

Graduate distance education in nursing: assessment under students' perspective

Educação de pós-graduação em enfermagem à distância: avaliação sob a perspectiva dos discentes

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Keywords

Education, distance; Education, nursing; Education, nursing, graduate; Educational measurement; Health management

Descritores

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Abstract

Objective: To evaluate the distance learning Graduate Nursing Management Program according to the students' perspective.

Methods: This exploratory-descriptive study with a quantitative approach involved 484 students who had completed the nursing program. For the assessment we used an instrument divided into the following categories: access location, hours dedicated to the program, professors, mentors, students' expectations and general assessment. Association among numerical variables was done using a Pearson's chi-square test, and measurement reliability was assessed with the Cronbach's alpha coefficient.

Results: Main results showed that students felt welcomed by mentors and professors and that two courses helped improve professional performance and development of competencies related to management.

Conclusion: Courses were evaluated positively and were perceived as a useful tool for training of nurses aim to support transformation of management scenario of Brazilian nursing.

Resumo

Objetivo: Avaliar os cursos de Especialização em Gestão em Enfermagem Modalidade a Distância sob a perspectiva dos discentes.

Métodos: Estudo exploratório-descritivo, com abordagem quantitativa realizado com 484 alunos concluintes. Para a avaliação foi utilizado instrumento dividido nas categorias: local de acesso, horas de dedicação, professores; tutores, expectativas dos alunos e avaliação geral. A associação entre as variáveis numéricas foi realizada por meio do teste Qui-quadrado de *Pearson*, e a confiabilidade da medição por meio do coeficiente Alfa de *Cronbach*.

Resultados: Os principais resultados demonstraram que os discentes se sentiram acolhidos pelos tutores e professores, e que os dois cursos contribuíram para melhorar o desempenho profissional e o desenvolvimento de competências relacionadas à gestão.

Conclusão: Os cursos foram avaliados positivamente e mostraram-se úteis como ferramenta de capacitação de Enfermeiros visando fomentar a transformação do cenário gerencial da Enfermagem brasileira.

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Introduction

Progress in information technology and telecommunication and the development of the Internet have led to an increase in distance education. As a result this important, low-cost and easily accessible tool for diffusing education and knowledge can be used to assist even more individuals who seek training to face the challenges of the job market.⁽¹⁾ Emphasis has been given to studies comparing distance education with traditional education, and improved efficiency has been reported for those who adopted the distance modality instead attending courses in a class room.⁽²⁾

In Brazil, distance education has been consolidated as an efficient strategy to address the social need for universal access to education. The National Telehealth Program in Brazil, a project of the Ministry of Health in distance education, has trained 154 teams to work on the Family Health Strategy and provide health support via telehealth services to 80 Brazilian municipalities. Nurses constitute the largest group of professionals attending the courses.⁽³⁾

Two other initiatives for this program exist. The first is a distance education module for nurses that addresses anti-sepsis in intramuscular pre-medication. This module uses the Modular Object-Oriented Dynamic Learning Environment (Moodle) as the virtual learning environment.⁽⁴⁾ The second is an endocrine physiology module for undergraduate nursing students who use the TelEdu®, a virtual environment developed by the Universidade Estadual de Campinas.⁽⁵⁾ Both modules support the teaching-learning process of the subjects proposed, and that addressing the expectation of pedagogical proposal.

The Nursing College of São Paulo at Universidade Federal de São Paulo began offering a *lato sensu* graduate program via distance learning in 1998 with the Specialization Distance Program for Nursing in Nephrology and, subsequently, the Nursing Program in Infectious Diseases and Prenatal Care. This distance learning program has been also used in international programs to develop nurses' skills in undergraduate and graduate programs.⁽⁶⁻⁸⁾

To contribute to the training of nurses, the Nursing College of São Paulo established a partnership with the Open University of Brazil to offer a Specialization Course in Nursing Management in a distance format. The main objective of this program is to train nurses to act with a critical and competent approach in nursing care administration in health services. The first group of students completing this program graduated in 2009 and the second group, in 2010.

Courses load consists of 416 hours, distributed in 11 disciplines. The program is free to the student and is sponsored by the Open University of Brazil. At each term 550 spaces are offered, equally distributed among available authorized sites.

To complete the course, the students are expected to dedicate 10 hours a week of studies, using Moodle as the virtual learning environment.

Interaction with students occurs mainly with distance mentors (in a proportion of one for every 25 students) and on-site mentors (one for each site), via discussion panels, and through individual messages. In the second course, we included a communication channel with a moderator and a social panel called Web coffe.

Learning was assessed weekly after presentation of each topic through use of a test with autocorrected responses. In addition, activities were conducted through the discussion panels, with the objective of correlating acquired knowledge in theory with professional experience in practice.

In the first iteration of the course, student participation in discussion panels was not mandatory or evaluated. Thus, we observed that students did not completely explore or use the tool, event with continual invitations sent by the moderators. With the second course, participation in discussions panels was graded according to an assessment of students' posts. This approach enhanced the frequency of students' participation in on-line discussions.

Two on-site meetings were done on sites. The first meeting occurred midway through the course and the second upon presentation of the final paper, general test, and course assessment. In the second iteration of the course, a welcome greeting and pre-

sensation were done by the program coordinator by web conferencing.

This study evaluated the distance education version of the Specialization Program in Nursing Management according to the students' perspectives.

Methods

This exploratory, descriptive analysis with a quantitative approach was developed for two distance courses in Nursing Management at the Nursing College of *São Paulo* at *Universidade Federal de São Paulo*.

The study population consisted of 495 students in the first group of and 427 in the second group, totaling 922 students. We included in the study students who concluded the program and signed the consent form. The final sample was composed of 216 students in the first group and 268 students in the second group.

The assessment instrument was a semi-structured questionnaire based on quality indicators for distance undergraduate program already established in Brazil that was divided into six categories: access location, hours dedicated to the program, professors, mentors, students' expectations, and general assessment. We considered the following answers: yes, no, partially, and not applicable; general assessment was considered as excellent, good, fair, or poor.

This instrument was evaluated by three specialists with experience in nursing management and distance education courses. The specialists suggested small reformulations, and all suggested changes to the questionnaire were made.

Data were collected on-site on the day of the final paper presentation during two periods. Data from the first group were collected in the second semester of 2010 and data from the second group were collected in the second semester of 2011.

Data were tabulated in the Statistical Package for Social Science software program for descriptive statistical analysis. Association between numerical variables of groups from the two courses was evaluated using a Pearson's chi-squared test, with a sig-

nificance level of 5% ($p < 0.05$), and internal consistency analysis of interviewees' responses. The Cronbach's alpha coefficient and item/instrument factor correlation were done to determine measurement reliability.

Development of this study followed national and international ethical standards for research on human subjects.

Results

This study sample was predominantly composed of women (90% in course 1; 91% in course 2). Participants ages ranged between 20 and 30 years (46% of both sexes) and between 31 and 40 years (36% in course 1; 34% in course 2) and the maximum time from graduation was 10 years. The latter finding was significantly different ($p < 0.001$).

The most common place where students accessed the course was home (85% in course 1; 72% in course 2; $p < 0.01$). Students reported that they dedicated on average 2 to 4 hours on activities for the course (42% in course 1 and 41 in course 2), some students reported dedicating more than 8 hours (10% in course 1 and 14% in course two). This result shows that students from both groups dedicated an equal number of hours to course activities ($p = 0.441$).

Professors' performance in the course was evaluated positively. A total of 87% of students in — course 1 and 95.9% in course 2 felt welcomed by professors ($p < 0.001$). Approximately 85% of students in course 1 and 93.7% in course 2 believed that the professors resolved scientific inquiries ($p = 0.002$), according to table 1.

Findings showed that 85.2% of students in course one and 96.6% of those in course 2 felt welcomed by both the distance mentor and the on-site mentor from his/her site. When students were asked whether the distance mentor was helpful in the discussions panels, most responded yes (88.4% in course one and 96.3% in course 2). These data also presented significant difference in both subjects ($p < 0.001$; $p < 0.019$, respectively), i.e., students in both courses had different opinions related to the tutorial, as shown in table 2.

Table 1. Professors' performance in courses 1 and 2

Attitude about course professors	Course	Yes n(%)	No n(%)	In parts n(%)	Not applicable n(%)	No response n(%)	Total n(%)	p-value
Did you feel welcomed by the professors?	1	188 (87.0)	1(0.5)	26(12)	-	1(0.5)	216(100)	<0.001
	2	257(95.9)	1(0.4)	7(2.6)	-	3(1.1)	268(100)	
Did professors resolve your scientific doubts?	1	184(85.2)	1(0.5)	21(9.7)	7(3.2)	3(1.4)	216(100)	0.002
	2	251(93.7)	-	7(2.6)	6(2.2)	4(1.5)	268(100)	

Table 2. Mentors' performance in courses 1 and 2

Attitudes about course mentors	Course	Yes n(%)	No n(%)	In parts n(%)	Not applicable n(%)	No response n(%)	Total n(%)	p-value
Did you feel welcomed by distance and on-site mentors of the site from which you received support?	1	184(85.2)	3(1.4)	27(12.5)	1(0.5)	1(0.5)	216(100)	<0.001
	2	259(96.6)	-	8(3)	-	1(0.4)	268(100)	
Was the distance mentor from the pole from which you received support helpful in discussion panels?	1	191(88.4)	3(1.4)	17(7.9)	3(1.4)	2(0.9)	216(100)	0.019
	2	258(96.3)	2(0.7)	7(2.6)	-	1(0.4)	258(96.3)	

Regarding students' expectations of the course, 97.7% of students in course 1 and 98.1% of students in course 2 felt that the course contributed to his/her professional performance. Approximately 98% of students in both courses reported that the course contributed to the development of competencies related to management.

The course was considered excellent by 46.3% of students in course 1 and 59.3% of those in course 2; very good by 44% and 36.6%, respectively; and good by 9.3% and 4.1%, respectively. A significant difference was observed between courses ($p < 0.001$), i.e., students in course 2 evaluated the program more positively than did students in course 1.

Discussion

Limitations of this study include the following: a Brazilian reference was used to create the instrument, which has not yet been validated; and the assessment instrument for course 2 included some questions that were not included for the assessment of course 1 and were not included in our study. We chose not to include these questions because they would have introduced additional information into the discussion about students' opinions.

Another important factor was that Nursing Management courses enable nurses to experience

several different scenarios from Brazilian's perspective, which allow them to explore a number of media and management tools that must be used to plan and implement safe care delivery for patients.

Most students were women. This result corroborates those of other author studies,⁽⁵⁾ although more men appear to be pursuing the nursing course in Brazil.

Researchers have been reporting that some groups are seeking distance courses, particularly women,⁽⁹⁾ because this modality permits them to devote time for seeking knowledge and reduces the difficulties women with two jobs face, activities at home, and parenting activities.

Regarding age ranges, we observed that young individuals and recent graduates are those looking for courses in Nursing Management. This finding corroborates job-market results showing that young nurses are being hired for management positions.⁽¹⁰⁾

This framework converges with the contemporary societal demand that nurses have technical experience and skills, such as leadership, teamwork, customer focus and decision making.^(10,11)

The study findings regarding access location for the course agree with those of another study conducted in Taiwan.⁽¹²⁾ In that study, students reported that the ability to access the course from home reduced time that would have been spent in

traffic had the student attended an on-site course and decreased the impact on family life because participants could spend more time with their family. Such findings confirm the flexibility that distance learning permits.

Concerning hours dedicated to the course, we observed a small percentage of students who dedicated more than 8 hours a week. The relevance of dedication to studies is shown in other surveys conducted among nursing undergraduate students and graduate students in epidemiology. These surveys verified that on-line modality, time organization and self-discipline and self-motivation are key elements to students' success in completing the course.^(13,14)

In our study, more students from course 2 than in course 1 assessed professors in relation to how welcoming they were and how well they clarified students' doubts.

Some authors believe that, in addition to selecting and rewriting texts in the discipline and organizing didactic material, distance educators must pursue basic skills, such as use of information technologies and communication to select, use and evaluate educational interventions (synchronous or asynchronous) that are helpful for students and are appropriate for the chosen learning environment. Another important aspect is the development of interactive activities from the pedagogical point of view; such actions must be also constructive, continuous and collaborative.⁽¹⁵⁾

In alignment with ideas of others studies, in course 1 the professors' main focus was to elaborate didactic material and content for grades; the distance mentor and the professor divided the tasks of providing guidance and answering questions. In course 2, each professor recorded videos of presentations of their material, created a video class, and participated effectively in discussion panels. These activities, in turn, improved increase interaction with students and encouraged learning and knowledge construction.

The mentor moderated discussions and forwarded specific questions to the responsible professor; the student then received a private answer. This

approach sought to better involve the student in the course.

Our results confirm the importance of mentors' role in distance education, which has been discussed by other researchers.⁽¹⁶⁾ Mentors play an essential role in the facilitation and structuring of individual cognitive networks, promoting among students and professors spaces for a collective construction of knowledge. Hence, mentors have a substantial impact on students' performance, in addition to improving understanding level through mediation and facilitating interaction among students.

In the tutorial for course 1, mentors followed students regarding participation in activities, adherence to deadlines and participation in panels on the course content. The mentors clarified the students' doubts and promoted the interface between student and professor. In course 2, the main focus was the collaborative work, welcoming the students, ensuring effective participation in panels, assessing posts made by students in relation to the pertinence of the answer, and helping improve communication (24 hours was established as the maximal time in which to respond to students). These actions were critical to increasing interaction and made mentors the reference point for students within the learning environment.

On the other hand, on-site mentors acted locally, helping students in all structural and pedagogical aspects of the course.⁽¹⁷⁾ In course 1, on-site mentors were guided to receive the student in the site in order to address the students' concerns about the use of the platform and orient the students regarding the course timeline, didactic material, grades and activities. In course 2, we actively searched for students who had been inactive regarding online access for more than seven days. We communicated with such students by phone, e-mail and telegram in order to reduce dropouts.

Concerning students' expectations, we emphasize the relevance of the graduate course in nursing management for training of Brazilian nurses in management aspects. These professionals were originally from several different locations in the country and reflect many different practice scenarios (mainly hospitals and the public health arena).

A similar situation occurred in a study done in Brazil,⁽¹⁸⁾ where students had the opportunity to learn about fundamental administration ideologies and theories, intervention, and practice methods for resource management, with the aim of developing and transforming their professional practice.

We verified in students' answers that courses helped students develop the management skills. This result agrees with findings in the literature.^(19,20) It is important to highlight that the competencies mentioned above were covered in this course, including supervision, leadership and decision making.

Results of our study in relation to assessment of the course agree with studies showing that success in an online model is linked to malleability concerning traditional education alternatives, enabling the student to attend the course at his/her own pace. Distance learning course allow students to balance learning with personal appointments and work and democratize the students' opportunities for personal, professional and social development.^(21,22)

Conclusion

Students of both courses provided positive evaluations of the courses, although most criteria significantly differed between course 2 and course 1. We conclude that changes applied in course 2 improved the construction of knowledge and prepared nurses to intervene and transform their professional practice. The changes also could help professionals respond to the demands of health management in Brazil and worldwide.

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Collaborations

Alves VLS contributed to the conception of the study, analysis and interpretation of data and drafting the manuscript. Bohomol E cooperated to the conception of the study, analysis and interpretation

of data, drafting the manuscript, critical review of intellectual content. Cunha ICKO contributed with conception of the project, analysis and interpretation of data and approval of final version.

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