ABSTRACT

Objective: to investigate the participation of nursing students in scientific research production during graduation, identifying difficulties, interest and influence in vocational training. Method: cross-sectional study with a quantitative approach, performed at a private higher education institution in Ceará central interior. The research occurred between April and June 2014 with 186 students, through a questionnaire. The study project was approved by the Research Ethics Committee, Opinion number 577,244. Results: the students had an inaccurate idea about the concept of research, 44.1% showed interest in this activity, but 53.2% did not do it; 44.6% agreed that research contributes to the expansion of scientific knowledge and develop professional skills; 64.5% did not participate in scientific events. Regarding the difficulties, 20.9% highlighted the lack of incentives of the institution. No participant had scientific publication. Conclusion: the students need to be encouraged about the importance and achievement of scientific research, and despite showing interest, there are lack incentives and concrete actions for its implementation. Descriptors: Nursing Research; Research Promotion; Nursing Students.

RESUMO

Objetivo: investigar a participação dos acadêmicos de enfermagem na produção de pesquisa científica durante a graduação, identificando dificuldades enfrentadas, interesse e influência na formação profissional. Método: estudo transversal, com abordagem quantitativa, realizado em uma Instituição de ensino superior privada no sertão central cearense. A pesquisa ocorreu entre abril e junho de 2014, com 186 alunos, por meio de questionário. O estudo teve aprovado o projeto pelo Comitê de Ética em Pesquisa, Parecer n° 577.244. Resultados: os estudantes tinham uma ideia imprecisa sobre o conceito de pesquisa, 44,1% mostraram interesse nessa atividade, mas 53,2% não a realizaram; 44,6% concordaram que a pesquisa contribui para a ampliação do conhecimento científico e desenvolve habilidades profissionais; 64,5% não participaram de eventos científicos. No tocante às dificuldades, 20,9% apontaram a falta de incentivo da Instituição. Nenhum participante possuía publicação científica. Conclusão: os acadêmicos precisam ser incentivados quanto à importância e realização da pesquisa científica, e apesar de mostrarem interesse, faltam incentivos e atitudes concretas para a sua realização. Descriores: Pesquisa em Enfermagem; Promoção da Pesquisa; Estudantes de Enfermagem.

RESUMEN

Objetivo: investigar la participación de los académicos de enfermería en la producción de investigación científica durante la graduación, identificando dificultades enfrentadas, interés e influencia en la formación profesional. Método: estudio transversal con enfoque cuantitativo, realizado en una institución de enseñanza superior privada en el interior central del estado de Ceará. La investigación ocurrió entre abril y junio de 2014, con 186 alumnos, por medio de un cuestionario. El estudio tuvo su proyecto aprobado por el Comité de Ética en Investigación, Parecer nº 577.244. Resultados: los estudiantes tenían una idea imprecisa sobre el concepto de investigación, 44,1% mostraron interés en esa actividad, pero 53,2% no la realizaron; 44,6% concordaron que la investigación contribuye para la ampliación del conocimiento científico y desarrolla habilidades profesionales; 64,5% no participaron de eventos científicos. En cuanto a las dificultades, 20,9% refirieron a la falta de incentivo de la Institución. Ningún participante poseía publicación científica. Conclusión: los académicos precisan ser incentivados de la importancia y realización de la investigación científica, y a pesar de mostrar interés, faltan incentivos y actitudes concretas para su realización. Descriptores: Investigación en Enfermería; Promoción de la Investigación; Estudiantes de Enfermería.

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Research is a way to educate the mind to build and organize ideas, to learn not to disperse, develop skills, and help to discipline the researcher to use the words and learn to value concepts.\(^1\) Starting a scientific research will provide a maturing of ideas, stimulate critical and promote greater responsibility, especially for the student, towards the environment in which he is inserted.\(^2\)

As one of the several professions performing actions in health, nursing requires a scientific base in research to implement these actions in a satisfactory manner. Thus, as a science and profession, nursing has appropriated this method to improve its performance.\(^3\)

Thus, it is necessary to increase the production of knowledge through research for greater visibility, recognition and profession consolidation as science, technology and innovation.\(^4\) However, although the Brazilian research have evolved in quantity and quality in recent years, it is seen that the practice of scientific production is still limited, most of them, the teachers and students of master’s and doctoral courses, especially with regard to the preparation of theses and dissertations.\(^5\)

A strategy to change this situation is to encourage students to conduct scientific research in the undergraduation. Therefore, theoretical and methodological support must be used for the realization of a project that contributes in vocational training.\(^6\)

To meet this need, the Law of Guidelines and Bases of National Education (Federal Law number 9394/96) determined that the scientific methodology of discipline is in undergraduate and graduate courses.\(^7\) The teaching of this discipline develops the students’ ability of thinking, improving their academic performance and training more qualified professionals for life in society and the productive activity.\(^8\)

Another discipline offered in undergraduate courses and also focused on the research is the monograph or completion of course work. In this, the student develops a study on a topic relevant to his area, allowing the use of theoretical references in the study of problems that indicate investigative treatment, but also the knowledge of methodological requirements for the construction of a scientific study.\(^9\)

It is noteworthy that although these disciplines are in undergraduate courses to provide incentives for research and academic production, a distancing of the student to develop scientific research is still observed. Among the reasons may be cited: the way the contents of the scientific methodology of the discipline is transmitted;\(^10\) the lack of empathy of students with the discipline and lack of incentives to carry out research by higher education institutions.\(^8\)

Nursing professionals need updated knowledge and skills baggage to develop their functions. Scientific research proves to be a useful alternative to the nurse can reasonably expect; deepen and develop their knowledge.\(^11\)

Although scientific research contribute to the academic development and vocational training, providing the maturation of ideas and expanding the critical view of these students, there are few higher education institutions with specific programs to encourage research. This is even more relevant in private colleges of education.

Moreover, there is a small academic production of this reality, especially with regard to undergraduate students. Given the above, the objectives of the study were to investigate the participation of nursing students of a private higher education institution in the production of academic scientific research during graduation; to investigate the main difficulties faced by students in the production of research, but also to know the opinion of the participants about the importance of this activity in vocational training.

### METHOD

Cross-sectional study with a quantitative approach, conducted from April to June 2014, in a private higher education institution of Ceará, located in the central interior of the state, identifying the stimulus for the scientific research outside the capital.

Students were invited to participate in the research at the time they were in the classroom. Data collection was conducted in all nursing undergraduate classes. The sample was obtained through adherence method, in which all students are invited to participate and only those interested were included.\(^12\) In order to get as many participants as possible, the search was conducted in the classrooms, in morning and afternoon shifts, and in the corridors of the institution.

A questionnaire was applied to those who agreed to participate, built for research based on the findings of previous studies.\(^13\) After collection, the data were entered into Excel database. The analysis was performed using...
There was no unanimity on the concept of scientific research, showing that students have doubts about the meaning of this term in the context of graduation. Regarding the level of participant’s interests on scientific research, 44.1% may be interested in the scientific research area, while 37.1% have an average interest for the realization of this activity. Only 2.1% say they have no interest in this activity. Despite reporting interest in scientific research, 66.7% of respondents never conducted research projects, while 20.4% had only a research project, only 12.9% said they had done two or more research projects at graduation. Among the projects undertaken, there were completion of course work (TCC), studies involving work by the education program for health (PET-Health) and the activities of academic monitoring.

It is highlighted the lack of nursing research groups that bring together teachers and students for the realization of this activity in the investigated institution. Table 2 shows the opinion of the participants on the importance of scientific research as a nurse.

Table 2. Distribution of participants about the importance of scientific research as a nurse. Quixadá - CE, 2014.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
<th>IC¹(95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can contribute to increased knowledge</td>
<td>74</td>
<td>39.8</td>
<td>32.7 - 47.2</td>
</tr>
<tr>
<td>Acquisition of skills such as writing, reading and</td>
<td>20</td>
<td>10.7</td>
<td>06.7 - 16.1</td>
</tr>
<tr>
<td>interpretation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities in elaboration of proposals for social</td>
<td>92</td>
<td>49.5</td>
<td>42.1 - 56.8</td>
</tr>
<tr>
<td>intervention projects</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ IC: Confidence interval

Table 3 shows the distribution of the participants regarding the contribution of scientific research to expand their professional knowledge.

Table 3. Distribution of participants regarding the contribution of scientific research to expand their professional knowledge. Quixadá - CE, 2014.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
<th>IC¹(95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge about the disciplines - specific</td>
<td>32</td>
<td>17.2</td>
<td>12.1 - 23.4</td>
</tr>
<tr>
<td>content</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of the context - society and world</td>
<td>67</td>
<td>36.0</td>
<td>29.1 - 43.3</td>
</tr>
<tr>
<td>Pedagogical knowledge</td>
<td>4</td>
<td>2.2</td>
<td>0.6 - 05.4</td>
</tr>
<tr>
<td>Scientific knowledge</td>
<td>83</td>
<td>44.6</td>
<td>37.3 - 52.1</td>
</tr>
</tbody>
</table>

¹ IC: Confidence interval

When questioned a respect to the contribution of the research for the training of professional skills, 37.1% said that this activity is an incentive for professional development. Stood out, even those who agree that it can contribute towards improving the assessment skills in the work processes and increasing the management and organization at work skills, corresponding to 19.9% and 19.4%.

Scientific research in nursing graduation and…

RESULTS

Study participants were 186 nursing students, mostly women (88.8%), single (80.1%) with mean age of 22.5 (± 4.7) years old. Table 1 shows the distribution of students according to the idea of the concept of scientific research.

Table 1. Distribution of students according to their concept of scientific research. Quixadá - CE, 2014.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
<th>IC¹(95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge production</td>
<td>60</td>
<td>32.3</td>
<td>25.6 - 39.5</td>
</tr>
<tr>
<td>Elaboration of Research Projects</td>
<td>51</td>
<td>27.4</td>
<td>21.1 - 34.4</td>
</tr>
<tr>
<td>Give answers to an initial hypothesis</td>
<td>13</td>
<td>7.0</td>
<td>03.7 - 11.6</td>
</tr>
<tr>
<td>Specific study of the subject</td>
<td>62</td>
<td>33.3</td>
<td>26.6 - 40.6</td>
</tr>
</tbody>
</table>

¹ IC: Confidence interval
respectively. The self-reflection skills were listed as one of scientific research contribution for only 2.1% of participants.

A Tabela 4 apresenta as principais dificuldades enfrentadas pelos acadêmicos na realização e publicação de pesquisa.


<table>
<thead>
<tr>
<th>Variáveis</th>
<th>n</th>
<th>%</th>
<th>IC(95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nunca passei por essa experiência</td>
<td>99</td>
<td>53.2</td>
<td>45.8-60.5</td>
</tr>
<tr>
<td>Falta de incentivo à iniciação científica pela instituição</td>
<td>39</td>
<td>20.9</td>
<td>15.3-7.5</td>
</tr>
<tr>
<td>Burocracia das revistas quanto às normas</td>
<td>30</td>
<td>16.1</td>
<td>11.1-2.2</td>
</tr>
<tr>
<td>Ausência de professores dispostos a orientar pesquisa</td>
<td>10</td>
<td>5.3</td>
<td>02.6-9.6</td>
</tr>
<tr>
<td>Falta de interesse da parte em realizar pesquisa</td>
<td>8</td>
<td>4.3</td>
<td>02.6-9.6</td>
</tr>
</tbody>
</table>

1 IC: Intervalo de Confiança

When asked about the participation in scientific events, 64.5% had not done until the moment of the study, 12.3% participated only once, and 14.8% attended two or more times.

Students who participated in scientific events were highlighted, since 91.4% presented research findings.

None of those interviewed had articles published in scientific journals, although the institution in which the research was conducted had a magazine for dissemination of studies developed by its teachers and students.

**DISCUSSION**

Data reaffirm the need to clarify the concept of scientific research at graduation to encourage its achievement by students, reflecting the concept imprecision in the literature.

Considering the socio-demographic profile, data found are similar to previous studies conducted across the country. The predominance of women’s confirms a feminization in nursing, although it was possible to see a small growth of male. 16 Presence of young students was also detected in a study conducted in Brasilia, in which 98.2% of respondents were from 18 to 25 years old and in the interior of São Paulo where 53.6% of the participants were from 17 to 20 years old. 16

The predominance of young people who were not in the job market and supported by their families and the fact that nursing is a recent profession with a lot of demand in the market and job possibilities are reasons for this profile. 16, 7

Students with this profile arriving earlier at higher education institutions face the need to perform scientific research. As a first step, they must understand the definition of this term, which is not unanimous in the scientific literature.

The definitions are broad, such as nuclear activity of science, which enables understanding of reality being investigated; result of an inquiry or examination, carried out in order to solve a problem, using scientific procedures. 18 It is part of a problem, of a question that will lead the researcher in search of new knowledge, but to become scientific, it will aim to validate a hypothesis through the use of scientific procedures. 19

In this study, the definition was associated with specific study of a subject (33.3%) and production of knowledge (32.2%), confirming this broad and imprecise definition. One way to facilitate understanding of the definition would divide the search by activities: choice of subject and the problem; planning that in this case is the research project; and then data collection, analysis, interpretation and communication of research. 19

Even with this difficulty of understanding, participants expressed interest in conducting scientific research (44.1%). Similar data were identified in students of Accounting Science (66.28%) 20 and Physical Education (48%). 14 Moreover, as in this study, although these students have interest in research, it was found that participation in this activity is still limited, a situation confirmed by several studies especially in private institutions. 13, 4

Research with Medical students identified that students were interested in activities related to the area of research, however there is still deficiency of their access to this activity. 21-2 Therefore, it is important to encourage students to carry out research, because it is through this learning they will be able to expand their knowledge about the contents of the courses and personal interest. 4

It was observed in this study that most students who have held at least one research project had this experience in the last semester of graduate courses as result of the requirement to perform the TCC. A unique
opportunity to some students in learning how to do research is by TCC.23

The curriculum guidelines of nursing undergraduate course advocated as a critical profile of egress training, reflective and able to act as promoter of integral health of the human being. They also emphasize the importance of participation of future nursing research as a way of professional qualification.24 Involving the student in developing and implementing this activity contributes to increased knowledge, familiarity with scientific productions, approaching the theory and practical dimensions.25

Therefore, the production and scientific research of consumption is also a professional responsibility, since it favors the production of knowledge, allowing the execution of nursing procedures to be evidence-based. This perspective benefits the institutions and allows the scientific advancement in society.26–7

Study participants confirm this point of view, because they claim that scientific research facilitates the development of social intervention projects (49.5%), being an incentive for professional development (37.1%), broaden the knowledge about the society context and world (36%) and scientific knowledge itself (44.6%).

The lack of incentives for scientific research by the institution was cited as the main barrier to the realization of this activity at graduation (20.9%). A similar study found the same difficulty as the main cause, adding to the insufficient number of teachers to guide the students.13

Regarding the lack of teachers, previous research reports that this activity is concentrated in a small number of teachers and even the lack of commitment of teachers.28 In institutions where this incentive is present, the lack of time to engage in this activity was highlighted as a barrier.29

Considering that the scientific research can be represented not only by the development of research projects, but also for the promotion of production knowledge.14 The publication is as important as the construction of a scientific research, since disseminating the results is critical to evolution and consolidation of science and contribution to society.13 Out of the participants, 35.7% have participated in at least one scientific event and no student has published articles. It is pointed out that the publication of research results is important for the solidification of academic education, whether in undergraduate or graduate courses.30

CONCLUSION

Women participants were predominant in the study, aged from 21 to 24 years old and single. As for scientific research, the students stated interest for it, although not showing concrete actions to achieve it.

An inaccuracy was identified regarding the concept of scientific research. Moreover, most students have a concrete experience with this type of activity only in the realization of completion of course work in order to fulfill a mandatory requirement needed to obtain the title.

The need to encourage scientific research is noticed since the first semester regarding the knowledge, importance and performance of this activity. Arousing the motivation to carry out a research is as important as acquiring the above knowledge in scientific methodology books, promoting the development of critical thinking of the student.

It is worth noting the lack of incentive of the institution to enter and prepare their nursing program students for the development of scientific research. These facts create a mistaken view of the realization of scientific research, believing that it is a difficult, laborious and demanding activity, hampering the development of this knowledge.

The study was limited by assessing only the opinions of students, and not considering the points of view of teachers and those responsible for the institution. It is believed that the results of this research allow a broader view of the scientific research institution in the study, so that we could realize the importance of this activity as an essential process in the formation of the student. It is expected that from the results, those responsible for this reality seek alternatives to involve students in the production of scientific research during graduation.

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