

International collaboration of early-stage researchers in nursing science: A discussion paper

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Abstract

Nursing is a global profession and international collaboration of early-stage researchers (ESRs) builds their capacity as future nursing scientists. This discussion paper focuses on international collaboration of ESRs in nursing science. The aim of this paper was to clarify the optimal collaboration forms and identify challenges and recommendations for supporting individual researchers and organisations to strengthen international collaboration for the ESR phase. The paper is based on previous literature and authors' experiences in the collaboration between two countries by the Baltic Sea, Estonia and Finland. In future, more discussion is needed on how to establish international partnerships and collaboration in researcher career building globally: expanded and long-term collaboration is needed to develop nursing science but also to improve nursing care, patient outcomes and, finally, to benefit society.

Keywords

early-stage researcher, international collaboration, international cooperation, international educational exchange, internationality, nursing

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Introduction

International collaboration is an inherent part of capacity building in nursing science education. In previous research, international collaboration has been defined as actors from two or more countries partnering for a shared goal.¹ International collaboration contributes to the capacity building of individual researchers, especially in the early stages of their careers. Early-stage researcher (ESR) refers to a researcher who is at the beginning stages, i.e. the first years of their research career, and is building independence in research. Among them, doctoral researchers study under supervision and aim to attain a PhD, while recognised researchers already hold a PhD and are developing their independence.²

Currently, international collaboration is an elementary part of career building for ESRs. They are expected to build knowledge, expertise and soft skills in research, such as intercultural management^{3,4} and integrated language, communication and environment skills in an international context.² International collaboration with and among ESRs is an investment in future research: it can lead to positive outcomes for several stakeholders, such as nursing science,⁵ sustainable societies, and the health and well-being of the population.^{6–8} Therefore, the basis for international collaboration is to benefit humankind.^{6–8}

Global perspectives and internationalisation have earned extensive policy support in education and research. In Europe, international collaboration has a relatively long history as a common endeavour for developing doctoral education and as a strategic priority for ESRs.^{6,9–11} The EU directs students,

teachers and researchers in different stages of their research careers towards internationalisation. These efforts are seen, for example, in the harmonising project of higher education with the Bologna process^{6,12} and the job, funding and career development portal EURAXESS.² Internationalisation and collaboration are seen to be as important as any other key subject and are deeply written into the curricula and guiding documents of education and research.^{6,13,14} Education and research are vital in exploring future phenomena in a globalising world, strengthening international collaboration^{15–18} and in creating regional or global initiatives and development.^{8,17,18}

This discussion paper focuses on the international collaboration of ESRs in nursing science. The paper is based on previous literature and the authors' experiences in the collaboration between doctoral education at the University of Tartu, Estonia¹⁹ and the University of Turku, Finland.^{20,21} Collaboration in nursing science between Tartu and Turku originated in the early 2000s, starting with mutual visits, and was then strengthened with research, e.g.^{22–24} Since 2020, there has been educational collaboration of ESRs, aiming to

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build their international capacity, promote their careers and help them proceed with their doctoral research. The aim of the present paper was to clarify the optimal collaboration forms and identify challenges and recommendations for supporting individual researchers and organisations to strengthen international collaboration for the ESR phase.

The potential of internationality for early-stage researchers and beyond

International collaboration is a way to unleash the potential of ESRs. It is the incentive for building international experience and competence in nursing science,^{3,4} provides opportunities to advance research skills and build up the career.¹⁶ Indeed, international reputation is often used as an assessment criterion in the promotion of researchers,^{4,25} and international collaboration is known to be associated with higher citations.^{1,26}

Clinical practice benefits from the results of investing in the potential of ESRs. Nursing science aims to provide output to nursing, for example, by advancing clinical nursing, administration and education.^{5,27,28} International collaboration produces international research evidence for nursing and supports the implementation of research results and therefore reinforces the capacity to address global and complex issues in nursing and health.^{16,29} International collaboration is called to address the global nursing shortage, which allows the sharing of best practices in nursing, education and professional development opportunities.³⁰ Researchers are expected to create interaction between local and global settings, build research capacity, support open science and societies, and avoid cultural and societal isolation. Unleashing the potential helps to lead to global and inclusive dialogue that will inform health policies and contribute to the health and well-being of the population, sustainable societies,^{8,16,18,29} healthy competition, research advancements and economic development.^{6,16} The ESRs are in an important position to advance local and global interaction in providing nursing output.

International collaboration serves as a source of trust, understanding, openness and connections within humankind and therefore promotes social justice.^{7,8} In research, it enables a global perspective and international efforts, which is required for working for Sustainable Development Goals and planetary health.^{6–8,18} Nursing science is no exception. Nursing is a global profession and an irreplaceable factor in the global health system.^{7,8,18,31} The benefits are not only limited to ESRs' career advances, but international collaboration can also increase the capacity to address complex problems in different health systems^{8,16,18,29} as well as improve the impact and quality of research.^{5,29,32} Even in times of global crises, social restrictions caused by the COVID-19 pandemic gave input to new international approaches to research data collection and even intensified collaborative ties.⁵

The forms of international collaboration for the benefit of early-stage researchers

ESRs benefit from both formal and informal international collaboration forms. Formal collaboration includes mentoring,

courses, seminars, exchanges, visits and mobility, which involve international and global educational elements.^{7,11,29,31} First, mentoring supports the internationalisation of the doctoral researcher, the quality of research, the merits of the mentor and the sharing of good practices.^{29,31,33,34} Second, international courses build expertise, support knowledge exchange between the departments of nursing science and establish relationships among ESRs and their supervisors.^{5,16,33} Third, international seminars as educational collaboration facilitate career development.³⁵

Our example of formal, planned collaboration started with ESRs' participation from Estonia in the international doctoral courses at the University of Turku. After connections were established, professors from both universities of Tartu and Turku organised joint doctoral seminars to prepare doctoral dissertations in Tartu. In line with earlier literature,³³ collective discussions in these seminars have given both confirmation and new perspectives for the research.

In addition, international exchanges, visits and mobility are formal forms of collaboration providing opportunities to widen the horizon.^{5,16} Between Estonia and Finland, teacher exchanges and visits supported by European Union initiatives^{36,37} have created opportunities for doctoral researchers to have formal visits. They have led to, for example, the production of a Finnish publication on healthcare ethics edited by doctoral researchers themselves.³⁸ International mobility can be promoted by different doctoral networks. For example, the Department of Nursing Science from Turku leads the Baltic Sea Region Network in Personalized Health Care, which organises events such as summer schools and conferences for doctoral researchers.^{39,40} The networks allow ESRs to gain international research training^{33,39} and get experience in organising and participating in international events.^{27,31,39}

Apart from collaboration with primarily educational elements, formal forms involve international research and industrial collaboration. Regarding the research collaboration, as indicated earlier, internationality provides opportunities for improving the quality of the research, opening new perspectives and crediting the researchers.^{4,5,32,33} This includes, for example, adding global perspectives to research plans, reaching for funding, collecting international data and utilising international expertise in data analysis.^{4,5,16,33} ESRs can produce international publications by co-authoring with researchers from a variety of countries.^{4,5,32} As for industrial collaboration, it can involve an exchange of expertise, doctoral projects or programmes, short-term internships or secondments, joint research laboratories or joint training programmes.⁴¹

Finally, informal collaboration is another beneficial option for ESRs. Based on our experience during the mutual visits between the Universities of Tartu and Turku, knowledge exchanges, joint dinners and informal discussions with peers highlighted the importance of peer support for ESRs in both countries, as also identified in earlier literature.^{5,27,33,39} These inspiring experiences of international collaboration^{27,39} have given ESRs motivation to drive forward their doctoral research, broadened mutual understanding of the importance of networking between colleagues^{31,33} and lowered the threshold for applying for international opportunities later on.³¹ Moreover, for many, these visits did not require travelling,

highlighting the productivity and sustainability of internationalisation at home.^{6,39}

In summary, different strategies are available for ESRs to develop their international collaboration. The optimal forms of international collaboration provide ESRs with academic knowledge, skills and various new scientific and societal perspectives and networks. However, optimising collaboration requires individual planning by ESRs and also new openings and initiatives to develop organisational and academic structures to facilitate the ESR paths in nursing science.

Challenges and recommendations for advancing the international collaboration of early-stage researchers

Some challenges still remain in international collaboration based on the literature. Specific to ESRs, some perceive the requirement for international collaboration negatively: living and travelling abroad can create a conflict between work and personal life⁴² and accepting a job offer abroad may not be an option.⁴³ ESRs are also concerned about job security, funding^{33,43,44} and the pressure of doing internationalised research, which may lead to unhealthy competition.^{42,43,45} In addition, cultural, economic and political contexts can distort international collaboration.^{5,27,29,34,44} Differences in nursing education,^{16,27,29,46} limited resources^{31,34} and logistical challenges⁵ can hinder collaboration. Lack of novelty in research involving international collaboration can be due to costs,¹ language barriers^{1,5,28,29} or limited implicit knowledge due to remote communication.^{1,5} Specific legal requirements must be considered in international research data management⁴⁷ and intellectual property rights.⁴⁴ These challenges underscore the urgency of ensuring capacity building in nursing science education and in advancing the careers of ESRs.

In light of these challenges, recommendations for successful international collaboration are proposed. These recommendations are divided into researcher-led, institution-led and structural recommendations. As for the researcher-led recommendations, the competitiveness and high intensity of research responsibilities, such as the constant pressure of publishing, participation in projects and seeking funding,^{44,48} can be both challenges and grounds for international collaboration. Yet, reputation-seeking should not be the driving force.¹ It is recommended that equal,³⁴ long-lasting partnership³² and commitment²⁷ are needed for the collaboration to reach its full potential. In addition, ethical research principles of honesty, accountability and respect need to be addressed and agreed upon in the collaboration.^{44,49}

Regarding institution-led recommendations, support from seniors, employers and institutions is a prerequisite for ESRs for successful international collaboration.^{6,33,43} ESRs can be affiliated with several institutions in industry, research organisations or universities.² This is an opportunity since ESRs have often clinical experience in addition to scientific understanding; therefore, they can produce evidence to practise, which puts them fairly optimal position to promote health and nursing. International collaboration outside academia or in institutions with low resources for research provides opportunities for career building when ESRs can find mentors or collaborators

in the same field.^{33,35} International professional networking and institutional collaboration can support professional growth, create joint research^{4,35} and provide means to develop expertise on specific topics or populations.^{4,33} It is therefore recommended to implement strategic planning at the institutional level⁶ and utilise the variation of experiences and competencies of research groups for fostering future development. Furthermore, it is worthwhile to address the differences in resources and preparedness for the internationality of both individuals and institutions.⁶

In educational institutions, the critical role of ESRs has been addressed in the Nordic countries.⁴⁸ After qualifying as a PhD, recognised researchers do not usually have formal education, yet they can be offered academic support, mentoring, participation in postgraduate courses and a community of ESRs.^{48,50,51} It is noteworthy that doctoral education is established internationally, but there is high variation in post-doctoral programmes and education.^{50,52} For example, at the University of Turku, there is a post-doctoral programme in nursing science aiming to give a basis for proceeding on a research career.²⁰ The requirement for internationality, however, is a common feature for ESRs across Europe.^{2,3,52} As a recommendation, more attention should be paid to the continuum of the career from doctoral researcher to the post-doctoral phase in future, as knowledge of the career of post-doctoral researchers in nursing is very limited.⁵³ International collaboration in this continuum could support achieving shared research projects with larger societal impacts.

In terms of structural recommendations, international collaboration seems to be the strongest among countries with high gross domestic product (GDP), a high number of nurses and a high total population, especially in middle- and high-income countries, which can be due to the economic stability that allows them to invest in and support research capacity.⁵⁴ This highlights the importance of investing in research and education when striving for international collaboration for ESRs. Knowledge of each collaborator's nursing context and acknowledging the power imbalances, for example between the global south and north, are recommended.^{18,27,34}

In summary, the challenges for ESRs' advanced international collaboration concern practical issues of individual resources or lack of organisational structures or support. It is recommended that ESRs' international collaboration should be integrated into the career planning of individual researchers and also in the strategic planning of academic institutions. In addition, international collaboration should have both short- and long-term goals and its contribution to the ESR career building should be evaluated.

Conclusion

International collaboration in the ESR phase should be considered a reciprocal activity, which produces a variety of possibilities for ESRs as well as nursing science and society. For individual ESRs, international collaboration supports their capacity and career building. It is an opportunity to widen ESR's scientific perspectives and understanding of healthcare systems and research priorities globally.^{28,33} Both formal and informal international collaboration advance an individual's

career and assist in building expertise, visibility and reputation in one's field.^{4,33} It is noteworthy that ESRs often have connections in both academia and clinical healthcare, which puts them in optimal positions to close the gap between practice and research. These advantages have been experienced by ESRs in our Estonia–Finland collaboration.

The international collaboration of ESRs has the potential to benefit people beyond research. International mutual goals and collaboration can generate high-quality research and evidence-based nursing,⁵⁵ and finally, increase the appeal of nursing as a profession. Eventually, the results of international collaboration can contribute to the health of the population and support healthy, sustainable and peaceful societies. However, the practical and institutional challenges of resources and supportive structures need to be considered and solved to achieve the best possible short- and long-term benefits of ESRs' international collaboration in nursing science.

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