







## LEARNING EVIDENCE BASED PRACTICE THROUGH INVOLVEMENT IN INVESTIGATION ACTIVITIES - THE SELF-PERCEPTION OF STUDENTS

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### ABSTRACT

**Objective:** to understand how students perceive their involvement in investigation activities and how they contribute for the development of evidence-based practices.

**Method:** qualitative, cross-sectional, descriptive, and exploratory study, carried out in Portugal, in August 2019. A focus group of eight participants was formed to answer the question: "What are the advantages of the participation of nursing students in investigations for the development of knowledge, attitudes, and performance in the use of evidence?" The software NVivo was used for a content analysis.

**Results:** five categories and subcategories emerged from the qualitative analysis of findings: self-learning, integration of theory and practice, interdisciplinary work, evidence-based decision making, and scientific literacy.

**Conclusion:** creating an effective learning experience helps building knowledge and can contribute for the health of the community, for improved educational results during the internship, and for the development of the abilities necessary for Evidence Based Practice.

**DESCRIPTORS:** Evidence-Based Practice; Learning; Students; Nursing; Knowledge Management.

### APRENDIZAJE DE PRÁCTICAS BASADAS EN EVIDENCIA POR MEDIO DEL INVOLVIMIENTO EN ACTIVIDADES INVESTIGATIVAS – LA AUTOPERCEPCIÓN DE ESTUDIANTES

#### RESUMEN:

**Objetivo:** comprender como estudiantes perciben su involucrimiento con actividades investigativas y su contribución para desarrollar una práctica basada en evidencias. **Método:** estudio cualitativo, trasversal, descriptivo y exploratorio, hecho en Portugal en agosto de 2019, utilizando un grupo focal con ocho participantes para responder a la cuestión: "Cuales las ventajas de la participación de los estudiantes de enfermería en actividades de investigación para desarrollar conocimientos, actitudes y competencias de utilización de la evidencia?" Se hizo al análisis de contenido con el software NVivo. **Resultados:** el análisis cuantitativo de los datos generó cinco categorías y subcategorías: autoaprendizaje, integración teórico-práctica, interdisciplinariedad, tomada de decisiones basadas en evidencia, y alfabetización científica. **Conclusión:** la creación de una experiencia eficaz de aprendizaje ayuda en la construcción del conocimiento y potencialmente contribuye para la salud de la comunidad, para los resultados del aprendizaje en la pasantía y para el desarrollo de competencias esenciales para una Práctica Basada en Evidencias.

**DESCRIPTORES:** Práctica Clínica Basada en Evidencias; Aprendizaje; Estudiantes; Enfermería; Gestión del Conocimiento.

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## INTRODUCTION

Studies on the advantages of the clinical use of Evidence-Based Practice (EBP) have enabled a discussion on the necessary abilities associated to science, so future professionals know the methods and techniques of investigation and can use scientific literature as a work asset<sup>(1)</sup>.

This movement has influences on the curricula of nursing courses, in which, more or less explicitly, educational results related to EBP emerge<sup>(1-2)</sup>. However, some authors find that EBP cannot be restricted to the traditional school education model; it implies the participation of students on investigations, making it possible to develop analytical capabilities about the design of the study, its quality, and the results obtained<sup>(2-4)</sup>.

It is hard to research without an active involvement of the students. Therefore, the professor cannot assume, when they prepare the classes (even when they use more active methods to introduce content), that students will leave them with the necessary abilities to investigate and produce safe results at the clinic<sup>(4)</sup>.

Some researchers, as they address the academic importance of investigation and its relevance for clinic, reiterate the importance of associating the care provided with scientific evidence<sup>(5-8)</sup>, and alert that a deeper exploration of investigative activities can train students more effectively to acquire essential tools for clinical practice<sup>(5)</sup>, such as those of critical thought, analytical thought, problem solving, and clinical reasoning<sup>(6)</sup>.

Although there is a consensus about the relevance of evidences for education and for the profession as a whole<sup>(6-7)</sup>, it has been found that disciplines related to investigation are essentially theoretical in approach. This does not allow for an effective performance regarding the methodology and the conduction of investigative processes<sup>(8)</sup>. Some authors corroborate the idea that EBP develops through the participation of future professionals in research projects, increasing their capacity to read, produce, and synthesize knowledge. As a result, theoretical classes on how to conduct investigations must be associated to other strategies that enable students to acquire the abilities they need and scientific attitudes<sup>(1-4,6-7)</sup>.

Clinical teaching (CT) can have an important role in overcoming the challenges mentioned above, as long as it improves the knowledge, attitudes, and abilities of the students regarding scientific evidences<sup>(1-2,9)</sup>. Many elements can provide experiences that enrich the students and impact their future use of EBP, among which are the introduction of the theme as early as possible in the curriculum<sup>(8)</sup>, the investment on the participation in investigations<sup>(1,9)</sup>, their familiarization with this level of interprofessional work, the effective interaction with academic and clinic researchers, and the incorporation of the results of the investigation in nursing interventions<sup>(3)</sup>, connecting these with CT<sup>(1)</sup>.

Considering the above, this study aims to understand how students perceive their involvement in investigation activities and how they contribute for the development of evidence-based practice.

## METHOD

This is a qualitative, cross-sectional, descriptive, and exploratory study, carried out using a focus group (FG)<sup>(10-12)</sup> and aimed at answering the question: "What are the advantages of the participation of nursing students in investigations for the development of knowledge, attitudes, and performance in the use of evidence?"

This methodological frame, which is part of an interpretative paradigm, is justified by the nature of the study, the specificities of the phenomenon being studied, and by the state of the art, since a literature review revealed that there are few studies about the participation of undergraduate nursing students in research projects<sup>(13)</sup>.

The research protocol was organized in five stages: planning; preparation; moderation; data analysis; and publication of results<sup>(12)</sup>.

The intentional sample included eight students from the last semester of the nursing licensing course. It follows recommendations according to which the ideal number of participants is between five and ten<sup>(11)</sup>. The inclusion criteria were: having finished their clinical classes for integration in their professional life in one of the partner institutions of the *Projeto Transição Segura* (the Safe Transition Project); being involved in one of the ongoing projects in the different services; not having failed in this subject in previous years; and showing interest to participate.

As recommended by authors with regard to the selection of members to constitute the FG, all members of the sample had one characteristic in common<sup>(10-12)</sup>: they participated in the Safe Transition Project in the second semester of the academic year of 2018/2019. This process aims to translate knowledge into the clinic, involving two health units and one higher education institution. Since it started, in 2015, it involves professionals from clinics, undergraduates, and nursing students, aiming to promote Evidence-Based Practice<sup>(14)</sup>. During the development of this process, students could be part of a set of activities aimed at researching and/or translating knowledge into practice, activities which are credited as a complementary element in the graduation of these future professionals.

Starting with the central question of this research, a semistructured interview was elaborated, including five guiding questions about the possibilities brought forth by the involvement in the project or the lack thereof, in regard to interdisciplinary work, search for evidences, the use of investigative results in their interventions, and in the development of abilities involving research and the translation of evidence into the context of the clinic.

The FC took place in the first week of August 2019, after the grades of the CT subject were made available, due to the fact that this is an extracurricular activity which was simultaneous with the internship, which generated a final grade. This was done to diminish/eliminate the effect of "socially desirable" responses.

The participants were contacted beforehand, two weeks before their studies in the CT subject were concluded, via e-mail. This e-mail included information on the data and time, objectives, rules for participation, and the estimated length of 75 minutes. It also identified the moderator and co-moderator of the session<sup>(11-12)</sup>. The choice to have a co-moderator made it possible for the exchanging of roles. The moderator was responsible for the conduction and maintenance of the discussion and the co-moderator aided in moderation, managing the recording equipment and being attentive to the logistic conditions and to the physical environment, making notes about the discussion of the group<sup>(11)</sup>.

During the week, the interview and the role of the moderator and co-moderator (observer) were reassessed by the team to guarantee the performance of the moderation, of the group dynamic, and of any elements that were critical for the success<sup>(12)</sup>.

The FC took place in the nursing school and was recorded in a previously prepared room. The space was organized to promote a comfortable environment, avoid interruptions, and guarantee the secrecy of information<sup>(11-12)</sup>. The recording was heard before the transcription. One of the participants transcribed the session to aid in the "visualization" of what happened in the group; one of the most time-consuming tasks in this data collection process is, precisely, the transcription process<sup>(12)</sup>.

The content analysis of the data was carried out using the NVivo software. At a first moment, the transcription of the FC session was skimmed, and then codified. Coding

units were selected, enumerated, and the categories were identified. The treatment of the results made it possible to make inferences and interpretations about them<sup>(11-12)</sup>. The categories were defined as to guarantee representativity, exhaustion, homogeneity, and pertinence.

This study was approved by an Ethics Commission (Opinion 09/2019 HVFX). All ethical and formal precepts were observed, from the institutional authorization for the students to integrate the project, as an extracurricular activity, to ethical issues inherent to the development of the investigation. All participants were assured about the anonymity of their participation, about data confidentiality, and it was made clear that they had the right to refuse participation.

## RESULTS

The FG counted on the participation of eight students who were finishing the nursing licensing course. There were six women and two men, with a mean age of  $22.3 \pm 1.98$  years.

These students had studied CT in several hospital services: intensive care units (2), urgency services (2), orthopedics (2), and medicine (2).

From a quantitative analysis of the findings, five categories emerged, together with their respective sub-categories: Evidence-based decision making (registered units (RU=38); Scientific literacy (RU=33); Interdisciplinary work (RU=26); Integration of theory and practice (RU=22) and Self-learning (RU=15) (Figure 1).

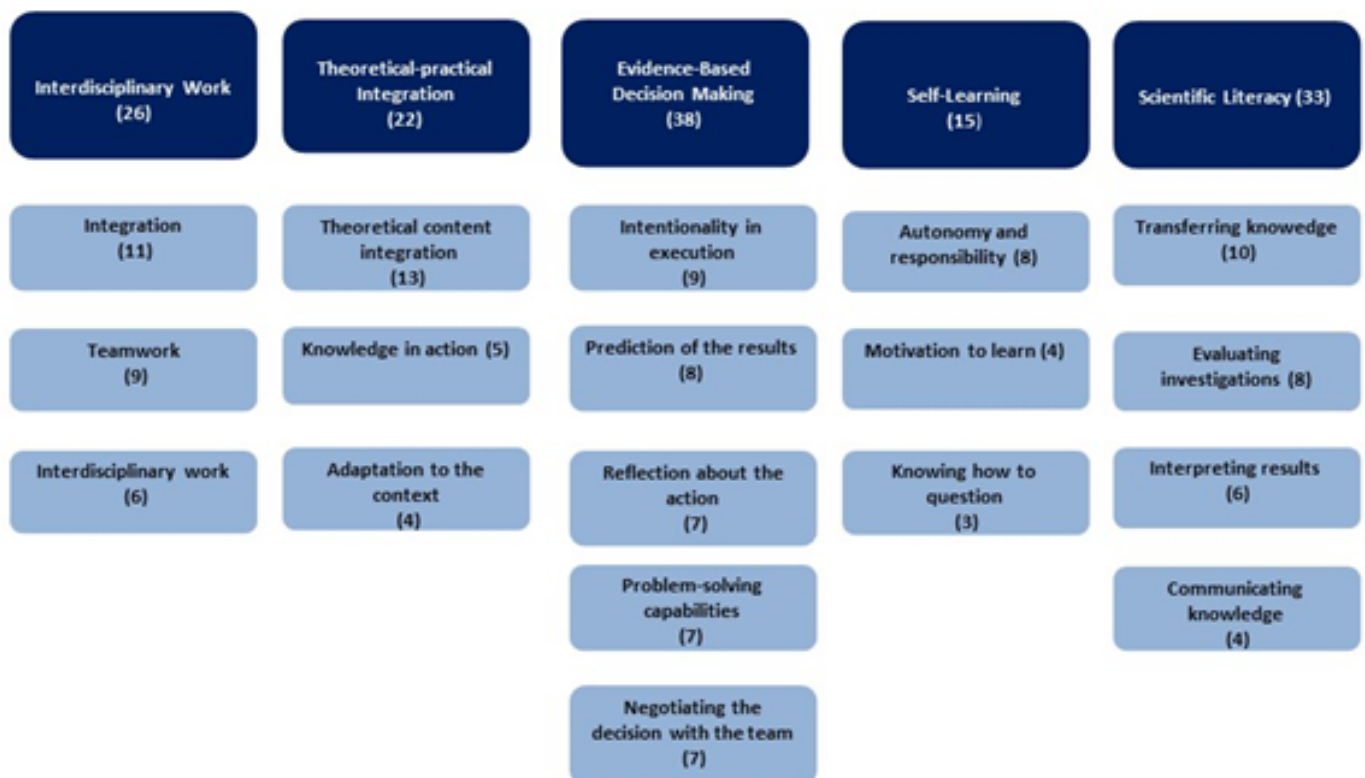


Figure 1 - Categories and subcategories and their respective Registered Units. Lisbon, Portugal, 2020.  
Source: Authors (2020)

The category with the most registered units was “Evidence-based decision making”. Participant value: the negotiation of decisions as a team, clarity about the intentions behind decisions, predictions of the results, and reflecting on actions and problem-solving capabilities.

The involvement of participants in the project of translation of knowledge was guaranteed by a set of activities, among which a meeting was carried out before the CT, to negotiate objectives and activities (for example, a literature review with scientific methodology, data collection, data analysis, activities, and scientific dissemination, the creation of products to transfer knowledge into the clinic, among others). This was the starting point for the active participation of the student, who received supervision in the activities and participation in the team meetings in which, often, questions and doubts about how to introduce evidences in clinic emerged. These led to reflections on the process, so it could be done safely:

*[...] considering the positive and negative aspects, deciding the best way to carry them out, predicting results, and there was always someone to ask about the risks (...) we had to consider all angles. (E6)*

Reflecting on the actions raised further questions on the best ways to carry them out and the respective consequences of the decisions. It implied confronting the possibilities of performing the actions, that is, confronting the knowledge understood as theoretical, which was learned in classes that were mainly theoretical, in addition to the elements observed the context.

*[...] to think it could be different, if it was done in this or that way. (E3)*

The discussion and the negotiation involving extra-curricular activities were cross-sectional, from the perspective of reaching the CT objectives. This increased the intentionality in the way students carried out their interventions. Integration allowed for a stronger feeling of belonging to the service, allowing more questions to be raised, doubts to be clarified, and making it possible to integrate routine knowledge and practices that were essential for decision making.

*[...] talking openly about our doubts, uncertainties, made us feel certain that the means implemented were the correct ones. But this posture was common throughout the internship itself, I found myself asking questions about the techniques and interventions with no fear, not as a frightened student under evaluation, but as a part of the team, who, like any other, must discuss to decide. (E2)*

Regarding the category Scientific literacy (RU=33), the following subcategories emerged: Transferring knowledge; Evaluating investigations; Interpreting results; and Communicating knowledge. Participants valued the fact that they learned how to transfer knowledge in a way that allowed them to integrate routine practices that are essential to build an EBP.

*[...] helped thinking about the process of transferring what we learn before we go to the internship to provide care. (E7)*

The development of this competence was possible because the activities related to the evaluation and interpretation of study results gave support to the projects, including the monograph required to finish the student's graduation. This made it possible to introduce more or less complex interventions in clinic, which induced new ways to perform or changed current paths of action.

*[...] Our project implied in the creation of a consultation to monitor the hospitalized patients in intensive care, even after clinical discharge. We carried out a research and found the results of the evaluation of other consultations, which helped defining the type of consultation, the instruments used, and the interventions implemented (...) the analysis of*

*the type of studies and their quality was a challenge, but it made sense to understand why. (E1)*

Still in this category, it is relevant to consider that four participants valued their experience participating in international journeys with posters to spread information about the project.

Participants appreciated interdisciplinary work (RU=26), stating that, in some services, the fact that the multidisciplinary teams are involved in the project promotes a fast integration in which professionals are more committed not only to give support to the extracurricular activity, but also to actualize the results of the learning that is predicted for CT:

*[...] Since the internship began we started in parallel with a safe transition (...) since the beginning I was accepted as one of the team, I was not a student, I was a member of the team with my functions and tasks like them... there was no difference. (E4)*

The fast integration and the acceptance of the student from the project has advantages for the teaching learning process:

*[...] reduces the uncertainty that is in all period of CT, caused by the lack of knowledge of the teams, its dynamics, and the expectations for our performance. (E7)*

Interdisciplinary work is a basic work instrument, which enables the teamwork with different professionals, in complex interdependence levels and impacting in the results of patient care.

The pathway that is started with the integration in the services enables interdisciplinary work involving students and professionals towards a common and cross-sectional goal, regardless of their professional category:

*[...] I was surprised when they told me to sit down and started talking to me as to an equal, they wanted to know my perspective about the medical and nursing consultations (...) what I said was taken into account and I felt that I gave a contribution. (E2)*

The teamwork, the fast integration, and the receptive attitude of the professionals with regard to the students increased their feelings of belonging (the I being part of the team), making interpersonal relations easier and mitigating power relations that form inside and between teams.

The analysis of the findings makes it possible to understand current activities and the process of transferring knowledge, which promote theoretical-practical integration. The projects bring innovation and changes in the practices, which implies in a justification (the why?) of the activities. There is a necessity to find what one knows about the subject and how to introduce it in the clinic (adaptation to the context). This category is revealed in the oral discourse through the perception that the experience contributed to soften the so-called hiatus between theory and practice:

*[...] the participation in the project made it possible to find that knowledge is pertinent and can be applied. (E3)*

This integration of theoretical knowledge in action makes it so the integration of "theoretical content" is carried out consciously in the clinical context, undermining the notion that theory and practice are two separate worlds, as the fragments of the discourse of two students, shown below, indicate:

*[...] to see how you can apply in practice what you learned at school. (E6)*

*[...] in school we learn, but we do not always see practical examples that are so close to the theory. (E8)*

The category which was expressed the less (RU = 15) is Self-learning and its respective subcategories: Knowing how to question; Autonomy and responsibility; and Motivation to learn. The involvement in the activities of the Safe Transition process increased the responsibility over the results that had to be obtained, provided them with autonomy and motivated them, as the following extracts express:

*[...] to know that our work will contribute to a project, later, motivates us to learn and do well. (E2)*

*[...] in our specific case, our research [Integrative Literature Research] provided results that allowed for the implementation of a follow up consultation in the [intensive care] unit and that will later lead to changes in the care provided by the service (...) as we become aware of how important it is, we start working more. (E5)*

## DISCUSSION

The findings of this study suggest that positive elements emerged from the active participation of the students in the project of Translating Knowledge into clinic, especially regarding evidence-based decision making and scientific literacy. Knowledge in health, as well as the emergence of multiple models to transform evidence in policies and practices aiming to implement sustainable improvement<sup>(9,15)</sup> have translated into quality of life for the population and decreases in the cost of health<sup>(1)</sup>.

The results tend to confirm that, in addition to increasing knowledge about the investigation, the participants develop important competences for EBP, such as evidence-based decision making, learning how to question, knowing how to transfer their knowledge into the clinic, evaluating investigations, interpreting results, and communicating science. Other studies subsidize these findings, recommending that the involvement is an important strategy to acquire knowledge and develop competences to adhere to true EBP as future workers<sup>(15-17)</sup>.

An active participation contributes to provide a high-level education. Considering the findings, we corroborate the opinion of other authors about the need to invest in quality clinical practice environments and improve the supervision and the evaluation of the practice of the student<sup>(1,18)</sup>.

Learning, in the context of CT, enables the implementation of interventions that can solve problems, improve care, and diminish hospitalization times, promoting the articulation between levels of care<sup>(1)</sup>. The clinical contexts and situations of the diseased are becoming increasingly complex, demanding an increase in scientific abilities<sup>(6)</sup> not only in regards to the scientific Literacy of the professionals, but also to facilitate the theoretical-practical integration and strengthen new learning experiences<sup>(1)</sup>.

Furthermore, the creation of efficient experiences in learning promotes the acquisition of nursing knowledge. It also has the potential to contribute for the health of the community<sup>(16,19)</sup> and can strengthen the results of learning experiences in CT itself<sup>(1)</sup>.

The analysis of our findings reiterates the results of other studies which conclude that the integration of students in research projects increases their levels of motivation<sup>(20)</sup> and develops their competences for interprofessional work<sup>(3,13)</sup>. The students feel motivated to guide their learning to answer to the inputs from the context. Despite having more work, they show more enthusiasm and motivation, because they can see their contribution in the short term, manifested in the changes that are instituted in the services. It is important to develop enthusiasm and enjoyment towards investigation and its continuous relevance<sup>(21)</sup>.

This research shows that the decision about actions in the clinic is more thought out and discussed in the team, implying in reading, analyzing, and transferring the knowledge acquired using different methods, increasing the safety of transferring of the knowledge produced into health care. Other studies reiterated that this involvement brings benefits associated to knowledge and motivation, finding that associated activities helps in the progress of the investigation<sup>(3,6,13,16)</sup>.

It stands out that, since this is an extracurricular activity, the professors must guarantee that learning experiences can become evidence-based practice in the context of clinical practice, where nursing care, inserted in an interprofessional cooperation network, becomes more complex<sup>(13,21)</sup>.

The participation favored interdisciplinarity and the integration with participants, showing the feeling of belonging and of wellbeing in the service. Participating in an EBP program enables the students to get to know many roles and develop capabilities to work in interdisciplinary teams<sup>(3)</sup>. Although it seems unconnected to the EBP, the integration and communication within and between the teams is extremely importance, since the students can, in these activities, take leadership actions and promote teamwork<sup>(17)</sup>, all the while developing fundamental communicational competences for the provision of care in the context of health. The objective is that they will be capable to mobilize these to establish a therapeutic relationship with the client<sup>(22)</sup>.

The findings here show they have the intention of continuing to value the EBP as future workers. However, it is impossible to predict this impact, since the time between the experience and the FG is short, which can influence their intentions. This aspect should be explored in future studies. It should be mentioned that this is an exploratory study, limited to a very specific context, but whose results contribute for a discussion around the idea that being part of researches during the licensing course is an emerging point of focus that can help students develop the abilities and competences a health professional needs nowadays<sup>(1,16)</sup>.

Some researchers found that students have low levels of knowledge, attitude, and little intention to implement EBP<sup>(23)</sup>. However, our findings reiterate the importance of their continued participation in this type of project. The university has the moral duty to license nurses who are competent to provide a certain level of quality and evidence in nursing care<sup>(1)</sup>.

The limitations of this study are associated to its method and context. The group interview may have influenced the interaction and the individual responses. The research evaluated an experience in a specific and limited context and cannot be generalized. However, since investigation is still scarce in this field, opting for a qualitative study made it possible to explore the phenomenon being studied. The findings and their discussion will guide future research.

## FINAL CONSIDERATIONS

The literature review made it possible to observe that there is little evidence about the involvement of undergraduate students in research projects. The findings of this focal group reiterate the need to rethink the place of evidence-based practice in the curricula of licensing nursing courses, not only regarding their theoretical content, but also creating opportunities for the students to participate in investigations, promoting the acquisition of knowledge, attitudes, and competences.

The discourse of the eight participants of this exploratory and qualitative study generated five categories, each with its subcategories, about the involvement of the



students in a project of translation of knowledge: Evidence-based decision making; Scientific literacy; Interdisciplinary work; Theoretical-practical integration; and Self-learning.

This research has practical implications. Guiding the students using a more collaborative posture in clinic is a challenge for tutors and brings benefits for health devices, with the introduction of evidence in practical contexts.

## REFERENCES

1. Baixinho CL, Ferreira Ó, Cardoso M, Nascimento P, Pedrosa R, Gonçalves P. Autopercepção dos estudantes sobre a participação em atividades extracurriculares de transferência de conhecimento: o exemplo da Transição Segura. NTQR. [Internet]. 2020 [accessed 30 nov 2020]; 2. Available from: <https://doi.org/10.36367/ntqr.2.2020.588-601>.
2. Mena-Tudela D, González-Chordá VM, Cervera-Gasch A, Maciá-Soler ML, Orts-Cortés MI. Effectiveness of an Evidence-Based Practice educational intervention with second-year nursing students. Rev Latino-Am Enfermagem. [Internet]. 2018. [accessed 27 fev 2020] 26. Available from: <https://dx.doi.org/10.1590/1518-8345.2502.3026>.
3. Slattery MJ, Logan BL, Mudge B, Secore K, Reyn LJ von, Maue RA. An Undergraduate Research Fellowship Program to Prepare Nursing Students for Future Workforce Roles. J Prof Nurs. [Internet]. 2016 [accessed 27 fev 2020]; 32(6). Available from: <https://doi.org/10.1016/j.profnurs.2016.03.008>.
4. Sun JH, Liu JE, Wu Y, Li SJ. The effects of the student-centered clinical nursing practice mode based on the action research for clinical practicum of undergraduate students in Beijing, China. Procedia Soc Behav Sci [Internet]. 2014 [accessed 26 fev 2020]; 141. Available from: <http://doi.org/10.1016/j.sbspro.2014.05.146>.
5. Egilsdottir HÖ, Byermoen KR, Moen A, Eide H. Revitalizing physical assessment in undergraduate nursing education - what skills are important to learn, and how are these skills applied during clinical rotation? A cohort study. BMC Nurs. [Internet]. 2019 [accessed 27 nov 2020]; 18(41). Available from: <http://doi.org/10.1186/s12912-019-0364-9>.
6. Einarsen KA, Giske T. Nursing students' longitudinal learning outcomes after participation in a research project in a hospital. IPDJ. [Internet]. 2019 [accessed 27 fev 2020]; 9(1). Available from: <https://doi.org/10.19043/ipdj.91.004>.
7. Aglen B. Pedagogical strategies to teach bachelor students evidence-based practice: a systematic review. Nurse Educ Today. [Internet]. 2016 [accessed 30 nov 2020]; 36. Available from: <https://pubmed.ncbi.nlm.nih.gov/26375570/>.
8. Vera F. Research skills in nursing undergraduate students: a case study at a Chilean private university. OSJ. [Internet]. 2020 [accessed 26 fev 2020]; 5(3). Available from: <http://doi.org/10.23954/osj.v5i3.2487>.
9. Kitson A, Brook A, Harvey G, Jordan Z, Marshall R, O'Shea R, Wilson D. Using complexity and network concepts to inform healthcare knowledge translation. Int J Health Policy Manag. [Internet]. 2018 [accessed 26 fev 2020]; 7(3). Available from: <http://doi.org/10.15171/IJHPM.2017.79>.
10. Flynn R, Albrecht L, Scott SD. Two Approaches to Focus Group Data Collection for Qualitative Health Research: Maximizing Resources and Data Quality. Int J Qual Methods [Internet]. 2018 [accessed 01 dez 2020]; 17. Available from: <https://doi.org/10.1177/1609406917750781>.
11. Krueger RA, Casey MA. Focus groups: a practical guide for applied research. 5 ed. New Delhi: Sage; 2014.
12. Silva IS, Veloso AL, Keating JB. Focus group: considerações teóricas e metodológicas. Rev Lusofona

- Educ. [Internet]. 2014 [accessed 27 fev 2020]; 26(26). Available from: <https://revistas.ulusofona.pt/index.php/rleducacao/article/view/4703>.
13. Loura D, Bernardes R, Baixinho CL, Rafael H, Félix I, Guerreiro M. Aprender em projetos de investigação durante a licenciatura em enfermagem: revisão integrativa da literatura. NTQR. [Internet]. 2020 [accessed 02 dez 2020]; 3. Available from: <http://doi.org/10.36367/ntqr.3.2020.293-304>.
  14. Baixinho CL, Ferreira Ó, Marques FM, Presado MH, Cardoso M. Transição segura: um projeto da transferência do conhecimento para a prática clínica. In: Costa AP, Sánches-Gómez MC, Cilleros MVM. A prática na investigação qualitativa: exemplos de estudos. Oliveira de Azeméis: Ludomédia; 2017. p. 57-80.
  15. Baixinho CL, Costa AP. Do hiato no discurso teoria - prática à clinica baseada na unicidade do conhecimento. Esc. Anna Nery [Internet]. 2019 [accessed 02 dez 2020]; 23(3). Available from: <https://doi.org/10.1590/2177-9465-ean-2019-0141>.
  16. Long A, Bischoff WR, Aduddell K. Research prescription for undergraduate students: research mentoring in a small liberal arts university. J Prof Nurs [Internet]. 2019 [accessed 27 fev 2020]; 35(3). Available from: <https://doi.org/10.1016/j.profnurs.2018.12.007>.
  17. Jansen DA, Jadack RA, Ayoola AB, Doornbos MM, Dunn SL, Moch SD, et al. Embedding research in undergraduate learning opportunities. West J Nurs Res. [Internet]. 2015 [accessed 28 fev 2020]; 37(10). Available from: <http://doi.org/10.1177/0193945915571136>.
  18. Heidari MR, Norouzadeh R. Nursing students' perspectives on clinical education. J Adv Med Educ Prof. [Internet]. 2015 [accessed 26 fev 2020]; 3(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4291507/>.
  19. Jong G de, Meijer E, Schout G, Abma T. Involving undergraduate nursing students in participatory health Research: Implications from the Netherlands. J Prof Nurs [Internet]. 2018 [accessed 27 fev 2020]; 34(6). Available from: <https://doi.org/10.1016/j.profnurs.2018.04.001>.
  20. Kurtz CP, Kessler TA. An undergraduate collaborative team model to engage nursing students in research. J Nurs Educ Pract. [Internet]. 2017 [accessed 30 nov 2020]; 7(7). Available from: <https://doi.org/10.5430/jnep.v7n7p112>.
  21. Kim JS, Gu MO, Chang H. Effects of an evidence-based practice education program using multifaceted interventions: a quasi-experimental study with undergraduate nursing students. BMC Med Educ. [Internet]. 2019 [accessed 01 mar 2020]; 19(71). Available from: <https://doi.org/10.1186/s12909-019-1501-6>.
  22. Graan AC van, Williams MJS, Koen MP. Professional nurses' understanding of clinical judgement: a contextual inquiry. J Interdisc Health Sci. [Internet]. 2016. [accessed 27 mar 2020]; 21. Available from: <https://doi.org/10.1016/j.hsag.2016.04.001>.
  23. Ashktorab T, Pashaeypoor S, Rassouli M, Alavi-Majd H. Nursing students' competencies in evidence-based practice and its related factors. Nurs Midwifery Stud. [Internet]. 2015 [accessed 27 mar 2020]; 4(4). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4733497/>.

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