

Learning to use evidence at nursing undergraduation: a contribution to collective health

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Abstract *There is universal agreement that health professionals have not implementing evidence-based practice as would be desirable and recommended by science and international institutions with responsibility for the guidelines issued for health contexts. This focus group with eight participants aimed to understand the perspective of students from the undergraduate nursing course on their involvement in a project of knowledge transfer to the clinic. Qualitative analysis followed the coding steps; storage/retrieval and interpretation of the findings and it was carried out by using a software for qualitative data analysis. This study is authorized by an Ethics Committee and respected the principles inherent to the investigation. The four categories that emerged from the content analysis were: Belonging, Using Evidence, Improving Care and Developing Competencies. The analysis of categories, subcategories and verbatim transcripts allowed us to conclude that participation in transference projects for clinics, according to the students, generates learning opportunities about the implementation and communication of evidence, facilitates integration in the service, participation, collaborative work and the development of transversal skills.*

Key words *Nursing, Evidence-based practice, Learning, Students, Knowledge, Management*

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Introduction

The methodological development and the increase in scientific production in the field of Health Sciences have enabled knowledge enhancement. However, it has been noticed that such enhancement has not been accompanied by the implementation of results in clinical contexts, which generates a true Evidence-Based Practice (EBP), not even through education, given the few opportunities that students have to integrate research project or knowledge translation¹⁻³.

The authors argue that, given the pertinence of the EBP, it is emerging to instill a feeling of passion and enthusiasm among students in relation to research and its everyday relevance to ensure quality⁴ and cost-effective health outcomes⁵. In Nursing specifically, educating a new generation of researchers is a challenge for the development of research attitudes and skills^{1,3} and that influences the way future professionals use evidence in their clinical decision-making^{3,6}.

We support that such change requires undergraduates and professors to redesign new and broad educational opportunities for the 21st century, which must be transforming, empowering and meaningful¹ in order to reduce the gaps between research, practice, health policies and research results^{3,6}. This would also promote a scientific culture of collaborative work for the development of products that enable the introduction of results in contexts^{3,7}.

The difficulty in transferring knowledge to a true EBP is justified by the preference for unidirectional models for the introduction of research results and by issues related to education and the opportunities given in graduation for such learning process⁶, which allows a preconceived and immutable knowledge *status quo*¹.

On the other hand, health teams and institutions themselves, as consumers of evidence, do not only have to undertake an EBP, but also need the scientific knowledge and experience necessary to actively engage in the production of new knowledge¹.

In view of the above, the development of skills and abilities is among the main priorities in Nursing research^{1,3,6}. It has been advocated by some that knowledge about research methodology and expertise in advanced nursing practice are priorities^{1,2} since the development of scientific competences implies the acquisition and consolidation of a minimum set of attributes, knowledge, skills and attitudes, related to the EBP, which contributes to safer, higher quality, per-

son-centered care^{8,9}. However, recent studies reinforce that nurses are not well prepared to apply evidence¹⁰ and that nursing students do not value it and lack the knowledge and skills to be able to use it¹¹. The Sicily Declaration recommends a five-step model in order to meet the minimum requirements for teaching and conducting EBP, as follows: to prepare a clinical question; to identify the evidence; to critically assess the evidence; to integrate evidence with clinical knowledge, patient preferences and their values to make a practical decision; and to evaluate the change or the result¹².

In the specific case of this project, final year undergraduate nursing students had the opportunity to participate for a semester in a project of transferring knowledge to the clinic, whose theoretical framework follows the model of Graham and collaborators called the Knowledge-to-Action process model. This method used and disclosed by the authors defines two central cycles for the translation of knowledge: the cycle of knowledge creation and the cycle of action, which illustrates the process of applying knowledge¹³. The participation of students took place during their period of integration into professional life. We agree that those are key moments for improving students' knowledge, attitudes and skills at the EBP level^{14,15} since learning about research and the use of scientific knowledge is greater when it is integrated in this teaching typology⁶. In view of the above, the aim of this study is to understand the perspective of undergraduate nursing students on their involvement in a project of transferring knowledge to the clinic.

Method

This focus group (FG) intended to answer the survey question "How do undergraduate nursing students perceive your involvement in a knowledge translation project?". A protocol has been established: planning, preparation, moderation, data analysis and dissemination of results¹⁶.

The semi-structured interview script was based on the following stimulus question: what are the contributions of involvement in the Safe Transition project for your learning? and it was conducted in order to evolve to more specific issues¹⁶ without restraining the discussion.

The FG participants were selected among those who were part of the Safe Transition project between February and July 2019 and who agreed to freely and voluntarily participate in the survey.

The sample was intentional and homogeneous in order to allow the discussion to be focused on the topic¹⁶ since they all share a relevant characteristic in relation to the subject under discussion – having participated in a project to translate knowledge into the clinic. We got in touch with the students to inquire about their intention to participate and then they received an email two weeks in advance with the objectives, estimated duration of the FG and identification of the moderator and co-moderator. As an extracurricular activity, credited as a supplement to the diploma and which took place simultaneously with the internship, the focus group was only held after the grade had been released. The FG was held at the nursing school in a room prepared for this purpose, with the guarantee of good recording conditions, privacy and convenience¹⁶.

One of the researchers carried out the video recording and transcription in order to allow “visualization” of what happened. The analysis of the findings followed the phases of codification; storage/retrieval and interpretation from systematic data analysis¹⁷.

To increase the accuracy, the analysis of the findings was carried out using the WebQDA computer software. The encoding of the free codes was performed by the researcher who made the transcript and was later validated by the research team. It was ensured representativeness, exhaustiveness, homogeneity and relevance when categories were defined.

The study was approved by the Ethics Committee (Opinion 09/2019 HVFX). The ethical and formal principles inherent in the development of research were respected. All participants were assured anonymity, data confidentiality and also the right to withdraw from the research.

Results

The eight (8) study participants, with a mean of 21.7 (± 1.9) years of age, are senior nursing graduates. Seven (7) of them are women.

One hundred and ninety (190) registration units emerged in the analysis of the findings, which were later organized into four categories: Belonging; Using evidence; Improving care; Developing skills and their respective subcategories (Table 1).

The most representative category is Using evidence. The project, where students were integrated, aims to introduce evidence in the clinic and this provides learning opportunities about the

evidence. Students participation takes place as an extracurricular activity in services in which they are serving as apprentices, which leads them to consider that the project activities, related to the transfer of knowledge, are parallel and complementary to the expected results for the internship:

[...] we would have already had to develop a research paper, but the fact of knowing we were working for the project [...] it then put a lot of pressure on me [...] OK! So this really has to be something with a very strong scientific basis, beyond what would be expected for the research paper (P1)

Realizing that a theoretical work can be implemented in practice and it is pleasing to know that this part of the results we obtained with the integrative literature review can actually be used and not just become another work (P5).

On the other hand, participation leads to greater analysis on practices and the search for solutions to clinical issues and context needs, as seen in these verbatim reports:

The increment to the projects is to verify the ideal conditions and difficulties of the context as well as thinking outside the box, how to solve things, what we learned and how we can apply it in the context(P2).

I failed to take everything for granted. When they tell me to do it like this or that, I always ask why and based on what (P1).

The participants consider that learning from evidence is carried out as part of the activities in which they participate:

And then we could also see that even if there isn't much research done in that area, we could be ourselves, one day later, who knows, to produce information and more knowledge and develop more what we've worked on now. It ends up being a contribution (P1).

[...] we also have other possibilities to consider and analyze data from our context, and so we learn some things from the research (P7).

It helped me reduce the differences between theory and practice. It is strange to say, but we often criticize that the school's contents are too theoretical and little applied in practice. There are big differences, but this experience allowed us to grasp the theory and apply it in practice, which is something we haven't done in other CEs (P8).

The opportunities given for the communication of project results contribute to learning about evidence:

Yes, and the most relevant one turned out to be a challenge both in writing and in oral communication, because working and summarizing it all on a single sheet is quite hard (P6).

And it's not just that. It is having that notion that we will be exposed to professors in posters at the university, we will be exposed to our classmates, and this time we will be exposed to the public. And that values, let's say, the work we are doing and our further responsibility. This work is not only ours, we work on it. Then we have to be more proud, more rigorous, and have a greater awareness of what we are writing (P7).

A contribution to this learning is the integration into the service, which generates opportunities for participation and collaborative work. Participants reinforce that integration, facilitated by the existence of a plan and continuous work between school and service, where other colleagues have already been involved, is a positive aspect of the project: *It also helped to integrate into the team, so yes, it was very positive (P4). [...] the fact of knowing that the work I'm developing in the project will also be important later on in the future was good for the integration (P8).*

The existence of a partnership with those services, where internships take place, in addition to promoting successful integration, also creates opportunities for the student to participate in activities, meetings and decisions relating to the project and even the activities to carry out during the internship, as seen in these lines:

Being available to answer our questions and doubts is always okay... always explaining how it works and how they do it here. Also sharing our

own ideas, what we thought could be done, sharing these ideas and being accessible to talking and sharing it I also think it's very important (P1).

[...] we were able to participate in an active life consultation and at the end the nurse even asked our opinion about things we could remember that they could not. Maybe they would not remember. It's good to be involved and to be counted on in the workplace (P8).

The nurses had to have this opportunity so that we could participate [...] she herself encouraged me and gave me feedback' (P7).

[...] because we are students, there is a lot of things that we do not take part in and so we have been given the opportunity (P3).

Integration and participation are combined with opportunities for collaborative work with nurses and other members of the multidisciplinary team:

That was one of the things I also felt, despite making the presentation to unit coordinator nurses and head nurses, psychologist and multidisciplinary team. I could feel that they were not just treating me as a student (P7).

I believe that according to the multidisciplinary team in the meetings, we as students could have an active role in these meetings and this does not always happen, not now, but in previous internships, even when we attended in-service training. We generally did not participate, not even with doubts. That was surely an improvement (P3).

Table 1. Corpus of content analysis. Lisbon, Portugal, 2021.

Category	Subcategoria	UR
Using evidence	Learning evidence	44
	Learning opportunities	32
	Motivation	23
	Communicating evidence	15
	Subtotal	114
Belonging	Collaborative work	25
	Participation	13
	Integration	10
	Subtotal	48
Improving care	Promoting better care	10
	Improvement opportunities	10
	Subtotal	20
Developing competencies	Autonomy	3
	Conflict management	3
	Leadership	1
	Time management	1
	8	
	Total	190

Source: Authors

Integration and opportunities for participation and collaborative work generate a sense of belonging in the student because: *This close partnership also allowed us to learn other things besides the project* (P7).

The project focuses on the translation of knowledge to the clinic so that it allows students to observe *in loco* the advantages of using evidence in praxis. Students note that using evidence enables 'Improving care' because:

It wasn't just the provision of care for the elderly, it was also the fact that we had a macro project that allowed us to frame such care in terms of safety and quality. We had the provision of care and an extra project, but they were related (P8).

The follow-up query at the unit will allow, in the future, not just now, but in the future, to change the follow-up of those patients, to have feedback on their progress even to improve practices in the unit and to be able to monitor those patients for a longer period as well. Knowing what health problem the patient has after hospitalization and keeping him connected to the unit is very practical (P3).

The learning possibilities extend to the development of essential skills for the professional practice and team leadership, such as autonomy, time and conflict management:

[...] in my case there were no major conflicts, but it is always a possibility and something that ends up being developed (P7).

[...] when we found a problem, we had to solve it and yes, it was as you said (referring to the problem) especially in this area (P8).

One of the participants also highlights the possibility of developing leadership skills: *[...] in which a person, let's say, has to distribute work among people to somehow work equitably, let's say, but there's always one person who ends up coordinating things* (P7).

The results obtained indicate that the existence of common projects between schools and services, as well as the continuous involvement of students, promotes integration, creates opportunities for participation and collaborative work, which increases the sense of belonging that permeates the emergence of opportunities for participation and learning, allowing them to see the advantages of using evidence in the clinic, developing attitudes and skills necessary for the appreciation and use of evidence.

Discussion

The findings reinforce the results of other studies that take into consideration the implementation of an educational approach, which may allow evidence learning to be successful. It then implies that students must understand the importance of evidence, are competent in its use, basing their decisions on the results of investigation^{6,18}. Such experience can potentially contribute to the development of professionals who value evidence and who support their decision in the results of the studies, with skills to implement it in practice and with the ultimate goal of improving the provision of health care and consequently the population health outcomes¹⁸.

The participants reinforce the importance of learning how to transfer evidence and even how this helps to bridge the gap between theory and practice. This finding is echoed in the voice of the authors who claim a paradigmatic rupture with this vision of a gap between two worlds (theoretical and practical). It is therefore necessary to give some thought to the practices, to the "ways of doing" and the consequences of the activity by using research-based knowledge for decision making⁷. Professors should not only instruct students, but also create opportunities for participation in researches^{9,19}.

The option for projects that enable the practice of evidence, in addition to theoretical training, can help resolve this gap, not only by learning how to transfer knowledge to the clinic, but also by the future role that bachelors may have in their teams when disseminating their learnings and in creating opportunities for debate/thoughts on the use and transfer of evidence⁷.

The school's close collaboration with clinical contexts and the hypothesis of putting 'hands-on' by participating in knowledge translation projects that take place in the contexts is an asset for research, reading, synthesis of evidence, knowledge transfer and verification of the impact that such evidence can have on the improvement of healthcare services²⁰. How students themselves perceive involvement in the project and learn how to use evidence impacts on improving care and developing other soft skills. This reinforces the authors' recommendations for an active articulation between academic institutions and clinics, creating opportunities for collaborative work that can benefit student development and simultaneously contribute to the improvement of practices^{6,9,21}.

Another relevant finding is the importance given to belonging to the team, which appears to be facilitated by the integration into ongoing projects at the institution. 'Belonging' is a universal characteristic of human beings and is a basic human need²². According to some authors, this is one of the students' most important needs, which allows them to work reliably in the clinical environment^{6,23}.

A successful integration that leads to a sense of belonging can reduce stress and tension²³ and promote learning⁶. Thus, clinical nurses who tutor students must help them become team members and foster the development of the sense of belonging, building bridges between staff and students²². The development of a sense of belonging to a community involves four elements: adherence, influence, integration and satisfaction of needs and shared emotional connection²⁴.

Future studies should explore the findings of this research and the relationship between integration, collaborative work and participation for learning and valuing the use of evidence.

The methodology used in the involvement of undergraduates makes them active in the search for evidence and knowledge transfer, reinforcing their sense of belonging and that they are part of the team when they are known personally and professionally^{6,22}.

A final note, in this discussion, to highlight the critical and reflective spirit that is explicit in some of the participants' narratives and that extends to the recommendation for the maintenance

of the project and the continued participation of students in its development⁶.

Final considerations

The participation of undergraduate nursing students in knowledge translation projects enables the acquisition of knowledge, the development of attitudes and skills for learning evidence-based practice and the use of knowledge in clinical practice.

In the discourse content analysis of the eight participants of the FG, the following categories emerge: Using evidence, Belonging, Improving care and Developing competencies. The category with the highest significance is Using evidence, with one hundred and fourteen (114) of the one hundred and ninety (190) registration units, that is, 60% of the registration units.

Believing that this will be a core competency for health professionals in the future, with an impact on improving care, collective health, the sustainability of health systems and supported by the results of this research, we recommend that students have the opportunity to use the results during their internships and learn how to transfer them to clinical contexts.

The limitation of the study is related to the method used and the possible influence of the interaction established among the group on the individual response.

Collaborations

OR Ferreira contributed to the project design, data collection, data interpretation, writing and final review; CL Baixinho contributed to project design, data collection; FG contributed to transcription, data interpretation, writing and final review; M Medeiros contributed to in project design, data collection, data interpretation, writing and final review; and ESF Oliveira contributed to project design, data collection, data interpretation, writing and final review.

Acknowledgments

We acknowledge the study participants for their contribution to this research.

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Article submitted 23/09/2021

Approved 15/11/2021

Final version submitted 17/11/2021

Chief editors: Maria Cecília de Souza Minayo, Romeu Gomes, Antônio Augusto Moura da Silva