



Aquichan

ISSN: 1657-5997

aquichan@unisabana.edu.co

Universidad de La Sabana

Colombia

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Aquichan, vol. 14, núm. 2, junio, 2014, pp. 251-260

Universidad de La Sabana

Cundinamarca, Colombia

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Undergraduate Nursing Students' Research Activities and Utilization: A Turkish Sample

ABSTRACT

Objective: The aim of this study was determine undergraduate nursing students' research activities and utilization. **Method:** A descriptive design was used in the study. This study conducted with undergraduate nursing students at the two universities in Turkey during the spring term of 2012. The population consisted of 216 participants. The data were collected through a questionnaire developed by the author based on literature. The Percentage, Chi-square and Fisher's exact tests were used to evaluate the collected data. **Results:** Approximately half of the students (49,5%) knew how to reach scientific publications but none of the students followed or read scientific publications. Only a few students (4,2%) had participated in a scientific research activity. It was found that 87,0% of the students did not utilize the research findings in clinical practice. Of 216 students, 34,4% did not know how to utilize the research findings. **Conclusions:** The majority of the students did not utilize the research findings in clinical practice. Insufficient knowledge about research utilization was the most prominent reason for not utilizing research findings by students. It is suggested that students should be encouraged and supported to utilize research findings and conduct research.

KEY WORDS

Nursing, students, nursing research, research utilization, evidence-based practice, Turkey (source: DeCS, BIREME).

To reference this article / Para citar este artigo / Para citar este artículo

Ertuğ N, Önal H. Undergraduate Nursing Students' Research Activities and Utilization: A Turkish Sample. Aquichan. 2014; 14(2): 251-260.

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Recibido: 9 de julio de 2013
Enviado a pares: 3 de septiembre de 2013
Aprobado por pares: 14 de enero de 2014
Aceptado: 25 de abril de 2014

Actividades investigativas y la utilización de los resultados de la investigación por estudiantes de enfermería a nivel pregrado: una muestra de Turquía

RESUMEN

Objetivo: el objetivo de este estudio fue determinar las actividades de investigación y la utilización de los resultados de la investigación por parte los estudiantes de enfermería de pregrado. **Método:** un diseño descriptivo fue utilizado en el estudio que se desarrolló con estudiantes de pregrado de enfermería en dos universidades en Turquía durante el semestre de primavera de 2012. La población estuvo conformada por 216 participantes. Los datos fueron recolectados a través de un cuestionario elaborado por el autor en base a la literatura. Las pruebas de porcentaje, chi-cuadrado y la prueba exacta de Fisher fueron utilizados para evaluar los datos recogidos. **Resultados:** aproximadamente la mitad de los estudiantes (49,5 %) sabían cómo acceder a las publicaciones científicas, pero ninguno de los estudiantes siguen o leen publicaciones científicas. Solo unos pocos estudiantes (4,2 %) habían participado en una actividad de investigación científica. Se encontró que el 87,0 % de los estudiantes no utilizan los resultados de la investigación en la práctica clínica. De 216 estudiantes, el 34,4 % no sabe cómo utilizar los resultados de la investigación científica. **Conclusiones:** la mayoría de los estudiantes no utilizan los resultados de la investigación en la práctica clínica. Falta de conocimiento sobre el uso de la investigación fue la razón más importante para que los estudiantes no utilizaran los resultados de la investigación. Se sugiere que los estudiantes deben ser alentados y apoyados para utilizar los resultados de investigación y realizar investigaciones.

PALABRAS CLAVE

Enfermería, estudiantes, investigación en enfermería, práctica clínica basada en la evidencia, Turquía (fuente: DeCS, BIREME).

Atividades investigativas e a utilização dos resultados da pesquisa por estudantes de enfermagem na graduação: uma amostra da Turquia

RESUMO

Objetivo: determinar as atividades de pesquisa e a utilização dos resultados da pesquisa por parte dos estudantes de enfermagem de graduação. **Método:** foi utilizado um desenho descritivo no estudo que se desenvolveu com estudantes de graduação de enfermagem nas duas universidades na Turquia durante o semestre de primavera de 2012. A população esteve conformada por 216 participantes. Os dados foram coletados por meio de um questionário elaborado pelo autor com base na literatura. As provas de porcentagem, chi-quadrado e a prova exata de Fisher foram utilizados para avaliar os dados coletados. **Resultados:** aproximadamente a metade dos estudantes (49,5%) sabia como aceder às publicações científicas, mas nenhum dos estudantes segue ou lê publicações científicas. Somente uns poucos estudantes (4,2%) participaram de uma atividade de pesquisa científica. Constatou-se que 87% dos estudantes não utilizam os resultados da pesquisa na prática clínica. De 216 estudantes, 34,4% não sabem como utilizar os resultados da pesquisa científica na prática clínica. **Conclusão:** falta de conhecimento sobre a utilização da pesquisa foi a razão mais importante para que os estudantes não utilizassem os resultados da pesquisa. Sugere-se que os estudantes sejam motivados a utilizar os resultados de pesquisa, bem como a realizá-la.

PALAVRAS-CHAVE

Enfermagem, estudantes, pesquisa em enfermagem, prática clínica baseada em evidências, Turquia (fonte: DeCS, BIREME).

Introduction

It is now widely recognized the world over that evidence-based practice (EBP) is key to delivering the highest quality of healthcare and ensuring the best patient outcomes. EBP involves using the best evidence to make patient-care decisions, and such evidence typically comes from research conducted by nurses and other healthcare professionals. It would seem a foregone conclusion that effective nursing practice is based on the best possible, rigorously tested evidence. Yet, it is only in the past two decades that an emphasis on evidence as a basis for practice has reached the forefront of the professional nursing (1-3).

The terms research utilization and EBP are sometimes used synonymously. Although there is overlap between the two concepts, they are distinct. Research utilization, the narrower of the two terms, is the use of findings from a study or set of studies in a practical application that is unrelated to the original research. EBP is the more general term and encompasses research utilization. Evidence is constituted of more than the findings of research; the term research in research utilization denotes only the research findings (usually scientific). The utilization of research knowledge is regarded as a prominent feature of EBP. Nurses, physicians, pharmacists, and other healthcare professionals seek answers to numerous clinical questions on a daily basis. An evidenced-based approach to care allows healthcare providers to access the best evidence to answer these questions in a timely fashion and to translate that evidence into clinical practice to improve patient care and outcomes (1, 3-5).

Nursing research is a systemic process of inquiry that uses rigorous guidelines to produce unbiased, trustworthy answers to questions about nursing practice. Nurses use research to generate new knowledge or to validate and refine existing knowledge that directly or indirectly influences nursing practice. Research ensures practices are based on evidence, rather than eloquence or tradition. Without research, nursing practice would be based on tradition, authority, trial and error, personal experiences, intuition, and borrowed evidence (2, 6).

There are numerous studies about nurses' research activities and utilization, both in Turkey (7-9) and other countries (10-13). In these studies, it has been determined that nurses have not utilized research results enough. The barriers to that utilization generally include lack of institutional support, lack of time to read

research reports, inability to understand research reports, and insufficient research knowledge.

Research utilization is crucial to preparing the next generation of nurses, since they are expected to conduct new research, to stay abreast of research, to read and to use existing research to improve their ability to solve problems, to process information at a scientific level and to make decisions independently in clinical settings. Therefore, nursing students need to be well prepared in relation to nursing research, and the education of nursing students is a key element in improved utilization of nursing research in clinical practice (14). The course "Research in Nursing" is mandatory in junior or senior year in the nursing baccalaureate curricula in Turkey. Yet, baccalaureate students, after completing a research course, are not prepared to critique research studies skillfully or to determine their potential use in professional practice. The faculty in baccalaureate nursing programs must incorporate nursing research throughout the curriculum. A single course on research process is no assurance that even the best and brightest students will be prepared to perform the investigative functions of a nurse with a baccalaureate degree in nursing (15). Previous research studies recommend nursing research courses and concepts be introduced into the nursing curriculum as early as possible, since research courses and concepts improve nursing students' positive attitudes toward nursing research (16, 17).

The nursing curriculum in Turkey includes a nursing research course. However, most of the nurses are unaware of the research that has been done and do not make use of research results in everyday practice. Conducting and using research are regarded as an additional burden and task by nurses in Turkey. Moreover, nurses who conduct and use research are discriminated against by others. Students have to fall in step with others after they become nurses, so as to avoid discrimination. Studies on the use of research by Turkish nurses show that 35–55% of nurses feel incapable of evaluating the quality of the research and 29–77% are unaware of the research that does exist (7, 18-20). However, presumably nurses should have acquired some research awareness and ability to evaluate research findings during the course of their training. Although students' research activities and research utilization skills are important, few studies have been done on this particular topic. Thus, it is hoped that providing an insight into nursing students' research activities and research utilization will help to restructure the nursing education curriculum and contribute to the development of effective strategies for research utilization.

The aim of this study was to identify Turkish undergraduate nursing students' research activities and research utilization.

Materials and Method

A descriptive design was used in the study. The sample was recruited from undergraduate nursing students at the two universities in Turkey. One of them is a private university; the other is public. The target population consisted of undergraduate nursing students who are in their sophomore, junior or senior years. Sampling was not done, since we wanted to reach the entire target population, which consisted of 302 nursing students during the spring term of 2012. The questionnaire was distributed to 302 students, and 216 questionnaires were returned (a response rate of 71%). Freshman students with no clinical experience were excluded.

This study sought answers to the following questions:

- 1) Do nursing students participate in research activities?
- 2) Do nursing students read scientific publications?
- 3) Do nursing students utilize research findings in clinical practice?
- 4) What are the barriers to nursing students using research in clinical practice?

The data were collected by means of a questionnaire developed for this study on the basis of the literature (21, 22). The questionnaire was pilot tested with ten nursing students and then revised based on the findings of the pilot study. The content validity of the questionnaire was evaluated by two experts. The items in question are: nursing students' research activities, the utilization of research findings during clinical studies, barriers to research utilization, request to conduct research, reading scientific articles, and participation in scientific activities. The questionnaires were given to students immediately after any lesson and then collected.

The study was approved by the research ethics committee of a university in Turkey. The data were collected subsequent to approval of the study by the ethics committee. Written permission for the study was obtained from the heads of the institutions in question. The students were informed about the purpose of the study and confidentiality was guaranteed. Participation was voluntary and could be terminated at any point in time. In order to

ensure anonymity, no identification was done at an individual level. Prior to data collection, informed consent was obtained from all the participants.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 16.0 (SPSS Inc., Chicago, IL, USA). Statistical significance was defined as $p < 0.05$. Chi-square and Fisher's exact tests were used to evaluate differences between the variables.

Results

The students were in the 19–33 age group and the average age was 21.5 years ($SD = 1.75$). Most of the students were from the public university (59.3%), and there was no difference between the public university and the private university in terms of homogeneity ($p > 0.05$). Female students accounted for 82.4% of the total group. The participation in scientific/research activities and research utilization by nursing students is shown in Table 1.

A relationship was found to exist between research education and conducting research ($\chi^2 = 10.582$, $p = 0.002$) (Table 2). Nine students had participated in a research activity in the past, and 88.88% of them had completed a research course. The students who had taken a research course conducted more research than the others. No significant differences were observed between conducting research and research utilization ($p = 1.000$), participation in scientific activities ($p = 0.093$), and knowing how to access scientific publications ($p = 1.000$). As illustrated in Table 3, no significant differences were found between research utilization and students' educational year ($p = 0.669$), having a research course ($p = 0.834$), knowing how to access scientific publications ($p = 0.094$), foreign language level ($p = 0.895$), and participation in scientific activities ($p = 0.934$).

The students had not utilized research findings for several reasons; namely, inadequate knowledge about research utilization (34.04%), not being allowed to do so by nurses (28.7%), inability to read articles in a foreign language (25%), never having read a research article (16.48%), and research results are not practical (11.7%).

When nursing students were asked what they expected from their instructors concerning research utilization in their clin-

cal practice, they responded as follows: 23.9% expected to be taught research utilization, 18.2% wanted guidance to conduct research, 16.9% wanted sufficient resources in the library, and 15.9% wanted to be taught how to evaluate research articles. Moreover, 11.9% students pointed out that nurses must utilize research findings.

Discussion

The aim of this study was to investigate undergraduate nursing students' research activities and research utilization. Although the vast majority of the students (84.3%) were willing to participate in research studies, only 4.2% had conducted a research study by that point in time. It was assumed students are not supported or encouraged sufficiently by lecturers in relation to conducting research. Björkström et al. (22) found a large number of students did not regard nursing lecturers as a resource for nursing development.

The vast majority of the students (87%) were found not to have utilized research findings in clinical practice. This result parallels that of a previous study on research utilization (23). Heikkila (23) found research utilization was fair or poor among most nurses and nursing students, and students' research utilization skills seemed to depend on the amount of instruction. On the other hand, Mattila et al. (5) and Björkström et al. (22) found most students (72% and 78.1%, respectively) utilized research results in nursing practice. We recommend students be supported to conduct new research, to stay abreast of research, and to read and use existing research done by lecturers so as to improve research utilization among students.

Insufficient knowledge about research utilization was found to be the most prominent reason for not utilizing research findings. Lecturers and curriculum are the most important factors regarding insufficient knowledge about research utilization on the part of nurses and nursing student. It is believed lecturers should not only instruct students, but also emphasize the importance of research utilization in nursing research courses and during other courses as well.

Nurses' knowledge of research and attitudes towards it are of great importance, given their influence on students' attitudes and behavior (24). Most of the students (73.1%) stated nurses do not use research findings in their work. Out of the 216 students, 19 (11.94%) indicated nurses should utilize research findings, because they are role models for nursing students. Nurses' behavior

was shown to have an influence on students. Therefore, research awareness should be encouraged among nurses as well.

Approximately half the students (49.5%) knew how to access scientific publications, but none of them followed or read scientific publications. Previous studies found the number of students reading scientific articles to be quite small. In a study by Björkström et al. (22), 24.5% of the students were non-readers. Mattila et al. (5) found 25–36% of the students had read no scientific nursing journal whatsoever. It seems students have yet to comprehend fully the importance of research and research utilization, and lecturers do not encourage students to read articles.

It was found that students who had taken a research course in the past conducted more research than others. Considering that students learn research methods during a research course, this result is not surprising. However, students' participation in research studies is very limited and this issue needs to be examined further.

It is expected that students conducting research should utilize their research findings. However, no statistically significant relationship was found between conducting research and utilization of research findings. This may be due to students' ignorance about how to utilize research findings, since research utilization requires different and special skills.

Conclusions

The results of this study show the majority of the students did not participate in research activities and did not utilize research findings in clinical practice. None of the students followed or read scientific publications. The findings also indicate that insufficient knowledge about research utilization was the most prominent reason for students not utilizing research findings. The findings of this study could have consequences for nursing lecturers and institutions. The nursing curriculum must emphasize research utilization and ensure it is taught. In this respect, collaboration between clinical nurses and nursing lecturers on utilization of research findings is crucial.

Recommendations for Practice

It is recommended students receive support and encouragement to utilize research findings, conduct research, and follow the

scientific publications recommended by their lecturers. The nursing curriculum might need to be restructured to emphasize the importance of research utilization and the utilization of research findings in courses. Moreover, appropriate training must be imparted to nurses about research utilization, because students generally take nurses as examples in clinical practice.

Limitations of the Study

The students at two selected schools might not represent the population of all students in Turkey. The small sample size might jeopardize generalization of the results. We suggest expanding the research by using a larger sample.

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Tables

Table 1. Participation in Scientific/Research Activities and Research Utilization by Nursing Students

| Participation in Scientific/Research Activities and Research Utilization | n | % |
|--|-----|--------|
| Research education | | |
| Yes | 81 | 37.50 |
| No | 135 | 62.50 |
| Participation in scientific activities | | |
| Yes | 171 | 79.20 |
| No | 45 | 20.80 |
| Knows how to access scientific publications | | |
| Yes | 107 | 49.50 |
| No | 109 | 50.50 |
| Follows scientific publications | | |
| Yes | 0 | 0 |
| No | 100 | 100.0 |
| Participation in research activities | | |
| Yes | 9 | 4.20 |
| No | 207 | 95.80 |
| Wants to participate in research activities | | |
| Yes | 182 | 84.30 |
| No | 34 | 15.70 |
| Foreign language level | | |
| Good-level | 29 | 13.50 |
| Mid-level | 80 | 37.00 |
| Poor-level | 107 | 49.50 |
| Students' research utilization in clinical practice | | |
| Yes | 28 | 13.00 |
| No | 188 | 87.00 |
| Nurses' research utilization in clinical practice | | |
| Yes | 58 | 26.90 |
| No | 158 | 73.10 |
| Total | 216 | 100.00 |

Table 2. Comparison between Some of the Students' Characteristics and Conducting Research

| Some characteristics of students | | Conducting research | | | | Test | |
|---|-----|---------------------|-----|-----|------|----------------|--------|
| | | Yes | | No | | | |
| | | n | % | n | % | X ² | p |
| Research education | Yes | 8 | 9.9 | 73 | 90.1 | 10,582 | 0.002* |
| | No | 1 | 0.7 | 134 | 99.3 | | |
| Research utilization | Yes | 1 | 3.6 | 27 | 96.4 | 0,029 | 1.000* |
| | No | 8 | 4.3 | 180 | 95.7 | | |
| Participation in scientific activities | Yes | 5 | 2.9 | 166 | 97.1 | 3,174 | 0.093* |
| | No | 4 | 8.9 | 41 | 91.1 | | |
| Knows how to access scientific publications | Yes | 7 | 6.5 | 100 | 93.5 | 2.996 | 1.000* |
| | No | 2 | 1.8 | 107 | 98.2 | | |

Table 3. Comparison between Some of the Students' Characteristics and Research Utilization

| Some characteristics of students | | Research utilization | | | | Test | |
|---|------------|----------------------|------|-----|------|----------------|-------|
| | | Yes | | No | | | |
| | | n | % | n | % | X ² | p |
| Educational year | Sophomore | 8 | 10.5 | 68 | 89.5 | 0.803 | 0.669 |
| | Junior | 11 | 15.5 | 60 | 84.5 | | |
| | Senior | 9 | 13.0 | 60 | 87.0 | | |
| Research course | Yes | 11 | 13.6 | 70 | 86.4 | 0.044 | 0.834 |
| | No | 17 | 12.6 | 118 | 87.4 | | |
| Knows how to access scientific publications | Yes | 18 | 16.8 | 89 | 83.2 | 2.799 | 0.094 |
| | No | 10 | 9.2 | 99 | 90.8 | | |
| Foreign language level | Good-level | 3 | 10.3 | 26 | 89.7 | 0.221 | 0.895 |
| | Mid-level | 11 | 13.8 | 69 | 86.2 | | |
| | Poor-level | 14 | 13.1 | 93 | 86.9 | | |
| Participation in scientific activities | Yes | 22 | 12.9 | 149 | 87.1 | 0.007 | 0.934 |
| | No | 6 | 13.3 | 39 | 86.7 | | |