

Why Nursing and Midwifery Students Do Research and Participate in Scientific Activities?

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ABSTRACT

This study aimed to investigate reasons of undergraduate nursing/midwifery students' engagements in scientific activities. This cross-sectional descriptive study was conducted during V. National Nursing Students Congress in Urfa. The sample included 133 of 550 registered students who were available and accepted to participate. Data were collected by means of a questionnaire including 36 questions about demographics, scientific activities and reasons of students during sessions by self-report. The average age of students was 22 and 95% of them were female. 72.9% of the students were attended at a congress the first-time and 86.5% were attendent at least one study. They said that they carried out research because they want to improve themselves (73.7%), learn how to do a research (57.9%) and contribute to improvements of their professions (44.4%). 79.7% of participants have decided to do the research and 43.6% have determined the study issues themselves. They were supported by their advisors (98.4%) and friends (53.5%) for their scientific activities, and 91.3% of participants found their advisors' supports sufficient. 67.7% of attendants have also got economical supports and 70% of them were supported by their families. Students said that their problem solving skills are improved by doing research (66.9%), they learned teamwork (66.2%), writing and communication (57.9%), but lack of sufficient time was their major problem (84.2%). A significant number of students wanted to maintain their scientific activities to make academic career (92.5%) and practice their profession (89.5%) in the future. Findings suggest that almost all of the participants desired to do the research to resume their scientific activities and to have an academic career. Further, it is clear that academic activities let the students gain some skills like problem solving and team-work. Therefore, it was suggested that nursing and midwifery students should be allowed time for and supported in their academic activities.

Keywords: Nursing; midwifery; education; undergraduate research; scientific activity.

Hem irelik ve Ebelik Ö rencileri Neden Ara tırma Yapıyorlar ve Bilimsel Aktivitelere Katılıyorlar?

ÖZET

Hem irelik ve ebelik ö rencilerinin bilimsel aktivitelere katılma nedenlerini saptamak amacıyla yapılan bu kesitsel tanımlayıcı ara tırma, Urfa'da V. Ulusal Hem irelik Ö rencileri Kongresi'nde yapılmı tır. Çalı manın örneklemini kongreye kayıtlı 550 ö renciden ula ılabilen ve çalı maya katılmayı kabul eden 133 ö renci olu turmu tur. Veriler ö rencilerin demografik özellikleri ve bilimsel aktiviteleri ile nedenleri konusunda 36 soru içeren bir soru formu ile, ö rencilerin öz bildirimlerine göre oturumlar sırasında toplanmı tır. Ö rencilerin ortalama ya 122'dir ve %95'i bayandır. Ö rencilerin %72.9'u ilk kez bir kongreye katıldı ını, %86.5'i en az bir çalı mayla katıldı ını belirtmi tır. Ö renciler kendilerini geli tirmek (%73.7), ara tırma yapmayı ö renmek (%57.9) ve mesleklerinin geli mesine katkı yapmak (%44.4) için ara tırma yaptıklarını belirtmi lerdir. Ö rencilerin %79.7'si ara tırma yapmaya kendileri karar vermi ve %43.6'sı çalı ma konusunu kendisi belirlemi tır. Bilimsel aktivitelerinde danı manları (%98.4) ve arkada ları (%53.5) tarafından desteklenmi lerdir ve danı manlarının deste ini yeterli bulmaktadırlar (%91.3). Katılımcıların %67.7'si ekonomik destek de almı lardır ve bunların %70'i aileleri tarafından desteklenmi tır. Ö renciler ara tırma yapmanın problem çözme becerilerini geli tirdi ini (%66.9), ekip çalı masını (%66.2), yazmayı ve ileti imi (%57.9) ö rendiklerini belirtmi lerdir. Ancak, çalı malar için yeterli zaman olmaması ba lıca problemlerini olu turmaktadır (%84.2). Önemli bir kısmı gelecekte bilimsel aktivitelerini devam ettirmek, akademik kariyer yapmak (%92.5) ve mesleklerini uygulamak

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(%89.5) istemektedir. Bulgular katılımcıların neredeyse tamamının ara tırma yapmak, bilimsel aktivitelerini devam ettirmek ve akademik kariyer yapmak istedi ine i aret etmektedir. Ayrıca, akademik çalı maların ö rencilere problem çö zme ve ekip çalı ması gibi belirli beceriler kazandırdı ı açıktır. Bu nedenle hem irelik ve ebelik ö rencilerinin akademik çalı maları için zaman ayrılması ve bu konuda desteklenmeleri önerilmektedir.

Anahtar Kelimeler: Hem irelik; ebelik; e itim; lisans; ara tırma; bilimsel faaliyet.

INTRODUCTION

Students are naturally more curious about the world within they are living and about all what realize in it. With an increased level of relevance to their area of interest, learning is more important for them. They need to be actively involved in scientific activities, to develop a rational and objective framework for solving problems, and to understand the concepts that unify the scientific disciplines. In addition, as primary users of scientific products all students need to recognize how developments in science impact their personal, social, and physical environments, and how scientific knowledge is developed, organized, interrelated, and translated into practice (1). All these are especially important for nursing and midwifery students because their education and practices are criticized worldwide as they still rely primarily on experience and tradition, although continuing accumulation of new research evidences in these areas (2-4).

These two professions, nursing and midwifery provide different types of care and co-exist in many countries as interdependent professions where both are necessary and are not alone sufficient (5). Several countries in the world have been developed effective strategies to improve basic and advanced education for nursing and midwifery (6,7). Consequently, they both have gained full professional statues and actually function as independent health care providers as a result of better education and professionalization (6,8,9). However, recent literatures revealed a dramatic shortage not only of students entering to study nursing or midwifery but also of faculty to teach these profesions in nursing or midwifery schools in several countries (10-14). In contrast, due mainly to the art of the qualification for entering into education at universities, the interest of students to study nursing or midwifery in Turkey is still high. Besides, students decline in the nursing and midwifery schools is not an actual problem, although an important part of the students do not want to perform their profession after graduation (15).

Despite the chances of being staffed at the universities as nurse academicians are very limited, evidences also indicate that there is an increasing interest of Turkish nursing and midwifery students in scientific activities during their undergraduate education since a few years although it is not essential and necessary to be a nurse or midwife in practice. Thus, national and international students' congresses are organized at which increasing numbers of students are attending from year to year.

Although it is very time-consuming, *ad modum* Chopin (16) both students and academicians are benefiting more from undergraduate research. Many studies on the

undergraduate researche have questioned the strategies on research education and training and the usage of scientific knowledge in curricular programs or practices (1,17,18). But, none of them questioned their motivation to do research. Consequently, the question "why students should do research?" was asked more frequently because students or their parents pay also for this opportunity anyway (19), but questions "why students do research?", "what are their motivations to do it during their intense educational conditions?" and "whether there are some limitations for students to do undergraduate research" were not scrutinized yet. This study aimed to examine the reasons "why undergraduate nursing and midwifery students carry out research in Turkey?", and "what are their limitations and future-oriented expectations?"

MATERIAL AND METHODS

This descriptive, cross-sectional study was carried out on students attended at the 5th National Nursing Students' Congress organized by Harran University School of Health in Urfa. The study has been approved by the institutional ethics committee. The principles of Helsinki Declaration 2008 were followed and written informed consent has been obtained. Study sample included all registered 550 students of the congress. However, not all of 550 registered students have been attended at the congress and some attendants were unwilling to participate in the study. Consequently, the study sample included only 133 available students (~25%) who had accepted to participate and filled out the questionnaire. Data were collected by the undergraduate research students *via* a self prepared questionnaire. This questionnaire included 36 questions about demographic characteristics of students, their reasons of doing research and attending the congress, their support resources and future-oriented thoughts as well as problems they faced while carrying out research. The questionnaire used after it has been firstly applied to 20 nursing and midwifery students of Aydın School of Health, and necessary revisions have been done. The questionnaires were distributed to the participants during the sessions throughout the congress with permission of the congress' chairperson and collected at the end of sessions. Descriptive statistics were used for data analysis.

Limitations of the Study

The study population was only a special group of students attended at a student congress. Also the sample of the study included only a small part of attendants who were available and had accepted to participate. Thus, the findings reflect their thoughts and emotions, and not those of all nursing and midwifery students. Further studies with larger sample sizes including students with and without scientific activities are necessary to determine a more objective picture of students' motivations, thoughts about, attitudes to and problems during undergraduate research.

RESULTS

The mean age of the participants was 22.09±1.69. Of students 60% had completed high school, 95% was female, 92.5% was single, 6% had a job, 69.9% had a scholarship

Table 1. Descriptive properties of students (n=133)

| Descriptive Properties | n | % |
|---|-----|------|
| Region from which they attended | | |
| Middle Anatolia | 47 | 35.5 |
| Aegean | 29 | 21.8 |
| Marmara | 26 | 19.5 |
| South-East Anatolia | 18 | 13.5 |
| East Anatolia | 7 | 5.3 |
| Mediterranean and Black Sea | 6 | 4.6 |
| Division | | |
| Nursing | 117 | 88.0 |
| Midwifery | 16 | 12.0 |
| Classes | | |
| 4th Class | 76 | 57.1 |
| 3rd Class | 44 | 33.1 |
| 1st+2nd Classes | 13 | 9.8 |
| The Last Completed School | | |
| High School | 80 | 60.1 |
| Anatolian High School + Super High School | 38 | 28.6 |
| Health High School | 9 | 6.8 |
| Vocational High School + Faculty | 6 | 4.5 |

Table 2. The students' desire of making academic carrier (n=133)

| Academic Carrier | n | % |
|------------------|-----|------|
| Wanting | 123 | 92.5 |
| Not wanting | 9 | 6.8 |
| Undecided | 1 | 0.7 |

Table 3. Reasons why students do research

| Reasons of Doing Research | n* | % |
|---|----|------|
| To improve themselves | 98 | 73.7 |
| To learn to do scientific research | 77 | 57.9 |
| To make academic carrier | 65 | 48.9 |
| To contribute the improvement of the profession | 59 | 44.4 |
| To attend at the congress | 51 | 38.3 |
| Like to do research | 41 | 30.8 |
| To improve problem solving skills | 35 | 26.3 |
| To be staffed at the university as academician | 33 | 24.8 |
| To get detailed information about the studied theme | 24 | 18.0 |
| To increase the communication with academic staff | 16 | 12.0 |

* "n" is folded because more than one answers.

and 68.4% declared their economical levels as moderate. Their mothers (71.5%) and fathers (44.4%) had primary school education or less, in general. Fathers of a great part (61.6%) were working actually, but only a few students' mothers had a job. 89.5% of the students said that they will work in the area of their undergraduate education in the future (Table 1).

Of all participants 72.9% had attended at a congress first time and 86.5% were attendant at least with one study. The students said that they have attended at the congress because they wanted to improve themselves (72.9%), to follow up scientific improvements (63.9%) and to present posters (61.6%). 92.5% of attendants said also that they want to maintain their scientific activities and have academic career after graduation (Table 2).

The students said that they do research because they want to improve themselves (73.7%), to learn carrying out research (57.9%), to make academic career (48.9%) and to contribute to the improvement of their profession (44.4%) (Table 3).

In general, 79.7% of students have decided themselves to do research and 69.2% did research because their advisers influenced them. The students also said that the subjects of their study were determined by their advisors (56.4%), themselves (43.6%) and generally in collaboration with their friends (42.8%). Most of the students have attended several steps of their studies including data sampling and storage (81.9%), literature search and evaluation (81.2%), planning the study (78.2%), preparing the questionnaire (77.4%), preparing posters and/or presentations (75.9%), and statistical evaluation of the data, and interpretation and writing of the findings (both 73.7%). They have been supported while they are doing research (97%), especially by their advisers (98.4%) and friends (53.5%). The support of advisers was found sufficient in general (91.3%). Many students have got also economical support (67.7%). Of those being economically supported, 70% have been supported by their families.

Students said that by doing research they improved their skills in problem solving (66.9%), advancing and writing

Table 4. The skills students acquired while they did research

| Skills Acquired | n* | % |
|--|----|------|
| Improvements in problem solving skills | 89 | 66.9 |
| Improving their self ideas and writing those | 88 | 66.2 |
| Learning teamwork | 88 | 66.2 |
| Improving the writing and communication skills | 77 | 57.9 |
| Better communication with academic staff | 65 | 48.9 |
| Improving analytical skills | 60 | 45.1 |
| Overcoming the time management | 1 | 0.8 |

* "n" is folded because more than one answers.

their self ideas (66.2%), learning teamwork (66.2%) and writing and communication (57.9%) (Table 4). The main problems they encountered during their research activities were having not enough time because the intensiveness of the lessons (84.2%), economical problems (37.6%) and problems with foreign language (33.1%), respectively. 85.7% of students were in opinion that advisers should direct students to do research to widespread the students' research, 85% highlighted the economical support and 72.9% wanted to achieve computers and internet easily.

DISCUSSION

Comparitively few nurses and midwives around the worldwide are equipped with the skills to develop nursing and midwifery research, and to participate and engage in interdisciplinary and collaborative international research activities. This is also true for our country, especially for midwives. Recently, however, increasing numbers of undergraduate nursing and midwifery students are interesting in scientific activities in Turkey, although it is not necessary for completion of their education or for carrying out the job. In approximately two decades ago, only 20 to 30% of student nurses wanted to work at universities and make academic career (20-22). With the time the rate of both nursing and midwifery students who want to make academic career and work at a university after graduation increased profoundly up to approximately 70% (15). In contrast, academic career was the desire of solely 3.7 to 30.1% of medicine students in Turkey in this time period (23,24).

The rate of students of nursing or midwifery and practising nurses who want to get master and doctoral degree is also increasing steadily. Ünsar found that 67.4% of last class nursing and midwifery students aimed to complete master and doctoral education; 90.2% of them were in opinion that master and doctoral education would improve the professional identity of the nursing and midwifery professions (25). Similarly, Hata et al., suggested that 74.5% nursing students wanted to attend at postgraduate education, 43.1% of them with the aim of being a professional nurse (26). Also, Akgün et al. surveyed the practising nurses and found that 87.8% of them wanted postgraduate education, most of them (79.7%) with an aim of contributing to occupational improvement (27).

The career preferences and/or motivations to involve scientific activities of nursing and midwifery students from other countries vary greatly. Björkström et al. suggested that most of the Swedish undergraduate nurses had positive attitudes towards nursing research and a majority of them

expected to use information from nursing research in the future; their interest in a particular development or research area was the most important variable (28). In contrast, Australian undergraduate students favoured to work as midwifery, pediatrics and in other clinical areas such as operating theatre and critical/intensive care after graduation (29). Similarly, Norwegian students did not have any interest in being an academician (30), although for approximately 80% of them bachelor degree was very important (31).

In this study 92.5% of all participants remarked that they would have academic career at the nursing and midwifery schools of universities after graduation. However, only 48.9% of attendants stated that they did research because they want to make academic career. If compared with the finding of studies cited above, the differences in rates of nursing and midwifery students wanting academic career are remarkable. This is possibly due partly to the fact that the participants of this study represent a partially self-selected group of students with a higher interest in science and academic career than overall undergraduate population. Even this study self was carried out with the co-operation of some undergraduates interested in scientific activities.

For a great part (72.9%) of the students this was the first participation in a congress, and 86.5% was attended at least with one study. Of students, 79.7% have decided themselves to do research and 69.2% did research because their advisers influenced them. They wanted to improve themselves (73.7%), and learn carrying out research (57.9%). 43.6% of students determined the subject of their study, and 81.9% have been attended several steps of their study. They have stated that they have been supported sufficiently by their supervisors, but 85% of students declared the need for economical supports. Another important limitation to do research was having not enough time for 84.2% of students. In contrast, Tanner and Hale determined staffing, cost and lack of support as the only barrier for a small group of research active nurses to do clinical research (32).

We were not able to find any relevant literature about this issue to compare and discuss the findings of this study. So, the data gathered could be the first findings on the topic; "motivations and reasons of nursing and midwifery undergraduate students' research and other scientific activities, problems they faced and their expectations in the future". One is clear; however, that in reality only a few of these undergraduate researchers will have the possibility of

becoming an academical staff at nursing or midwifery schools after graduation. But, as the only aim of many students it could be helpful for a positive attitude and their adherence to the school and profession. Furthermore, their present experiences would encourage them to make master and doctoral degrees or clinical research while they practice their profession at different health care settings in the future. Clinical nursing research is also very important, then, on the one side there is a great need to get information about the experiences of clinical nurses, because little is written about this subject yet (33-35). And, on the other side, nursing and midwifery professions present remarkable changes because their work "care" itself appears to have evolved a profound change from its tradition of being a virtuous practice to a more personal investment in professional competencies (36). They both are currently undergoing radical changes in the direction that the "Doctor of Nursing Practice" or "Doctor of Midwifery Practice" degree will possibly be soon the required degree for clinically practicing specialists and nursing and midwifery leaders in health care institutions, in general. The growing focus for evidence-based nursing and midwifery practice make also it imperative for undergraduate students to engage in research activities while studying. Besides, most organisations encourage nurses and midwives to be involved in collaborative research with other health professionals. So, there will be an increasing need for non-academic staff to follow up the related scientific developments while practising. A research culture just during the undergraduate education could help to overcome these transition process easily. This is one of the important reasons why undergraduate students from today should be encouraged for scientific activities and to build a research culture, so that at least some of them would perpetuate their scientific activities under all circumstances in the future. Undergraduate research reduces the gap between theory and practice, help individuals to develop information-seeking behavior, to become lifelong learners and to employ scientific knowledge. So, it may be an effective tool to prepare nursing and midwifery students for evidence-based practice and practicing doctors' issues by integration of best research evidence with clinical expertise and patient values.

CONCLUSION

The findings strongly suggest that almost all undergraduate nursing and midwifery students actively involved in scientific activities will make academic carrier and maintain their scientific activity in future. Even if most of the students doing undergraduate research can not be staffed at the universities, doing research will make today's students an important part and informed consumers of the science in future, because doing research means also reading and assessing the research reports of others. Consequently, they can be willing to use and translate scientific knowledge into practice, and to promote the health care culture and, not at least, the profession self. Thus, it is important to determine their motivations and limitations to solve problems on this way and to direct more students and thus more nurses and midwives to scientific activities.

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