interest for research among prospective nurses

is crucial to the development of productive researchers in their future. Nursing schools should continue to raise and cultivate the positive attitudes of students toward nursing research and develop a supportive environment to further hone nursing students' skills and knowledge in the conduct of scientific research. Furthermore, nursing students should be given more opportunities to participate in more scientific activities and optimize their research experience in the undergraduate nursing program.

### **Conflict of Interest Declaration**

The author has no conflict of interest to declare.

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