DISCUSSION PAPER

Conducting research through cross national collaboration

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Abstract
Aim: To explore the collaborative nature of an international research project with other advanced practice nurse researchers and critically analyse the process.
Background: Research within the nursing community is recognized internationally as important to ensure that nurses participate in cutting-edge health care and promote evidence-based practices, yet there is little detail found in literature on how a successful collaborative relationship is initiated and conducted in advanced practice research.

Design: Discussion paper: The purpose of this paper is to discuss the process of collaboration on a research study among advanced practice nurses from 4 countries who are members of an international organization.
Implications for Nursing: The collaborative process in international nursing research can be challenging and rewarding. It is important to remember that there is a relationship between the complexity of the study and the time required to complete it. Keys to success include following established guidelines.

Conclusion: This project was a valuable experience in developing collaborative relationships as well as creating partnerships for future research to build on the knowledge gained. The authors’ linkages to universities facilitated their participation in the research and completion of the ethical review processes. The use of social media and university resources was indispensable.

KEYWORDS
advanced practice nursing, collaboration, international research, nursing
SUMMARY STATEMENT

What is already known about this topic?

- The scope for collaborative research in universities is expanding beyond the traditional student-exchange programmes to encouraging faculty members to develop international collegial relationships through research.
- There is little information available about the processes of international collaborations in nursing in professional organizations; there is no indication concerning the time frames required for each step, the types of communication used, how leadership roles are established, and what resources should be available.

What this paper adds
- This paper provides a practical example of the use of the Sigma Theta Tau International guidelines for collaboration among advanced practice nurses in an international professional organization.
- Keys to the success of the project included flexibility on behalf of each member in terms of meeting times and roles; respect for each other's ideas and contributions to the project; and transparency through all of the steps of the project.
- When starting an international collaborative project, it is important to follow a framework for establishing clarity of roles, tasks, and timeframes. Focusing on a mutual goal and providing flexibility in the workload were key.

The implications of this paper
- This project was a valuable experience in developing collaborative relationships and creating partnerships for future research, building on the knowledge gained.
- This paper provides a practical guide for nursing research collaborators who may not have funding for a project but desire to collaborate with researchers with common interests.

1 INTRODUCTION

Research in the nursing community is recognized internationally as important to ensure that nurses contribute to cutting-edge health care and promote evidence-based practices (International Council of Nurses, 2012; International Research Committee, 2003). This paper will discuss how nurse practitioners/advanced practice nurses from 4 countries (the United States, Canada, the United Kingdom, and Ireland) collaborated to conduct a global survey on nurse practitioner job satisfaction in developed and developing countries (Steinke, Rogers, Lehwaldt, & Lamarche, 2017). The results of the project will be published elsewhere. The aim of this paper is to discuss the collaborative nature of the international project and critically analyse the phases within the collaborative process. The study that formed the basis of this collaboration was unique in that the idea was germinated, not from an academic
institutional viewpoint but through a common interest generated by colleagues who were members of an international network group, the International Council of Nursing Nurse Practitioner/Advanced Practice Nursing Network (INP/APNN). Recommendations of this paper based on our experiences are aimed at assisting fellow researchers who wish to embark on similar international collaborations.

2 BACKGROUND

Collaborative research frameworks may guide international teams in anticipating and solving individual and organizational issues relating to cross-national collaboration (Rambur, 2009; Suhonen, Saarikoski, & Leino-Kilpi, 2009). The collaboration in this international research project on nurse practitioner/advanced practice nurse job satisfaction involved 4 members of the practice subgroup of the INP/APNN who, because of their background in research and academia, were interested in evaluating job satisfaction of advanced practice nurses in developed and developing countries. The INP/APNN organization aims to serve as a forum for exchange of knowledge and act as a resource base for the development of Nurse Practitioner/Advanced practice (NP/APN) roles internationally (Cross, n.d.). The authors had worked together within the INP/APNN network for at least 6 months before embarking on this project. All of the members were nurse practitioners, which ensured a common understanding of the topic under evaluation.

International research is usually discussed in terms of academic partnerships (San Martin Rodriguez, Beaulieu, D’Amour, & Ferrada-Videla, 2005; Sutton & Obst, 2011). Many colleges and universities are broadening the scope of international partnerships to expand beyond student exchange programmes to include developing the international capacity of faculty and staff and advancing research by connecting institutions and scholars with those who have similar strengths and interests (Sutton & Obst, 2011). There are benefits to international collaboration in research such as harnessing resources, offering complementary strengths, and intellectually diversifying the team (Rambur 2008).

Chiang-Hanisko et al. (2006) defined international nursing research as “cross-national research on nursing phenomena that is conducted in more than one country via a working partnership that shares resources, time and talents. It may include single individuals or involve larger groups of people” (p. 308). They used their experiences in working with researchers in countries such as Haiti, Thailand, Taiwan, and the United Kingdom to illustrate the importance of identifying good collaborative practices that will help determine success of the project (Chiang-Hanisko et al., 2006). San Martin Rodriguez et al. (2005) reviewed empirical studies of successful collaborations and found that willingness to collaborate, trust, communicate, and have mutual respect were important determinants for good partnerships in international research. In their review, organizational and systemic determinants (including elements outside of the organization) were
powerful factors that could hinder successful collaborative relationships.

A factor to consider in collaborative research is time, which increases by complexity, ie, the number of partners, different scientific languages, and cultures involved (Rambur, 2009). Brew, Boud, Lucas, and Crawford (2013) suggested that international collaboration is complex, involving different parties, each with their own frames of reference connecting and working on mutual matters of concern. The Sigma Theta Tau International Honour Society of Nursing international guidelines recognize the importance of addressing issues such as conflict of interest, intellectual property rights, and academic freedom among collaborative partners in pursuit of international research (International Research Committee, 2003).

Despite these existing research recommendations, there is some evidence that researchers have difficulty identifying good collaborative practices. A study conducted by Ulrich et al. (2014) indicated that nearly 40% of participants in a web-based survey of nurse scientists selected from 50 doctoral graduate programmes in the United States were not able to identify the aspects of good collaborative research practices.

3 ETHICAL IMPLICATIONS

Collaborating internationally when using human subjects can be a challenge on several levels. For example, obtaining approval of the respective institutional ethics boards requires making the information culturally specific, ie, culturally appropriate and culturally sensitive tools and considering ways to relieve stress and anxiety of the subjects' participation in the project (Callister et al., 2006). Roberts and Allen (2015) describe 5 key ethical issues in the domain of educational research when considering using online surveys: dual teacher/researcher roles; informed consent; use of incentives; privacy, anonymity, and confidentiality; and data quality. Detailed and clear information should be given to participants regarding the reason for the survey, the organization(s) and people interested in the responses, and the reasons why the survey is being conducted. The assurance of anonymity or confidentiality should be mentioned in the introduction, as well as a non-judgemental statement that the participant can stop responding to the questions at any time without fear of recrimination. Online surveys may identify the respondent's Internet protocol address, which could potentially undermine privacy and anonymity; care should be taken to strip that information from the dataset, preferably at set-up stage, prior to the conduct of the survey (Roberts & Allen, 2015). The Qualtrics (Qualtrics Customer Satisfaction Survey Platform, n.d.) survey tool, for example, allowed the authors a choice of options regarding identification of the respondent as well as the ability to check for unique URL addresses for each respondent.

4 | STUDY METHODS
The study aim was to explore the collaborative nature of an international research project with other advanced practice nurse researchers and critically analyse the process. The authors were faculty members at universities in Canada, the USA, the UK, and Ireland. They met regularly online to develop an online survey, to establish methods of access and recruitment, to review data, and to analyse the results. Everyone in the group contributed to the inception of the survey, and one of the members agreed to be principal investigator (PI). The authors' collaboration during the nurse-practitioner job satisfaction survey followed the Sigma Theta Tau International (STTI) (2003) guidelines for collaborative research. The World Health Organization also has a publication detailing standards and guidelines for researchers (WHO, 2011, p. 22). The STTI (2003) guidelines for development and implementation of international collaborative research projects and the authors' use of them were as follows.

4.1 Phase 1: establishing the collaborative Partnership

This phase included communication mechanisms available, and identification of resources. Gardner's (2005) description of the collaborative process as a synthesis of different perspectives to understand complex problems describes the authors’ “partnership.” She outlined 10 key questions that collaborators should reflect upon and develop when putting collaboration into practice. These include active listening, positive regard for differences, and the belief in multiple realities. Everyone in the team had access to a computer and used multiple modes of communication: social media, email, Skype, Google docs, Adobe connect, and texting. Three of the 4 colleagues met at a network conference in 2014 and discussed the project, and all members of the team met face-to-face at the next network conference in 2016.

Early in the research process, the team agreed upon structured times to communicate. Conference calls were held at approximately the same time of day each time, using UK time as the standard, and then being flexible to compromise on dates. Initially, our group met every 2 to 3 months, then every month after the data were collected and when the paper was being written. Minutes were written up and circulated after each meeting to all members. Understanding that the nature of our study did not involve high expectations or stakes, funding pressures, or complex relationships, we accomplished our goals in a spirit of camaraderie and professionalism.

The project demonstrated that commitment was a driving factor and steps were taken to develop a team-player culture, valuing roles of all members as outlined in the STTI international guidelines (International Research Committee, 2003). The positive and supportive atmosphere within the group with strong leadership and support from the principle investigator helped to complete the project, although the
“part-time” status of members likely impacted the duration the project took.

Larger research projects, such as this global nurse practitioner job satisfaction survey, can be conducted without funding, although this requires some level of creativity and the willingness of institutions to share their resources with the project team. Once the number of the survey responses reached 1000, the authors had to become creative in using their own and their universities' resources, when available. The secure university-approved survey tool was provided without cost. The SPSS 23 (2015) analysis tool was available through each of Q5 the universities. The social media platforms were used free.

4.2 Phase 2: establishing the research team

Steps 1 and 2 of the STTI guidelines include defining the responsibilities of each member of the research team, adhering to the group’s goals and respecting the expertise of each member's contribution to the team. Each member took charge at different times, depending on the need. For instance, the colleague from Dublin directed an assistant to count and categorize some of the findings and distributed the survey at the German Congress, as there were otherwise very limited contacts through the group. Another member had a unique way of assigning tasks and establishing timetables for the group. The roles of PI and coinvestigators came easily, as one colleague had more time than the others to develop the survey. Every step of the process was transparent, and each author had access to the survey tool and data. There were also others who contributed to the process, such as members of the ICN and the INP/APNN research assistants, and the Q6 statisticians who reviewed the data. The clarity of roles within the team was more important than geographical distance, a phenomenon also described by Ulrich et al. (2014). The team evaluated the outcomes of the collaboration and research project as the final goal. The findings of the survey were shared with other colleagues at an INP/APNN conference in Hong Kong.

The universities did not put undue pressure on the authors to expedite the project. However, each university required a review by its ethics board. The authors worked at the most complex level of Rambur's (2009) collaboratives involving human subjects and culturally or politically sensitive topics, albeit with minimal risk to the participants. The research involved interaction with human subjects in the form of a survey with respondent information kept anonymous. English was the only language for the survey and intracollaborative communications.

Rambur’s (2009) suggestions for a successful collaboration included a “clear understanding of goals and the meaning and costs in time and personnel of research integrity and compliance” (p. 92). San Martin Rodriguez et al. (2005) suggested that to successfully
collaborate, “individuals must be able to acquire a vision and to explicitly develop common goals” (p. 144). From their strengths, weaknesses, opportunities, and threats analysis of the evidence of international scholarly collaboration, Uhrenfeldt, Lakanmaa, Flinkman, Basto, and Attree (2014) identified 2 major categories of factors affecting collaboration: facilitators and barriers. They had 6 recommendations for collaborative scholarly activity/research, which encompassed detailed planning, funding, rotating the leadership role, using multiple means of communication, and evaluating the process. With the exception of funding, the team followed those recommendations.

4.3 | Phase 3: implementing the project

This phase included agreement on the design, writing reports for each author’s institutional review board, establishing analysis processes, and determining a timetable for the project. Since the intent of the survey was to capture information from NP/APNs in developed and developing countries via an online survey, the authors were required to seek approval from each university’s review board, which had similar but unique requirements. Because of these requirements, the time frame for institutional approval was lengthy.

Despite planning for unforeseen circumstances, there were issues that occurred during the course of the project that slowed it down and caused some frustration. For instance, each university’s ethics committee had different requirements on their applications. For instance, a sentence informing the participant that the information gathered would be initially stored on a United States’ online survey (Qualtrics) and the responses could be subject to the Patriot Act had to be added. The authors were also advised to encourage participants to discuss any stress they may have experienced while taking the survey with their local nurses’ association.

The authors agreed on the type of survey to use, the type of statistical analyses and the use of SPSS software. A university statistician was asked to review and guide analysis. The authors received valuable input from the practice subgroup and core steering group (CSG) of the INP/APNN. For example, the original survey had 44 items. After the survey was reviewed by the CSG, redundancy was removed, and the terms were clarified for international use. The goals of the authors were to present the findings to the International Council of Nursing conference in September 2016 and to publish the findings.

4.4 Phase 4: evaluating the outcomes of the project

Steps 1, 2, and 3 of this phase included evaluating the scientific findings, inviting feedback from all team members, determining the number of publications and authorship, and discussing “spin-off” projects.
The group collectively spent over 170 hours in preparation, collection, analysis, and translation of the survey data. Communication, study design, methodology, and access to participants were all achieved through commitment to the project, trust in each other's work, and persistence in finishing the project. As a result of each colleague's contributions, including the ICN INP/APNN's input and advice, the project was an enriching, inspiring, and insightful experience.

From the time of the inception of the idea for the project, to the presentation of findings at the ninth ICN INP/APNN in September of 2016, the project took approximately 3 years. The process of obtaining input from the INP/APNN subgroup practice committee members and ethical approval from all 4 universities and from the ICN took approximately 11 months. Data analysis took approximately 3 months.

In the first part of step 2 of this phase, the plan for dissemination of project findings was set out; collaborators “revisit(ed) the contract for authorship based on contribution to the project and the writing” (International Research Committee, 2003). The PI developed a rough draft of the findings and the others contributed with literature searching, writing, and editing. The authors agreed on the order of the names depending upon the contributions made to the article. An online document account was set up by one of the colleagues for the purpose of managing the editing. An order of editing was decided upon, so only one person edited at a time. Working with a rough time frame of 2 weeks, each person took a turn to work on the paper and notified the next person when it was their turn to start writing and editing. Writing the paper and editing it took approximately 7 months. The second and third parts of step 2 of phase 4 collaborators determined the future publications and journals to submit to, conferences for abstracts for further presentations and posters; authorship and presenters were identified (International Research Committee, 2003). Criteria for journal choice included pertinence to international nursing and impact factor.

Increasingly, institutions are looking at ways to collaborate with each other (Sutton & Obst, 2011) in terms of curriculum building, developing the international capacity of faculty and staff, and tackling pressing global issues. For instance, Chiang-Hanisko et al. (2006) discovered that “when international nursing research is published, there are rewards for the authors, sponsors, research assistants, organisations, and ultimately, nursing” (p. 318). Garner, Metcalfe, and Hallyburton (2009) discussed a pilot project implemented collaboratively with 2 United Kingdom schools of nursing and their US school of nursing for the education of future international nurse leaders, encouraging advocacy, activism, and professional accountability. When establishing international research relationships, it is important to use ethical guidelines between the researchers. Wright and Breda (2015) emphasized the importance of establishing strict ethical
guidelines between institutions of developed and developing countries so that each is on equal ground regarding decision making on the project from beginning to end. While this project was not between institutions of developing and developed countries, the survey was sent to respondents in those types of countries and discussions undertaken to include culturally specific questions on the survey. The partnership involved cooperation and understanding of all parties to work fairly toward common goals. Other ethical considerations regarding the survey included its clarity of purpose, as well as assurance of anonymity of the respondents’ answers.

4 LESSONS LEARNED

Developing good collaborative relationships for the purpose of research is a labyrinthine process. It requires persistence, focus, trust, flexibility, and leadership through a PI in reaching the desired objective. Keys to success also included respect for each other’s ideas and contributions to the project, and transparency through all of the steps of the project.

The reliance on the internet was challenging at times, especially when group members were travelling. All of the group members were involved in a number of international projects. Time zone differences were taken into account for internet meetings, as the members of the group could be in various geographical locations with different time zones during meetings. There was limited face-to-face time. Ultimately, an internet-based resource was used, originating from one university, as it was free to use and easily accessible in areas with poor internet connectivity. It could be accessed by personal computer, laptop, or mobile phone. There was also a backup plan if video-conferencing failed, of using either email correspondence or another free internet software application.

Q7 The main challenge with regards to time frame related to time/workload constraints of individual members. Almost at all points during the project, the input of individual group members varied. For example, two of the group finished their PhDs during the project, which impacted on the time that they could give to the survey. Ulrich et al. (2014) indicated from their research of nurse scientists’ views on collaborative research that successful collaborations were challenged by poorly defined roles and responsibilities, among other issues. It was therefore most important to have a PI who held the group together and kept the project moving through the stages.

5 CONCLUSION

This experience closely mirrored those of the STTI guidelines for collaborative research (International Research Committee, 2003) regarding the phases experienced within the collaborative cross-national research project. This project proved to be a valuable experience in
developing collaborative relationships as well as creating partnerships for future research and to build on the knowledge gained. This research study enabled the authors to learn more about nurse practitioner/advanced practice nurses’ job satisfaction and also about how to transnationally collaborate, as well as interest in sharing the findings and pursuing these findings with future research. Interestingly, these points differ from Rambur's (2009) findings or the responders' definition of success of the collaboration. Those included publication in respected international journals, research dollars, and to a lesser degree patents and foundation for more teaching collaborations. The authors reached several conclusions with this project: The idea of studying the job satisfaction of nurse practitioners/advanced practice nurses was important both nationally and internationally; that each of the research team had a stake in the outcome both personally and professionally; there were more common issues than differences in the research project findings, and that funding could have expedited the process. It was important to continue to stay focused, despite some frustrations. Each person remained committed to see the project to the end, to present at the INP/APNN conference, and to publish our findings.

The ICN board and the NP/APNN CSG played a significant part in helping shape the survey, particularly in the areas of appropriate language that would be universally understood. This process, independent of the study results, provided important insights into professional development and international collaborations.

The global survey on nurse practitioner job satisfaction in developed and developing countries study was not started because of a higher education institutional requirement, our institutions were only peripherally involved. However, some of the practical information listed such as time management and economic resource usage could be applied to other types of international projects. This is a lesson learned in terms of engaging in a project for personal professional development versus academic institutional benchmark. There was less pressure for deadlines, and more flexibility to work around other projects. However, because there was less pressure for an academic deadline, it became important to communicate frequently and focus on the goal of sharing the information at the INP/APNN conference. The authors remained committed to the project for 2 reasons: their collegiality within the INP/APNN was strong, and the study was important to all as an international focus on advanced practice job satisfaction in developed and developing countries, which added to the body of knowledge. This successful partnership has proven to be a seed for further research and a forum for brainstorming ideas.

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No conflict of interest has been declared by the authors.

AUTHOR CONTRIBUTIONS
M.S., M.R., D.L., and K.L. conducted the study design; M.S. and D.L. conducted the data collection; M.S. analysed the data; M.S., M.R., D.L., and K.L. supervised the study; M.S., M.R., D.L., and K.L. conducted the writing of the manuscript; and M.S., M.R., D.L., and K.L. conducted the critical revisions for important intellectual content.

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