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Research Paper

The development and evaluation of a short-term international student research and educational program



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ABSTRACT

Objectives: This study aimed to describe the "how-to" details and processes for developing and evaluating a short-term international student research and education program.

Methods: This study included two parts: development and implementation, and evaluation of the program. A foreign doctoral nursing student requested to visit the West Virginia University School of Nursing for research training and academic teaching experience. The global nursing program coordinator and the lead mentor met and identified the program basis and team participants. Learning activities were related to this student's interest in older adults and in-home end-of-life care, included four contents: research; educational engagement; practice/clinical engagement; special activities & professional development training and courses. The program evaluation was conducted at the end of the six-month visit using a focus group and an anonymous short survey. Participants (n = 10) included the host university's faculty, graduate students, and one short-term international student.

Results: Content analysis of the participant's short survey answers and the focus group discussion resulted in three themes: 1) lessons learned from participating in the program (enhanced diversity in education and research, gaining new global healthcare knowledge, and self-reflection on and promoting cultural awareness); 2) program barriers and challenges (the visa application process, the English language barrier, the lack of public transportation in the town, and scheduling conflicts); and 3) strategies to overcome these barriers and challenges (adding cultural diversity information into curriculum; attending English proficiency with others in the class; using different communication techniques; continuous collaboration with the University's Office of Global Affairs for the Visa application process; providing interactive experiences). All participants rated their engagement in the program as very satisfactory (*Mean* = 4.67, *SD* = 0.50), and highly impacted their nursing skills in research, teaching, and clinical practice (*Mean* = 4.67, *SD* = 0.50).

Conclusions: All the participants have gained some experience in this program, which can be used for future teaching guidance. Further, international nursing students need assistance to adjust and thrive in the host university learning community. Faculty must be culturally sensitive, understand the visiting foreign nursing student' learning needs, and advocate for an environment suitable for enhancing the students' learning.

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What is known?

- International research and educational training experiences are reported as an advantage for international (foreign) students.
- Team mentoring with international graduate students and junior researchers has known advantages.
- International visiting nursing programs can promote collegial and collaborative approaches to address global health challenges.

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What is new?

- Program engagement impacted host participants' skills in research, teaching, clinical practice, and learning how nursing care is conducted in other countries.
- Interactions with the international (foreign) student prompted host participants' self-reflection and cultural awareness, improving their understanding of different healthcare systems.
- As incorporated into this program, essential training components will prepare students for their future academic and research roles.

1. Introduction

There were over 6.4 million international students around the world as reported in 2022, which is 3 times larger than 1.6 million in 2000 [1]. Among the most common host universities, the United States (U.S.) hosted the majority of international students (15%), followed by United Kingdom (10%) and Canada (9%). Most of the international education programs are long-term (i.e., 2–4 years for graduate programs). Notably, there are many universities in China and other countries that offer various degrees taught entirely in English, reducing the language barrier that previously discouraged international students from these countries [2]. However, the growth of the global international program has been declined due to COVID-19 restriction policy [3].

Specifically, the U.S. has a long history of highly valued research and educational program opportunities for visiting international students [4–7]. The International Network of Doctoral Education in Nursing recommends foreign doctoral students participate in learning opportunities with mentors in other countries [8]. A recent survey of 196 doctoral students across 11 East and Southeast Asian countries indicated that adding academic teaching training to the research mentorships for visiting doctoral students supports their future faculty roles [9].

For years, West Virginia University (WVU) School of Nursing, one of the healthcare universities in the U.S., has hosted students and faculty from all over the world. Our school has a Coordinator of International Programs who works with the WVU's Council of International Programs. The unique characteristics of our current program was developed for short-term 6-month program for the foreign doctoral students who studied in the country of origin (i.e. Thailand) but sought further education and training to enhance their research, teaching, clinical and practice, and cultural experience in the Western country (i.e., U.S.). This is the first short-term (6-month) program for research faculty using a team-based approach to engage a foreign doctoral student in academic teaching in our school. The foreign visiting student in this program is a faculty from Boromarajonani College of Nursing, Thailand [10]. WVU School of Nursing's Associate Dean of Research, the lead mentor in the 6-month program, is originally from Thailand.

WVU School of Nursing offers professional educational programs from baccalaureate to doctoral degrees [11]. The faculty are specialized in areas of teaching, clinical practice, and nursing research. The 6-month program aimed to train the visiting doctoral nursing student in advanced academic skills and team-based research activities [12]. Foreign visiting students are assigned to participate in the research program that matches their clinical research interests.

This paper describes the procedures used to evaluate the shortterm research and educational program [13,14]. The program's impact on School of Nursing graduate students and faculty participants was assessed by a short survey and a focus group discussion [15,16]. The barriers and challenges experienced during the program development and implementation were discussed. In addition, the strategies used to cope with those challenges were also documented.

2. Methods

2.1. Study design

This study was carried out to provide a step-by-step guide on "how to" develop, implement, and evaluate the short-term international student research and educational program. The study occurred at the WVU School of Nursing within a large academic medical center with multiple clinics and hospitals in a rural state.

2.2. Ethical considerations

The institutional review board of the West Virginia University Health Science Center approved this study, protocol number 2205583387. Participation in these evaluative processes was voluntary and confidential. A cover letter was sent to program participants describing the anonymous evaluation survey and the focus group discussion.

2.3. Development and implementation of the program

A foreign doctoral nursing student requested a short-term visit for research training and academic teaching experience. The global nursing program coordinator and the lead mentor met and identified the program basis and team participants. The domestic team was established initially when the basic objectives of the visit program were related to the foreign doctoral student's goals. This team included three research faculties, three teaching/clinical faculties, two graduate students, and one research staff who provided key education and research learning activities and engaged in program evaluation.

The visit implementation step-by-step process is described in the following order: 1) the initial contact via online (Zoom) meeting to discuss the overall goals of the visit; 2) the second Zoom meeting took place to guide the visa application process (the required documentation for the J1-Scholar visa was completed with assistance from the University's Office of Global Affairs and the Global Engagement Office.); then, 3) subsequent Zoom meetings with the lead mentor, who has expertise in the student's research field of interest, further elaborated on the learning activities to achieve the goals [17]. Specifically, the international student's doctoral research was focused on designing and testing a rural home-based nursing intervention for older adults. Therefore, the program's activities began with the student's engagement in the host faculty mentor's funded research projects. The mentor's funded research tested various in-home nursing care interventions for older adults with serious health illnesses and guided their family caregivers in a rural region [18-20]. Thus, the lead mentor projects aligned well with the visiting student's goals [21].

The key mentoring content design schemes from the U.S. National Research Mentoring Network [22,23] and the mentorship guidelines on palliative care [24] were used to develop learning activities related to this student's interest in older adults and inhome end-of-life care. Our program included planning for effective learning activities to strengthen the academic and research skills of the visiting student [25,26]. This program's mentorship included engagement in research conduct, team-based research approaches, and data analysis skills. The visit dates were negotiated to allow the host participants and the foreign students time to prepare. Eventually, a schedule for the visit activities was established, lasting from February to July 2022.

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The visiting student was involved in ongoing teaching and clinical activities to attain her academic goals. The school of nursing faculty and graduate students facilitated activities such as observation/discussion of clinical simulations. These experiences were integrated into the visiting international student's learning activities to train her for a future academic role. In addition, social and cultural activities around the campus were recommended for cultural exchanges. The host lead research mentor oversaw the student's goal-setting and self-evaluation discussions. Weekly formal and informal meetings with the host faculty mentor were scheduled to monitor the student's progress in each learning activity. Further, these meetings included the student sharing experiences and feelings, allowing verbal confirmation of her general health and psychological well-being [27,28]. Key learning activities in this short program are highlighted in Table 1.

2.4. Evaluation of the program

2.4.1. Participants

Study participants (n = 10) included host university faculty, graduate students, research staff, and one foreign doctoral student. The content analysis summarized the participants' responses to the short survey and focus group discussion conducted at the program's 6-month endpoint.

2.4.2. Data collection

Data collection for the program evaluation was conducted via a focus group and an anonymous short survey. The focus group's questions were based on previous evaluations of clinical programs that we developed and tested [15,29]. Three questions were asked during the focus group discussion: 1) What were lessons learned from engaging in collaborative team-based research and educational experiences with a visiting foreign doctoral student? 2) What were the program barriers and challenges? and 3) What were

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helpful strategies to overcome these challenges? Prompt questions used in the focus group [15] to encourage in-depth discussion were "Please give us examples of how best to communicate with the foreign student." and "Please explain more about your shared learning experience." The focus group session lasted 60 min and ended when no new topics (data saturation) were raised [30,31]. A professional transcriptionist recorded and transcribed the focus group verbatim. Confidentiality was maintained, as participants' names, unique titles, and personal information were removed from the transcripts. The digital record of the focus group discussion was deleted after the completion of the data analysis [16].

Data collected in the evaluation short survey were age group, gender (male, female, prefer not to answer), years in academia or nursing practice role (faculty or student), and previous experience with other international students (yes, no). Two 5-point Likert-type questions in the survey were: 1) Please rate the impact of your engagement in the global research program on your nursing skills (i.e., teaching, clinical, research. Response options were no impact [score = 1] to excellent impact [score = 5]); and 2) Please rate overall satisfaction of your engagement in the international research and educational program (Response options were very dissatisfied [score = 1] to very satisfied [score = 5]). Higher scores indicated high impact and satisfaction. An additional question posed was: Would you recommend team research and educational activities for other visiting foreign doctoral students in the future? Response options were "yes," "no," or "don't know." In addition to each question, the participants provided short answers clarifying their Likert scale rating: they also provided recommendations to improve the program. This survey took 15–20 min to complete.

2.4.3. Data analysis

The thematic content analysis method was used to classify words or phrases from the participants' written short answers and focus group transcribed data [16]. Three experienced qualitative

Table 1

Examples international research and educational activities.

Topics of the program	Planned international research and educational activities
1. Research (with research team members and lead mentor)	 Review and discuss team science research – National Research Mentoring Network. Research mentorship program on palliative care. Engage with the mentor's research team and observe research interventions for home palliative family caregiving for older adults in rural Appalachia. Submit a manuscript of the preliminary research findings to peer-reviewed journal. Conduct a literature review on the intervention for people with dementia. Complete the national collaborative institutional training initiative (modules related to responsible conduct of research). Study/undertake statistics used in clinical trial (i.e. longitudinal cross-over design). Observe subject screening and enrollment in the clinical trial.
 Educational engagement (with nursing faculty and other health professionals) 	 Observe and participate in simulation lab for adult health and medical-surgical nursing. Discuss evidence-based practice and collaborative group education (interprofessional education, IPE) university program. Complete older adult cognition and health assessment training program. Observe and review patient education materials at West Virginia University Heart and Vascular Institute.
3. Practice/clinical engagement (nursing faculty)	 Attend the faith nursing community program and join community activities. Observe long term nursing facilities for geriatrics and palliative medicine and hospice services for older adults with dementia followed nurse (4 visits). Meet with school of nursing global nursing programs to join cultural/social activities (visit botanical garden, museums, local art and music programs).
4. Special activities & professional development training and courses (guide by multidisciplinary faculty and the lead mentor)	

researchers (U. Piamjariyakul, S. Shafique, W. Sanghuachang) independently coded the participant's responses and discussion data in this analysis. The three met to sort and categorize the topics into themes. The content that was aligned or had similar topics was grouped under key topic themes. Therefore, coding achieved 100 % agreement with coded themes [32]. The rigor and data richness of the study were enhanced by the triangulation of the anonymous individual short survey questions and the focus group discussion [15,16]. SPSS (version 28) was used to analyze the descriptive data.

3. Results

3.1. Participant demographics

Faculty and research team participants (n = 10) in the program participated in the evaluation short survey and focus group. Research faculty members ranged from 40 to over 50 years of age and had 1 to 6 years in the current position. All the Clinical/teaching faculty members were in their 40s years of age and had 6 to 12 years in their current position. (Table 2).

3.2. Findings from the focus group discussion

Content analysis results from both the short survey questions and the focus group were complementary and were grouped into three independent themes: 1) lessons learned from the program; 2) program barriers and challenges; and 3) strategies to overcome short-term program barriers and challenges. Themes and quotations from the short survey and focus group were as follows.

3.2.1. Theme 1: Lessons learned from the program

Participants discussed lessons learned from engagement in the international research and educational program, including 1) enhanced diversity in education and research, 2) gaining new global healthcare knowledge, and 3) self-reflection on and promoting cultural awareness.

(1) Enhanced diversity in education and research

The visiting international student described that having experiences with various research team members provided her with a good understanding of the essential skills needed in research. Many participants expressed their experiences interacting with international students as bringing diversity to education and research.

"Diversity always adds to the teaching and learning experience. Interacting with (visiting foreign doctoral student) can enhance my mentoring skills and shared experiences with research team members." (Participant 8)

"I have shared and learned culture from a foreign student, which enhances the global nursing experience." (Participant 7)

Table 2					
Characteristics	of the	interview	participants	(<i>n</i> =	10).

No.	Age group	Gender	Role	Years in current position
P1	50s	Female	Research staff	30
P2	40s	Female	Clinical faculty	7
P3	40s	Female	Clinical faculty	6
P4	40s	Female	Research faculty	1
P5	50s	Female	Research faculty	6
P6	40s	Female	International student	4
P7	40s	Female	Clinical faculty	12
P8	50s	Female	Research faculty	6
P9	20s	Female	Graduate student	2
P10	20s	Female	Graduate student	2

"It is also beneficial to get exposure to working with someone with a different culture and language than mine." (Participant 9)

"I truly feel I learn so much (i.e., about different healthcare approaches) from interacting with people from different backgrounds than mine." (Participant 9)

(2) Learning new global health knowledge

Co-learning (mutual) experiences were brought up by participants who engaged in the team-based research and educational program. One unique learning experience was related to a faithbased community nursing program and a different healthcare system.

"I never knew that it (faith-based community programs) could be implemented to enhance healthcare in such a systematic way. We collect data in the temple during the religious ceremony but never thought about developing a program that you can integrate into the curriculum that involves students in community-based projects." (Participant 6)

Another student shared, "The faith-based community programs are compelling because they are based on the people's beliefs and culture. We can develop trust and can implement it into many community programs." (Participant 3)

"I learned about community health in Thailand; their healthcare for the older adults focuses much more on prevention than intervention to treat the disease that is better prevented." (Participant 5)

"I learned that simulation nursing labs in Thailand nursing schools do not have multiple manikins as we have Learning how nurses perform skills and think regarding patient care from different cultures." (Participant 5)

"We must learn how healthcare is delivered in other countries and how we might benefit from those different healthcare models." (Participant 2)

"I observed some cultural differences and differences between the care of older adults in Thailand and the US. Most of the time, older adults in Thailand live with their family members responsible for caring for their older parents." (Participant 5)

"The first day I went to the nursing home, I didn't know what to expect. It was very different in Thailand, where only people living alone (or homeless) end up in nursing homes." (Participant 6)

"Simulation learning center here is very advanced [compared] to my country." (Participant 6)

The international student gained new research and educational skills.

"I had the opportunity to attend multiple professional development courses offered to the faculty at the health science center." (Participant 6)

"Collaborative Institutional Training Initiative (CITI) training offered multiple research training modules, which will be helpful when I return to Thailand." (Participant 6)

"I learned how to develop fidelity in family caregiving research." (Participant 6)

(3) Self-reflection and promoting cultural awareness

Participants had insights about their self-reflection, perceptions, and communication approaches when interacting with others from

different cultural backgrounds. Students shared their self-reflection and perceptions as:

"It makes me feel very grateful for the facilities and resources that we have in our hospital... things that we are used to as being the standard. I see how much it is different in her hospital in rural Thailand." (Participant 9)

Samples of the communication approach were "I observed that she (foreign student) was very shy and afraid to seek help." (Participant 1) "It makes me aware that I should explain things to make sure they are clear and simple to understand to students and patients." (Participant 7)

3.2.2. Theme 2: Program barriers and challenges

Participants described barriers and challenges. The common issues included the visa application process, the English language barrier, the lack of public transportation in the town, and scheduling conflicts (i.e., arranging nursing home visits, simulation laboratory classes, and faculty schedules).

"The process to bring a foreign student or visiting scholar takes months of preparation and involves many faculty and staff throughout the university and colleagues from her university." (Participant 7)

"Interactions and communication (verbal and written) were challenging at first, due to English (which was not her first language)." (Participant 8)

"Lack of public transportation (for visiting students) made it difficult." (Participant 4)

"COVID-19 restrictions also limited our interactions and other social activities." (Participant 8)

"Barriers were time limits of the faculty and team." (Participant 8)

3.2.3. Theme 3: Strategies to overcome short-term program barriers and challenges

The participants suggested methods for overcoming the barriers and challenges that could be improved in future programs. Recommendations included: 1) adding cultural diversity information; 2) attending English proficiency with others in the class; 3) using different communication techniques; 4) continuous collaboration with the University's Office of Global Affairs for the Visa application process; and 5) providing interactive experiences.

"Cultural diversity content should be incorporated into the nursing curriculum." (Participant 7)

"English proficiency class (speaking and writing) will be essential to improve communication skills." (Participant 8)

"Written communication was often the best way by giving [visiting foreign students] more time to decipher and to respond appropriately." (Participant 8)

"Developing close and supportive relationships within the office of international students to efficiently and effectively meet the requirements ... and being patient and methodically following the step-by-step process of bringing a visiting student is the key to success." (Participant 7)

"I would suggest that the visiting student present in some of our classes about the healthcare system and nursing school education so that we can learn about different healthcare systems." (Participant 9)

"Incorporate educational events and casual get-togethers to allow for more interactions with the foreign nursing student." (Participant 9)

Another student suggested, "I suggest meeting in person when opportunity allows (related to COVID-19 restrictions)." (Participant 9)

3.3. Findings of the short survey questions

On the 5-point Likert scale on the survey, participants rated their experience in the international program as very satisfactory (*Mean* 4.67, SD = 0.50). All participants recommended that faculty and graduate students participate with other visiting foreign doctoral students in the future. Further, the participants rated that engagement in the team research and educational activities had highly impacted their nursing skills (*Mean* = 4.67, SD = 0.50).

4. Discussion

This program focused on developing and implementing the planned research and educational activities. The goal of the evaluation results verified our steps of "how-to" design of a short-term program for one foreign doctoral student were met. The participants' written comments and focus group evaluation judged the impact on the visiting student and the host school of nursing participants as positive. Further, the program's challenges, barriers, and implications on nursing were identified. The results from the evaluation were based on visit participants' survey answers and the focus group content analysis, as discussed below. Given the small number of participants, these findings must be considered cautiously.

All participants rated their engagement with an international student in team-based research and other activities as highly satisfactory. Participants also were asked if the program engagement impacted their nursing skills in research, teaching, and clinical practice. These results described learning about nursing education and care in another country, gaining cultural health perspectives, and better communication approaches with international students. Participants reported significant global health knowledge from discussing differing healthcare systems with the students. Graduate students and the faculty reported that their interactions with visiting international students prompted selfreflection and increased cultural awareness. Such experiences can provide an essential path to cultural understanding and personal and professional development [14,33]. Another study has shown that cross-cultural exchanges can significantly benefit global nursing education and practice [34]. For example, our international student highly rated her experiences in nursing homes in the U.S. In addition, she explained that nursing homes in Thailand are for older adults who have no family or are homeless. The student learned that nursing homes in Western countries include individuals who elect not to be cared for at home or cannot be cared for at home.

Further, the visiting student described her engagement with our School of Nursing faith-based community program (taught by two research program team members) as a unique and valuable experience related to her goals of working with older adults in rural communities. Studies report that faith-based programs are effective in improving global health outcomes [35–37] and increasing older adults' participation in healthy behaviors [38]. Also, the international student expressed a keen interest in our research team's implementation of rural nursing care. She shared the knowledge gained in the program to take back home. These discussions

clarified that all international nursing programs should include objectives related to the student visitor goals. Knowing the visiting students' goals for their visit is critical to successful experiences.

Another significant factor the international student described was her appreciation of the flexibility in program activities and the time faculty took to discuss with her. All visiting students should set up weekly meetings with their primary mentor or research team members, who can modify the activities as new interesting topics arise or unexpected changes occur. Significantly, the student's accomplishments can be reviewed, and the host program participants can provide positive feedback and support for the visitor.

Results from the focus group discussion by all program participants found program challenges with potential solutions. Similar to other international doctoral nursing student programs, the main challenge reported was the language barrier [5]. The U.S. Schools of Nursing are frequently called upon to assist international students with speaking English, understanding Western healthcare systems, and helping with the stress of being away from home [4]. Such challenges were addressed in our short-term program activities plans [6,7,9]. Before visiting, non-English speaking doctoral students can use multiple strategies to address these issues.

Language problems hinder students' social interactions and participation in some learning activities [26]. In this case, the program's English proficiency course was offered via Zoom. However, limited social interactions were noted. Offering English proficiency classes for the visiting student with other students before and upon arrival could be beneficial. Notably, this program's advantage was that the mentor faculty was originally from the student's country and thus spoke her language. However, reaching out to faculty with similar backgrounds and research interests may provide positive learning experiences.

Although there was no sign of physical and psychological health issues with this student, weekly formal and informal meetings with the mentor to monitor the student's adjustment are crucial. Thus, the common psychological symptoms such as homesickness, stress, anxiety, and loneliness were prevented [27,28]. On practical issues, there needed to be more public transportation for our students to engage in social activities. Placement at an apartment within walking distance of the nursing school and ease of access to the local transportation services for other social activities were also recommended.

Overall, the short answer evaluation survey indicated the program's benefits, nursing implications, and strategies to improve future programs. Compared to the literature on international programs, this short-term program confirmed that careful preplanning is essential to prepare host faculty for their specific program involvement [39]. In particular, the potential of students from low-income countries to partner with colleagues in high-income Western countries has resulted in mutual dialogue and enrichment [40]. International nursing programs could promote a collegial and collaborative approach to addressing global health challenges [8]. Other international nursing programs reported that evaluation evidence may facilitate improvement in nursing science, global research, and exchanges of academic education practices [6,7,14,17]. Long-term collaboration among international institutions can increase doctoral nursing education and impact global healthcare.

Guidelines for maintaining program excellence and mentoring for visiting international students in nursing doctoral education were followed [41]. It is recommended to use international nursing programs' core competencies and resources from the National League of Nursing [41,42]. These core competencies are well-suited for long-term international nursing programs. However, many international students, especially those from low- and middleincome countries desiring advanced Western education, need help to afford to attend long-term international nursing programs. Therefore, the resources referred to by NLN can be integrated into short-term visiting programs and future global nursing curricula [43].

As in other studies, all the participants and the international students in this study indicated appreciation for the team research activities, instruction on academic teaching, and clinical observations [12,14,44]. Reporting the details and procedures of establishing, conducting, and evaluating this program can be used to guide students' experiences in the future. Further, international nursing students need assistance to adjust and thrive in the host university learning community. Faculty must be culturally sensitive, understand the visiting foreign nursing students' learning needs, and advocate for an environment suitable for enhancing the students' learning [14,39].

5. Limitations

Some limitations of the study were noted. The program's social impact or social capital on the school of nursing should be evaluated [45]. The extended program's educational activities could promote multiple nursing experiences and improve international visitors' English verbal and written communication skills [46]. An unavoidable limitation was the unprecedented COVID-19 impacting procedures of some academic activities [44,47,48] as many classes were online only, and in-person clinical observations were restricted. Instead, simulation experiences were used.

6. Conclusion and cautious recommendations

The knowledge gained from this short program experience will improve our planning for educational and research experiences for our future short-term visiting international (foreign) students. Conservatively, this short-term international research and academic expertise identified nursing implications, challenges, and practical solutions for improving this program. The process steps and procedures we used for "How-To" design, conduct, and evaluate this foreign visitor short-term program were helpful planning guides. Participating in this program was rated by all the faculty and student participants as a rewarding experience for the visiting student, host nursing faculty, and graduate nursing students. Considering the merits of a valuable experience for the host institute, it was deemed worthy of efforts to develop and establish a short-term program. We plan to have multiple programs based on what we learned from conducting this program.

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Data availability statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

CRediT authorship contribution statement

Ubolrat Piamjariyakul: Conceptualization, Methodology, Formal analysis, Writing - original draft, Writing - review & editing, Project administration, Funding acquisition. **Saima Shafique**: Writing - review & editing, Validation, Formal analysis, Resources, Data curation. **Dana L. Friend**: Conceptualization, Resources, Validation, Writing - review & editing. **Kimberly A. Adams**: Writing review & editing, Resources. **Wiyakarn Sanghuachang**: Conceptualization, Methodology, Validation, Writing - review & editing. **Trisha M. Petitte**: Writing - review & editing. **Stephanie Young**: Writing - review & editing.

Declaration of competing interest

The authors have declared no conflict of interest.

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Appendix A. Supplementary data

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References

- Which ApplyBoard. Countries will Be the next big destinations for international students?. https://www.applyboard.com/applyinsights-article/whichcountries-will-be-the-next-big-destinations-for-international-students. [Accessed 1 December 2023].
- [2] Jiang Q, Horta H, Yuen M. International medical students' perspectives on factors affecting their academic success in China: a qualitative study. BMC Med Educ 2022;22(1):574. https://doi.org/10.1186/s12909-022-03597-z.
- [3] Gao N, Eissenstat SJ, Wacha-Montes A, Wang Y. The experiences and impact on wellness among international students in the United States during the COVID-19 pandemic. J Am Coll Health 2022. https://doi.org/10.1080/ 07448481.2022.2052077. Published online April 15.
- [4] Buser JM, Cranmer JN, Dzomeku VM, Ngoma-Hazemba A, Ngabirano T, Bakari A, et al. The call for global health research mentorship for doctorally prepared nurses in low- and middle- income countries. Am J Trop Med Hyg 2021;104(5):1932–5. https://doi.org/10.4269/ajtmh.20-1603.
- [5] Akanwa EE. International students in western developed countries: history, challenges, and prospects. J Int Stud 2015;5(3):271-84. https://doi.org/ 10.32674/jis.v5i3.421.
- [6] Lake ET. How nursing science builds from global evidence. Res Nurs Health 2020;43(1):3-4. https://doi.org/10.1002/nur.22009.
- [7] Evans C, Stevenson K. The learning experiences of international doctoral students with particular reference to nursing students: a literature review. Int J Nurs Stud 2010;47(2):239–50. https://doi.org/10.1016/ j.ijnurstu.2009.05.025.
- [8] International Network for Doctoral Education in Nursing (INDEN). INDEN's Mission. https://indenglobal.org/about. (accessed June 19, 2023).
- [9] Molassiotis A, Wang T, Hoang HTX, Tan JY, Yamamoto-Mitani N, Cheng KF, et al. Doctoral nursing education in east and Southeast Asia: characteristics of the programs and students' experiences of and satisfaction with their studies. BMC Med Educ 2020;20(1):143. https://doi.org/10.1186/s12909-020-02060-1
- [10] Boromarajonani College of Nursing, Saraburi. History of boromarajonani college of nursing, Saraburi. http://61.7.221.197/about-us. (accessed October 30, 2023).
- [11] West Virginia University School of Nursing. Community & global engagement. https://nursing.wvu.edu/community-global-engagement/. [Accessed 1 June 2023].
- [12] Guise JM, Geller S, Regensteiner JG, Raymond N, Nagel J. Team mentoring for interdisciplinary team science: lessons from K12 scholars and directors. Acad Med 2017;92(2):214–21. https://doi.org/10.1097/ACM.000000000001330.
- [13] Katz F, Glass RI. Mentorship training is essential to advancing global health research. Am J Trop Med Hyg 2019;100(1_Suppl):1–2. https://doi.org/ 10.4269/ajtmh.18-0694.
- [14] Meaux JD, Saviers B, Traywick L. Effects of study abroad on cultural and interprofessional competencies. Nurse Educ Today 2021;103:104928. https://

doi.org/10.1016/j.nedt.2021.104928.

- [15] Creswell JW, Creswell JD. Angeles L. In: Creswell JW, Creswell JD. Research design: qualitative, quantitative, and mixed methods approaches. Thousand Oaks (CA): SAGE; 2018. p. 179–212.
- [16] Knight G. Data management for interview and focus group resources in health. London School of Hygiene & Tropical Medicine; 2018. https:// researchonline.lshtm.ac.uk/id/eprint/4646631/1/RDM4InterviewData.pdf. [Accessed 25 May 2023].
- [17] Piamjariyakul U, Keener TA, Smothers A, et al. Mentoring undergraduate nursing students in palliative home care research. Teach Learn Nurs 2021;16(4):423-8. https://doi.org/10.1016/j.teln.2021.05.001.
- [18] Piamjariyakul U, Petitte T, Smothers A, et al. Study protocol of coaching endof-life palliative care for advanced heart failure patients and their family caregivers in rural Appalachia: a randomized controlled trial. BMC Palliat Care 2019;18(1):119. https://doi.org/10.1186/s12904-019-0500-z.
- [19] Piamjariyakul U, Smothers A, Young S, et al. Palliative care for rare advanced lung diseases in underserved Appalachia: study protocol for a randomized controlled trial. J Adv Nurs 2020;76(8):2182–90. https://doi.org/10.1111/ jan.14395.
- [20] Piamjariyakul U, Smith CE, Werkowitch M, et al. Designing and testing an end-of-life discussion intervention for African American patients with heart failure and their families. J Hosp Palliat Nurs 2016;18(6):528–35. https:// doi.org/10.1097/NJH.0000000000290.
- [21] Tatterton MJ, Fisher MJ. Team-based learning and nurse education: a systematic review. Evid Base Nurs 2022. https://doi.org/10.1136/ebnurs-2022-103595. ebnurs-2022-103595.
- [22] Ahmed T, Johnson J, Latif Z, Kennedy N, Javier D, Stinson K, et al. MyNRMN: a national mentoring and networking platform to enhance connectivity and diversity in the biomedical sciences. FASEB Bioadv 2021;3(7):497–509. https://doi.org/10.1096/lba.2020-00102.
- [23] Javier D, Stinson K, Zavala M, Ahmed T, Vishwanatha JK. NRMNet: building a national resource for mentorship, networking and professional development to enhance diversity. Ethn Dis 2021;31(3):469–80. https://doi.org/10.18865/ ed.31.3.469.
- [24] Palliative care Research Cooperative Group. Mentorship selective. https:// palliativecareresearch.org/research/investigator-support-information/ mentorship-selective. [Accessed 19 June 2023].
- [25] Dobrowolska B, Chruściel P, Pilewska-Kozak A, Mianowana V, Monist M, Palese A. Doctoral programmes in the nursing discipline: a scoping review. BMC Nurs 2021;20(1):228. https://doi.org/10.1186/s12912-021-00753-6.
- [26] Mitchell C, Del Fabbro L, Shaw J. The acculturation, language and learning experiences of international nursing students: implications for nursing education. Nurse Educ Today 2017;56:16–22. https://doi.org/10.1016/ j.nedt.2017.05.019.
- [27] Nauta MH, Aan Het Rot M, Schut H, Stroebe M. Homesickness in social context: an ecological momentary assessment study among 1st-year university students. Int J Psychol 2020;55(3):392-7. https://doi.org/10.1002/ ijop.12586.
- [28] Roxas KA, Shapiro AL, Chisholm SC, Niland DL, House MA. Homesickness among rural Appalachian university students. J Am Coll Health 2023:1–7. https://doi.org/10.1080/07448481.2023.2172579.
- [29] Piamjariyakul U, Smith CE, Russell C, Werkowitch M, Elyachar A. The feasibility of a telephone coaching program on heart failure home management for family caregivers. Heart Lung 2013;42(1):32–9. https://doi.org/10.1016/ j.hrtlng.2012.08.004.
- [30] Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville AJ. The use of triangulation in qualitative research. Oncol Nurs Forum 2014;41(5):545–7. https://doi.org/10.1188/14.ONF.545-547.
- [31] Crowe M, Inder M, Porter R. Conducting qualitative research in mental health: thematic and content analyses. Aust N Z J Psychiatr 2015;49(7):616–23. https://doi.org/10.1177/0004867415582053.
- [32] Miles MB, Huberman AM. Qualitative data analysis. second ed. Thousand Oaks (CA: Sage; 1994.
- [33] Luo JL, Jamieson-Drake D. Examining the educational benefits of interacting with international students. Jis 2013;3(2):85-101. https://doi.org/10.32674/ jis.v3i2.503.
- [34] Ortega J, Mitchell EM, Peragallo N. Beyond borders: global nursing education for the future. Nurs Educ Perspect 2016;37(4):227-9. https://doi.org/10.5480/ 13-1296.
- [35] Gizaw Z, Astale T, Kassie GM. What improves access to primary healthcare services in rural communities? A systematic review. BMC Prim Care 2022;23(1):313. https://doi.org/10.1186/s12875-022-01919-0.
- [36] Mama SK, Bhuiyan N, Bopp MJ, McNeill LH, Lengerich EJ, Smyth JM. A faithbased mind-body intervention to improve psychosocial well-being among rural adults. Transl Behav Med 2020;10(3):546–54. https://doi.org/10.1093/ tbm/ibz136.
- [37] May I, George N. Faith community nursing: faith element enhances cardiovascular risk reduction program outcomes. J Christ Nurs 2021;38(1):38–46. https://doi.org/10.1097/CNJ.000000000000788.
- [38] Tristão Parra M, Porfírio GJM, Arredondo EM, Atallah ÁN. Physical activity interventions in faith-based organizations: a systematic review. Am J Health Promot 2018;32(3):677–90. https://doi.org/10.1177/0890117116688107.
- [39] Lockwood C, Dos Santos KB, Pap R. Practical guidance for knowledge synthesis: scoping review methods. Asian Nurs Res 2019;13(5):287–94. https:// doi.org/10.1016/j.anr.2019.11.002.

U. Piamjariyakul, S. Shafique, D.L. Friend et al.

- [40] Keating S, Berland A, Capone K, Chickering M. Global nursing education: international resources meet the NLN core competencies for nurse educators. Online J Issues Nurs 2021;26(1):1–17. https://doi.org/10.3912/ ojin.vol26no01man08.
- [41] National League for Nursing. A vision for expanding us nursing education for global health engagement: a living document from the national league for nursing. National League for Nursing; 2017. https://www.nln.org/docs/ default-source/uploadedfiles/about/nln-vision-series-position-statements/ vision-statement-a-vision-for-expanding-us-nursing-education.pdf? sfvrsn=ee69af0d_0. [Accessed 1 June 2023].
- [42] Christianson LS, Simmons LE. In: Christianson LS, Simmons LE, editors. The scope of practice for academic nurse educators and academic clinical nurse educators. third ed. New York: Lippincott Williams & Wilkins; 2020.
- [43] Keating SA, Berland A, Capone K, Chickering MJ. Establishing global nursing education equity by developing open access resources. Nurse Educat 2020;45(2):63–5. https://doi.org/10.1097/NNE.000000000000698.
- [44] Montegrico J, Cornelius J, Downing C, Fradelos EC, Machuca-Contreras F, Oducado RM, et al. International nurse education research collaboration

during the COVID-19 pandemic: researchers' perspectives. Nurse Educ Today 2023;120:105606. https://doi.org/10.1016/j.nedt.2022.105606.

- [45] Agampodi TC, Agampodi SB, Glozier N, Siribaddana S. Measurement of social capital in relation to health in low and middle income countries (LMIC):A systematic review. Soc Sci Med 2015;128:95–104. https://doi.org/10.1016/ j.socscimed.2015.01.005.
- [46] Henry AA, Ingles DJ, Du LP, Vermund SH, Heimburger DC, Aliyu MH. Expanding global health engagement through fogarty fellowship programs. Am J Trop Med Hyg 2021;106(2):419–23. https://doi.org/10.4269/ajtmh.21-0311.
- [47] Dewart G, Corcoran L, Thirsk L, Petrovic K. Nursing education in a pandemic: academic challenges in response to COVID-19. Nurse Educ Today 2020;92: 104471. https://doi.org/10.1016/j.nedt.2020.104471.
- [48] Keener TA, Hall K, Wang KS, Hulsey T, Piamjariyakul U. Quality of life, resilience, and related factors of nursing students during the COVID-19 pandemic. Nurse Educat 2021;46(3):143-8. https://doi.org/10.1097/ NNE.000000000000969.