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Process Matters

Successes and Challenges of Recruiting and Retaining Participants for Nursing Education Research

Christy Raymond, PhD, RN • Joanne Profetto-McGrath, PhD, RN • Florence Myrick, PhD, RN
William B. Streaan, PhD

Researchers who study nursing education encounter difficulty when trying to recruit and retain nurse educator participants. Researchers would benefit from knowing more about effective and ineffective sampling strategies and methods to increase the efficiency of the research process. This article outlines the struggles and successes encountered with a mixed methods study that examined nurse educators' critical thinking. Specific examples are interwoven with current literature to uncover some important insights and future recommendations for researchers in nursing education.

Keywords: nursing education; nursing education research; nursing faculty; research design

Few nurse researchers have reported the struggles and issues experienced while recruiting and retaining research participants from specific populations.¹ Issues with recruiting and retaining participants in nursing studies are evident despite many calls by researchers and educators to develop and refine a science of nursing education.² Although some authors address recruitment and retention strategies related to patient-specific longitudinal and clinical trial research or ethical processes of recruiting students in education research, we found no published studies specifically illuminating factors that affect nurse educators' decisions to participate in research. There is also limited information about successful recruiting and retaining educators for research studies. The lack of in-depth discussion on important research process information, such as recruitment and retention successes and struggles, impedes our understanding and practice of educational and nursing research.

The intent of this article is to dissect, discuss, and bring focus to ways of thinking about recruitment and retention of nurse educator populations in nursing education research.

Author Affiliations: Acting Associate Dean, Assistant Professor, Faculty of Nursing, MacEwan University (Dr Raymond), Edmonton, Alberta; and Assistant Adjunct Professor (Dr Raymond), Vice Dean and Professor (Dr Profetto-McGrath), and Faculty Emerita (Dr Myrick), Faculty of Nursing, and Professor (Dr Streaan), Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Canada. The authors declare no conflicts of interest.

Correspondence: Dr Raymond, Level 3, Edmonton Clinic Health Academy, 11405 87 Ave, Alberta, Canada T6G 1C9 (craymond@ualberta.ca). This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

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By using the authors' experiences with a mixed methods study as an example, discussion about recruitment and retention is offered, followed by recommendations that may be useful to strengthen the methodology of future research in nursing education and bring awareness to much needed discourse in this topic area.

Finding Participants for a Nursing Education Research Study: The Background

The origin of our interest in the recruitment and retention of nurse educator research participants was a triangulated mixed methods research study that we completed with 5 nurse educators. The aim of our study was to explore nurse educators' critical thinking and how they revealed their critical thinking in clinical practice while supervising students. The data collection methods included 2 online critical thinking assessment tools (California Critical Thinking Skills Test and Disposition Inventory), 24 to 32 hours of participant observation, and 2 semistructured interviews with each participant. We also used a grounded theory approach for the qualitative portion of the study. The unanticipated small response rate resulted in significant questions about best practice in nursing education research, specifically the importance of recruiting nurse educators as important yet elusive research participants.

The original plan for our study was to sample from a single large educational institution consisting of a significant complement of educators. We invited nurse educators electronically using multiple e-mails and print-based recruitment materials. We planned to collect data in 2 phases: a quantitative phase involving the online critical thinking assessment tools, followed by a qualitative in-depth exploration of educators teaching in clinical settings. When the original sampling plan yielded few subjects for the quantitative portion of the study, our approach was revised, and we invited only those educators specifically teaching in the clinical setting

and asked them to complete both phases of data collection. After using multiple recruitment invitation methods to increase our sample unsuccessfully, we continued with the 5 participants.

Exploration of Issues: From Recruitment to Retention and Beyond Recruitment

Despite our best recruitment efforts, the final number of participants in our study was small. There were 5 educators who agreed to participate of the 35 who were invited using a convenience method, for an overall response rate of 14.3%. Possible reasons for our low response rate may point to issues in the sampling plan. We chose to include a single site versus collecting data from multiple sites based on time constraints and the amount of available funding. The sample for our study may have increased had we used snowball sampling, in addition to convenience sampling. Sadler et al³ stated that snowball methods are useful for difficult-to-reach populations in which individuals can recommend the study to a colleague/peer. Broyles et al⁴ suggested using a peer-to-peer recruitment strategy with nurse participants. This process may have been helpful in our study if we identified faculty champions to act as key contacts and promoters of the research.⁴ Although we personally addressed invitations to potential participants, only 1 of the 30 nonparticipants acknowledged receipt of their personal invitation. This rate may indicate that the invitation was not valued, considered spam, or ignored because of multiple requests and a lack of time to respond. It would be beneficial to use an expedient follow-up inquiry in future studies to verify reasons for nonparticipation.¹

The interpretation of response rates requires further discussion in the context of our research. White¹ indicated the need to identify an acceptable response rate, understand standard response rates for specific research methods, and examine what factors impact response rates. Depending on the data collection method or research design, there are some published norms related to acceptable response rates. Our response rate was low compared with the range of rates (12%-85%) reported in available literature related to nurse educators' critical thinking published over the past 15 years. Comparisons with our study are difficult because of a limited number of studies in the topic area that used a mixed methods approach. Given that recruitment measures and response rates have been infrequently discussed in the literature, it is difficult to assess which strategies are more effective in specified settings and what standard of practice researchers should follow when recruiting certain populations. Discourse related to response rates is needed specifically to frame the purpose of reporting the rates and discuss the factors that should inform the usefulness of this statistic within nursing education literature.

Even though comparison to standard response rates is important, research processes rarely occur in a vacuum, and the question remains whether response rates can be objectified or serve as a guide amidst a myriad of other factors affecting the research design and each participant's decision whether to participate. We would support that response rates underscore the ability of researchers to make generalizations or estimate an effect. However, if the pur-

pose of the research is a beginning exploration or proposes to gain insights, as was the case in our inquiry, then a lower response rate may still yield valuable outcomes. Even if data collection methods or research designs are aligned with certain response rates or sample sizes, the complexity of the contexts in which researchers work requires more thoughtful interpretation and integration of specific guidelines.

Knowing the population that one wishes to sample from is also important to the success of any recruitment strategy. Although Broyles et al⁴ concluded that "recruitment can be particularly challenging when the intended study participants are health care providers..."^{4p1705} it was our experience that obtaining nurse educator participants was difficult as well. Time constraints and potential indifference expressed by health care providers were cited as some of these challenges,⁴ but these also are common among academic faculty members. Nurse educators are known to experience significant pressure with high teaching workloads. Moreover, rewards for participating in research, versus completing research, are often nonexistent and usually absent from any promotional processes or required documentation for annual performance review.

Potential participants may choose not to participate in research for a variety of reasons. White¹ discussed questionnaire fatigue and an overall hesitation by nurses to participate in research. North and Giddens⁵ reported poor response rates in their study, potentially attributable to survey fatigue and virtual delivery of the study. Baker et al,⁶ as well as Whalen⁷ and White,¹ identified several work stressors faced by nurse educators that may have prevented them from participating in our study. In their studies, factors such as heavy workloads, multiple competing responsibilities, less than expected compensation, and working outside regular hours were listed as main stressors for nurse educators.^{1,6,7} The lack of release time from participants' teaching workloads for research participation may prohibit educators' participation in activities outside their main teaching responsibilities. Promotion and performance evaluations are not affected by one's participation in research and therefore may not be viewed as valuable in advancing nurse educators' position within the institution. Berent and Anderko⁸ added that professional satisfaction, resource management skills, and research satisfaction were important factors in tenured faculty members' decisions to stay in the academic context. Interestingly, nontenured faculty members were not included in their study, which were the main participants in our research. Even though tenured faculty may value a research culture, many faculty members in nursing programs are not tenured, leaving the question whether a research culture has influence on whether educators participate in research as subjects.

Williams et al⁹ emphasized the importance of altruistic benefits on research participation. Nurse educators invited to participate in our study may not have considered the opportunity for personal, professional, or altruistic benefits associated with participation. Potentially, the link between personal empowerment and job satisfaction could also offer an important clue to encourage nurse educator participation in research. Baker et al⁶ discussed the presence of such a link in a variety of environments. For example, employees who believe that there is an opportunity to empower oneself through research may experience increased job satisfaction and therefore be more inclined to participate.

Possibly, those educators who participated in our study felt a sense of empowerment by examining their own critical thinking and learning more about it.

Some strategies might have aided our efforts to increase the participation rate in our single-site study. According to some published reports, using multiple sites and involving face-to-face strategies have been known to increase sample sizes.¹⁰ However, limited research budgets may impede the ability of researchers to submit multiple ethics applications and implement face-to-face recruitment methods. Oermann et al¹¹ indicated that streamlining the ethics process by identifying a main collections site with collaborators at other sites may decrease the necessary number of ethics applications. Involving individuals embedded in the recruitment setting as champions is another approach that researchers can use to yield more research participation. Some authors involve community members or site champions in the recruitment process to foster participant trust in the research and researcher.¹²

Social media applications, such as Facebook, are also considered as an effective way to invite large numbers of individuals with limited effort on the part of the researcher.¹³ Mychasiuk and Benzies¹⁴ reported that the use of Facebook facilitated retention in their longitudinal study. Despite the positive effect that Facebook may produce on recruitment success, there are some potential challenges when using this social media tool with populations that do not characteristically access the social media application. Kapp et al¹⁵ found that there has been limited examination of using Facebook in health-related research. It is important for researchers to use new and different recruitment strategies to improve response rates among nurse educators, as well as engage in continued discussion about best practice in research recruitment based on the lived experiences of those doing nursing education research.

Retention

Often discussed simultaneously with recruitment, retention is also a key element in successful research. In our study, the 5 nurse educator participants completed all data collection components and remained in the study for its duration. Part of the success in retaining this small sample may have resulted from concerted efforts to ensure that participants felt valued, respected, and comfortable. Over the duration of multiple interactions with each participant, the lead researcher created a connection with each educator, which we believe fostered a strong sense of trust.¹² Moreover, the lead researcher completed all data collection at scheduled times convenient for each participant, eliminating the potential for variance from different data collectors.¹⁶ Care was taken to address the potentially intimidating nature of the participant observation data collection approach and to emphasize the nonthreatening purpose of the study, which was to gather positive examples as to how nurse educators revealed their critical thinking. The participants were informed that the lead researcher was not monitoring them for purposes beyond those of the research study and was not evaluating their teaching abilities.⁴ In addition, we offered each participant a \$15 coffee card to thank them for participating.

The lead researcher in our study maintained constant contact with each participant between the data collection

phases, which seemed to foster participants' association and commitment to the study given the multiple data collection components. The lead researcher's knowledge of and experience with the nurse educator role was integral in being able to converse, relate, and build trust with the participants. Even though we did not create a project identity or an online Web site for this study, developing one for future larger studies could be an important consideration to foster participants' affiliation with the study and their valued participation. Another strategy that might increase retention in future studies is the use of a certificate of participation for the participants after completion, which may increase incentive for participants to remain in a study once it has begun.¹¹

Other Considerations

In addition to specific efforts to recruit and retain nurse educator participants, researchers need to understand nursing education contexts, which influence the educators' decisions on whether to participate in research. Contextual factors may have resulted in a lower sample size in our study. Specifically, we invited educators from a research intensive environment where many requests to participate in research are sent to faculty from graduate students and faculty researchers. Although leadership was openly supportive of forwarding research requests, administrators may also believe that they need to offer a layer of protection for faculty members as to not bombard them with requests that take away from their time as educators and researchers. This balance may lead to a context where face-to-face methods of recruitment are too time-consuming and other methods of recruiting are preferred. Leaders who role model research participation would also positively support a culture of research.

White¹ stated that nursing seems to have created a culture "cautious of inquiry"^{1p17} whereby participation in research is perceived as less desirable and the provision of personal information is often withheld. Perhaps, recurrent and numerous requests made by researchers in a teaching and research intensive nursing program, such as the environment in which we were sampling, made some individuals more skeptical about divulging personal information and sharing their perspectives. Nurse educators may gravitate to relational approaches to research encompassing both recruitment and retention efforts. Within this relational space, a culture of appreciating and engaging with research may grow. As researchers and educators, we need to foster a culture of celebrating and participating in the development of knowledge through research endeavors.

Attributes of researchers and specific requirements of the research can also affect the recruitment outcome. Researcher traits, such as previous experience and interpersonal qualities, are important considerations when developing a recruitment plan. In our study, we believed that the lead researcher openly displayed positive qualities, such as enthusiasm and engagement with prospective participants, which increased the likelihood of participants agreeing to take part in our study.¹⁷ However, this may be difficult depending on the method of recruitment. For example, we originally sent e-mail invitations to participate, which many not have initially reflected the researchers' enthusiasm for the study. Given that the lead researcher was known to be an experienced

educator, the participants might have been hesitant to complete the observation portion of the research due to fear of evaluation or judgment. Possibly, using more relational methods, such as face-to-face recruitment information sessions, may have yielded more interest and decreased any possible fear associated with participation.

Although not often discussed in the literature, the difficulties we experienced with external approval processes played a critical role in our study. Although the chosen nursing program leadership supported the research study by offering access to invite their faculty as potential participants, we also needed clinical site approvals that were complex and time consuming. The multiple and lengthy permission processes to gain access to clinical sites resulted in the loss of at least 1 participant who could not complete the study because necessary multiple site approvals were not received in time. Given the challenges that the programs face obtaining enough clinical sites, many of the units in our study were not identified until immediately after commencement of each educator's rotation. We may have yielded more success in recruiting individuals within clinical settings if we had anticipated these delays, opted for a longer data collection time period, or worked with key individuals to explore how to decrease the length of time it takes to gain approvals.

Our recruitment and retention efforts may also have been affected by the absence of a robust formal pilot test before our study. Pilot testing in nursing education is not widely reported¹⁸ but can predict practical problems and promote sampling effectiveness associated with recruitment strategies.¹⁹ Pilot testing can also identify whether intervention burden may affect response rates.¹⁶ Nevertheless, limited funding may prohibit the feasibility of completing this type of research before a larger study.²⁰

Insights and Recommendations

The insights that we discovered include an understanding that the process of researching is as critical as the outcomes achieved. There is not enough focus in the literature on dissecting the challenges and successes associated with the research process to propel our knowledge forward. This information would better inform our ability as researchers to conduct studies more effectively and thoroughly and to document the research complexities that we face. More literature on the nuances of recruitment and retention will also build capacity in those who are developing their research careers. As academics within a changing society, we need to place more value on the details of our practice to inform the decisions and thinking work that we engage in every day.

Based on our lessons learned, and from reviewing the literature, we offer the following recommendations. To optimize nurse educator participation in research we suggest that

- nurse leaders encourage, facilitate, and role model participation in nursing education research. This can be through creating a culture of celebrating research by welcoming studies to be done with their nursing faculty, participating in studies as applicable, and promoting the use of research in education decisions.
- nurse researchers use different recruitment strategies, such as virtual invites and face-to-face research recruitment briefings, aimed at maximizing nurse educator participation and

publish their successes and challenges with the various recruitment strategies in the context of their research design.

- nurse researchers select participant-friendly recruitment and retention strategies, such as those that decrease burden and increase effect, to address the complexities and busyness of nurse educators' work lives.
- nurse researchers continue to disseminate and discuss response rates of nursing education studies to assist understanding how to implement effective future research practices.
- nurse researchers publish their research process details and logistics associated with studying nurse educator populations to enhance tracking of what is known in this area. These details include how best to invite, study, and retain nurse educator participants in nursing education research.

Continued research in this area is also needed to determine and understand the personal and environmental factors that affect nurse educators' decisions to participate or decline participation in nursing education research. A systematic review outlining the sampling methods, as well as recruitment and retention details in nursing education research, would also be helpful to synthesize what various nurse researchers have discovered to date.

Conclusion

We derived this study from our challenges and insights related to the completion of a small study involving nurse educators. Compounding the issue is the existence of little published material to guide researchers on how to manage potential recruitment issues and organize the pragmatics of gaining access into clinical settings. Textbooks may be helpful to describe basic approaches to recruiting and sampling; however, discussions focused on barriers and facilitators affecting the decisions by educators to participate in research, occur mainly in article-based published literature. By intentionally publishing more details about the struggles and successes of recruiting and retaining nurse educator samples, the methodology of how we research can support future research. Obviously, researchers' abilities to recruit and retain adequate samples are critical to the outcome and effect of their work. The educators' abilities to implement robust and substantiated outcomes obtained from research will strengthen their findings, which inform nursing education practices. As research supports the implementation of evidence-based teaching practice, so too should such evidence support best practice in research.

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A Tool to Guide Students in Identifying Problem Concepts, Assessment, and Diagnosis

Beginning nursing students often struggle to identify patient problems based on their assessments that link a North American Nursing Diagnosis Association (NANDA) label to them. To help students, we developed a list of common problem concepts, such as oxygenation, perfusion, and fluid/electrolytes, and paired them with appropriate assessment and NANDA labels that fit the problem concept. This tool is named the Problem Concept/Assessment/Diagnosis (PCAD) tool (see Table, Supplemental Digital Content 1, <http://links.lww.com/NE/A417>). While using the nursing process and completing head-to-toe assessments, students are able to utilize the tool to identify which concept is a problem for patients and quickly identify missing assessment data. The PCAD then assists students to identify appropriate NANDA labels correlated to assessment data and the patient's priority problems.

The tool is also helpful for clinical instructors, especially those who are new to teaching. Clinical instructors are able to use the tool to guide students in prioritizing problems, encourage the student to do a more thorough assessment, and link NANDA labels that fit the patient's condition. The PCAD also reminds new clinical instructors of how novice nursing students work through the nursing process and make early clinical judgements.

By Alyssa Backes, MS, RN, CLC, and Sara Berger MSN, RN-BC, CNE Assistant Professors of Practice, North Dakota State University Nursing, Sanford Health, Bismarck, ND, alyssa.backes@ndsu.edu; sara.berger@ndsu.edu.

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