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Ingram School of Nursing, McGill University

Message From the Senior Editors

For decades *CJNR* has been the leading nursing research journal in Canada. It has provided an indispensable forum for Canadian and international nurse researchers, students, and practitioners to exchange ideas and contribute to advances in nursing research and practice.

The impressive contributions that *CJNR* has made to nursing scholarship in Canada would not have been possible without the investment of nursing scholars, the commitment of the Editors-in-Chief from the host institution (the Ingram School of Nursing at McGill University), and the dedication of all those who have given their time as reviewers and/or members of the editorial board throughout our history.

As the scope and readership of the Journal expand, and as we strive to reach further with our impact, it has been vital for us to seek new ways to meet the financial and human resource needs of the expansion.

We are excited to report that, starting with the March 2016 issue (Volume 48, Nº 1), *CJNR* will be under the banner of SAGE Publications, a change that we believe will lead the Journal to new heights.

As we finalize this transition, we are committed to processing all submitted manuscripts according to the standard protocol of our peer-review process. New submissions will be redirected to the SAGE site for consideration in future issues of *CJNR* (beginning in 2016). All currently published issues of the Journal will remain permanently accessible in the McGill online archives.

We understand that this is a significant change, but we are confident that it will be a seamless one that further advances the scope and impact of *CJNR*. Thank you for your support and patience as we conclude this transition.

The Senior Editors

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EDITORIAL

CJNR Bids a Fond Farewell to the Ingram School of Nursing at McGill University

This last issue of *CJNR (Canadian Journal of Nursing Research)* published from the Ingram School of Nursing at McGill University goes out to our readers with mixed emotions: sadness, gratitude, hope.

Long-time readers will know that the earliest issues of the Journal, then named *Nursing Papers,* were published by the School at the initiative of Moira Allen, Director of the McGill School of Nursing at that time, 47 years ago. *Nursing Papers* was the only journal of its kind in Canada — one that gave voice to nurses, thus publicly acknowledging the key role played by nurses in the health of society by virtue of their ability to gather, analyze, and use information for the purpose of acting on behalf of patients and communities.

The Journal has evolved tremendously since those early days. Its name was changed from *Nursing Papers* to *Canadian Journal of Nursing Research* — and later abbreviated to *CJNR*. Its frequency of publication was increased from two to four times a year. The editorial board and the structure were greatly altered. The role of nurse scholars across the country was expanded through the introduction of focus issues with guest editors. Production and administration were transformed through the adoption of new technologies. Numerous other changes, both large and small, were instituted to ensure that *CJNR* remained current within the ever-evolving world of scholarly publishing.

Through all of these shifts and changes at the Journal, there has been one constant: the editorial decisions and publishing oversight of *CJNR* have always been based at the McGill School of Nursing — in fact this journal is one of the few still published out of a university. While the loss of this important part of the School's history saddens us deeply, it also fills us with immense gratitude towards those who brought the Journal into being at McGill and those who developed and nurtured and sustained it at the University for so many years.

Forty-seven years for which to be grateful means that, in this brief editorial, we are unable to acknowledge the valuable contributions of everyone who has given generously of their time and talents. We must, however, most enthusiastically acknowledge the dedication, expertise, and

skills of the Journal's successive Editors-in-Chief: Moira Allen (1969–84), Mary Ellen Jeans (1985–92), Laurie N. Gottlieb (1993–2012), Sean P. Clarke (2013–14), and Mary Grossman (January–April 2015).

The members of *CJNR*'s editorial board over the past half century are simply too numerous to list, their important contributions notwithstanding. We are particularly grateful to the senior members of the current editorial board, who have been so heavily involved over the last few years: Jan Angus, University of Toronto; Antonia Arneart, McGill University; Eloise Carr, University of Calgary; Maher El-Masri, University of Windsor; Diana Gustafson, Memorial University of Newfoundland; Louise Racine, University of Saskatchewan; and Souraya Sidani, Ryerson University.

CJNR has had several Managing Editors over its lifetime. The two most recent, Jill Martis and Joanna Toti, in particular, have demonstrated an impressive level of enthusiasm and expertise, as have members of the Journal's production team during the last two decades. *CJNR* would not have been able to function without the commitment and flawless work of Jane Broderick, Copy Editor; Cait Beattie and Jean Louis Martin, responsible for Graphic Design and Layout; and Lou Lamontagne with her team of Translators. Equally indispensable have been the Canadian and international nursing scholars who have served as reviewers — and, of course, our faithful readers.

The enormous contribution of Laurie Gottlieb, Editor-in-Chief Emeritus, deserves to be singled out. Having worked with Laurie as Assistant Editor (1998–99), as Associate Editor (2000–03), and, currently, as Acting Director of the Ingram School of Nursing, I can attest to her relentless intellectual pursuit of the best that nursing has to offer. Laurie Gottlieb's service to *CJNR* and to nursing scholarship remains unparalleled, and there are no words to express the profound gratitude of the editorial board, the staff, and all those associated with the Journal, as well as the Ingram School of Nursing and the entire nursing research community.

Joanna Toti, *CJNR*'s Managing Editor for the past 18 years, has been its mainstay. Her level of professionalism is without equal. Joanna's willingness to ever so patiently tutor me in my *CJNR* roles, her readiness to troubleshoot on any and all issues related to the Journal, and her commitment to quality assurance are testament to her fierce dedication to *CJNR*.

Change can, often, mean hope, and this is the case as SAGE Publications Inc. takes the reins of *CJNR* beginning with the next issue. SAGE has a history of publishing quality journals, and there is no reason to believe that *CJNR* will not become part of this tradition.

As the only general nursing research journal in Canada, *CJNR* occupies a special place in the realm of nursing journals, offering Canadian "flavour" while reaching far beyond the country's borders. Canadian nurse researchers are engaged in responding to issues specific to the communities in which they practise. These issues include being situated in a country in which universal physician and hospital care are guaranteed by law; Aboriginal communities are relatively numerous and are engaged in taking control of their health and its socio-economic and political determinants; the population is more than 20% foreign-born; and a particular cultural mix has resulted from the country's unique "place" between North America and Europe, particularly France and the United Kingdom. These are just a few of the issues differentiating Canada from other countries and through which Canadian nurse researchers contribute to the worldwide body of nursing knowledge.

I am a firm believer in the idea that change always brings with it something positive. We are being challenged, as Canadian nurse researchers, to ensure that the new knowledge we gain for the benefit of the society in which we live continues to be shared with others, for the benefit of their own communities. We fervently hope that this will occur, at least partially, within the covers of SAGE's *CJNR,* as well as through all the other means available to us — social media, networks, conferences, other journals. Canadian nurse researchers have much to say. Let us all make sure that our voices continue to be heard.

And let us celebrate new beginnings for *CJNR*.

Anita Gagnon, Acting Director
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McGill University

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Developing a Web Site: A Strategy for Employment Integration of Internationally Educated Nurses

Andrea Baumann, Dina Idriss-Wheeler, Jennifer Blythe, Paul Rizk

In Canada and elsewhere, the case for hiring internationally educated nurses (IENs) has not been adequately made and guidance for employers is lacking. The Web site *Internationally Educated Nurses: An Employer's Guide,* launched in 2012, is intended to provide health-care employers in Ontario with comprehensive information on the hiring and integration of IENs. An evaluation framework and mixed methods design were used to determine the usability of the site in relation to its goal. Convenience sampling was employed to select participants representing specified users (i.e., health-care employers). Overall evaluation of usability was positive. Participants indicated that it raised their awareness of the advantages of hiring and integrating IENs to address shortages, increase workforce diversity, and provide culturally competent care. Future projects should focus on collaboration with employers to increase the uptake of IENs.

Keywords: Canada, cooperative behaviour, culturally competent care, employer resources, international nurses, personnel selection

Résumé

La création d'un site Web : stratégie pour l'intégration à l'emploi des infirmières et infirmiers diplômés à l'étranger

Andrea Baumann, Dina Idriss-Wheeler, Jennifer Blythe, Paul Rizk

Au Canada et ailleurs, les avantages de l'embauche des infirmières et infirmiers diplômés à l'étranger (IIDE) n'ont pas été expliqués adéquatement et les employeurs manquent d'orientation à ce propos. Le site Web Internationally Educated Nurses: An Employer's Guide (*Infirmières et infirmiers diplômés à l'étranger : Un guide destiné aux employeurs,* en anglais seulement), lancé en juin 2012, vise à fournir aux employeurs dans le domaine des soins de santé de l'Ontario des renseignements complets sur l'embauche et l'intégration des IIDE. À partir d'un cadre d'évaluation et de diverses méthodes, le site Web a été soumis à une analyse afin de déterminer sa facilité d'utilisation en fonction de son objectif. Un groupe de participants représentant des utilisateurs précis (les employeurs dans le domaine de la santé) a été constitué au moyen d'un échantillonnage de commodité. Globalement, le résultat de l'évaluation de la facilité d'utilisation du site Web s'est révélé positif. Les participants ont indiqué que le site avait contribué à mieux les sensibiliser aux avantages et à l'importance de l'embauche des IIDE pour résoudre les problèmes de pénurie, pour accroître la diversité de l'effectif et pour offrir des soins adaptés sur le plan culturel. Les projets futurs devraient être axés sur une collaboration avec les employeurs afin d'accroître l'intégration des IIDE.

Mots-clés : Canada, collaboration, soins adaptés sur le plan culturel, personnel, infirmières et infirmiers diplômés à l'étranger, embauche

Background

In 2011 Canada had the largest proportion of foreign-born residents (20.6%) among the G8 countries (Statistics Canada, 2011). According to the 2011 Canadian Census, 20% of Canada's total population speaks a non-official language (i.e., neither English nor French). As the most populous province in Canada, Ontario is home to 53.3% of the country's foreign-born population, 26% of whom speak a non-official language (Statistics Canada, 2013). British Columbia, Quebec, and Alberta also have large shares of foreign-born residents.

Canada requires a health workforce able to provide care to a diverse population. Internationally educated nurses (IENs) have experience, unique ideas and knowledge, and language and communication skills. They are a valuable resource and can help build relationships in communities that have large proportions of foreign-born residents and contribute to the provision of culturally sensitive care (Li, Nie, & Li, 2014; Wahoush, 2009). However, while national immigration policies encourage the migration of educated persons, including IENs, admittance to Canada does not necessarily translate into labour market uptake or optimal employment.

Research demonstrates that employment rates are lower for university-educated immigrants than for their Canadian-born counterparts (Reitz, Curtis, & Elrick, 2014). IENs frequently settle for occupations other than those for which they are trained, resulting in skill underutilization. Their efforts to obtain employment in the health-care sector are met with various barriers, including racialization and employer reluctance (Neiterman & Bourgeault, 2015b; Spetz, Gates, & Jones, 2013; Wheeler, Foster, & Hepburn, 2014).

To increase IENs' prospects of obtaining suitable employment, employers need to be aware of the contributions that IENs can make to the workforce. The case for hiring IENs has not been adequately made and guidance for employers is lacking. Furthermore, what little information exists is not available from any one source. In June 2012 the Web site *Internationally Educated Nurses: An Employer's Guide* was launched. This innovative user-friendly resource is the first of its type in Canada. It is intended to help health-care employers prioritize IEN uptake and integration by increasing their awareness of the advantages of hiring IENs and the challenges these nurses face in entering the labour market (Ontario Hospital Association, 2011).

The Web site provides comprehensive information on hiring, recruitment, entry, and orientation, ongoing support and requirements for IENs, as well as case studies and resources (Ontario Hospital Association, 2011). The Web site project was part of the 3-year Framework for

Integrating Internationally Educated Nurses into the Healthcare Workforce initiative, funded by the Ontario Ministry of Health and Long-Term Care. Conceptually, the project was guided by an evaluation framework.

Rubrics are frequently used in Web site evaluations to measure performance. Common areas of focus include content, authority, currency, purpose, and usability. The last was of particular importance in the project. Usability is a key quality attribute in Web site design (Microsoft, 2009). Based on ISO 9241-11, released by the International Organization for Standardization in 1998, usability is the "extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use" (Dingli & Cassar, 2014, p. 1).

Effectiveness is the "accuracy and completeness with which users achieve specified goals," efficiency is the "resources expended in relation to the accuracy and completeness with which users achieve goals," and satisfaction is the "comfort and acceptability of use" (Matera, Rizzo, & Toffetti Carughi, 2006, p. 4). In accordance with the ISO (1998) definition, the purpose of the study was to evaluate the usability of the Web site by determining the "extent to which" its aim was achieved. The "specified users" of the site were employers and the "specified goal" was increased employer awareness.

Methods

Design

The *Internationally Educated Nurses: An Employer's Guide* site was developed over a 3-year period (2010–13). We used empirical testing and a mixed methods design to evaluate its usability. Methods included three interactive think tank sessions prior to the launch and four field-testing workshops, semistructured telephone interviews, an electronic survey, and Google Analytics following the launch.

The interviews and surveys were conducted following the field-testing workshops and were used to obtain data on the participants' experiences using the site, benefits of the site, and quality of the content. Participants were asked to provide general and specific feedback and recommendations for improvement. The interview questions were based on the literature and our previous research. The interviews were audio-recorded and transcribed verbatim. Responses were coded into QSR NVivo version 10.0. Texts were interpreted through thematic analysis (Boyatzis, 1998).

The survey was distributed electronically. It was designed "on the basis of the literature on usability and user satisfaction" and adapted from

a published reliable and valid tool (Elling, Lentz, & de Jong, 2007, p. 293). It included 23 items measured on a seven-point scale *(strongly disagree, disagree, neutral, agree, strongly agree, not applicable).* Responses were summarized using descriptive statistics. Data were analyzed using Microsoft Excel.

While Google Analytics provides various metrics, pageviews were used to determine site usage and the content most visited by users. Web traffic for each section was evaluated from June 1, 2012, to May 31, 2013. Analysis of Web traffic was conducted using R version 3.0.0 (https://www.r-project.org/).

Participants

Convenience sampling was used to select participants, who were identified in partnership with the Ontario Hospital Association (OHA) consisting of health-care employers across the province. The sample included chief/executive nursing officers and human resource (HR) managers from various hospitals and other members of the OHA. To enhance inclusivity and obtain a more panoptic view, we also included IENs, educators, regulatory body members, and representatives of agencies and organizations that facilitate IEN employment. The team selected interview and survey participants based on region, size of organization, and willingness to participate, thus ensuring wide representation.

Ethics

The project and research instruments were approved by the Hamilton Health Sciences Research Ethics Board. The study rationale was explained to all participants prior to their involvement. Informed consent was obtained. Confidentiality was assured and maintained.

Results

Table 1 provides a breakdown of the dates, locations, evaluation methods, participant categories, and number of participants. Google Analytics is discussed separately because participants were not involved in that process.

Think Tanks

Sixty-one participants attended the think tank sessions. They validated the need for the Web site and suggested modifications to improve relevancy. They also provided examples of successful IEN hiring and retention practices that could be used across health-care organizations and suggested additional activities to encourage the uptake of IENs (e.g., ori-

Table 1 ***Evaluation Methods and Participants***

Date	Method	Location	Participants (Number)
September 2011	Think tank 1	London	Employers (11) Educator (1) Agencies/organizations (2)
September 2011	Think tank 2	Toronto	Employers (19) Educators (4) Agencies/organizations (6)
September 2011	Think tank 3	Ottawa	Employers (10) Educators (5) Agencies/organizations (3)
October 2012	Field-testing workshop 1	Toronto	Employers (25) Educators (3) Agencies/organizations (8) Regulator (1)
October 2012	Field-testing workshop 2	Niagara	Employers (3) Educators (3) Agencies/organizations (2) Regulator (1)
November 2012	Field-testing workshop 3	Ottawa	Employers (4) Educators (2) Agencies/organizations (6) Regulators (2)
November 2012	Field-testing workshop 4	Windsor	Employers (3) Educators (2) Agencies/organizations (5)
January 2013	Telephone interviews	N/A	Employers (7) Educators (5) Agencies/organizations (4) IEN (1)
February 2013	Electronic survey	N/A	Employers (56)

entation funding). The Web site was revised accordingly and field-tested during the workshops.

Workshops

Seventy participants from more than 40 organizations across Ontario attended the workshops. The half-day sessions were held in areas shown by Statistics Canada (2011) to have a significant percentage of foreign-born residents. Discussion focused on the Web site and current trends and issues in the labour market, such as the need for increased workforce diversity. Strategies to recruit, retain, integrate, and mentor IENs were highlighted. Participants were asked to rate the overall value of the workshop. Ratings were as follows: *good* (25%), *very good* (50%), *excellent* (25%). Over 80% of participants indicated that the workshop met their objectives for attending, which included better understanding of IEN competency and how to link IEN employment initiatives to corporate objectives.

Interviews

Seventeen interviews were conducted. Interviewees stated that the Web site had "a great layout with great headings" and was "appealing to look at and easy to navigate." They noted that the content was relevant, concise, and clear and indicated that they would recommend the site to others. Interviewees cited various benefits of the site, such as clarifying the rigours of entry to practice for IENs and increasing their potential for suitable employment. However, they did suggest several improvements, such as including a map of hospital hiring needs in Ontario and information on educational assessment for IENs.

Survey

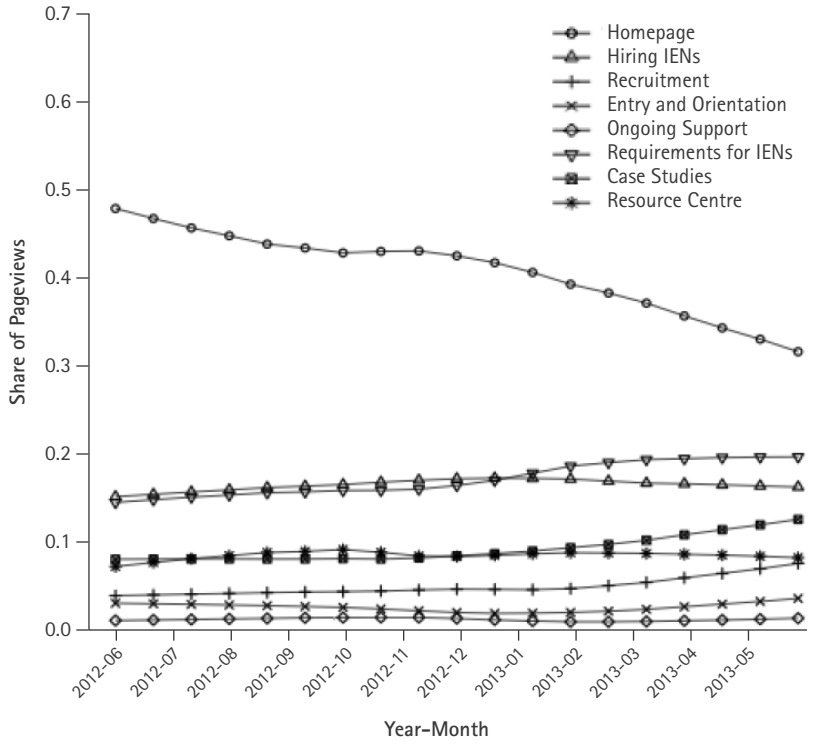
The survey was sent to 188 potential respondents. Fifty-six valid surveys were returned, for a response rate of 30%. The most common respondents were employers (46%) in a hospital setting (41%). Close to one third of respondents (31%) were HR specialists or HR leaders. Respondents were asked to rate the utility of the Web site sections. Their responses are provided in Table 2.

Fully 84% of respondents agreed/strongly agreed that the site offered relevant content. More than 70% found the design appealing and 80% found the information easy to understand. Further, 30% indicated they used the information, strategies, and tips provided on the site and 44% reported that the site had benefited them or their organization. Examples of benefits included increased knowledge of IEN employment issues and greater awareness of the advantages of hiring IENs. Over 80% of respondents anticipated using the site in the future. Suggestions for improvement included highlighting cultural differences in practice to

Table 2 ***Utility of Web Site Sections***

Section	Utility (%)	95% CI
Hiring IENs	79.8	73.4–85.1
Recruitment	77.1	70.7–82.5
Entry and Orientation	79.8	73.4–85.1
Ongoing Support	81.9	76.1–87.2
Requirements for IENs	81.9	76.1–87.2
Case Studies	75.0	68.1–80.9
Resource Centre	79.8	73.4–85.1

Figure 1 ***Local Regression (LOESS) Fit of Mean Share of Pageviews, by Section***



demonstrate that IENs do not lack knowledge or skills and focusing on key areas to consider when working with IENs (e.g., documentation and team processes).

Google Analytics

The share of daily pageviews is the proportion of pageviews for a single section out of the total number for an entire site on a given day. Figure 1 provides the mean share of daily pageviews for each section of the site from June 2012 to May 2013. The dashed line indicates the local regression (LOESS) fit for the data. Heavy-usage days were generally associated with dissemination activities, such as e-mail blasts and announcements, which were prevalent early in the evaluation period.

The share of daily pageviews for the homepage and each section changed over time (see Table 3). The homepage share decreased by May 2013, but the share of all other sections increased. The largest absolute increases were for Case Studies (5.0%), Requirements for IENs (4.9%), and Recruitment (4.4%). Aside from a switch in position between the sections Hiring IENs and Requirements for IENs, the relative ranking of sections by share of pageviews changed little. Based on end rank, the two most accessed sections were Requirements for IENs and Hiring of IENs. The least accessed sections were Entry and Orientation and Ongoing Support.

Table 3 ***Daily Pageview Shares for Homepage and Sections***

Section	Share of Pageviews (%)			Ranking	
	Start	End	Change (% Change)	Start	End
Homepage	49.3	29.5	-19.8 (-40.2)	1	1
Hiring IENs	14.4	16.4	2.0 (13.9)	2	3
Recruitment	3.8	8.2	4.4 (115.8)	6	6
Entry and Orientation	2.9	4.0	1.1 (37.9)	7	7
Ongoing Support	1.0	1.3	0.3 (30.0)	8	8
Requirements for IENs	14.2	19.1	4.9 (34.5)	3	2
Case Studies	8.2	13.2	5.0 (61.0)	4	4
Resource Centre	6.0	8.3	2.3 (38.3)	5	5

Note: "Start" indicates the launch of the Web site on June 1, 2012. "End" indicates the end of the evaluation period on May 31, 2013.

Discussion

The Canadian Institute for Health Information (2015) recently reported that the supply of nurses nationwide has declined. Similar shortages have been noted in Australia, the United Kingdom, and the United States and are expected to intensify (American Association of Colleges of Nursing, 2014; "Nursing shortage expected to worsen," 2015; Royal College of Nursing, 2015). To fulfil staffing requirements, Canadian health-care organizations rely on traditional sources of nursing supply: new graduates and nurses from other provinces. However, the former lack experience and the latter are usually low in numbers (Cheng, Tsai, Chang, & Liou, 2014; Twibell et al., 2012). IENs can ease the burden of shortage, improve capacity, and increase workforce diversity, thus better reflecting the patient population. It is therefore vital that employers perceive IENs as an asset to their HR complement and that impediments to the hiring and integration of IENs be removed. Based on the results of our evaluation, the Web site *Internationally Educated Nurses: An Employer's Guide* enhances the employment prospects of IENs by increasing employer recognition of their skills and potential.

Involving stakeholders in the development of the site helped to ensure that it met the goal of the project and the requirements of the target audience. The US Department of Health and Human Services (2006) cites the need to solicit the input of users to determine the relevance of Web site content and usability. Furthermore, knowledge transfer is enabled by a strong relationship between those who generate knowledge and those who use it (Reardon, Lavis, & Gibson, 2006).

Many participants indicated that they first heard about the benefits of IEN employment and integration through the Web site project. During workforce integration, "nurses enter the workforce efficiently, effectively and with productive employment" (Baumann, Hunsberger, & Crea-Arsenio, 2011). The literature demonstrates that both domestically educated and internationally educated nurses who are satisfied with their jobs remain in their positions longer, which has a positive effect on patient outcomes (Ea, 2007; Tao, Ellenbecker, Wang, & Li, 2015).

As per Almeida, Fernando, and Hannif (2014), human capital theory holds that IENs, having invested in their skills and knowledge, should be able to obtain employment in the area for which they have been trained (i.e., health care). However, this view overlooks the influence of health-sector employers and professional associations in labour market uptake and integration of IENs. The *Internationally Educated Nurses: Employer's Guide* site targets those who play an integral role in IEN employment and integration in Ontario. It increases the likelihood of IENs obtaining

suitable employment by bridging the gap between employers and a pool of licensed, experienced health professionals.

Overall evaluation of the Web site's usability was positive. Participants indicated that it provided relevant and easily accessible content that raised their awareness of issues in and barriers to IEN employment and integration, many of which are cited in the literature, including discrimination, insufficient orientation for international graduates, and failure to recognize IEN capabilities (Baptiste, 2015; Neiterman & Bourgeault, 2015a; Newton, Pillay, & Higginbottom, 2012; Xiao, Willis, & Jeffers, 2014). Participants also reported using the Web site and corresponding flipbook as referral sources for hiring and integrating IENs. The flipbook, which is available through the Web site, follows the layout of each section and provides highlights of the content. Between January and May 2013, 2,755 hard copies of the flipbook were distributed to more than 1,200 organizations in Ontario.

Feedback from the think tank sessions, workshops, interviews, and survey was complemented by Web site traffic analysis. The large amount of traffic observed in association with the dissemination activities was one way to determine short-term effectiveness. Making vital information readily available to users can encourage stakeholder engagement and support decision-making and policy development (Van Eerd et al., 2011). Some participants indicated their intention to leverage the Web site content within their organizations and include IEN staffing and recruitment in strategic planning.

The decrease in homepage share towards the end of the evaluation period and the concurrent rise in the page shares of other sections indicate that users were exploring the content more deeply. The popularity of the Requirements for IENs and Hiring of IENs sections suggests that many users were in the pre-hiring stages. The Entry and Orientation and Ongoing Support sections showed little traffic. These sections focus on issues that arise after IENs join the workforce. The lack of interest in these sections may indicate that users were not ready for the latter stages of the integration process at the time of the evaluation.

Limitations

The study targeted a niche audience and a portion of the nursing stakeholders in Ontario. The number of organizations employing IENs is small, and nurses usually have to self-identify for a supervisor or manager to know they are internationally educated. We compensated for these limitations by using the think tank sessions and field-testing workshops to further explore issues related to the employment of IENs and to highlight stories of successful IEN workforce integration.

Conclusion

The multicultural profile of Canada and other countries — including Australia, the United Kingdom, and the United States — heightens the need for a diverse health-care workforce. The *Internationally Educated Nurses: An Employer's Guide* Web site provides valuable evidence-based resources for employers interested in hiring and integrating IENs. The site addresses the issue of information being dispersed among many sources and ensures that relevant information and guidance are readily available. Although the site has been implemented in Ontario only, it has applicability in all Canadian provinces. Future projects should focus on collaboration with employers to increase the uptake of IENs. Strategies could include providing employers with benchmark models of employment, guiding them through government-funded initiatives, and linking them with a pool of work-ready IENs.

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Attrition in Smoking Cessation Intervention Studies: A Systematic Review

Emily Belita, Souraya Sidani

Withdrawal of participants from intervention studies has dire methodological and clinical consequences. Attrition rates in smoking cessation studies have been found to be particularly high. Identifying factors that contribute to attrition may inform strategies to address the problem and prevent its consequences. This systematic review had 2 objectives: to report attrition rates, and to identify factors that influence attrition of adult smokers participating in smoking cessation intervention studies. Inclusion criteria were (1) published between 1980 and 2015; (2) experimental or quasi-experimental design; (3) pharmacological, educational, or behavioural intervention; (4) target population of adult smokers; (5) examination of attrition rate; and (6) exploration of factors associated with attrition and/or of reasons given by participants for withdrawing. These criteria were met by 10 studies. Attrition rates ranged from 10.8% to 77%. A small number of demographic, clinical, behavioural, health, health-related beliefs, and logistical factors were related to attrition. The report of high attrition rates underlines the importance of incorporating strategies to minimize attrition in smoking cessation studies. Strategies to reduce attrition are proposed.

Keywords: attrition, withdrawal, dropout, smoking cessation, interventions, systematic review

Résumé

Revue systématique du taux d'abandon dans les études d'intervention sur la cessation du tabagisme

Emily Belita, Souraya Sidani

Le retrait de participants à des études d'intervention a des conséquences fâcheuses sur les plans méthodologique et clinique. Le taux d'abandon observé dans les études sur la cessation du tabagisme est particulièrement élevé. Cerner les facteurs qui contribuent à l'abandon peut contribuer à mieux éclairer les stratégies déployées pour résoudre ce problème et prévenir ses conséquences. Cette revue systématique visait deux objectifs : prendre acte des taux d'abandon et déterminer les facteurs influençant la décision de fumeurs adultes de se retirer d'une étude d'intervention sur la cessation du tabagisme à laquelle ils participent. Les critères de sélection des études étaient : 1) la publication entre 1980 et 2015, 2) l'emploi d'un modèle expérimental ou quasi expérimental, 3) les études portant sur des interventions pharmacologiques, d'éducation ou comportementales, 4) une population cible consistant en des adultes fumeurs, 5) un examen du taux d'abandon et 6) l'étude des facteurs associés à l'abandon ou des raisons données par les participants pour expliquer leur retrait de l'étude. Dix études répondaient à ces critères. Le taux d'abandon dans ces études se situait entre 10,8 % et 77 %. Un petit nombre de facteurs démographiques, cliniques, com-portementaux et logistiques ainsi que de facteurs liés à la santé et aux croyances relatives à la santé ont pu être associés aux abandons. L'indication de taux élevés d'abandon souligne l'importance d'intégrer aux études des stratégies visant à minimiser les départs des participants aux études sur la cessation du tabagisme. De telles stratégies sont proposées dans le cadre de la présente revue systématique.

Mots-clés : abandon, retrait, départ, cessation du tabagisme, interventions, revue systématique

Introduction

Attrition or withdrawal of participants from smoking cessation intervention studies has dire methodological and clinical consequences. It poses a major threat to statistical conclusion and internal and external validity of the findings. Attrition results in a sample size that is smaller than is necessary on the basis of power analysis. With a small sample size, the statistical power to detect significant intervention effects is reduced and the chance of type II error is increased (Shadish, Cook, & Campbell, 2002). This may lead to the abandonment of a potentially useful intervention. Attrition compromises the representativeness of the sample when individuals who withdraw from the study and those who complete it differ on sociodemographic (e.g., gender) and clinical (e.g., nicotine dependence) characteristics that can influence the response to the intervention; the generalizability of the findings is limited to the subgroups of the target population with the same characteristics as those observed for participants who completed the study. Attrition can also produce a situation in which the number and sociodemographic and clinical characteristics of participants assigned to the intervention and the comparison groups differ (i.e., differential attrition). This happens when a large number of participants with a particular profile assigned to one group withdraw from the study, so that the two groups are no longer comparable on baseline characteristics; these group differences have the potential to confound the effects of the intervention (Sidani, 2015; Valentine & McHugh, 2007).

Attrition may also prolong the study and increase its costs (Butler et al., 2013). Researchers attempt to enrol more individuals in the study to make up for those who withdraw and put in extra efforts to follow up with participants to prevent attrition. These strategies require extensive human and financial resources (Marcellus, 2004), which may not be available. Further, their effectiveness in minimizing attrition is not well established.

High attrition rates in smoking cessation intervention studies, classified as either pre-inclusion or post-inclusion, have been reported (Curtin, Brown, & Sales, 2000). Pre-inclusion attrition takes place when participants withdraw after screening for eligibility and fail to begin any aspect of the intervention (Ahluwalia et al., 2002; MacPherson, Stipelman, Duplinsky, Brown, & Lejeuz, 2008). Thus, these participants do not receive the treatments (i.e., intervention under evaluation or comparison treatment) offered in the study. Post-inclusion attrition occurs any time after the intervention is provided. Attrition rates have been reported as ranging from 30% to 50% pre-inclusion and 10% to 50% post-inclusion (Curtin et al., 2000). Regardless of when it takes place throughout the

study, attrition poses the same methodological dilemmas for researchers. Thus, examining predictors of any type of attrition is warranted, to establish general attrition prevention strategies that could also transcend smoking cessation intervention studies.

This descriptive systematic review was designed to generate a list of factors underlying attrition in smoking cessation intervention studies. The specific objectives were to (1) report attrition rates, and (2) identify factors that influence the attrition of adult smokers in intervention evaluation studies. Investigating factors that contribute to attrition can help to identify specific groups of individuals, with distinctive characteristics, that are most at risk for dropout and/or contextual factors that impede continued participation in the study. Exploration of factors that influence attrition in smoking cessation intervention studies is important for devising strategies that are relevant and appropriate and that successfully address attrition.

Method

This descriptive review focused on studies that evaluated the effectiveness of smoking cessation interventions. Data were extracted on the type of treatments under evaluation, the reported attrition rate, and factors that contributed to participants' withdrawal from the study.

Selection Criteria

Studies were included in the systematic review if they met the following criteria: (1) published between 1980 and 2015, to ensure relevance of the settings and interventions to the current context of smoking cessation; (2) experimental (or randomized clinical trial) or quasi-experimental (cluster randomized trial or cohort study) design, which are considered appropriate for the evaluation of interventions; (3) pharmacological, educational, or behavioural smoking cessation intervention; (4) targeting adult smokers (18 or older); (5) reporting the rate of attrition, defined as the number of participants who withdrew at any point during the study, or relevant data that allow calculation of the attrition rate; and (6) exploring factors associated with attrition and/or reasons given by participants for their withdrawal.

Search Strategy

The search for relevant studies included the following databases: Medline, CINAHL, PsycINFO, Health Star, and Cochrane. The databases covered literature pertaining to different disciplines (i.e., medicine, nursing, health psychology, health education) engaged in smoking cessation treatment. The keywords were as follows: smoking, smoking cessation, smokers,

drop-out, non-participation, attrition, intervention, nonparticipants, and research studies. The reference lists included in the study reports were searched for additional sources. The search was limited to the English language.

Data Extraction

Data were extracted on study characteristics, intervention characteristics, attrition rate, and factors influencing attrition. Study characteristics entailed target population (as delineated by the inclusion criteria) and overall design (as described in the study report). Intervention characteristics were related to the type of treatment offered; these were obtained from the description of the intervention and the comparison protocols. The attrition rate was extracted if reported. Otherwise the number of participants who withdrew or the number who completed the study was recorded. This number allowed for computation of the attrition rate when it was not explicitly reported. Data on factors influencing attrition encompassed (1) the list of factors hypothesized to affect attrition and assessed with relevant quantitative measures, and (2) the factors that were found to be significantly or not significantly associated with attrition. Reasons for withdrawal, as given by participants, were also extracted. Data from journal articles were extracted individually by three researchers; these had high interrater reliability (≥ 80%).

Data Abstraction

Information extracted from the selected studies was incorporated into a table to facilitate data abstraction and synthesis. When the attrition rate was not explicitly reported, it was computed as the percentage of participants who withdrew from the study out of those who consented. Data on the attrition rate were examined descriptively (i.e., range and mean). Data on influential factors were synthesized across studies to determine the frequency with which they were found to affect attrition and to describe the direction of their influence (inferred from the correlation or regression coefficients given in the reports).

Results

The search yielded 189 articles. Only 10 studies examined factors influencing attrition in smoking cessation intervention studies. Nine studies met the selection criteria; one study was excluded as the attrition rate was not explicitly reported and there were no data available to compute the attrition rate. The characteristics of the included studies, the treatment, the attrition rates, and the factors that were and were not associated with attrition are summarized in Table 1.

Table 1 ***Sample of Studies: Characteristics, Attrition Rates, and Factors Influencing Attrition***

Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
Ahluwalia et al. (2002)	*N* = 787 African-American smokers over 18 years of age	*Control* Standard (non-tailored) care: videotape and guide for smoking cessation *Intervention* Culturally sensitive smoking cessation videotape and guide	36%	*Demographic* • employment • income • marital status *Clinical* • number of quit attempts • age of first cigarette • smoking within 5 minutes of waking *Behavioural* Participation in physical activity and weight loss program *Health status* • pre-existing medical conditions • self-reported good health • depression *Health beliefs* Health will improve if I quit smoking. *Logistical* Travel time from home to clinic	*Demographic* • age (younger) • sex (male) • education (lower) • literacy level (lower) • regular source of health care (less likely) • health insurance (less likely) • having own transportation (less likely) *Clinical* Smoking fewer and lower-tar cigarettes *Behavioural* • alcohol use • intention to quit (low) *Logistical* Proactive recruitment *Other* • physician advice to quit (less likely) • knowing someone whose health was impacted by tobacco (less likely)

Continued on next page

Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
Curtin et al. (2000)	*N* = 358 Smokers with history of major depressive disorder	*Control* Standard smoking cessation treatment *Intervention* Standard smoking cessation treatment + cognitive-behavioural treatment for depression	28%	*Demographic* Age *Clinical* • minutes after waking until first cigarette • daily number of cigarettes • duration of smoking • current and past participation in psychotherapy *Behavioural* Current and past use of alcohol and non-prescription drugs	*Demographic* Gender (female) *Clinical* Smoking cigarettes with high nicotine levels *Health status* Taking psychiatric medication
MacPherson et al. (2008)	*N*= 53 Smokers with symptoms of depression	*Control* Standard smoking cessation treatment *Intervention* Standard cessation intervention + group behavioural activation (i.e., activity monitoring and conscious exposure to positive life experiences)	40%	*Demographic* • age • gender • ethnicity • employment status • education • income *Clinical* • duration of smoking • nicotine dependence • daily number of cigarettes • number of quit attempts • motivation for quitting	*Behavioural* Engagement in avoidance behaviours in response to affective and physical stress

Continued on next page

Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
MacPherson et al. (2008) *(continued)*				*Health status* • anxiety • depressed mood	
Brouwer & Pomerleau (2000)	*N* = 143 Female smokers with self-reported weight concerns	*Control* • 6 weeks of nicotine replacement therapy • cessation counselling sessions • placebo *Intervention* • 6 weeks of nicotine replacement therapy • cessation counselling sessions • fluoxetine	16%	*Demographic* • age • education • race *Clinical* Daily number of cigarettes *Behavioural* • use of smoking as weight control • restraint and disinhibition when eating *Health status* • depression • BMI	*Clinical* Nicotine dependence (higher) *Behavioural* Dieting severity (higher)
Copeland et al. (2006)	*N* = 746 Female smokers with self-reported weight concerns	*Intervention 1* Individually tailored group session focused on smoking relapse prevention and prevention of post-cessation weight gain	36%	*Demographic* • age • race *Smoking/quit behaviours* • daily number of cigarettes • duration of smoking • number of quit attempts	*Clinical* Nicotine dependence (higher) *Behavioural* Eating restraint (low level)

Continued on next page

Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
Copeland et al. (2006) *(continued)*		*Intervention 2* Group session focused on smoking relapse prevention and prevention of post-cessation weight gain		*Other health behaviours* • disinhibition (losing control of eating) • perceived hunger	*Health status* Weight concern (higher)
Woods et al. (2002)	*N* = 120 African-American smokers	*Control* • 8 motivational interviews (phone or in-person) • culturally tailored cessation guidebook • placebo for 7 weeks *Intervention* • 8 motivational interviews (phone or in-person) • culturally tailored cessation guidebook • buproprion for 7 weeks	45%	*Demographic* • marital status • income • health insurance *Clinical* • daily number of cigarettes • depression • nicotine dependence • number of quit attempts *Social network* Having smokers in network *Logistical* Transportation	*Demographic* • age (younger) • employment (full-time) • education (low levels) • gender (male) *Health beliefs* • confidence in quitting (low) • motivation to quit (low)

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Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
Leeman et al. (2006)	*N* = 246 Female smokers	*Intervention* Nicotine gum, brief behavioural counselling, exercise *Control* Nicotine gum, brief behavioural counselling, standard care	77%	*Clinical* • daily number of cigarettes • nicotine dependence • depression *Logistical* Group assignment	*Demographic* • living condition (with a child) • non-white • age (younger) • education (low) *Clinical* • length of quit attempt • confidence in quitting (high) *Health behaviours* • concerns about weight gain • guilt
Geraghty et al. (2012	Two cohorts of smokers: *n* = 16,430, *n* = 1,000	*Intervention 1* Static online cessation guide *Intervention 2* Static online cessation guide + reminder e-mails *Intervention 3* Static online cessation guide + lessons on mood management	*Automated treatment* 48.1% *Live treatment* 10.8%	*Demographic* • age • sex • marital status • education *Clinical* • nicotine dependence • confidence in quitting • motivation to quit	***Automated group*** *Demographic* • age (younger) • sex (male) • marital status (unmarried) *Clinical* • nicotine dependence (high) • education (low) • confidence in quitting (low) • motivation to quit (low) • delay before quit date

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Study	Population	Type of Intervention	Attrition Rate	Non-significant Factors Influencing Attrition	Significant Factors Influencing Attrition
Geraghty et al. (2012 *(continued)*		*Intervention 4* Static online cessation guide + virtual group for peer support		*Logistical* • reminder e-mails • group that received mood lessons • week of study enrolment (enrolling later)	*Logistical* • group that received reminder e-mails • group that received mood lessons • week of study enrolment (enrolling later) *Live group* • age (younger)
Nevid et al. (1996)	*N* = 93 Hispanic smokers: 48 men, 45 women	*Intervention* Multicomponent behavioural program *Control* Self-help	*Intervention* 18% *Control* 20%	*Demographic* • age • education • gender • origin and acculturation *Clinical* • daily number of cigarettes • duration of smoking • nicotine dependence • health	*Demographic* • income (low) *Clinical* Confidence in quitting (high) *Health-related* • health (poor) • cardiovascular problems

Characteristics of Studies

The nine studies were conducted in the United States in the period 1996 to 2012. The target population, which differed across studies, included African Americans (n = 2 studies), Hispanics (n = 2), and smokers in the contemplation and preparation stage of quitting smoking (n = 2). Women were targeted in three studies, with weight concern being a focus in two of the three.

Sample sizes ranged from 53 to 17,430, with only two studies reporting a sample size under 100. In all studies, the treatment was offered in a community setting. With the exception of Geraghty, Torres, Leykin, Perez-Stable, and Munoz (2012), all studies consisted of a randomized clinical trial.

Characteristics of Interventions

The smoking cessation interventions comprised two or more components (Table 1), with behaviour modification being the most common (n = 6). In three studies, the intervention consisted of a combination of behavioural and pharmacological (e.g., nicotine replacement therapy) components. The mode of intervention delivery differed. It involved interactive individual (n = 3), both group and individual format (n = 3), or passive format. The interactions among smokers or between smokers and interventionists occurred through virtual or face-to-face contact. The passive format included a review of a videotape and guides (Ahluwalia et al., 2002) and Internet lessons on mood management (Geraghty et al., 2012). Studies that targeted African-American and Hispanic smokers provided culturally tailored interventions.

Attrition Rate

The overall attrition rates ranged from 10.8% to 77%. The rates exceeded 35% in six studies that targeted African-American smokers (Ahluwalia et al., 2002; Woods et al., 2002), smokers with symptoms of depression (MacPherson et al., 2008), and women in general (Leeman et al., 2006) as well as women with weight concerns (Copeland, Martin, Geilselman, Rash, & Kendzor, 2006). The intervention for these studies consisted of behavioural treatment only or a combination of behavioural and pharmacological treatment. The attrition rates that were less than 35% included women with weight concerns (Brouwer & Pomerleau, 2000), people with depressive symptoms (Curtin et al., 2000), and Hispanics (Nevid, Javier, & Moulton, 1996). The interventions in these studies consisted of combined behavioural and pharmacological treatment, behavioural treatment for smoking cessation and depression, and behavioural treatment for smoking cessation, respectively.

Factors Influencing Attrition

A variety of factors have been investigated as potentially contributing to attrition. The factors can be meaningfully categorized as demographic, clinical, behavioural, health status, health beliefs, and logistics. Demographics and clinical characteristics were the most frequently examined in the reviewed studies.

The demographic characteristics commonly investigated included age (n = 9), gender (n = 6), education (n = 7), income (n = 4), ethnicity (n = 4), employment status (n = 3), and marital status (n = 2). As shown in Table 1, the influence of these factors on attrition was inconsistent across studies. Age was significantly associated with attrition in five studies. The results of four studies indicate that younger participants are more likely than older ones to drop out. Gender was not related to attrition in two studies (Macpherson et al., 2008; Nevid et al., 1996); however, more women were reported to withdraw in one study and more men were observed to drop out prior to intervention in three studies. Education was found to influence attrition in three of the seven studies that explored this factor; participants with lower education levels were more likely to withdraw. Only one study found a significant relationship between employment status and attrition, with participants employed full-time withdrawing prior to study completion. Three of the four studies examining income found no significant relationship between income and attrition, whereas the fourth reported a higher risk of withdrawal for participants with low income. Three (of four) studies identified a non-significant relationship between ethnicity and attrition, whereas one found that non-whites were more likely to drop out early in the study. Marital status consistently showed no association with attrition.

The most frequently (i.e., more than two studies) examined clinical factors were those related to smoking behaviours: daily number of cigarettes smoked (n = 8), duration of smoking (n = 5), number of quit attempts (n = 4), nicotine dependence (n = 6), self-confidence in quitting smoking (n = 3), and motivation to quit (n = 2). The results consistently showed that duration of smoking and number of quit attempts were not associated with attrition. The daily number of cigarettes smoked was not related to attrition (n = 7). Level of nicotine dependence influenced attrition in three (of six) studies: participants with high levels of nicotine dependence tended to withdraw more than those with low levels. High levels of self-confidence in quitting showed a significant relationship with attrition (n = 2). One study found that motivation to quit was not related to attrition, but another study found that participants with low motivation were more likely to drop out.

The influence of additional clinical factors on attrition was investigated in a few studies. Taking a medication (for a variety of conditions other than smoking) showed both a significant and a non-significant relationship with attrition in the same study, depending on the type of medication (psychiatric and non-prescription, respectively); specifically, smokers on psychiatric medication tended to withdraw (n = 1). Receiving psychotherapy did not influence attrition (n = 1). Participants reporting heavy drinking were more likely to withdraw (n = 1).

A few behavioural factors were examined. Engagement in physical activity, attempting to lose weight, alcohol use, and dieting/eating behaviours did not affect participant withdrawal. In contrast, severe dieting (n = 2), behavioural response to stress (n = 1), and engagement in avoidance behaviours in response to emotional and physical stress (n = 1) did influence attrition.

Factors related to health status that were examined included general health perception (n = 2), pre-existing conditions (n = 2), anxiety (n = 1), and depression (n = 4). One study found a significant relationship between perceived poorer health and report of cardiovascular problems with attrition. Anxiety was found to have a non-significant relationship with attrition, whereas depression was associated with attrition in one study. Only one study investigated the influence of health-related beliefs on attrition. Belief in the benefits of quitting smoking was not related to withdrawal.

Three studies evaluated logistical factors related to time it took participants to travel to the clinic (n = 1 study), driving to the clinic (n = 1), recruitment strategy (n = 1), and reminder e-mails throughout the study (n = 1). The two latter factors were associated with attrition. The use of a proactive recruitment strategy in which study staff recruited clients from hospital clinics and a hospital lobby and the use of reminder e-mails increased the odds of attrition.

Two studies explored participants' reasons for withdrawing (Nevid et al., 1996; Woods et al., 2002). The themes emerging from the qualitative data analysis of the reasons included concerns about medications (e.g., nicotine replacement), low readiness to quit, significant other not believing in the effectiveness of smoking cessation, scheduling conflicts, transportation access, forgotten appointments, unavailability of child care, relocation, and loss of interest in the intervention.

Discussion

This systematic review set out to synthesize empirical evidence on the rates of and factors that influence attrition in smoking cessation intervention research. Despite extensive search efforts, only nine studies met the

selection criteria and were included in the review. This small number of studies suggests limited attention to attrition in this field and highlights the need to investigate the extent of and factors contributing to withdrawal from smoking cessation trials, in order to enhance the validity and clinical utility of the conclusions (Sidani, 2015).

The results of this review indicate that attrition rates range from 10.8% to 77%, which differs slightly from the range (10% to 50%) reported by Curtin et al. (2000). The difference may be related to a variety of factors, such as the type of smoking cessation interventions under evaluation and the characteristics of the population targeted in the selected studies. Pharmacological treatments were not investigated by Curtin et al. (2000). However, these treatments were provided to smokers in four studies included in this review and could have contributed to participant withdrawal that is associated with the experience of side or adverse effects. Concern about the medication was one reason reported by participants for dropping out of the trial (Woods et al., 2002); this should be further examined as a factor affecting attrition in future research. The populations targeted in the study by Curtin et al. (2000) included the general public and smokers diagnosed with depressive disorders. In contrast, the present review selected intervention studies targeting different groups of smokers, including smokers of African or Hispanic heritage, women expressing weight concerns associated with quitting, and smokers with depressive symptomology. The attrition rates for the last group (28% to 40%) are comparable to those reported by Curtin et al. (2000). However, higher attrition rates were found in studies with African Americans (45%), Hispanics (48%), and women (77%). The extent to which variability in attrition rates is related to differences in the type of intervention and/or characteristics of the target population cannot be confirmed and requires further investigation.

The influence on attrition of a wide range of demographic, clinical, behavioural, health-related, and logistical factors was examined in all nine studies included in the review. However, the set of factors that were explored differed across studies, so that only a small number of studies investigated the same factor. Further, the number of studies showing statistically significant associations between specific factors and attrition was low (not exceeding four), compared to the number of studies reporting non-significant associations. The limited evidence suggests that participants' age (4 of 9 studies), gender (4 of 6), education (3 of 7), and nicotine dependence (3 of 6) are related to attrition in smoking cessation intervention studies.

Younger age was consistently associated with attrition, as reported in other research on attrition (Geraghty et al., 2012). What exactly leads younger smokers to withdraw is not well understood. The following

explanations have been proposed. Younger smokers, even if they wish to quit, may have life (e.g., employment or familial) responsibilities that interfere with their full participation in the intervention (Woods et al., 2002). Strategies could be incorporated to make it convenient for younger smokers to participate in a trial, and therefore to minimize attrition. These include (1) flexibility in the time and location of research activities (e.g., screening, data collection) and delivery of the intervention (e.g., evenings, weekends), as well as the method of data collection (e.g., online); and (2) provision of child care when participants are involved in on-site activities (Butler et al., 2013; Warner et al., 2013).

Three studies found that men are likely to withdraw from smoking cessation intervention studies, whereas one study reported that women are likely to drop out. The reasons underlying men's attrition could not be explicitly identified in the literature. It is possible that men's employment hindered their continued involvement. Alternatively, participating men may not have been ready to quit smoking (due to social stereotyping) or may not have perceived the intervention as acceptable. The high attrition rate among women may be related to competing priorities, including familial responsibilities (Leeman et al., 2006). Flexibility in treatment and research activities and provision of child care are two possible strategies to address these barriers. Taking account of participants' perceptions and their preferences for smoking cessation interventions is another strategy to minimize attrition. Participants' perception of the treatment offered in a study is emerging as a factor influencing enrolment and attrition in intervention research. Favourable views of and preferences for treatment have been identified as deterrents to participation in randomized clinical trials and reasons for withdrawing from such trials (Lang, 2005). In particular, those who perceive the intervention as unacceptable may decline to enrol and those who do not receive the intervention of choice may drop out (Sidani, 2015; TenHave, Coyne, Salzer, & Katz, 2003).

Smokers with a low level of education were also likely to withdraw. This may be attributable to a low literacy level, which could affect one's understanding of the research requirements and/or the treatment recommendations. Ahluwalia et al. (2002) and Borrelli et al. (2002) report that low literacy levels are associated with poor adherence to treatment and medical appointments, and consequently with low smoking cessation rates. To address this barrier, Geraghty et al. (2012) suggest that smoking cessation interventions be modified to fit participants' literacy levels; for instance, oral (video/audio) instead of written intervention materials or resources could be provided to smokers with low literacy levels. Additional strategies include clearly communicating expectations related to participants' involvement in research activities, maintaining regular

contact with participants, and expressing appreciation for participants' involvement in the study both orally and non-orally (Sidani, 2015).

Smokers with high levels of nicotine dependence were consistently found to drop out of cessation studies. Yet this subgroup of smokers is most in need of treatment. Their high attrition rate is due to greater difficulty quitting (Borrelli et al., 2002; Leeman et al., 2006) and the perception that cessation interventions are ineffective. Strategies to reduce attrition in this subgroup of smokers include (1) design and implementation of tailored cessation interventions that consist of assessing participants' level of nicotine dependence and providing quit strategies that correspond with that level (Geraghty et al., 2012); for instance, those with high dependence may be given a multi-component intervention consisting of motivational interviewing to set reasonable goals and achievable plans of action, group therapy so that one might learn from peers' practical tips for successfully managing craving, and additional encouragement from the therapist; and (2) exploration of preferences for cessation interventions and offering the intervention of choice (Bower et al., 2014), as described above.

It is worth noting that the majority of factors investigated in the reviewed studies as potentially affecting attrition were characteristics of individual smokers. Exploration of additional logistical factors, such as those that emerged from one study with a qualitative component (Woods et al., 2002), is warranted. These factors, including transportation and child-care issues, are often mentioned as the reasons for non-enrolment and/or attrition in intervention research (Harris & Dyson, 2001). Further, attention should be paid to factors embedded in the context of research as potentially affecting attrition (Marcellus, 2004). Examples of contextual factors are characteristics of the research personnel, in particular their communication or interactional style, and characteristics of the study protocol, such as recruitment strategies and flexibility of scheduling. Preliminary evidence from the reviewed studies supports the influence of some contextual factors. For example, proactive recruitment strategies were found to increase the odds of attrition (Ahluwalia et al., 2002) and scheduling conflicts were identified as barriers to continued participation (Woods et al., 2002). As well, participants who received frequent e-mail reminders were more likely to drop out, possibly due to the phenomenon of e-mail fatigue resulting in e-mails being ignored (Geraghty et al., 2012). Last, methods of treatment assignment that account for participants' preferences should be investigated. Providing the treatment of choice has been found to reduce attrition in intervention research (Swift, Callahan, & Vollmer, 2011).

Conclusion

Attrition is reported to be high in smoking cessation intervention studies. This may present a threat to statistical conclusion and external and internal validity, and consequently limit the clinical applicability of potentially useful interventions. A small number of participant characteristics were found to influence attrition. The findings of this systematic review highlight the importance of incorporating strategies to minimize attrition throughout various phases of a study. The effectiveness of these strategies in addressing attrition should be investigated in future research.

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Better Care and Better Value for Canadians: A Review of RCT Studies of Nurse Interventions

Gina Browne, Stephen Birch, Lehana Thabane

This review is focused on the effectiveness of nursing interventions for patient outcomes and health-care costs. It was guided by ecological and economic evaluation frameworks. Restricting the first-tier search of over 4,000 articles to randomized controlled trials (RCTs) yielded 203 studies and 9 additional trials that used identical methods of cost evaluation. Of 212 RCTs, 37 met the eligibility criteria. Of the 37 articles, 29 came from the literature search and 8 came from the first author's research unit, which used identical methods of economic evaluation. Of the first 29 studies, 26 found that nurse interventions were more or equally effective and less or equally costly compared to usual care, as was true of 7 of the 9 RCTs with comprehensive economic evaluations. It is effective and efficient to deploy specialty-trained nurses to lead teams of professionals, including physicians, assembled to address complex patient needs. A nurse-led model of proactive and supplemental care for the chronically ill, versus the on-demand, physician-led model now in place, would be more or equally effective and less or equally costly.

Keywords: nursing interventions, economics, chronic illness, outcome research, evidence-based practice

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Résumé

De meilleurs soins et une valeur accrue pour la population canadienne : revue d'essais cliniques randomisés sur les interventions infirmières

Gina Browne, Stephen Birch, Lehana Thabane

La présente revue porte sur l'efficacité des interventions infirmières en ce qui concerne les résultats pour les patients et les coûts liés aux soins. Sa réalisation a été orientée par un cadre d'évaluation économique et écologique. Restreinte aux essais cliniques randomisés, la première étape de la recherche, effectuée à partir d'un bassin de plus de 4 000 articles, a permis de dégager du lot 203 études et 9 essais cliniques supplémentaires utilisant des méthodes identiques d'évaluation des coûts. Sur ces 212 études et essais, 37 répondaient aux critères d'admissibilité, et parmi ces 37 articles admissibles, 29 provenaient du dépouillement de la littérature et 8 de l'unité de recherche de la première auteure, qui utilise exactement les mêmes méthodes d'évaluation économique. Dans le groupe des 29 premières études, 26 constataient une efficacité des interventions infirmières égale ou supérieure aux soins réguliers pour un coût égal ou inférieur, constatation également présente dans 7 des 9 essais cliniques randomisés ayant fait l'objet d'une évaluation économique approfondie. Il est donc efficace et rentable de déployer du personnel infirmier spécialisé pour diriger des équipes de professionnels, y compris les médecins, mises sur pied pour donner des soins aux patients ayant des besoins complexes. Ainsi, pour les patients souffrant de maladies chroniques, un modèle de soins proactifs supplémentaires dirigé par du personnel infirmier serait, par rapport au modèle actuel de soins sur demande dirigé par des médecins, plus efficace ou également efficace, et ce, pour un coût égal ou inférieur.

Mots-clés : interventions infirmières, économie, maladie chronique, résultats pour les patients, revue, essais cliniques randomisés

Background

Since the signing of the 2004 Health Accord (Health Canada, 2004), a number of improvements in access to Canada's health-care system have been made, especially in hip and knee replacements and cataract surgery. However, a 2008 report on health-care renewal (Health Council of Canada, 2008) identified areas where progress was lagging: safe and appropriate prescribing of medication and compliance, home care, primary health care, the health-care workforce, electronic health records and information technology, and accountability. In preparation for the 2014 Health Accord, Denis, Davies, Ferlie, Fitzgerald, and McManus (2011) recommended the development of models of care that are more responsive to the aging population, the increased prevalence of complex co-morbid chronic diseases, growing inequities in the determinants of health, and the escalating costs that have accompanied technological advances and investments in acute care.

The purpose of this review is to document the comparative effects and costs of models of nursing interventions with a view to addressing the above concerns. Specifically, the review (1) provides evidence for the impact of nursing care across a range of outcome variables, including patient health outcomes (mortality and morbidity) and system impacts (costs of health care); (2) identifies promising nurse-led or nurse-involved service innovations; (3) identifies common characteristics of effective or efficient interventions; and (4) makes recommendations regarding key clinical programs across the range of determinants of health, the health-care system, and policy implications for achieving better care for Canadians.

Complex interventions for complex chronic diseases involve a number of potential interacting factors, such as the nurse provider's level of preparation and whether the focus is on prevention, health promotion, or treatment. Provider characteristics further interact with the patient's transition between some combination of hospital, primary care, specialty clinics, and home care. The patient's co-morbid diseases, characteristics (e.g., age), and circumstances (e.g., living alone) also add complexity. As well, some models of nursing practice serve a "substitution for the physician" function while others "supplement the care provided by physicians."

Secondly, decision-makers want studies of effectiveness and efficiency, not simply reports of patient outcomes (effects) in isolation from resource consumption (costs). This separation of comparative effect and cost has characterized most nursing intervention research to date. Meta-analyses involve separating active components of an intervention and are appropriate only if the components work independently of each other — not

if they work interdependently or synergistically (Birch & Gafni, 1996). Thus, we chose to conduct a review in which the comparative effectiveness on patient and system outcomes is based on treatment goals.

The review was commissioned by the Canadian Health Services Research Foundation and funded by the Canadian Nurses Association.

Methods

We used an ecological framework, similar to that used for the determinants of health, which acknowledges the cumulative and multiple levels of dynamic, reciprocal influences on nursing practice and patient situations. These are (1) competencies and talents of nurses who provide care across the patient's lifespan and settings; (2) larger organizational issues, such as the culture, structure, and economic (reimbursement) policies and their effects on the nurse, nurse workload, scope of practice, development, interdisciplinary collaboration, and provider attitudes; (3) competing goals and practice reimbursement, or funding policies, within and between different ministries of the same and other provincial governments; (4) competencies, involvement, and talents of a range of intersectoral service providers with whom the nurse or the patient interacts; (5) cognitive, emotional, and behavioural competencies of the patient; (6) competencies and talents of personal supports from the patient's family; and (7) supportive nature and demands of the nurse's immediate family (Bronfenbrenner, 1979). A second framework guided the economic evaluation (Birch & Gafni, 1996), which plots effectiveness against costs, producing nine categories of study (Table 1).

Since health-service use has only recently been included in studies, and since a baccalaureate education has recently been made a requirement for entry to nursing practice, we searched the following databases for the years 2003 to 2011: United States Preventive Services Task Force–

Table 1 ***Economic Evaluation Frame***

Costs	Effectiveness		
	Increased	**Same**	**Reduced**
Increased	More effective More costly	Equally effective More costly	Less effective More costly
Same	More effective Equally costly	Equally effective Equally costly	Less effective Equally costly
Reduced	More effective Less costly	Equally effective Less costly	Less effective Less costly

Agency for Health Care Research Quality, Scottish Intercollegiate Guidelines Network, National Institute for Clinical Excellence, Health Evidence Network, Canadian Agency for Drugs and Technologies in Health, CINAHL, PubMed, www.bmj.com, ISI Web of Knowledge, Trip Database, www.health-evidence.ca, Medscape, and Health Economic Evaluations Database. We also searched the grey literature: Google, Google Scholar, and Advanced Google Scholar.

The search terms were as follows: Nursing interventions, Hospitalization rates, Emergency Use, Access to Care, Symptom Management, Hypertension Control, Diabetes Control, Costs, Economic Analyses, Functional Status, Activities of Daily Living, Use of Nursing Homes, Elderly, Caregivers, Cognitive functional states, Cardiovascular Health/Hypertension, Oncology, Diabetes, Nursing Specialists, Nurse Practitioner, Symptom Management, Pressure Ulcers, Wound Care, Neonatal Care, Depression, Psychosocial Functioning, Nurse Staffing Levels, Models of Care, Acute Care, Community Care, Patient Outcomes. Due to the volume of papers, we then restricted the retrieval to randomized controlled trials (RCTs); this minimized the bias of non-comparability of study subjects found in other comparative research designs.

Content eligibility was based on the following: interventions involving nurses with added specific training for the Index condition, or interventions involving nurses with disease-specific master's-level training, such as clinical nurse specialists (CNSs) and nurse practitioners (NPs), now called advanced practice nurses (APNs). This was a review of the international nursing literature. We accepted eligible studies that included registered nurses, acknowledging that scopes of nursing practice and educational preparation vary by jurisdiction, with none of the eligible literature recognizing these distinctions. We excluded studies of technological devices and economic evaluations if the methodology required assumptions about resource use or costs or provided estimates rather than measurement of actual resources used.

Regarding study quality, we included only studies that met at least 16 of 20 criteria appropriate for the assessment of random clinical trials from Williams and colleagues (2009) and Sidani and Sechrest (1999), which included issues such as "length of follow up," "effects on health and functional status," and "use of other health and social services." One author assessed the title and abstract initially to determine if the paper should be included in this review of studies, and then a second time 2 weeks later when summarizing the quality of selected papers using criteria outlined in Table 2.

These RCTs captured different dimensions of health-care use, such as emergency department visits, hospitalizations, length of stay, readmissions, and admissions to nursing homes, as well as various (or unknown)

Table 2 ***Characteristics of High-Quality Studies, Participants, and Intervention Programs***

Quality Criteria for Studies	
1. Study design 2. Treatment schedules compared (setting, content, intensity, duration) 3. Was there adequate concealment? 4. Was the client blinded? 5. Was a power calculation performed? 6. Number randomized/participants 7. Number included in analysis 8. Number withdrawn (giving reasons) 9. Was analysis on the basis of intention to treat? 10. Lists participants	11. Selection criteria described? 12. Inclusion criteria 13. Exclusion criteria (summary characteristics) 14. Age 15. % female 16. Health condition/other/outcomes measure 17. Were assessors blind to the assignment? 18. Length and timing of follow-up(s) 19. Lists health-service/social-service measures 20. Lists client measures/lists any other measures

methods of costing or determining health-service use. Further, because reports often lacked a description of costing methods, it was difficult to tell if costs for the provision of the novel model of care were included. To address these issues, a second-tier search retrieved all published RCTs from 1995 to 2011 that used the Health and Social Services Utilization Questionnaire (HSSU) (Browne, Arpin, Corey, Fitch, & Gafni, 1990). In this way, we could assess any biases that may have affected conclusions drawn from the first group of RCTs. Each of these economic evaluations was assessed for quality using the same instruments used for the previous group, as well as criteria for high-quality economic evaluations established by Drummond, Sculpher, Torrance, O'Brien, and Stoddart (2005). From these studies we determined which features of the nurse model were the most effective and equally or less costly.

The HSSU is a self-report instrument used in structured interviews capturing expenditures from a societal point of view. It includes not only the use of health-care resources, but also social resources, such as child welfare, police, and social work. In addition to these total direct costs from the payer's perspective, it includes total indirect costs for the patient's or carer's time lost from work while consuming care and cash transfer expenditures for being out of work or disabled. However, to be consistent with the other studies discussed in this report, only direct

costs for use of health resources from the payer's perspective were included in the analyses. In each evaluation, the health-care costs of the comparative interventions were included. This component of the HSSU consists of 30 items where the frequency of use of each type of health service (physician, nurse, emergency, hospital, laboratory services, physiotherapy, occupational therapists) during reliable spans of recall (2 weeks for ambulatory visits to 6 months for hospitalizations) is annualized and then multiplied by the dollar value of that service during that study year (Browne, Byrne, Roberts, Gafni, & Whittaker, 2001). It has been cited by Guerriere et al. (2006) as one of the few validated measures of ambulatory utilization.

The 29 RCTs from the first search are discussed separately below.

Results

In the initial search, over 4,000 studies were identified. Restricting studies to RCTs reduced the number to 203. Of these, 29 met 16 of the 20 eligibility criteria outlined in Table 2. The quality criteria for each of the 29 studies are available in Appendix D of the report *Better Care: An Analysis of Nursing and Healthcare System Outcomes* (Canadian Nurses Association, 2011). Appendix D of the report also provides the study authors, title, quality score, country, chronic conditions under scrutiny, study sites, sample size, mean age, percentage of the sample female, experimental model of nursing care, comparison group, and length of follow-up. The studies included persons with diabetes, undergoing endoscopy, cardiac surgery, asthma, wounds, medically stable in-patients, heart failure among ethnically diverse urban residents, Parkinson's disease in the community, stroke survivors, common mental health concerns in primary care, pneumonia in nursing home residents, hospitalization for heart failure, chronic obstructive pulmonary disease at home, children with eczema, rheumatoid arthritis, and risk of breast cancer.

Comparative outcomes for each study also differed as a function of the Index condition under investigation. There were various measures of outcome such as quality of life (SF-12), rate of falls, dyspepsia, decline in $HbA1_c$, Barthel Index of Function, time to wound closure, Zarit Burden Score, family impact, coronary events, and mortality. Also, each study had different measures of resource consumption; these included emergency visits, hospitalization rates, hospitalization days, unscheduled general practitioner visits, and costs in Canadian, American, or British currency. Statistical tests of difference between groups in each study were appropriate to means and standard deviation or percentage, making reports of effect sizes unsystematic. Thus, this article conceptually summarizes outcomes as more or less effective while being more or less expensive.

Table 3 ***Levels of Nurse Preparation by Care Setting and Level of Nurse Involvement in Models of Team Care Reported in 29 RCT Studies***

Training Level and Care Site	Studies of Physician-Led Nurse Involved with Team	Studies of Nurse-led Care with Team
Baccalaureate Nurse Training		
Hospital		Cuthbertson et al. (2009) Loeb et al. (2006)
Primary care		
Community/ home care		Hebert et al. (2008)
Disease-Specific Training Added to Baccalaureate		
Hospital/ specialty clinic		Dunagan et al. (2005) Chan et al. (2009) Scott et al. (2005) Williams et al. (2009) Ⓡ Torrance et al. (2006) Ⓡ
Primary care	Kalra et al. (2004) Vass et al. (2005)	Gary et al. (2009) Griffiths et al. (2004) Kendrick et al. (2006) Raftery et al. (2005) Latour et al. (2007)
Community/ home care	Brumley et al. (2007) Davison et al. (2005) Ricauda et al. (2008)	Harris & Shannon (2008) Hurwitz et al. (2005)
Master's-Prepared (APN, CNS, NP)		
Hospital		Harris, Richardson, et al. (2005) Ⓡ Higginson et al. (2009)
Specialty clinic		Schuttellaar et al. (2011) Ⓡ Tijhuis et al. (2003)
Primary care and community		Goodman et al. (2008) Naylor et al. (2004)
Community/ home care		Castro et al. (2004) Coleman et al. (2006) Dawes et al. (2007)

Ⓡ = nurse-led physician-replacement (or substitution) model
Ⓛ = supplemental nurse-led model

Table 3 shows the locations of the nursing interventions and the level of nurse preparation for specific conditions. Studies were classified by type of nurse preparation, site of intervention, and model and intensity of the nursing role with patients' conditions. Those studies followed by an "R" code were of nurse-led physician-replacement (or substitution) models, and those not followed by an "R" were of supplemental nursing care models. The majority of these high-quality studies were primarily of the supplemental nurse-led model of care (L) provided by nurses with different amounts of training.

The general characteristics of the nurse-led supplemental models of care were as follows: the assignment of a designated group of vulnerable patients, regular assessment and care initiated by the nurse (proactive), and comprehensive (supplemental) care of the other determinants of health that co-exist with the Index medical condition. The main characteristic of the nurse-involved physician-replacement models of care ("R") was that the nurse responds to patients' on-demand request for care. Those studies with both "L" and "R" codes characteristically had both types of nurse intervention.

The mean age of participants in the trials ranged from 1 to 85 years. None of the studies commented on the multicultural mix of patients. For conditions that affect both males and females, the proportion of females in the studies ranged from 19% to 70%. The length of follow-up post-surgery in the trials ranged from 3 months to 4 years. Twenty-four of the trials concerned nurse-led models of care, and four of these concerned models of nursing designed to substitute for (replace) general practitioner (GP) or specialist medical doctor (MD) functions in hospitals or specialty clinics. In nine of the studies of nurse-led models, care was provided by a master's-prepared nurse.

Of the 29 RCTs, 15 were conducted in the United Kingdom, 7 in the United States, 4 in the Netherlands or Denmark, 2 in Canada, and 1 in Italy. In addition, 15 of the 29 studies had large sample sizes.

Different yet comparable currencies were used in any given study. Across jurisdictions, the supplemental nursing model is comparatively less costly per patient than the substitution (replacement) model of nursing because in the supplemental model attention is paid to other risk circumstances and factors that lead to deteriorating health and more use of emergency or hospital resources.

In Table 4 we re-classify models of nursing interventions from the 29 high-quality studies based on the economic evaluation framework. Of the 29 studies, 14 had nurse models categorized as more effective than usual care, and 12 of these 14 studies were also less costly. We designated another two of the 14 studies as more effective and no more costly. Seven of the 29 studies were classified as equally effective and as having a

Table 4 *Economic Evaluation of RCTs of Nursing Interventions and Outcomes*

Costs or Use	Effects				
	Increased		Same		Reduced
Increased	**1**: Nurse model more effective/ more costly		**2:** Nurse model equally effective/ more costly	Cuthbertson et al. (2009) Ⓛ Kendrick et al. (2006) Ⓛ Latour et al. (2007) Ⓛ	**3:** Nurse model less effective/ more costly
Same	**4:** Nurse model more effective/ equally costly	Hurwitz et al. (2005) Ⓛ Vass et al. (2005)	**5:** Nurse model equally effective/ equally costly	Hebert et al. (2008) Ⓛ Harris, Richardson, et al. (2005) Ⓡ Ⓛ Schuttellaar et al. (2011) Ⓡ Ⓛ Torrance et al. (2006) Ⓡ Ⓛ Williams et al. (2009) Ⓡ Ⓛ	**6:** Nurse model less effective/ equally costly
Reduced	**7:** Nurse model more effective/ less costly	Chan et al. (2009) Ⓛ Coleman et al. (2006) Ⓛ Dawes et al. (2007) Ⓛ Gary et al. (2009) Ⓛ Goodman et al. (2008) Ⓛ Harris & Shannon (2008) Ⓛ Higginson et al. (2009) Ⓛ Kalra et al. (2004) Ⓛ Naylor et al. (2004) Ⓛ Raftery et al. (2005) Ⓛ Ricauda et al. (2008) Scott et al. (2005) Ⓛ	**8:** Nurse model equally effective/ less costly	Brumley et al. (2007) Castro et al. (2004) Ⓛ Davison et al. (2005) Dunagan et al. (2005) Ⓛ Griffiths et al. (2004) Ⓛ Loeb et al. (2006) Ⓛ Tijhuis et al. (2003) Ⓛ	**9:** Nurse model less effective/ less costly

Ⓡ = nurse-led physician-replacement (or substitution) model; Ⓛ = supplemental nurse-led model

nursing intervention that was less costly than usual care, while five of the 29 studies were classified as equally effective and equally costly compared with usual care. These studies of equally effective and equally costly types of nurse models were usually (four out of five) studies in which the nurse model was designed to replace the physician function.

We categorized the nursing model in only three of the 29 studies as equally effective but more costly than usual care. In the case of the study by Kendrick and colleagues (2006), which involved the study of serious mental illness in primary care, it was recommended that the more costly community mental health nurse team be used only when the GP's initial treatment failed. The study by Cuthbertson and colleagues (2009) added nurses to follow patients discharged from the intensive care unit (ICU) while still in hospital. We can conclude that existing hospital nursing was sufficient to manage patients discharged from the ICU. The study by Latour and colleagues (2007) demonstrated reduced use of institutionalization for patients who received more community support services.

Only four studies followed patients for longer than 1 year. This fact is important when considering the economic benefits of sustained nursing interventions (20 months to 2 years).

The three studies that followed patients from 20 to 24 months concluded that the nursing intervention was more effective than usual care. Two of these studies showed that the intervention was equally expensive (Hurwitz, Jarman, Cook, & Bajekal, 2005; Vass, Avlund, Lauridsen, & Hendriksen, 2005), whereas the third showed that it was less expensive (Raftery, Yao, Murchie, Campbell, & Ritchie, 2005).

Seven of the studies found the intervention with the nurse model to be equally effective and less expensive than usual care (e.g., Loeb et al., 2006).

The conclusions made about efficiency from these studies could be challenged for three reasons:

- Some of the studies provided only information on comparative hospital and emergency department resource use.
- Others provided information on the use of these same resources and total direct costs from the payer's perspective, but barely described the costing methods.
- Others simply reported direct costs and provided little information on costing methodology.

Because of these problems, in stage 2 of our review we undertook an assessment of our own economic evaluations to see if more detailed economic evaluations supported the conclusions drawn from stage 1.

Stage 2 of our review of nursing intervention focused on RCTs that involved economic evaluations from McMaster University's System-

Linked Research Unit on Health and Social Service Utilization (SLRU). We provide these because each study also met the criteria for high-quality economic evaluations established by Drummond and colleagues (2005). Each SLRU study examined expenditures from a total societal point of view and included the use of not only health-care resources but also social resources, such as child welfare, police, school, and social work. In addition to these total direct costs from the payer's perspective, the SLRU economic evaluations included total indirect costs for the patient's or carer's time lost from work while consuming care and cash transfer expenditures for being out of work or disabled. To be consistent with the other studies discussed in this article, we include only direct costs from the payer's perspective in Table 5. The Browne, Byrne, et al. (2001) study of nurse-led and other interventions also reports a reduction in cash transfers for social assistance within 1 year. In each of the SLRU economic evaluations, the Canadian costs of the comparative interventions were included.

All of the SLRU studies were comparative RCT studies conducted in the same southern Ontario region with the same available resources, policies governing use of services such as home care, and basic or specialized nurses. These studies examined costs for the use of all health and social personnel in both nursing and usual care, and they included the costs of the interventions. The studies illustrate that, typically, expenditures for interventions accumulate in one service sector in order to create savings in another service sector.

Table 5 summarizes the SLRU results to ascertain whether the SLRU conclusions support the conclusions of the 29 RCT studies from the point of view of costs or resources used. The details of these studies are included in Appendix E of the *Better Care* report (Canadian Nurses Association, 2012). The only study that found that the nursing intervention was more effective but more costly (Roberts et al., 1999) came to this conclusion based on a sub-analysis illustrating more effect and more cost for services appropriate for caregivers of people with dementia with poor problem-solving skills. It was concluded that the greater use of community-based services for this subgroup was appropriate. All the other SLRU studies supported the pattern of conclusions drawn from the 29 RCTs. The SLRU RCTs involved people with dysthymia in primary care, at risk for falls while receiving home care, surviving stroke on home care, attending hospital-based specialty clinics for chronic illnesses, or with cardiovascular risk factors in primary care.

No study from stage 1 or stage 2 showed that any nursing intervention was less effective at any cost level. This fact supports the safety of nurses' work.

Table 5 ***Formal Economic Evaluations of RCTs of Nursing Interventions Performed by McMaster University's SLRU Using Same Economic Evaluation Methodology***

Costs or Use	Effects			
	Increased		**Same**	**Reduced**
Increased	**1**: Nurse model more effective/ more costly	Roberts et al. (1999) Ⓛ	**2:** Nurse model equally effective/ more costly	**3:** Nurse model less effective/ more costly
Same	**4:** Nurse model more effective/ equally costly	Mills et al. (2010) Ⓛ Browne et al. (2002) Ⓛ Markle-Reid et al. (2011) Ⓛ Markle-Reid et al. (2010) Ⓛ	**5:** Nurse model equally effective/ equally costly	**6:** Nurse model less effective/ equally costly
Reduced	**7:** Nurse model more effective/ less costly	Harrison et al. (2002) Ⓛ Markle-Reid et al. (2006) Ⓛ Roberts et al. (1995) Ⓛ	**8:** Nurse model equally effective/ less costly	**9:** Nurse model less effective/ less costly

Ⓛ = supplemental nurse-led model

Discussion

The evidence suggests that leadership provided by baccalaureate- and master's-prepared APNs that supplement rather than replace physicians for a designated group of patients were the nursing intervention models that were most effective and less or equally costly.

We argue that problems arise when circumstances in the world change and conventional wisdom does not. The publicly funded Canadian health-care system has been driven principally by physician and hospital-based services providing acute and episodic care that is a poor match for the changing demographics of persons with chronic disease living longer. The health-care system consumes nearly one half of provincial government budgets.

In Ontario, which represents 37% of the Canadian population, an independent report (Ontario Association of Community Care Access Centres, 2010) estimates that millions of dollars could be saved in direct health-care costs within 1 year by (1) having nurses provide leading practices in home wound care, (2) reducing hospital readmission by 10% for those with chronic conditions, (3) providing 25% of palliative care in the home as opposed to in acute-care hospital settings, (4) providing community care for patients at a hospital-designated alternative level of care, and (5) providing proactive community care and patient self-management for those with congestive heart failure and other chronic conditions.

Recommendations

Analyses of 2005 health- and social-service expenditures by member countries of the Organization for Economic Co-operation and Development (Bradley, Elkins, Herrin, & Elbel, 2011) demonstrate that, after adjusting for Gross Domestic Product per capita, it is the ratio of social-service expenditures to health-service expenditures that is more closely associated with improved outcomes in key health indicators, not the amount spent on health services.

This review indicates that models of proactive, targeted, nurse-led care for people with chronic diseases or nurses in a team that supplements physician care and focuses on preventive patient self-management are either more effective and less costly or equally effective and less costly.

Additional key components of more effective and efficient models of care are community-based, nurse-led models of care with an interdisciplinary team including the primary care physician. This complex intervention requires baccalaureate-prepared nurses with special training in the Index condition or master's-prepared APNs who supplement

the care provided by physicians and other professionals. The proactive comprehensive, coordinated model of community care is patient-/family-centred and targeted at community-dwelling individuals with complex chronic conditions and social circumstances.

A nurse leader should be used to identify characteristics of the patient with chronic illness that signify a risk for deterioration and hospitalization, whether in primary care specialty clinics, home care, or nursing homes, or at the point of hospital or emergency department discharge. The assessment and ongoing monitoring should be proactive rather than reactive. The nurse leader would collaborate with homemakers, personal support workers, nursing home personnel, nursing assistants, hospital/emergency department staff, and caregivers in the development and implementation of a patient-centred plan of care, including end-of-life care. When the plan is formulated, the roles of team members would be clarified, along with types and schedules of monitoring, including the specifics of who would conduct the monitoring and reasons for the monitoring. In addition, clear lines of communication in the event of changing situations should be established by the nurse leader.

These recommended models of nursing for chronic illness align with the recommendations for Health Care Transformation (Canadian Medical Association, 2011), which are as follows: (1) The central role of all levels of government is to provide for and sustain the well-being of its citizens now and in the future. (2) The direction for government should be one of continued growth and expansion of health (illness) care or sustainability of the quality of life and the human service system that determines health. (3) Addressing the source of and reasons for excessive and growing health expenditure includes (a) providing nurse-led proactive comprehensive and preventive care for those with chronic illness, (b) financing care by reducing resources for acute hospital care, and (c) having physicians and nurse practitioners continue to provide acute and episodic care.

We recommend that the model be financed through home care by cost reductions generated from lower levels of provision of acute hospital care. After the current hospital caseload of patients awaiting alternative levels of care has been managed, hospital beds could be reduced to free up funds for this reallocation. It is estimated that with an annual average cost of a nurse of $130,000 (including benefits), 7,692 additional nurses could be funded nationally for every $1 billion averted from acute hospital use. Some savings could also be reallocated to increase funding for social resources for persons receiving social assistance and the working poor.

Conclusion

It is effective and efficient to deploy baccalaureate- and master's-prepared nurses to lead teams of professionals, including physicians, assembled to address complex patient needs. A nurse-led model of proactive and supplemental care for the chronically ill, as opposed to the on-demand, physician-led model now in place, is more or equally effective and less or equally costly.

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Navigating Relationships: Nursing Teamwork in the Care of Older Adults

Sherry Dahlke, Mary Fox

As people age there is increasing incidence of chronic illness and atypical presentations of acute illness. Although research suggests that the care of older adults is improved when there is collaboration between nursing staff and other health professionals, there is no clear understanding of how this might occur. This qualitative study describes how how nursing staff work in teams to provide and manage the care of hospitalized older adults. Navigating relationships offers valuable insights into the perspectives of nursing staff working in teams with one another, with their operational leaders, and with other professionals. The language they used contributed to their perceptions of being undervalued within interprofessional teams, which in turn undermined their efforts to navigate relationships. Care for hospitalized older adults would be advanced through the provision of opportunities for interprofessional teams to learn the perspectives of nursing staff.

Keywords: older adults, interprofessional teams, nursing perceptions

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Résumé

Naviguer parmi les relations : le travail d'équipe du personnel infirmier dans la prestation des soins aux personnes âgées

Sherry Dahlke, Mary Fox

Le vieillissement de la population entraîne un accroissement de l'incidence des maladies chroniques et des tableaux cliniques atypiques de maladies aiguës. Bien que les recherches laissent entendre qu'une collaboration entre le personnel infirmier et les autres professionnels de la santé permet d'améliorer les soins aux personnes âgées, la façon dont cette amélioration se produit demeure incertaine. La présente étude qualitative décrit comment le personnel infirmier travaille en équipe pour assurer la prestation et la gestion des soins aux personnes âgées en milieu hospitalier. Naviguer parmi les relations offre un aperçu précieux du point de vue des infirmières et infirmiers travaillant en équipe les uns avec les autres, avec les responsables des opérations et avec les autres professionnels de la santé. Le langage utilisé dans le milieu contribue à accentuer la perception des infirmières et infirmiers de former un groupe sous-évalué au sein des équipes interprofessionnelles, ce qui en retour vient miner leurs efforts pour naviguer parmi les relations. Donner la possibilité aux équipes interprofessionnelles de mieux connaître le point de vue du personnel infirmier contribuerait à améliorer la prestation des soins aux personnes âgées en milieu hospitalier.

Mots-clés : personnes âgées, équipes interprofessionnelles, perception du personnel infirmier

Background

Adults aged 65 and older represent 40% of all in-patient hospital days (Canadian Institute for Health Information, 2011). Providing care for an older population is complex because of the atypical presentations of acute illness, underlying chronic diseases associated with reduced physical and cognitive function, and precarious health conditions subject to rapid deterioration (Fedarko, 2011). The complexity of their care calls for the expertise of multiple professionals (Arbaje et al., 2010; Hartgerink et al., 2013). Since nursing staff represent the largest workforce providing continuous bedside care to older adults (Institute of Medicine, 2008), they play a key role in organizing and coordinating older adults' care and communicating their needs to other health professionals (Dahlke, Phinney, Hall, Rodney, & Baumbusch, 2014; Harris & McGillis Hall, 2012). In providing care to older adults, nursing staff work in nursing teams comprising registered nurses (RNs), licensed practical nurses (LPNs), and patient-care/health-care aides (PCAs/HCAs), with varying levels of education, responsibility, and authority, and in interprofessional teams comprising physicians and allied health professionals (Barrow, McKimm, Gasquoine, & Rowe, 2015). Scholars who have studied nursing practice suggest that better teamwork is associated with less missed patient care because the weakness of one team member is compensated for by the strengths of another (Kalisch & Lee, 2010). Despite research findings suggesting that effective interprofessional teamwork can improve outcomes for older adults (Arbaje et al., 2010; Boult et al., 2009), nursing staff have difficulty working effectively in interprofessional teams (Atwal & Caldwell, 2005) due to power issues, confusion over roles, and language that inhibits communication (Barrow et al., 2015; Fox & Reeves, 2015). It is unknown how nursing staff navigate these challenges in order to manage the care of older adults. Yet such knowledge could guide the development of initiatives to improve the ability of nursing staff to work in interprofessional teams and the development of research agendas in this area as well as improve outcomes for hospitalized older adults.

Literature Review

Literature examining interprofessional practice and how to manage some of the challenges to interprofessional collaboration does not adequately represent the perspectives of nursing staff working with others in managing the care of older adults. Studies examining the involvement of nursing staff in interprofessional teams report that nurses play a minimal role in team meetings yet are often sought out by other professionals for their patient-related information (Atwal & Caldwell, 2005, 2006; Miller

et al., 2008). Atwal and Caldwell (2005) found that nursing staff were disinclined to voice their opinions and attended team meetings principally to relay information about their patients. When questioned regarding their perceptions about working in an interprofessional team, nursing staff described it as a myth — suggesting that just because professionals meet, it does not mean they are a team (Atwal & Caldwell, 2006). The studies cited above focused on the challenges of interprofessional teamwork but not on how nursing staff manage such challenges. Furthermore, they did not identify the type of nursing staff (e.g., RNs, LPNs) involved in the study, nor did they explore how nursing staff functioned within the nursing team. Because of varying levels of education, responsibility, and authority among nursing staff, they can experience challenges associated with power issues and confusion about roles within both nursing and interprofessional teams (Dahlke, Hall, & Phinney, 2015).

Scholars who examined the emotional work of nursing staff in terms of interprofessional collaboration found that their feelings of group belonging, obligation, and loyalty to one another were derived from a belief in their subordinate position among professionals (Miller et al., 2008). This suggests that working in nursing teams may be different from working in interprofessional teams. In the study by Miller et al. (2008), nursing staff experienced negative group belonging within interprofessional teams, describing the relationship as "the RN against everyone else," leading them to disengage from structured interprofessional collaboration (p. 336). Voyer and Reader (2013) found preliminary evidence that nurses view themselves as subordinate to other professionals. Although both of these studies offer insights into the perceptions of nursing staff about their place within interprofessional teams, it is not well understood how nursing staff work with other health professionals to manage the care of older patients.

The first author's doctoral study examined nursing practice with hospitalized older adults. One of the findings was the importance of working with others when caring for an aging population (Dahlke et al., 2014). Although this initial study identified some of the challenges nurses faced in collaborating with other professionals, data on the topic were not explored fully. The first author ruminated on nurses' confessions of feeling less valuable than other professionals and how negative perceptions of themselves in relation to other professionals could erode patient care. Further reading about interprofessional teams and reflection on the gaps in our understanding of how nursing staff (RNs, LPNs, PCAs) function in these teams prompted the present study. An understanding of how nursing staff perceive and work within interprofessional teams can form the foundation for initiatives that support the ability of nursing staff to

collaborate with other professionals and ultimately provide more effective care to hospitalized older adults.

Methods

Design

This study was a thematic analysis of data collected for the first author's doctoral dissertation (Dahlke et al., 2014). The dissertation reported on a grounded theory exploration of nursing practice with hospitalized older adults. Although relationships with others was found to be important in that study, these relationships were not explored in relation to nursing staff's perspectives with regard to interprofessional teams. In the present study we explored the data for the perspectives of nursing staff with regard to interprofessional teams and how nursing staff engaged with other professionals.

The study was guided by the following research question: *What contributes to the perceptions of nursing teams about their place within interprofessional teams?*

Participants and Data Collection

Data collection for the grounded theory study took place between July 2010 and May 2011. It included 375 hours of participant observation (PO) on two different hospital units; 35 interviews with 24 nursing staff — RNs, LPNs, and PCAs; and a review of selected documents. The two units were located in hospitals managed by two different health authorities. The first author engaged in active PO by assisting participants with bed-making or retrieving needed supplies, gaining participants' trust and experiencing some of the challenges faced by nursing staff (Dahlke, 2015; Mulhall, 2003; Polit & Beck, 2010). In addition, previously developed observation questions guided the researcher in examining the layout of the units, activity levels, and how staff interacted. Both units identified their population as almost exclusively older adult, defined as over 65 years. Sites were chosen to provide variation in type of hospital setting, thus one was a geriatric unit in a tertiary-care hospital and the other a medical unit in a community hospital.

There were 24 participants: 18 RNs, 3 LPNs, and 3 PCAs. Participants ranged in age from 25 to 58 years. Their level of education varied by job category: PCAs had 4 to 6 months' health-care education, LPNs had 12 months' health-care education, and RNs held either a 2-year diploma or a or 4-year baccalaureate degree. As data collection unfolded it became evident that the sample did not include experienced RNs, whose perspective was considered important from the point of view of both less experienced RNs and PO, thus theoretically relevant.

Table 1 ***Sample***

Participants	Years of Experience *(mean)*	Years Working on Unit *(mean)*	Work Location Unit
RNs $N = 18$	1.5–8 (4.2)	1.5–2 (1.8)	Geriatric $n = 11$ Medical $n = 7$
LPNs $N = 3$	1.5–8 (4.2)	1.5–2 (1.8)	Geriatric $n = 2$ Medical $n = 1$
PCAs $N = 3$	2–20 (8)	2–8 (4)	Geriatric $n = 3$

The first author attributed this lack of experienced RNs to participants encouraging their experienced co-workers to take part in the study.

Data collection proceeded after ethical approval had been obtained from two different health authorities in western Canada and informed consent had been secured from the participants. Initially the first author buddied with a nurse to familiarize herself with the unit. During the first PO shift several nurses volunteered to participate. During subsequent PO shifts other nursing staff volunteered to participate. The first author, who was known to participants as a doctoral student, conducted all of the data collection for the grounded theory study. Nursing staff were interviewed using semi-structured questions following PO, to allow for clarification of events that occurred during observation. Questions included the following: "What is important about caring for hospitalized older adults?" The interviewer also inquired about events that had occurred during PO.

During PO, participants interacted with physicians, other nursing staff, occupational therapists, physical therapists, social workers, rehabilitation aides, pharmacists, unit clerks, and a variety of other healthcare providers and offered their perspectives on these relationships. Interactions were included as data whenever informed consent had been obtained from the primary participant — that is, the person who was the focus of observation.

Data Analysis

Data analysis, initially conducted by the first author, entailed reviewing data using thematic analysis with regard to the nursing team's actions or interpretations of their actions in relation to working in various teams (Loiselle & Profetto-McGrath, 2011). The second author provided feedback on the first author's analysis. An iterative process took place as the two authors debated their interpretations of the data until they reached consensus on the themes developed to describe the perspectives of

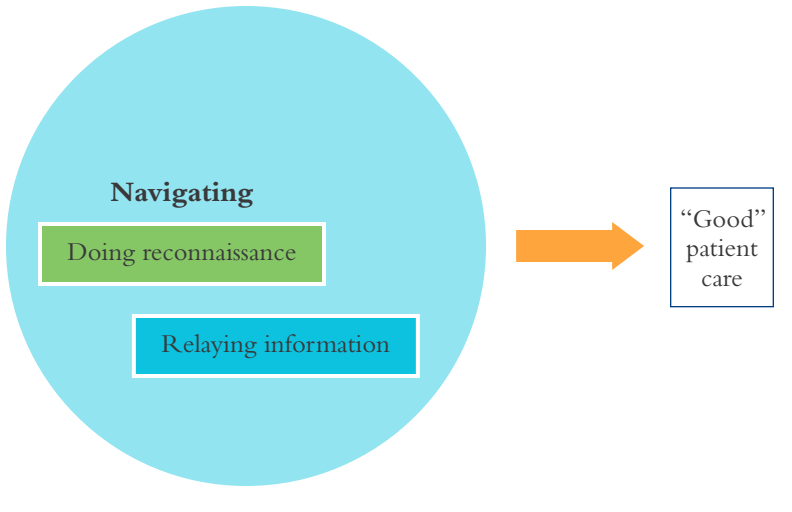
nursing staff working in interprofessional teams within the social context of acute-care hospital units. Both authors were experienced in conducting thematic analyses.

Trustworthiness of the data was enhanced through the ensuring of credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985). Credibility was supported by triangulation of data collection and analysis. Ways in which nurses responded to working in interprofessional teams and how they articulated their actions were found to be important in the grounded theory study (Dahlke et al., 2014). The present study provided an opportunity to examine this phenomenon in detail. Dependability was supported by the use of data from two sites collected over the course of a year. Confirmability was promoted through support to the first author from her doctoral committee during data collection and through the iterative process employed in the present study. Transferability was enhanced by the thick description provided in the findings and in explanations of the research process as well as the participant demographic information provided.

Findings

Navigating relationships describes how nursing staff work in teams to provide older adults with good care, which participants defined as safe, individualized, enhancing function, and ensuring comfort. Navigating

Figure 1 ***Navigating Relationships***



relationships describes how nursing staff negotiated expectations for working with each other and with other professionals. Participants needed to navigate relationships in order to gather and share information related to care. The complexity and physical challenges associated with caring for older adults within resource-deficient and hierarchical work environments underpinned why nursing staff engaged in navigating relationships. The relationships that nursing staff were able to develop brought them opportunities to provide better care than they could offer on their own, such as getting assistance with moving a heavy patient or collectively managing an older patient's breathing problems. Navigating relationships underpinned how nursing staff assessed their environment (doing reconnaissance) and how they passed information to others. Doing reconnaissance describes the ongoing assessments performed by nursing staff as they gather information about patient states, staffing levels, the physical environment of the hospital unit, and available resources. Relaying information involves passing information to nursing and interprofessional team members in order to leverage better care.

Navigating Relationships

Navigating relationships describes how nursing staff negotiated spoken and unspoken expectations for working in nursing and interprofessional teams encompassing a variety of roles and levels of experience. RNs possessed knowledge and skills that allowed them to care for patients in a highly acute and unstable state. As a result, RNs were ultimately responsible for the overall care of the patients on the unit. If a patient assigned to an LPN or a PCA became acutely ill, the RN had to step in to manage the situation. RNs were

> *. . . fully responsible. You have to be in control of the situation. But you can still be responsible and delegate. You have to trust that the person you're delegating to will do their job.* (PCA 3, site 1)

This need to trust one another in order to collectively provide good care influenced how nursing staff navigated relationships with one another. They purposefully developed relationships with each other over time and over food shared in the break room. Participants shared information and learned about each other's values, practice challenges, and effective and ineffective strategies. They learned whom they could trust to help them leverage better care for their patients. There was a shared understanding about the importance of everyone being a team player. One participant described the importance of helping when you are new on a unit in order to make personal connections and to be accepted by the nursing team:

> *If you're not really a team player your life is going to be miserable. And then you've got nobody to talk to. Nobody to answer your call bells.* (RN 11, site 2)

Another participant described the importance of being a team player: "It's give and take" (LPN 3, site 2). Nursing staff who helped others were more likely to receive help when they needed it. Participants valued nursing team members who were "good helpers" — defined as those who could anticipate when help was needed and offer it without being asked (field note, July 2, site 2). Thus helping others was an essential element of navigating relationships within the nursing team.

Although helping one another was valued and expected in the nursing team, it was not expected in the interprofessional team. Participants discerned a helping hierarchy among health professionals, with doctors at the top and nursing staff at the bottom:

> *There's horizontal accommodating, like patients, other nurses, PT [physical therapist], OT [occupational therapist], all accommodating each other; we accommodate and help the doctor. It's the hierarchy and it just has to be.* (field note, July 16, site 1)

Although this participant viewed relationships with other professionals (with the exception of the doctor) as horizontal, others believed that interprofessional team members managed their workload pressures by "getting us [RNs] to do their jobs" (RN 2, interview 2, site 1). As evidence of hierarchical rather than reciprocal relationships, participants explained that physiotherapists were "delegating [walking patients] to us" (RN 2, interview 2, site 1). Ironically, participants also indicated that walking patients was part of their own goals of good care — enhancing the function of older patients. The perceptions of nursing staff of their position within interprofessional teams influenced communication patterns and ultimately the relationships they were able to develop with other professionals. For example, during a PO one RN who had a positive perception of other professionals demonstrated one of the ways in which she navigated relationships with the various levels of doctors and medical students on her unit:

> *The doctor had told the medical student it was okay for the patient to eat but didn't write it. The RN explains, "I'll ask the doctor to write an order." She goes to the desk, where a third-year medical student is looking at charts. The RN asks him, "Do you want us to give the essentials? Could you write the order, please?" She smiles, then she goes and finds the chart and hands it to him.* (field note, July 19; RN 3, site 1)

This nurse navigated relationships with other professionals by politely and clearly articulating what she would like them to do for the patient.

Opportunities for nursing staff to develop trusting relationships with interprofessional team members were limited because of differing work schedules. Nursing staff reported being excluded from interprofessional team decisions:

> *Someone had to fight just to get us to be able to attend care rounds. We weren't even included in the beginning.* (RN 9, site 1)

Such experiences contributed to their lack of trust and their unwillingness to engage in open communication with other interprofessional team members.

Participants believed that interprofessional team members were misinformed about challenges faced by nursing staff. They observed that many interprofessional team members were unwilling to work collaboratively with or help nursing staff. Consequently, nursing staff were cautious in their interactions with interprofessional team members. This resulted in nursing staff relaying less information about patients. For example, during an observation an RN did not pass specific information to a resident about a patient. She explained: "I try to step back because . . . they [might] know what to do" (field note, October 25, site 1). Nonetheless, participants agreed that when all members of the interprofessional team communicated and contributed their expertise to problem-solving it was easier to achieve good care for older patients:

> *[When] everybody within the team knows their job and knows their responsibilities, the nurses are going to do the nursing and the care aides are going to do the care-aide-ing and the physios are going to do the physio-ing and the dietitian is going to do the dietition-ing. Nice and smooth — everybody's happy.* (PCA 3, site 1)

Doing Reconnaissance

Doing reconnaissance represents the ongoing assessments performed by nursing staff as they gathered information about the status of their patients, staffing levels, the physical environment of the unit, and available resources. This information would then be strategically passed on to obtain assistance from other team members or to influence them in the provision of good care. Participants explained that constant assessments were necessary because everything around them, particularly the health status of older patients, was constantly changing: "Things change from hour to hour" (RN 7, site 1). RNs constantly assessed the environment and their patients as a means of protecting patients from harm:

> *Every time I go in the room, I'm looking at the patients, checking that they're safe.* (RN 5, site 1)

Their constant vigilance required accurate assessments of patients' status and knowledge about when to call for the assistance of nursing and interprofessional team members, because it was their responsibility to know when to engage other professionals and what to say in order to leverage their assistance.

Doing reconnaissance included gathering information about all patients on the unit as well as which nursing staff members were working a particular shift. The following field note from an observation shift includes an example of reconnaissance:

> *. . . across the unit, two other experienced RNs nurses are watching this RN nurse as she goes about her work*. (field note, November 7, site 2)

As the day unfolded, the researcher learned that these two experienced RNs were assessing not only patients but the unit as well, watching and evaluating how other RNs and LPNs (in particular, new nurses) were managing their patient assignments. Their attention to these types of detail allowed them to intervene if assistance was needed. They considered it part of their shared responsibility to keep patients safe.

Nursing staff were also doing reconnaissance as they interacted with members of the interprofessional team: "I'll ask [the physiotherapist] [about] the mobility of the patient, so we get help" (LPN 2, site 1). Frequently, nursing staff were able to gather information about patients' mobility or share information with interprofessional team members because of previously developed relationships. For example, during POs, occupational and physical therapists were observed responding more quickly to the requests of RNs who, they explained, were experienced and to those whose practice they trusted (July 19, site 1; August 23, site 1).

Nursing staff also included patients' families in their reconnaissance activities. They asked family members about patients' pre-hospital baseline cognitive and mobility states. If a patient did not speak English, family members could aid the nurse in her reconnaissance activities as well as in passing information to the patient. For example, during one observation the family of a non-English-speaking patient was encouraged to remain at the bedside as long as they could. When the RN and the first author came to the patient's bedside "his daughter-in-law translates and the RN learns that the patient wants a glass jar to pee in" (field note, July 16, site 1). In these ways families could serve as an extra pair of eyes and ears to monitor patients' needs. The extent to which families could assist in gathering information about patients' needs and promoting com-

pliance with the plan of care, they were considered part of a team. Nursing staff were able to engage families as part of the team only to the extent that they had developed a relationship with them. During POs, the time that nurses took to explain tests and medical plans to families demonstrated how they were navigating these relationships. For example:

> *As the RN goes into an older woman's room, she greets the patient and her daughter. She explains the test [that] the patient is waiting [for] to the daughter.* (field note, July 18, site 1)

Relaying Information

Part of leveraging good care involved passing along information that nursing staff had gathered while doing reconnaissance. They passed pertinent information to each other, patients and families, interprofessional team members, and leaders. Communicating patient care plans to families was observed to increase their cooperation with the plans and their participation in care. Relaying information helped nursing staff to develop and navigate relationships with patients and families. It was vital to navigating relationships: "Everybody knows what's going on. Everybody communicates" (PCA 3, interview 2, site 1).

Nursing staff used descriptive terms to rapidly communicate patient care information to each other, clinical leaders, and interprofessional team members. They used the word "acute" to convey the complexity of older patients' medical conditions with potential for rapid deterioration. They used the word "heavy" to describe patients who, while medically stable, were dependent on nursing staff for assistance with activities of daily living and who needed physical assistance to improve their function so they could be discharged. The use of these terms by nursing staff was an efficient way to communicate with and summon help from each other.

Nursing staff used the word "heavy" in conversations with their leaders as part of their rationale for requesting more staff. However, use of this word did not necessarily result in help. Rather, it reinforced general nursing beliefs about care of older adults as custodial, "consisting of bedpans and pills" (RN 4, site 1), "not very acute" (RN 9, site 1), or lacking in complexity. This could explain why RNs reported, "You'll really have to put a good case forward" (RN 11, site 2) "because it's going to be looked at, like, why can't you do it yourselves?" (RN 12, site 2). When nursing staff were unable to make the case for what they considered sufficient staffing, the acute needs of older patients who had been labelled "heavy" were easily overlooked:

> *They don't get better. They get bedsores, they get infections, and they actually get worse in the hospital and [end up] staying for quite a while.* (LPN 3, site 2)

Use of the word "heavy" could be a disadvantage in their ultimate goal of providing good care to older patients.

Nursing staff did not use the word "heavy" within the interprofessional team. Rather, they used "acute" when seeking prompt attention for their patient-related concerns. Observing RNs relaying information within the interprofessional team made their knowledge base evident and highlighted their strategic ways of sharing information. In the following PO note, an RN realizes the significance of laboratory results for the condition of her patient, an older adult, and responds:

> *The RN checks her patients' blood work and says her patient's white count is elevated. She explains that she will flag the doctors to see if they want to order an antibiotic. She puts a note to the doctor on the front of the chart and explains that if the doctor doesn't come in a couple of hours, she will page him. Later, she pages him.* (field note, July 16, site 1)

As this example shows, conveying information effectively required synthesis of information such as laboratory values and the patient's medical condition, and its significance, to determine which interprofessional team member to contact and how to most effectively relay the information. Nursing staff also considered the unit routines and the patterns of a particular interprofessional team member's visits to the unit to aid them in communicating with them:

> *RNs demonstrated a particular style of passing information to physicians, especially novice physicians. During one observation shift, a novice physician was reviewing the care of a patient who had pulled out his intravenous. The physician was considering restarting the intravenous in order to give medications. The RN told [the researcher]: "I don't want him tortured with another intravenous and then he dies anyway. The doctor has not had the courage to tell the family that the wisest course of action is comfort care."* (field note, October 25, site 1)

Starting intravenous lines or conducting invasive procedures was not included in the RNs' goals of comfort care. Yet, even after expressing strong feelings to the researcher about the requisite care, nursing staff would not openly discuss their opinions with the physician. Rather, they would present selected information in such a way that the physician would be "naturally led" to the "right conclusion." Nursing staff tailored their communication strategies to perceptions of their low status in the health-care team, indicative of relationships that had been established, to obtain the patient care they believed to be most appropriate.

Nursing staff were engaged in doing reconnaissance and relaying information constantly and concurrently within the relationships they were building and navigating in order to ensure better care for their

patients than they could provide on their own. Although there were individual variations in how these processes were enacted by the three different groups of nursing staff, all three were agreed on the importance of constantly being aware of what was transpiring in their environment and relaying important information to various professional team members. Moreover, all groups saw the importance of nurturing relationships to support interprofessional teamwork.

Discussion

Navigating relationships provides novel insights into how the use of particular language by nursing staff influenced the responses they received from managers and interprofessional team members. The responses reinforced the self-perception of nursing staff as lower in status than other professionals. Consistent with the results of previous research, how nursing staff communicated was pivotal to the right patient information reaching the right health professional (Buljac-Samardzic, Dekker-van Doorn, Wijngaarden, & Wijk, 2010; Edwards & Donner, 2007; O'Brien, Martin, Heyworth, & Meyer, 2009; Orchard, 2010). Use of the word "heavy" to describe their older patients undermined the ability of nursing staff to communicate their staffing requirements to nursing leaders and patient care needs to the interprofessional team. "Heavy" is often associated with older adult care that is physically strenuous and requires little thinking (Deschodt, Dierckx de Casterle, & Milisent, 2010; Kjorven, Rush, & Holt, 2011). Although further research is needed, it is possible that managers and other professionals interpreted "heavy" as describing older adults' functional status, such as immobility. While functional changes in older patients can be a symptom of acute illness (Fedarko, 2011), the word "heavy" did not convey the need for assessment and acute intervention. Previous research has suggested that language can undermine communication in interprofessional teams (Barrow et al., 2015; Fox & Reeves, 2015). Use of the word "heavy" by nursing staff in this study shows how communication about older patients can be misinterpreted by other professionals. There is a need for interprofessional teams to dialogue about the underlying meanings of language used in describing older patients. In particular, nursing teams need to clarify what they mean by "heavy" in their communication with other professionals.

Use of the word "heavy" by nursing staff in their conversations with other professionals did not result in the actions they desired and as a result contributed to their perceptions that their contributions to the interprofessional team were of lesser value than those of other professionals. Previous studies have noted nurses' perception that their power status is lower than that of other professionals (Miller et al., 2008; Speedy,

2009). The present study provides novel insights into how the perception of nursing staff that they were "just a pair of hands" influenced how they viewed their relationships and how they communicated with individuals outside of the nursing team. In communicating with other professionals, nursing staff did not articulate what they believed to be the most appropriate course of action for their older patients, but, rather, pointed to details of the patients' conditions — hoping that the other professionals would determine what was best (in the nurses' eyes) for the patients. This finding is congruent with other research findings concerning RNs' indirect communication with other health professionals (Barrow et al., 2015; Edwards & Donner, 2007). This study extends these findings by revealing the reticence of nursing staff in communicating with interprofessional team members and disclosing their perceived value to the interprofessional team. Such perceptions have a historical context. The economic and philosophical models developed during the Industrial Revolution have contributed to health professionals' sociological development, which is characterized by controlling their occupations and defining their identity, values, and sphere of practice in ways that protect their unique contributions to patient care (Hall, 2005). These historical forces help to explain why collaboration among professionals is often challenged by power issues (Barrow et al., 2015; Fox & Reeves, 2015) despite the stated need for interprofessional teams to improve the quality, safety, and efficiency of care (Reeves et al., 2009; World Health Organization, 2010).

This historical context also helps to explain why relationships were navigated differently within nursing teams compared to interprofessional teams. Since caring for hospitalized older patients frequently required the assistance of others, nursing team members valued one another as possible resources; they helped one another as a means of developing goodwill (also known as social capital) that could be mobilized strategically in managing the care of older patients (Adler & Kwon, 2003). The limited opportunities of nursing staff to develop relationships with interprofessional team members (due to differing work hours and because other professionals worked throughout the hospital) helped to entrench the nursing staff perspective that they were at the bottom of the hierarchy. The language used by nursing staff (e.g., "heavy") in describing older patients did not reflect the significance of their observations. The lack of response to their language reinforced historical power structures and nurses' low professional ranking. It also prohibited the exchange of professional opinions about patients' conditions and obscured the complexity of nursing work from the view of other professionals.

There is a need for common conceptualizations about the role of each professional (Barrow et al., 2015; Pereault & Careau, 2012) and how professionals communicate with each other. Interprofessional teams need

to be aware of how hierarchy restricts communication and affects perceptions of self-worth and patient care. Nurse leaders and educators have a role to play in helping nursing staff to inform interprofessional teams about their knowledge, skills, and roles (Orchard, 2010; Sommerfeldt, 2013). Health-care leaders need to provide opportunities for interprofessional teams to have frank conversations about roles and communication strategies that foster positive relationships. A good way to start would be to unpack the meaning of the term "heavy" to each profession, in relation to older adult care.

Although this study was limited in size, representing only one geographical region and the perspective of only one professional group, it offers insights into how the language and perceptions of nursing staff limit their communication and collaboration within interprofessional teams. Further research is needed to explore the meanings attributed by each professional group to language such as "heavy." Moreover, leaders and educators can help to optimize the ability of interprofessional teams to improve outcomes for hospitalized older patients by instituting interprofessional team training (Montagnini et al., 2014) and processes for professionals to have regular dialogue (Fox & Reeves, 2015) on such issues as language usage. Finally, we need more research on the processes and structures that facilitate interprofessional team collaboration in the care of older patients.

Conclusions

Navigating relationships illuminates the importance of the perceptions of nursing staff concerning their place among professionals and influences how they communicate and collaborate with others to leverage better care for older patients. The efforts of nursing staff to provide good care are hampered by the language they use and their perception of being undervalued in interprofessional teams. An important step in increasing the ability of nursing staff to collaborate in the care of older adults would be the initiation of regular dialogue among interprofessional team members so that they can establish common language and equitable relationships. Further research is needed to identify structures and processes that facilitate communication and collaboration within interprofessional teams.

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Canadian Nurse Graduates Considering Migrating Abroad for Work: Are Their Expectations Being Met in Canada?

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An RN credential has been called "a ticket to the world." Canadian RNs have been active participants in migration, especially to the United States. In an increasingly globally oriented world, Canadian nurse graduates have many employment options. The purpose of this study was to explore the job values and expectations of baccalaureate nursing students who indicated they were considering migrating for work abroad for their first job and to explore their confidence in having these values met in Canada compared to another country. This was a quantitative study guided by the Value-Expectancy Framework. Data were collected through a Web-based self-report survey and analyzed using descriptive statistics for sample characteristics and *t* tests for comparison. Nonprobability convenience sampling of graduating baccalaureate nursing students from a Canadian border region was used. Of 130 respondents, 92 (70.8%) indicated that they were considering migrating from Canada for work. Respondents believed that working abroad would provide more adventure, full-time work, professional development, appropriate staffing, flexible scheduling, and freedom to choose their preferred job sector/specialty. The authors conclude that there is a need to study nursing graduates' labour mobility both within and outside of Canada and the factors that influence their decision-making and to address the factors that encourage them to leave Canada. Human resource planning will become increasingly important given the predicted nursing shortage and changes to nurse licensure in Canada with the potential to influence migration.

Keywords: migration, commuter migrant, value-expectancy, nurse graduates, border region, labour mobility

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Résumé

Des infirmières et infirmiers diplômés au Canada envisagent de partir à l'étranger pour travailler : le Canada répond-il à leurs attentes?

Michelle Freeman, Lizette Beaulieu, Jamie Crawley

On dit du titre d'infirmière ou infirmier autorisé qu'il est un « billet pour le monde ». Les infirmières et infirmiers du Canada participent activement à l'émigration, en particulier vers les États-Unis. Dans un monde de plus en plus tourné vers l'international, les infirmières et infirmiers diplômés du Canada ont accès à de nombreuses possibilités d'emploi. L'objectif de la présente étude est d'explorer les valeurs et les attentes en matière d'emploi d'étudiantes et étudiants au baccalauréat en sciences infirmières qui ont indiqué envisager de partir à l'étranger pour leur premier emploi, ainsi que d'évaluer leur confiance dans l'éventualité de retrouver les valeurs qu'ils recherchent au Canada comparativement à un autre pays. Il s'agit d'une étude quantitative s'appuyant sur le modèle attentes-valeurs. Les données ont été recueillies au moyen d'un sondage par autodéclaration en ligne et analysées à l'aide de la statistique descriptive pour la caractérisation de l'échantillon et de tests t pour les comparaisons. Un échantillonnage de commodité non probabiliste a été utilisé pour constituer un échantillon composé d'étudiantes et étudiants de dernière année d'un programme de baccalauréat en sciences infirmières vivant dans une région frontalière du Canada. Parmi les 130 répondantes et répondants, 92 (70,8 %) ont dit envisager de partir du Canada pour le travail. Les répondantes et répondants estiment que de travailler à l'étranger leur offrira plus d'aventure, du travail à plein temps, du perfectionnement professionnel, des milieux de travail adéquatement dotés en personnel, des horaires souples et la liberté d'investir le secteur ou la spécialité de leur choix. En conclusion de leur étude, les auteures signalent la nécessité d'étudier la mobilité de l'effectif des infirmières et infirmiers diplômés à l'intérieur et à l'extérieur du Canada et les facteurs influençant leur prise de décision, afin de trouver des moyens d'atténuer l'effet de ceux qui favorisent le départ à l'étranger. La planification des ressources humaines est appelée à devenir de plus en plus importante, étant donné la pénurie annoncée de personnel infirmier et les modifications apportées à l'autorisation d'exercer au Canada, lesquelles sont susceptibles d'avoir une influence sur la migration des effectifs.

Mots-clés : migration, émigration, modèle attentes-valeurs, infirmières et infirmiers diplômés, région frontalière, mobilité des effectifs

Background

Migration has had a long tradition in the nursing profession and Canadian registered nurses (RNs) have been active participants in it, especially in migration to the United States. Canadian nurse graduates have the option of working in their local area, migrating to other locations in Canada (internal migration), or leaving Canada to work in another country. The United States is the largest importer of nurses because of its size, and Canada has been an important source of RNs for the country, especially in border states such as Michigan (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004; Freeman, Bauman, Akhtar-Danesh, Blythe, & Fisher, 2012), where nurses are able to live in Canada but commute across the international border for employment. In the 1990s, because of hospital restructuring and downsizing throughout Canada, approximately 27,000 nurses migrated to the United States in search of jobs (Baumann & Blythe, 2003; Industry Canada, 2008). McGillis Hall, Peterson, Price, Lalonde, and MacDonald-Renez (2013) argue that this trend in mobility continues today.

A shortage of RNs has been acknowledged globally, and most countries predict that they will need more nurses than they can produce or retain (Aiken et al., 2004; Buchan & Calman, 2004; World Health Organization, 2010). The United States alone has projected a deficit of 500,000 RN full-time equivalents (FTEs) by 2025 (Buerhaus, Staiger, & Auerbach, 2008). In addition, RN positions in the United States are projected to grow 19% from 2012 to 2022, a faster rate than that for all other occupations (Bureau of Labor Statistics, US Department of Labor, 2014). Canada has predicted its own nursing shortage of almost 60,000 FTEs by 2022 (Tomblin Murphy et al., 2009). It is essential, therefore, to continually examine factors that contribute to the loss of Canadian RNs, including new graduates, to other countries.

Recent changes to RN licensure in Canada may facilitate nurse migration to the United States. In January 2015 Canadian regulators chose the National Council of State Boards of Nursing (NCSBN) as the provider of the Canadian RN entry-to-practice examination. This is the same RN examination (NCLEX-RN) that is administered in the United States for entry-to-practice RNs (Canadian Council of Canadian Nurse Regulators, n.d.). Although the NCLEX is only part of the nursing regulatory licensure/registration process required for RNs to work in the United States, its adoption removes a significant barrier for Canadian RNs wishing to work there and could increase their migration. In addition, the College of Nurses of Ontario (2014) has introduced a regulation requiring nurses who have not practised in Ontario for 3 years to

either assume the status of *non-practising class,* relinquish their licence, or have their licence revoked; these nurses must now apply to have their certificate of registration reinstated. There is a concern that this regulation will act as a barrier for Canadian nurses who work in the United States but wish to return to Ontario to work (Dunphy, 2015).

The purpose of this article is to explore the job values and expectations that influence the decision-making of baccalaureate nursing students in a Canadian border region (southwestern Ontario) who indicated they were considering migrating abroad for their first job. There were two research questions: *What job factors do these graduates value? How confident are these graduates that their values will be met in Canada compared to another country?*

The study was guided by the Value-Expectancy (V-E) Framework. De Jong and Fawcett (1981) developed the V-E model of migration based on the theory of planned behaviour (Ajzen, 1988). They believed that to understand migration one must understand the individual's perspective, including how the decision to migrate is made by weighing what is valued against the expectation of achieving it. "The model assumes migration is purposive behaviour, that is, that the potential migrant makes a conscious decision to migrate or not to migrate through a process by which perceived consequences are weighed and evaluated" (De Jong & Fawcett, 1981, p. 57). The basic components of the V-E model are values (goals) and expectancies (subjective probabilities). The V-E model will help identify job factors that influence and motivate the decisions that nursing students make when choosing employment after graduating as an R.N. The students' values and their expectations of achieving those factors will be examined. The framework was adapted for a previous study by Freeman et al. (2012).

Design and Methods

This article reports on the quantitative data collected through the replication of a Web-based self-report survey. It reports the survey results (quantitative findings only) for the cohort of nurse graduates who received their degree in June 2013 and indicated an interest in migrating. As in the previous study, using the same Web-based self-report survey (Freeman et al., 2012, p. 1533), a "migrant" was defined as a graduate who responded that he or she was considering taking their first nursing job outside Canada. This could entail either moving abroad (e.g., to the United States [California] or the United Kingdom) or living in Canada but commuting (commuter migrant) for work across the international border (e.g., Windsor–Detroit).

Quantitative data were collected through a Web-based self-report survey. These included personal characteristics shown to influence migration, such as age, partner and children status, history of migration (Buchan & Sochalski, 2004; De Jong, 2000; Kingma, 2006), job preferences (e.g., work hours), migration intentions, and the value and expectation of 25 job factors organized into eight categories: economic rewards, professional development, healthy work environments, safe living and working environments, opportunities for adventure, autonomy in choice of workplace, social supports, and support for ethical practice. Validity of the survey was examined using face and content validity analyses (Freeman et al., 2012; Waltz, Strickland, & Lenz, 2005). Face validity was tested in four steps: (1) 10 graduate nursing students were asked to judge the flow, clarity of language and concepts, and missing items; (2) the research team simplified the questions to include only one concept and added questions to more fully explore each category; (3) two recent graduates were observed completing the survey and were asked to comment on anything that was unclear; (4) the survey was tested by the researcher and five individuals for functionality and to ensure accurate data capture. Content validity of the questions in each category was tested by two experts. They rated each question on a four-point Likert scale (1 = *not relevant to the category,* 4 = *strongly relevant to the category*). The Content Validity Index (Waltz et al., 2005, p. 155) was calculated as 0.96, indicating high interrater agreement that the questions adequately represented each job category.

Value scores were measured using a five-point Likert scale (1 = *very unimportant,* 5 = *very important*). Expectation scores were measured on a five-point Likert scale (1 = *not confident at all*, 5 = *extremely confident. I am about 100% certain*). Questions were framed as statements about the importance (value) of a job factor and how confident the respondent was (expectation) about that job factor in Canada or in another country. For example: "How important is getting a fulltime job in nursing after you graduate?" "How confident are you that you will get a full-time job in nursing in Canada?" "How confident are you that you will get a full-time job in nursing in another country?" Each item on the scale was treated as a stand-alone variable. Thus no psychometric validation beyond face and content validity was necessary.

The study was approved by the Research Ethics Board at the home university of the researchers.

Sample

Survey participants were recruited from a class of 268 baccalaureate nursing students graduating from a university in a Canadian border

region in June 2013. Nonprobability convenience sampling was used. The survey was announced via e-mail and notices in public areas at the schools. The researchers were given permission to have the students complete the survey during classes taught by nursing professors not associated with the study. All students in attendance were given a $5 gift card by the professor at the end of class (whether or not they chose to complete the survey). Students who were absent from class were given a link to the survey through the class Web site and were able to pick up their gift card from the nursing secretaries upon completion of the survey. Data collection took place in March 2013.

Data Analysis

Data analysis was performed using IBM® SPSS® Statistics 22. Prior to data analysis, the data were explored for accuracy of entry, missing data, and statistical assumptions such as normal distribution and outlier data points (El-Masri & Fox-Wasylyshyn, 2005; Field, 2005; Hazard Munro, 2005). Descriptive statistics were used to describe the sample characteristics and value and expectations mean scores. Ordinal variables (Likert scales) were treated as continuous variables for analysis (Tabachnick & Fidell, 2007). In this study, values and expectations were analyzed by individual job factor (rather than by category, as in the previous study) to gain additional insights into specific factors. A paired samples *t* test was used to explore differences between participants' job expectations for Canada and those for another country.

Results

There were 268 nurse graduates at the research sites. Of these, 141 (52.6%) completed the survey. Eleven surveys were incomplete and were removed from the analysis, resulting in a final response rate of 48.5%. The remaining surveys had a few missing responses (missing at random) accounting for differences in the reported number of participant responses. Almost 71% (70.8%, $N = 92$) of students indicated that they were considering migrating abroad for work and were the focus and final sample for this analysis. Notably, there was a difference of approximately 5% between 2011 (Freeman et al., 2012) and 2013 (66.1% and 70.8%, respectively) for the number of students interested in migrating abroad for work.

Sample Characteristics

Sample characteristics are displayed in Table 1. The majority of graduates expressed a preference for full-time work (78.3%, $n = 72$) in Canada

Table 1 ***Sample Characteristics (N = 92)***

Variable	*n*	(%)
Age		
24 or under	56	(60.9)
25 or over	36	(39.1)
Gender		
Female	76	(82.6)
Male	16	(17.4)
Partnership status		
Single	73	(79.4)
Partnered	19	(20.6)
Children		
No	79	(85.9)
Yes	13	(14.1)
Born in Canada		
Yes	73	(79.3)
No	19	(20.7)
Lived in border community prior to entering program		
Yes	78	(84.8)
No	14	(15.2)
Preferred work hours		
Full-time	72	(78.3)
Part-time	20	(21.7)
Know nurse in Michigan		
Yes	44	(48.4)
No	47	(51.6)
Family/relative in Michigan		
Yes	59	(65.6)
No	31	(34.4)
Previous degree/diploma		
Yes	24	(26.1)
No	68	(73.9)
Prefer work in Canada		
Yes	75	(81.5)
No	17	(18.5)

Table 2 ***Importance (Valuing) of Job Factors***

Variable	Values	
	Mean	***(SD)***
Economic rewards		
Full-time job	3.81	(1.3)
Salary	3.74	(1.06)
Benefits	4.15	(1.2)
Professional development		
Increase competencies	4.3	(1.3)
Professional development	3.9	(1.06)
Healthy work environment		
Supports health, safety, and well-being	4.57	(1.09)
Supports quality patient care	4.53	(1.14)
Appropriate staffing	4.51	(1.16)
Visible nurse leaders	4.34	(1.02)
Open communication and trust	4.44	(1.1)
Good relationship with nurse manager	4.51	(.97)
Sufficient orientation program	4.64	(.97)
Flexible schedules	4.32	(.98)
Personal safety		
Job located in safe area	4.19	(.99)
Job allows living in safe area	4.35	(1.04)
Zero tolerance for workplace violence	4.35	(1.04)
Adventure		
Adventure — live in new place	3.5	(1.14)
Adventure — work in new place	3.3	(.94)
Autonomy		
Preferred job sector	4.09	(1.08)
Preferred specialty	4.15	(.89)
Support network		
Live close to family	4.01	(1.04)
Live close to friends	3.48	(.92)
Ethical practice		
Questioning unethical practices	4.45	(1.04)
Supports error reporting	4.55	(.89)
Supports speaking up if risk of harm	4.64	(.96)

(81.5%, n = 75). The participants ranged in age from 22 to 48, with almost two thirds (60.9%) being 24 years or under. The sample was 82.6% female (n = 76). As would be expected in an undergraduate nursing program, the majority were single (79.4%, n = 73) and childless (85.9%, n = 72). One in four (26.1%, n = 24) reported having a previous degree or diploma. The majority (84.8%, n = 78) lived in a border city prior to entering the nursing program. Not unexpected for residents of a border reigon, almost half (48.4%, n = 44) knew a nurse working across the border (in Michigan) and two thirds (65.6%, n = 59) had a friend or family member doing so. Approximately 21% (20.7%, n = 19) stated that they were not born in Canada, indicating a previous migration experience.

Values and Expectations

As might be expected, participants' mean scores for job-related values (see Table 2) show that the 25 job factors were important to them. All factors of a healthy work environment, personal safety, autonomy in job choice, and support of ethical practice had means greater than four (*important* to *very important*). Individual factors, such as employment benefits, improved competency, and living close to family, also scored in this range of importance. Full-time work was slightly less important (M = 3.81, $SD \pm 1.3$), but this result might be explained by the fact that approximately one fifth of this group indicated that they preferred part-time work.

Participants' expectations for jobs in Canada and abroad were compared (see Table 3). They had significantly higher expectations of having their valued job factors met abroad for full-time work (t = -6.95, p < .001), professional development (t = -3.02, p = .003), appropriate staffing (t = -2.8, p = .007), flexible scheduling (t = -3.11, p = .003), adventure as a result of living (t = -5.0, p < .001) and working (t = -4.8, p < .001) in a new place, autonomy in choice of job sector (t = -6.7, p < .001), and preferred specialty (t = -6.7, p < .001). They had significantly higher expectations, however, for safe living (t = 11.15, p < .001) and working (t = 7.24, p < .001) in Canada. In addition, participants were significantly more confident that that they would be supported in questioning unsafe and unethical practices (t = 2.67, p = .009) in Canada.

Discussion

This study focused on the decision-making of nursing graduates before they enter the workforce and identified the job factors that might push them to leave Canada. The majority of graduates indicated a preference

Table 3 *Comparison: Expectations for First Job in Canada and Abroad*

Variable	*N*	Expectations		*t(df)*	*p* Value
		Canada *Mean (SD)*	Abroad *Mean (SD)*		
Economic rewards					
Full-time job	91	2.38 (1.16)	3.36 (.94)	-.6.95 (90)	.001*
Salary	92	2.95 (1.06)	3.03 (1.02)	-.754 (91)	.45
Benefits	92	2.52 (1.21)	2.64 (1.03)	-.919 (91)	.36
Professional development					
Increase competencies	92	3.59 (.92)	3.66 (.86)	-.695 (91)	.49
Professional development	92	2.82 (1.08)	3.22 (.98)	-3.024 (91)	.003*
Healthy work environnent					
Supports health, safety, and well-being	92	3.35 (.93)	3.37 (.87)	-2.1 (91)	.83
Supports quality patient care	92	3.54 (.90)	3.6 (.85)	-6.3 (91)	.53
Appropriate staffing	92	2.75 (.99)	3.11 (1.09)	-2.8 (91)	.007*
Visible nurse leaders	92	3.11 (.96)	3.17 (.85)	-8.0 (91)	.43
Open communication and trust	92	3.08 (.89)	3.11 (.83)	-.35 (91)	.73
Good relationship with nurse manager	92	3.34 (.92)	3.32 (.84)	.36 (91)	.72
Sufficient orientation program	92	3.1 (.96)	3.11 (.98)	-.11 (91)	.92
Flexible schedules	92	2.48 (.94)	2.82 (.99)	-3.11 (91)	.003*

Continued on next page

Variable	N	Expectations		t(df)	p Value
		Canada Mean (SD)	Abroad Mean (SD)		
Personal safety					
Job located in safe area	91	3.85 (.76)	2.65 (.89)	11.15 (90)	.001*
Job allows living in safe area	91	3.85 (.77)	3.12 (.99)	7.24 (90)	.001*
Zero tolerance for workplace violence	91	3.57 (.92)	3.41 (.87)	1.55 (90)	.12
Adventure					
Adventure — live in new place	90	2.61 (1.14)	3.22 (1.21)	-5.0 (89)	.001*
Adventure — work in new place	90	2.69 (.87)	3.20 (1.01)	-4.8 (89)	.001*
Autonomy in job choice					
Preferred job sector	92	2.52 (1.04)	3.30 (.99)	-6.7 (91)	.001*
Preferred specialty	92	2.33 (.99)	3.13 (1.04)	-6.7 (91)	.001*
Support network					
Live close to family	92	2.95 (1.19)	2.66 (1.25)	1.9 (91)	.06
Live close to friends	92	2.82 (1.17)	2.65 (1.29)	1.3 (91)	.21
Ethical practice					
Questioning unethical practices	91	3.70 (.81)	3.45 (.89)	2.67 (90)	.009*
Supports error reporting	91	3.54 (.85)	3.36 (.98)	1.72 (90)	.09
Supports speaking up if risk of harm	91	3.74 (85)	3.59 (.86)	1.4 (90)	.17
* Significant two-tailed *p* value at an α of .05					

for working in Canada but because of a perceived lack of valued job attributes were considering migration. MacMillan (2013) cautions that policy-makers believe they have addressed the issue of nurse supply because they have increased the number of places in nursing programs. By taking a singular approach, without addressing factors that attract nurses to jobs, Canada may be unwittingly producing nurses for the benefit of other countries, especially the United States. Increasing the production of nurses, although important, must be viewed as only one aspect of addressing the predicted nurse shortage. The missing link is understanding nurse mobility and the factors that influence nurses to move from one place to another during their careers (MacMillan, 2013). There is a pressing need for researchers and policy-makers to monitor the impact of changes to Canadian nurse licensure on this mobility, especially on the return migration of Canadian nurses.

Theories of migration have rarely informed research on nurse migration (Freeman et al., 2012). "Although migration theory has been evolving for many decades, determining why nurses migrate is a complex matter, and no one theory has yet captured all the forces that influence an individual's decision to move" (Kingma, 2006, p. 13). The V-E Framework offers a promising approach to recruiting and retaining new graduates. It identifies what new graduates value in a first job and the factors that push them to migrate (e.g., lack of full-time work). The V-E Framework has proven to be useful in predicting migration behaviours in other populations (De Jong, 2000), and future development of a psychometric scale holds promise for predicting nurse migration.

This study has identified a troubling trend. Between 2011 and 2013, students indicating an interest in migrating from Canada for work increased by 5% (Freeman et al., 2012). This increase could be influenced by a combination of factors. It may be a result of the lack of anticipated full-time positions in Canada, as the forecasted retirement and exit of older nurses from the workforce has yet to be realized. The dearth of full-time jobs for new graduate nurses in southwestern Ontario has been attributed to a worsening economy in the region, with job losses in several industries that have caused many current nurses to delay their retirement. Also, the nursing workforce in Ontario has grown, as schools of nursing were funded during the first decade of the millennium to increase their intake of students in anticipation of a nursing shortage (Baumann, Yan, Degelder, & Malikov, 2006): for example, in 2008 there were 2,797 nursing graduates and by 2012 the number had grown to 3,941, an increase of approximately 41% (Canadian Nurses Association & Canadian Association of Schools of Nursing, 2013, p. 6). In addition,

there has been a movement in Ontario to replace RNs with registered practical nurses (RPNs), resulting in fewer RN positions. Ontario has been found to have the second-lowest RN-to-population ratio in Canada, having decreased from 7.18 to 6.99 per 1,000 people between 2008 and 2012 (Registered Nurses Association of Ontario, 2013). This complex pattern of supply and demand points to the need for more research focused on nurse human resource planning.

The study was focused on one border region in Canada. However, its findings have broad implications for current and future nurse human resource planning. Canadians have been described as a "border people," with 75% of the population living within a narrow radius of 150 kilometres from the US border (Hillmer, 2005). Nursing students who live in and attend programs in communities along the US–Canada border have access to jobs within large American health-care systems and have the option of working in either country, crossing the border daily to work as commuter migrants and returning to their home country at the end of their shift (Freeman et al., 2012). A recent study in a border region in southwestern Ontario found that commuter migrants have workplace choices that do not exist in non-border regions and rated their US workplace (in Michigan) more positively (Rajacich, Freeman, Armstrong-Stassen, Cameron, & Wolfe, 2014). In addition, seminal work by Arango (2000) describes migration networks, including such aspects as "knowing nurses who work in Michigan," as one of the principal explanatory factors for migration (p. 292). Border regions may be at greater risk for nursing shortages in the future as a result of these influential networks.

An additional concern is that participants perceived that many of the job factors identified as important and valued by this cohort would not be available to them in Canada. These factors, such as full-time work, flexible scheduling, and professional development, have been found to influence the decision to leave Canada (McGillis Hall et al., 2009, 2013). Another factor, safe living and working environments, has received little attention in Canada but is known to influence nurse migration worldwide (Kingma, 2006). Participants in the present study valued the ability to choose their job sector and specialty, a challenge in unionized workplaces where positions are awarded by seniority, leaving new graduates out of the competition. Health-system and union leadership need to partner to explore ways of designing workplaces that entice new graduates to remain in Canada, including more flexible scheduling, professional development, and orientation periods sufficiently long to instil confidence in new graduates.

Limitations

This study examined the values and expectations of one cohort of Canadian graduating nursing students living in a region bordering on the United States and might not be generalizable to other border populations. Migration intentions do not always result in migration (De Jong & Fawcett, 1981). Longitudinal studies of both border and non-border regions and cohorts of nursing graduates over time are warranted, to determine whether the expectations of new graduates were indeed met while working in other countries.

Conclusion

Nurse migration is a growing global phenomenon and Canadian graduate nurses are part of the trend. To effectively guide nurse human resource planning, we need to study nurse labour mobility both within and outside Canada (MacMillan, 2013) and the impact, on the trend, of recent changes to nurse licensure in Canada. The younger generation is more globally oriented and may have chosen the profession because nursing is regarded as "a ticket to the world" (MacMillan, 2013; Roush, 2009). The graduates who took part in this study, like many before them, voiced a desire to stay and work in Canada. Health-care leaders and policy-makers need to address the factors in the work environment that continue to encourage nurses to leave Canada. Migration does not occur without strong push factors in the home country (Kingma, 2006). "Without both sets of forces [push and pull] operating in unison, little migration would occur. In other words no matter how strong the 'pull' forces, large scale migration will not take place from countries where strong 'push' factors do not exist" (Meija, Pizurki, & Royston, 1979, p. 102). Retaining new graduate nurses has major implications for the nursing profession and for the health of Canadians. The time for action is now.

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A Precarious Journey: Nurses From the Philippines Seeking RN Licensure and Employment in Canada

Margery Hawkins, Patricia Rodney

Increasingly, internationally educated nurses (IENs) from developing countries are seeking RN licensure and employment in Canada. Despite efforts to support their integration into the nursing workforce, a significant number never achieve integration. To explore this phenomenon, the authors use ethnographic methods informed by postcolonial feminism and relational ethical theory to examine the experiences of nurses educated in the Philippines as they seek Canadian RN licensure and employment. The study's focus on a journey that begins in the Philippines and continues in Canada adds an important temporal dimension located in tensions within and between the contexts of regulatory and immigration policies. The findings illuminate the dual challenge of being a new arrival in the country and being an IEN pursuing the Canadian RN credential. Additionally, the findings deepen our understanding of the dominant political, ideological, and social values, both in the Philippines and in Canada, that shape this experience.

Keywords: internationally educated nurses, Philippines, nurse migration, postcolonial feminism, relational ethics, health human resources

Résumé

Infirmières et infirmiers des Philippines en quête d'une accréditation d'IA et d'un emploi au Canada : un parcours précaire

Margery Hawkins, Patricia Rodney

De plus en plus, des infirmières et infirmiers diplômés à l'étranger (IIDE) provenant de pays en développement cherchent à obtenir une accréditation d'infirmière ou infirmier autorisé (IA) afin de pouvoir se trouver un emploi au Canada. Malgré les efforts déployés pour soutenir leur intégration au sein de la profession infirmière, un nombre important d'entre elles et d'entre eux ne réussissent pas à s'intégrer. Dans le but d'étudier ce phénomène, les auteures de la présente étude ont utilisé les méthodes de l'ethnographie adaptées au point de vue du féminisme postcolonial et de la théorie de l'éthique relationnelle afin d'analyser l'expérience que vivent les IIDE des Philippines dans le cadre de leurs démarches pour l'obtention d'une accréditation d'IA et d'un emploi au Canada. Mettant l'accent sur un parcours qui commence aux Philippines et se poursuit au Canada, l'étude ajoute une importante dimension temporelle aux tensions qui existent à l'intérieur des différents contextes réglementaires et des politiques d'immigration, de même qu'entre ceux-ci. Les constatations des auteures mettent en lumière le double défi que doivent relever les IIDE, soit celui d'être des nouveaux arrivants et celui de devoir obtenir une accréditation d'IA canadienne. L'étude contribue également à approfondir notre compréhension des valeurs sociales, idéologiques et politiques dominantes aux Philippines et au Canada, lesquelles ont façonné les expériences étudiées.

Mots-clés : infirmières et infirmiers diplômés à l'étranger, Philippines, immigration, féminisme postcolonial, éthique relationnelle, profession infirmière

Background

Internationally educated nurses (IENs) play an important role in the provision of health care in Canada. They represent approximately 8% of the country's RN workforce (Canadian Institute for Health Information [CIHI], 2003). While this percentage has not increased significantly over the past decade, there has been a shift in source countries. An increasing majority of IENs in Canada are coming from developing countries (CIHI, 2013). Although IENs constitute a substantial proportion of the RN workforce, many who migrate to Canada never complete the registration process and remain underemployed (Atanackovic & Bourgeault, 2013, 2014; Salami, Nelson, McGillis Hall, Muntaner, & Hawthorne, 2014).

Concerns about the vulnerable status of these nurses (Atanackovic & Bourgeault, 2013; Brush, 2008; Ishi, 1987; Kingma, 2008; Salami & Nelson, 2014) and curiosity about broader structures and processes limiting their opportunities for Canadian licensure led the first author to conduct an in-depth exploration of the phenomenon of nurse migration to Canada for her doctoral research (Hawkins, 2013). Since studying IENs overall as a homogeneous group renders invisible the unique challenges encountered by nurses from different source countries (Kingma, 2006), the focus of the study was the experiences of IENs educated in the Philippines. These nurses represent one third of IENS currently working in Canada (CIHI, 2013) and have a long history of migration and experience from which we can learn (Ishi, 1987; Ronquillo, Boschma, Wong, & Quiney, 2011). While there is growing awareness of the importance of studying the experiences of IENs in general, there is an insufficient empirical base from which to inform nursing regulation, education, and related policy (Atanackovic & Bourgeault, 2013; Brush, 2008; Ronquillo et al., 2011; Salami & Nelson, 2014). It is our hope that knowledge gleaned from this study will help to inform the structures and processes that shape the experiences of nurses entering Canada from the Philippines and other countries.

Literature Review

Numerous published accounts provide a helpful overview of regulatory challenges encountered by IENs seeking Canadian RN licensure (Blythe, Baumann, Rheaume, & McIntosh, 2009; Salami et al., 2014; Sochan & Singh, 2007) and challenges encountered by regulators assessing foreign credentials (Blythe et al., 2009; College of Registered Nurses of British Columbia [CRNBC], 2009b). However, there is a paucity of literature addressing the root causes of these challenges.

Several bodies of knowledge are particularly salient in our understanding of the context of nurse migration from the Philippines. Brush and Sochalski (2007) provide a critical analysis of the policies that have eased the way for this migration; Ronquillo et al. (2011) describe the deeply embedded culture of migration in the Philippines that influences the migration of nurses; Parrenas (2008) discusses the shifting gender ideologies that affect women's emigration from the Philippines; and Guevarra (2010) examines the neoliberal ideology that promotes the commodification and export of nurses educated in the Philippines. While this literature deepens our understanding of the structures and processes that foster migration, little is known about how these play out for IENs residing in Canada.

Almutairi and Rodney (2013) explicate the complexity of cultural and linguistic issues and power relations induced by race, class, and gender that can contribute to vulnerabilities among both providers and recipients of health care internationally. Further, several authors have shed light on how power relations such as gender, race, and class intersect within broader contexts to contribute to the marginalization and exploitation of live-in caregivers in Canada, many of whom are nurses from the Philippines (Atanackovic & Bourgeault, 2013, 2014; Pratt, 2012; Salami & Nelson, 2014). Others have examined how such oppressions shape the experiences of skilled immigrants in Canada in general (Beiser, 2005; Creese & Wiebe, 2009; Gogia & Slade, 2011; Turrittin, Hagey, Guruge, Collins, & Mitchell, 2002). Turrittin et al. (2002) address how racial relations influence the workplace experiences of visible minority IENs in Canada. How such relations inform the experiences of IENs as they seek RN licensure in Canada, however, is poorly understood.

Aim

The purpose of this study was to learn from IENs educated in the Philippines about their subjective experiences seeking Canadian RN licensure and, with these nurses, to critically examine structures and processes that intersect at international, national, and local levels and pose challenges for them. The study was guided by one overarching research question: *How do social, political, economic, and historical contexts mediated by intersecting forms of oppression come to shape the everyday experiences of nurses educated in the Philippines as they seek RN licensure in the province of British Columbia?* The ultimate goal of the study was to promote socially just approaches to the international migration of nurses from the Philippines and other countries.

Methodology and Methods

Design

To address the power-laden context of the research question and the aim, we located the study's meta-theoretical context within postcolonial and feminist scholarship and relational ethical theory. Postcolonial feminism provides an analytic lens for a multi-layered examination of intersecting sources of oppression, such as gender, race, and class, located within broader historical and political contexts that have structured, and continue to structure, opportunities and choices (Reimer-Kirkham & Anderson, 2010). Postcolonial feminism challenges the notion that social behaviours are determined by fixed cultural characteristics that are in turn linked to specific "racial groups," and it calls for the inclusion of voices that have typically been overlooked in the social production of knowledge (Reimer-Kirkham & Anderson, 2010). In relational ethical theory, individuals are seen as rooted in a dynamic web of social relationships and affinities that influence each person's identity, development, and aspirations (Rodney, Harrigan, Jiwani, Burgess, & Phillips, 2013). Relational ethical theory also refers to larger system (political) relationships of power that may interfere with individuals' ability to exercise autonomy (Rodney, Jiwani, et al., 2013; Sherwin, 2000).

A qualitative research design inspired by ethnographic traditions of research was selected, to deepen our understanding of the context of nurse migration as perceived by the study participants. This approach directed the researcher to begin with the experiences of the nurses and to analyze the tensions between agency and structural constraints embedded within the social and historical contexts that shape their everyday lives (Reimer-Kirkham & Anderson, 2010). Further, ethnographic inquiry offered an opportunity to use data from a variety of sources to enhance our understanding of complex concepts and practices (Hammersley & Atkinson, 2007).

Context and Sample

Ethics approval was obtained in 2010 and, over the course of 11 months, 47 nurses educated in the Philippines were recruited for the study. Recognizing that as white, middle-class professionals, the authors may not be fully cognizant of the complexities of the experiences of research participants, an Advisory Group of five nurses from the local Filipino community was formed. These volunteers were able to advise on strategies for fostering interest in the study and recruiting participants, inspiring dialogue during interview sessions, interpreting the data, and disseminating the findings.

Recruitment letters were sent to immigrant-serving organizations and community colleges and universities offering nurse bridging courses and programs for IENs. Purposive sampling was used to identify nurses educated in the Philippines who had sought or had considered seeking Canadian RN licensure and/or employment within the past 10 years, who could converse comfortably in English, and who would be willing to talk about their experiences.

The mean age of the participants was 37 years, the majority were female, and most had been in Canada less than a year. The majority had arrived under the Federal Skilled Worker Program (FSWP) (35). Others had come under the Live-in Caregiver Program (LCP) (8), Family Class sponsorship (2), and the Temporary Foreign Worker Program pre-arranged RN employment (2). They had diverse nursing experience, ranging from voluntary nursing work in the Philippines to 17 years of RN practice in the Middle East.

Data Collection

After obtaining informed consent, we used in-depth individual and focus group interviews to collect data. We developed an interview guide of open-ended questions to learn about how participants decided and prepared to migrate, how they pursued RN licensure in Canada, how life had changed for them since arriving, and their thoughts about the future. Seventeen individual and six focus group interviews were held, each lasting from 1 to 2 hours. All interviews were audiorecorded. To safeguard confidentiality, an identification number was assigned to each participant and attached to the data. As well, personal identifiers were removed from the data and any documents with identifying information were isolated and kept in a locked filing cabinet.

Data Analysis

The collection and analysis of data proceeded concurrently. NVivo 8 was used to organize data for ease of retrieval. Through an iterative process of coding, reflecting, and memoing and then discussing interpretations with the Advisory Group, initial codes were refined. Consistent with an ethnographic approach, analysis became more focused on the context influencing individual experiences (Emerson, Fretz, & Shaw, 1995). Core themes observed in participants' descriptions of their experiences were used to cluster data and to conceptualize experiences as temporal sequences on a precarious journey that began in the Philippines and continued in Canada, with each sequence influenced by and influencing another.

Results

Beginning the Journey: "Seeking Greener Pastures"

Participants explained that "greener pastures," or factors inspiring their migration to Canada, included opportunities for an improved economic situation, better prospects for their families, employment as an RN, and improved social status. One participant stated, "Our families look up to us if we get out of the Philippines." The decision to migrate was seldom made in isolation. It was mediated by unemployment in the Philippines, access to Americanized nursing education programs, family pressure to migrate, and Canadian immigration policies that prioritized RNs and offered Canadian citizenship.

The participants' accounts also show that preparing to relocate to Canada requires significant agency. The first step in their journey was to complete RN licensure in the Philippines. Further, they had to strategize about how to obtain Canadian immigration status (or, in the case of live-in caregivers, a Canadian work contract). This step included gaining RN work experience, which frequently entailed temporary relocation to the Middle East.

Being a New Immigrant in Canada: "Not for the Faint of Heart"

Arrival in Canada proved equally daunting. Although Citizenship and Immigration Canada (CIC) may recognize an IEN's education and skills, RN employment is not automatic upon arrival. All participants had to obtain licensure, which is a provincial or territorial responsibility. Consequently, skilled workers had to find interim employment, which often meant low-paying survival jobs in the service sector. Those who had arrived in Canada under the LCP had to fulfil the terms of their caregiver contract, commonly referred to as "the countdown," prior to taking steps leading to RN licensure. There was a dissonance between what participants had hoped for and the reality that awaited them. The following comment captures the despair noted among many: "It's like you're being dropped off in a field where you are by yourself, there's the *enemy zone,* and you're, like, 'what am I supposed to do to survive?'" One participant referred to "the great struggles of being a nurse and an immigrant." Instead of finding greener pastures, participants were faced with two intersecting challenges: being a new immigrant in Canada and obtaining Canadian RN licensure.

Being an IEN in Canada: "One Block After Another"

The first licensure hurdle was meeting the regulatory body's English-language proficiency requirement. In addition to the challenge of the expenses associated with English review classes and proficiency tests,

participants communicated frustration with being required to prove competency in English, as they felt they deserved some recognition for being socialized to English since childhood. Moreover, failure to achieve the required test scores typically caused deep disappointment. After failing her second test, one participant lamented, "I really miss my work. But when I tried [the test] again, the score . . . was deteriorating because I didn't have any confidence . . . I give up" [crying].

Participants were also troubled by the Substantially Equivalent Competency (SEC) assessment, a series of activities introduced in 2008 as a means to efficiently assess the competency of foreign nurses and determine the need for follow-up education (CRNBC, 2009a). In particular, they worried about how to prepare for the assessment. One nurse explained, "In my country we don't do physical assessment. It's done by doctors. So how would I [know how to do one]? And it's a *Canadian way* here." Further, some questioned the usefulness of the SEC assessment since employers demand Canadian education and experience regardless of the assessment outcome.

For many participants, a nurse re-entry program was not a viable option if educational upgrading was deemed necessary. Financial pressures, intersecting with family responsibilities and lengthy waitlists, often constrained aspirations. One nurse expressed it this way: "I would not be able to take [the re-entry program] because, you know, it's very hard for me to be feeding four mouths, and then I'll be studying."

Nurses also voiced frustration at being excluded from hospital mentorship programs offered to Canadian-educated new graduate nurses. Compounding their struggles was the employer requirement of Canadian RN education or experience. One nurse described how a job interview typically unfolded: "They are asking . . . 'Your experiences?' And then there is one point when they usually ask . . . 'Do you have any formal education here in Canada?' And you say, 'No.' Then . . . the doors will close . . . there's no other follow-up questions." Consequently, for participants who did eventually meet the RN licensure requirements, employers came up with another unforeseen hurdle.

Reconciling the Journey: "I Have to Move On"

Deliberations about the future took a variety of forms. Some participants described struggling to come to terms with lost aspirations, in particular becoming deskilled and hence unemployable. One nurse stated, "If I had known that I would suffer this kind of fate, I would have not chosen Canada." Some turned to private colleges to seek certificates in alternative health-related fields. However, one participant who had enrolled in such a program said that the private college lowered its entry qualifica-

tions to accommodate her and then was unable to fulfil the promise of employment upon graduation.

For some, aspirations extended beyond the realm of health care. One nurse said, "Actually . . . when I came in here I didn't really want to [be a nurse]. Nursing was my *ticket* to come here . . . to put on the application." For others, options included relocating to the United States or temporarily resuming an RN career in the Middle East. However, terminating their precarious journey and returning permanently to the Philippines was not articulated as an option by any of the participants.

Discussion

As can be seen from the participants' descriptions of their precarious journey, nurse migration is a multifaceted phenomenon fraught with ethical and practical concerns about the nurses' well-being as well as the safety and competency of their practice. The results of this study deepen our understanding of nurses' experiences in complex organizational and sociopolitical contexts over time. Insights were gleaned from their experiences both prior to and after their arrival in the country, and at various stages of the regulatory process. These insights provide a valuable means of inspecting structures at international, national, and local levels that intersect to shape entry into nursing practice in Canada.

Culture of Migration

Our findings, similar to those from other research (Brush & Sochalski, 2007; Choy, 2006; Guevarra, 2010; Pratt, 2012; Rafael, 1997; Ronquillo et al., 2011; Salami & Nelson, 2014), reveal a culture of migration in the Philippines, or an inexorable trend of seeking overseas employment. This trend appears to be deeply embedded within a colonial context, such as Americanized education and hospital systems that include the promotion of fluency in English (Choy, 2006). Our findings also support the notion that this culture of migration is informed by a neoliberal market economy (Choy, 2006; Guevarra, 2010; Kingma, 2006; Pratt, 2012): in response to a demand for nurses in developed countries such as Canada, the nursing profession has become a commodity or a means of sustaining migration (Guevarra, 2010; Kingma, 2006). As explained by most of our participants, it is their "passport" or "ticket" out of the Philippines.

While the above structures foster a desire for overseas employment, they also have far-reaching implications after one's arrival in Canada, and our study's focus on the "journey" adds an important temporal dimension located in tensions within and between the contexts of regulatory and immigration policies. For instance, while Americanized nursing education programs contribute to eligibility for immigration, they also

mislead some nurse immigrants into assuming that their RN licence will be readily recognized in Canada — a notion reinforced by CIC policies that prioritize immigration on the basis of nursing education and skills. We have learned that a disconnect between immigration (at the federal level) and RN regulation (at the provincial level) means that IENs from the Philippines arrive in Canada unable to work to their professional capacity until they meet Canadian nursing standards. Moreover, a nursing education in the Philippines does not guarantee eligibility for practice in Canada. While we certainly appreciate the importance of effective Canadian nursing regulation, the disconnect that our participants pointed to is a serious concern for IENs from the Philippines, and likely for IENs from other developing countries as well.

Further, the shifting nature of immigration policies often requires IENs to act hastily, so as not to miss immigration opportunities, and to delay applying for RN licensure until after their arrival. At the same time, rapidly changing RN regulatory policies (e.g., the introduction of the SEC assessment) that cause confusion about Canadian regulations also serve to lower the likelihood of nurses beginning the application process prior to departure and further delay their readiness for employment after arriving.

Precariousness of Being a New Arrival

The period following our participants' arrival in the country was characterized by uncertainty, consistent with reports pertaining to immigration in general (Beiser, 2005; Creese & Wiebe, 2009; Gogia & Slade, 2011; Pratt, 2012; Salami & Nelson, 2014; Teelucksingh & Galabuzi, 2007). However, as our above discussion indicates, our results suggest dual challenges confronting IENs seeking RN licensure in Canada: the day-to-day challenges of being a new arrival and those related to obtaining the Canadian RN credential.

Contributing to the precariousness of the nurses' situation, the federal government has not taken steps to ensure that skilled immigrants, such as nurses, can effectively use their skills in Canada — a situation that underscores a neoliberal ideology whereby individuals must increasingly assume responsibility for their own survival (Teelucksingh & Galabuzi, 2007), including paying for private education (Coburn, 2010). Indeed, a particular concern expressed by our participants was that they had recently come to rely on — and pay high tuition to — private colleges in navigating their precarious journey. Limited access to daycare programs and a deep-rooted conviction that child care is a gendered responsibility (Man, 2004) hinder the ability of nurses who arrive in Canada with their families under the FSWP to attend English classes or take part in nurse bridging programs.

As noted in related immigration literature, while migration may be seen as a solution to oppression for some, it should not be equated with improved status for women (Walton-Roberts, 2012). Indeed, IENs' inability to enter professional nursing practice until they complete a rigorous registration process after arriving in Canada initiates a cascade of events that too often put them in jeopardy of poverty, low self-esteem, family breakdown, and deskilling. The findings of our study and others indicate that the journey is equally perilous for those who come to Canada as caregivers (Salami & Nelson, 2014; Salami et al., 2014). For example, several of our participants indicated that they were unable to attend nursing information sessions or to schedule English-language or nursing review classes since these are typically offered during the work week when they are caught up in their caregiver responsibilities.

Elusiveness of the RN Credential

For those who initiate the application process for registration, the RN credential proves elusive. Consistent with findings from other studies (Blythe et al., 2009; Salami et al., 2014; Sochan & Singh, 2007), our participants confronted numerous obstacles to obtaining RN licensure. Participants' accounts of these obstacles raise concerns about evolving and increasing regulatory scrutiny.

The increasing mobility of nurses is making it progressively more difficult for regulatory bodies to assess whether an IEN's competency to practise meets the same requirements expected of a Canadian RN (Blythe et al., 2009; CRNBC, 2009b) and have necessitated new methods for assessing competency (CRNBC, 2011, 2014). Further, in reviewing archived regulatory requirements for nurses in British Columbia we found that there have been recent and progressive increases in English fluency requirements. At the same time, there has been an increasing influx of nurses from other countries.

Clearly, effective regulation of all nurses is foundational to safe, effective, and ethical nursing practice. However, our data indicate that increased regulatory rigour has not been met with commensurate support for IENs from the Philippines. As new arrivals in the country, our participants did not have adequate resources to achieve English proficiency, to prepare for competency assessment, or to secure employment without Canadian mentorship. Further, they indicated that delays in RN licensure and employment put them at risk of becoming deskilled and underemployed — a concern that has been raised in other research with IENs (Salami & Nelson, 2014; Wagner, Brush, Engberg, Castle, & Capezuti, 2015). While the diversity of education and work experience among IENs can be significant (Wagner et al., 2015) and the magnitude of the task of assessing foreign credentials enormous (CRNBC, 2009a),

experts in nursing regulation caution that regulators must continually re-evaluate the intricacies of regulation to ensure that the processes have global as well as local relevance and are "fair, robust, transparent, and informed" (Barry & Ghebrehiwet, 2012). It is ethically imperative that the skills of all internationally educated health professionals be used to the maximum (Bourgeault, 2013). We see this imperative as a prerequisite to respectful and ethical treatment of nurses within and across countries (Almutairi & Rodney, 2013).

Limitations

Although the sample comprised 47 participants, the majority had entered the country as federal skilled workers and live-in caregivers. The study did not adequately represent those nurses who come to Canada with temporary work permits to fill RN positions. Though several nurses who had come as temporary foreign workers did express an interest in participating, in the end only two followed up with interview appointments. Despite this limitation, our results, together with those of other, related, studies, suggest numerous possibilities for improvement for nurse regulators, educators, employers, and researchers at international, provincial, and local levels.

Conclusion

Overall, the findings increase our understanding of nurses' migration experiences over time, especially with regard to tensions within and between the contexts of shifting regulatory and immigration policies. Nurses who migrate are confronted with not only the challenges of being new immigrants but also the challenges associated with navigating a complex and evolving set of professional licensing requirements. The findings also shed light on the power dynamics that prevail at each step of the migration journey and raise questions about what ought to be done to mitigate the root causes of difficulties encountered by IENs from the Philippines and other countries.

Regulation

At a global level, nurse regulators must strive to promote universal standards of performance (Barry & Ghebrehiwet, 2012; Blythe et al., 2009; International Council of Nurses [ICN], 2013). Such standards would foster greater uniformity of the profession internationally and ease entry into foreign workplaces. At national and provincial levels, immigration policy-makers and RN regulators should work in partnership to obviate the disconnect between immigration policy that encourages admittance to Canada on the basis of education and skills and provincial nurse reg-

ulatory policy that delays entry into professional nursing practice until post-arrival.

Education

Global guidelines recommended by the World Health Organization (2013) to revise and update nursing curricula and strengthen nursing competencies should be supported by national and provincial nursing organizations in Canada. At the national level, IENs need to be orientated to the country's official languages, to local cultural, social, and political values, and to the health-care system (ICN, 2007). At the local level, re-entry programs for IENs must have flexible delivery options and IENs with limited resources must be given special consideration (Hawkins, 2013). Since democratic engagement is foundational to ethical policy work (Rodney, Jiwani, et al., 2013), IENs should also be included on advisory committees and related policy vehicles.

Health Human Resources Planning and Management

While recruitment of IENs may be seen as a short-term solution to the deep-seated problems driving the shortage of nurses (Brush, 2008; Kingma, 2008), efforts must be made to support the integration of IENs into the Canadian workforce. A comprehensive orientation and support program for IENs should be established in British Columbia. Such a program should, like the CARE Centre for Internationally Educated Nurses funded by the Province of Ontario, include professional communication courses, networking, observational job shadowing, and professional nursing workshops (http://www.care4nurses.org/). Educating IENs to their highest skill level will not only foster healthy workplaces and but also reduce inefficiencies in the health-care system (Bourgeault, 2013). At the same time, we ought to address our Canadian nursing shortage by providing more supportive workplaces for all nurses (Canadian Nurses Association & Canadian Federation of Nurses Unions, 2015; Rodney, Buckley, Street, Serrano, & Martin, 2013) — nurses who are educated in Canada as well as IENs.

Research

The importance of an advisory group of IENs to inform research projects related to their experiences cannot be overstated. It is paramount that IENs also assume leadership positions in such projects. Future research ought to expand on the ethical implications of nurse migration and the effects of political, ideological, and social values embedded in societal institutions on the mobility and integration of nurses in diverse workplaces.

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Impacts of a Support Intervention for Zimbabwean and Sudanese Refugee Parents: "I Am Not Alone"

Miriam Stewart, Edward Makwarimba, Nicole L. Letourneau, Kaysi Eastlick Kushner, Denise L. Spitzer, Cindy-Lee Dennis, Edward Shizha

Knowledge about the beneficial effects of social support has not been used to systematically develop and evaluate interventions to help refugee new parents cope. The purpose of this study was to design and evaluate a social support intervention for refugee new parents. A multi-method research design was used and participatory research strategies were employed. Qualitative and quantitative measures were used to understand experiences of participants and to assess the perceived psychosocial and health-related outcomes of the intervention. Mentored support groups, matched by gender and ethnicity, met biweekly over 7 months. The participants were 48 Sudanese and 37 Zimbabwean refugee parents in 2 Canadian provinces. Increases were found in informational support, spousal support, community engagement, coping, and support-seeking. Decreases were found in parenting stress, loneliness, and isolation. The authors conclude that there is a need for culturally appropriate nursing practices and programs for refugee new parents from diverse cultures.

Keywords: Canada, intervention effects, parenting, social support, stress and coping

Résumé

Impacts d'une intervention de soutien pour les réfugiés nouveaux parents zimbabwéens et soudanais : « Je ne suis pas seul »

Miriam Stewart, Edward Makwarimba, Nicole L. Letourneau, Kaysi Eastlick Kushner, Denise L. Spitzer, Cindy-Lee Dennis, Edward Shizha

Les connaissances concernant les effets bénéfiques du soutien social n'ont pas été utilisées de manière systématique pour élaborer et évaluer les interventions visant à aider les réfugiés nouveaux parents à s'adapter à leur situation. L'objectif de cette étude est de concevoir et d'évaluer une intervention pour venir en aide aux réfugiés nouveaux parents. Diverses méthodes de recherche et différentes stratégies de recherche participative ont été utilisées pour la réalisation de l'étude. Des mesures quantitatives et qualitatives ont été effectuées pour comprendre l'expérience vécue par les participants et pour évaluer les résultats perçus de l'intervention sur les plans psychologique et de la santé. Des groupes de soutien encadrés et formés en fonction du sexe et de l'ethnie se sont réunis toutes les deux semaines pendant sept mois. L'ensemble des nouveaux parents participants comprenait 48 réfugiés soudanais et 37 réfugiés zimbabwéens établis dans deux provinces canadiennes. Ces groupes ont donné lieu à un accroissement du soutien informationnel, du soutien conjugal, de la participation communautaire, de l'adaptation et des demandes d'aide, ainsi qu'à une diminution du stress, de la solitude et de l'isolement des parents. En conclusion de leur étude, les auteurs signalent la nécessité d'adopter des programmes et des pratiques de soins infirmiers adaptés sur le plan culturel aux besoins des réfugiés nouveaux parents appartenant à diverses cultures.

Mots-clés : soutien social, intervention de soutien, réfugiés, nouveaux parents, recherche participative, soins adaptés sur le plan culturel

Each year Canada receives approximately 20,000 refugees (Citizenship & Immigration Canada, 2012). Refugees report a high prevalence of emotional disorders (Bronstein & Montgomery, 2011; Fazel, Reed, Panter-Brick, & Stein, 2012; Kirmayer et al., 2011). Social support mitigates negative health impacts during refugees' early years of resettlement (Anderson et al., 2010). However, intergenerational conflicts, financial constraints, struggle for employment, inadequate knowledge about resources, language difficulties, and lack of transportation significantly impede refugees' ability to mobilize or use resources and may contribute to poor physical and mental health outcomes (Gottlieb & Bergen, 2010; Wu & Hart, 2002). The loss of social support following migration has a detrimental impact since resources and support-seeking can reduce refugees' isolation, enhance their sense of belonging and life satisfaction, mediate discrimination, and facilitate integration into the new society (Fernandez, Silvan-Ferrero, Molero, Gaviria, & Garcia-Ael, 2014; Foss, Chantal, & Hendrickson, 2004; Fox, Rossetti, Burns, & Popovich, 2005; Grewal, Bhagat, & Balneaves, 2008; Schweitzer, Melville, Steel, & Lacherez, 2006).

Recent migration in combination with the stresses of new parenthood and diminished support can negatively affect children's social development (Deng & Marlowe, 2013; Lewig, Arney, & Salveron, 2010). Sole responsibility for family support, family composition, and length of time in the new country influence refugees' experiences and perceptions of social support (Schweitzer et al., 2006). Lack of support from extended kin may compromise the adaptation of new parents who are refugee and their children. Newcomer mothers experience loss of support networks (Chung, Hong, & Newbold, 2013).

Types, sources, and appraisal of social support may differ cross-culturally (Paris, 2008; Simich, Hamilton, Baya, & Neuwirth, 2004), and social support produces differing adaptive results for migrants from different countries (Deng & Marlowe, 2013; Kirmayer et al., 2011; Wu & Hart, 2002). Canada is one of the top refugee destinations worldwide and Sudan and Zimbabwe are represented in the top countries of origin of refugees (Citizenship & Immigration Canada, 2013). The Sudanese are diverse, speaking Arabic as well as English or other Sudanese languages (e.g., Nuer, Dinka). Many Sudanese refugees have been exposed to violence, war, trauma, and isolation from family (Lietz, 2007; Simich et al., 2004). While most Sudanese refugees fled with the assistance of humanitarian organizations, most Zimbabwean refugees are economic refugees and often arrive with an advantage in educational, language, and occupational skills. Sudanese and Zimbabwean refugees can be targets of discrimination because of racialized status and cultural and

religious traditions (Schweitzer et al., 2006; Simich, Beiser, Stewart, & Makwarimba, 2005).

Although research suggests the potential beneficial effects of social support in ameliorating acculturative challenges, isolation, and resource deprivation (Foss et al., 2004; Grewal et al., 2008; Jaranson et al., 2004; Schweitzer et al., 2006), this knowledge has not been invoked to systematically develop and evaluate interventions that help new parents who are refugee adapt to life in Canada. A review of the research literature from 1996 to 2011 found no social support intervention studies focused on African refugees (Stewart, 2014). Hernandez-Plaza, Alonso-Morillejo, and Pozo-Munoz (2006) point out that overall evidence regarding the effects of social support on migrants is scarce. A shift towards examining social determinants of refugee mental health is beginning to focus on the complex social factors affecting refugee mental health (Simich, 2010). Nonetheless, according to the Mental Health Commission of Canada there continue to be wide research gaps regarding the design and testing of interventions that could inform relevant services for refugees in Canada (Hansson, Tuck, Lurie, & McKenzie, 2010).

Conceptual Foundation

Social support is a resource for coping with social challenges (Gottlieb, 2000) (e.g., immigration, resettlement). Social support is defined here as interactions with family members, friends, peers, and professionals that function to communicate information, affirmation, practical aid, or understanding. Social networks provide varied types of support function, which should be specific to stressful situations (Cutrona, 1990). As most social relationships have positive and negative elements (Brunk & Hoorens, 1992; Rook, Thuras, & Lewis, 1990), the supportive and non-supportive elements of interactions and relationships should be appraised. Support can either endure or dissipate over time in stressful situations (e.g., migration) (Bernard, Johnsen, Killworth, & McCarty, 1990). *Support-seeking* as a coping strategy for managing stressful situations has been linked to greater provision of support, whereas people who use distancing and avoidance coping strategies tend to have fewer support resources (Stewart et al., 2008). Supportive persons can alter appraisal of stressors, sustain coping efforts, and influence choice of coping strategies (Gottlieb, 2000). Social support and coping have bidirectional effects (Thoits, 1995). For example, the ways in which refugees cope can provide clues to potential supporters about the type of support needed. Conversely, the amount and type of support received can influence refugees' choice of coping strategies. Variables that influence social support include community size, socio-economic status, age, gender,

marital status, and ethnicity (Eriksen, 1992; Jones, 1998). As social support is conceptualized as interactions that improve coping, moderate stress, and alleviate loneliness and isolation (Gottlieb, 2000), this study was intended to assess the impact of the intervention on social isolation and loneliness (House, Umberson, & Landis, 1988), support seeking as a coping strategy (Anderson, 1996), and parenting stress.

Aim

The purpose of this pilot study was to design and evaluate the effects of an accessible and culturally appropriate social support intervention that meets the support needs and preferences identified by new parents who are refugee. The results of this study could inform the design of supportive services that prevent and alleviate problems arising from stress and social isolation.

The study was guided by a four-part research question: What are the perceptions, values, and beliefs of new parents who are refugee about the impacts of the social support intervention on their (1) support resources (e.g., social, informational); (2) loneliness and isolation (discrepancies between ideal and perceived interpersonal relationships producing and maintaining feelings of loneliness and isolation [Cacioppo & Hawkley, 2009]); (3) coping (proactive coping using the resources of others — practical, informational, and emotional [Greenglass, 2002]); and (4) parenting stress (attributed to the behaviour of the child, to difficulty managing parenting tasks, or to dysfunctional interaction between child and parent [Abidin, 1995])?

Methods

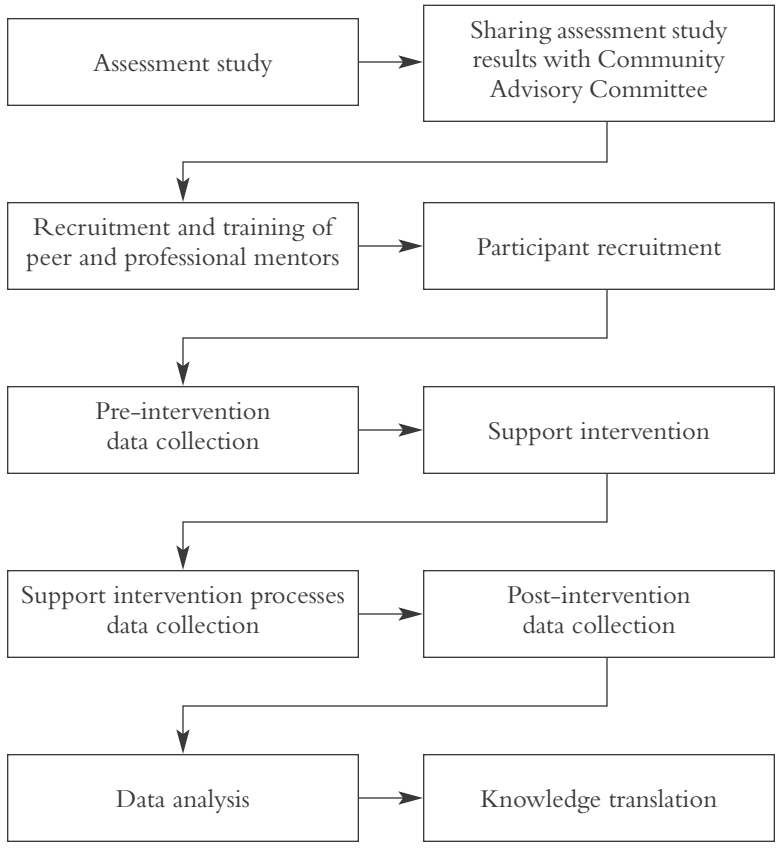
Given the wide gaps in research on support interventions for new parents who are refugee, this pilot intervention study used multi-methods with pre-test and post-test measures in a quasi-experimental design to assess outcomes (Bergold & Thomas, 2012; Tashakkori & Teddlie, 2003). Moreover, participatory approaches (Ahmed, Beck, Maurana, & Newton, 2004; Bergold & Thomas, 2012; Boffa, King, McMullin, & Long, 2011) enabled (1) assessment of refugees' perspectives, which informed the development of the customized support intervention; (2) engagement with community advisory committees comprising refugees and refugee-serving organizations to guide the study; and (3) training and inclusion of refugee mentors and interviewers.

The study was built on the research team's preceding assessment study of support needs and intervention preferences. New mothers and fathers from Sudan and Zimbabwe who had migrated to Canada as refugees in the previous 5 years reported major support needs and preferences: infor-

mation about culturally appropriate services, more supportive service providers, and peer support to complement professional support (Stewart et al., 2014).

A Community Advisory Committee was formed prior to initiation of the pilot intervention study to provide guidance in the conduct of the study. Committee members were invited by the research team and included partners from public, practice, program, and policy areas across various sectors (e.g., health, immigration); they guided the planning and implementation of the study and the dissemination of its results. Committee members were consulted about recruitment and cultural appropriateness of the intervention and data-collection tools (see Figure 1).

Figure 1 ***Support Intervention: Chronology***



Both qualitative and quantitative methods were used to corroborate, elaborate, and illuminate understanding of the phenomena under study, thereby enhancing validity, transferability, and confidence (Creswell, 2013; Tashakkori & Teddlie, 2003). Qualitative methods were employed to facilitate understanding of sensitive issues and meanings, perceptions, beliefs, values, and behaviours (Ahmed et al., 2004; Schulze, 2003) of African new parents who are refugee. Qualitative data can reveal social validity (participants' subjective perspectives on the intervention), transportability (utility of the intervention in a natural setting), cultural elements of the intervention (Meyers & Sylvester, 2006), and perceived impacts of psychosocial interventions (Tashkkori & Teddlie, 2003). Qualitative methods are emphasized in this article.

Verification strategies were used throughout the research process to ensure rigour. These included coherence or fit between the research question and the research method, concurrent data generation and analysis, documentation of evolving interpretations and decisions, and theoretical thinking as emerging data interpretations were reconfirmed or modified in subsequent data (Morse, Barrett, Mayan, Olson, & Spiers, 2002).

Quantitative measurements were used to assess the psychosocial and health-related outcomes of the intervention (Lietz, 2007; Sosulski & Lawrence, 2008) and to potentially enhance relevance to other refugee or newcomer populations. These measures also elucidated distinctions among pertinent variables and extended, refined, and cross-checked qualitative data (Foss et al., 2004; Jamil, Nassar-McMillan, & Lambert, 2007; Liebkind & Jasinskaja-Lahti, 2000).

Sample and Context

Participants were selected using purposive and snowball sampling. The study included both "convention refugees" (persons outside their country of origin with a well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion [Canadian Council for Refugees (CCR), 2010]) who had their refugee claims accepted, and "refugee claimants" (persons who have fled their country and are asking for protection in another country [CCR, 2010]) who were waiting for their asylum case to be settled. Recruitment was facilitated by community agencies and organizations and by research staff knowledgeable about the two refugee groups. Successful recruitment strategies (e.g., ethnic newspapers, staff of community organizations, radio announcements, flyers) from the team's previous studies with vulnerable populations were used.

The study was conducted in two urban sites in the provinces of Alberta and Ontario (Edmonton and Ottawa). A total of 85 new parents who were refugee (48 Sudanese and 37 Zimbabwean) were recruited for the intervention. The sample size was selected to ensure that qualitative data saturation by national origin was achieved for the two culturally diverse refugee groups. For quantitative analyses, these numbers are sufficient for larger pilot studies such as this, enabling analysis within each ethnic group. Infant age (over 4 months) was selected to ensure that infants were no longer newborn (a period of peak parenting stress). Since reports suggest that economic and employment integration is a challenge in the first 5 to 9 years after immigrating, the participants were refugees living in Canada for less than 5 years.

Participants were mothers and fathers of one or more children (including single/lone parents) who had arrived in Canada in the preceding 60 months from Sudan or Zimbabwe and who had a preschool child between the ages of 4 months and 5 years born in Canada. The countries of origin were Sudan (57%) (n = 48) and Zimbabwe (43%) (n = 37). Over half (55.3%) of the participants were male (n = 47). Most (75%) of the participants who reported marital status were either married or in a common-law relationship, 19% were single, 5% separated, and 1% widowed. Of those who indicated maximum level of education achieved, 5% had completed elementary school (n = 3), 25% secondary school (n = 16), 30% college (n = 19), and 41% had university undergraduate or graduate degrees (n = 26). The ages of those who provided this information were 21 to 30 (15%), 31 to 40 (24%), 41 to 50 (27%), or 50 and older (34%).

Intervention

Eight face-to-face support groups were created consisting of like-ethnic and like-gender peers (e.g., Sudanese females, Zimbabwean males). Each of the support groups was co-led by a Sudanese or Zimbabwean peer mentor who had a child in Canada and a Sudanese or Zimbabwean professional mentor (experienced service provider for immigrant and refugee populations) from the health, education, or social-service sector. Mentors participated in a 1-day training session, which oriented them to assessment phase results, intervention phase objectives, mentor roles and responsibilities, support group topics, session reporting, and the survey instrument. Professional mentors were consulted regarding concerns raised by peer mentors or participants. Peer mentors facilitating the support groups were established refugees who had experiential knowledge of immigration and integration, relationships with community agencies for refugees, and connections to their cultural communities. The

support groups were facilitated by 12 peer mentors (3 Zimbabwean and 3 Sudanese women; 3 Zimbabwean and 3 Sudanese men) and 8 professional mentors (2 men and 2 women each from Zimbabwe and Sudan). An additional female Zimbabwean research assistant facilitated participant recruitment in Alberta. The support groups met for 1 to 2 hours biweekly during the 7-month-long intervention. Strategies to sustain participation were essential and included the following: transportation — bus tickets or rides provided by mentors; child care — babysitting by older children of participant mothers; refreshments; and familiar venues.

Support program content was guided by challenges and parent preferences articulated in the previous face-to-face support intervention study, by participant preferences identified in the initial online group sessions, and by feedback from the Community Advisory Committee. A guide to relevant topics and resources was developed for peer and professional mentors by the research team in consultation with the Community Advisory Committee. The guide included modules on social support, mentoring, team-building, group facilitation, reflective listening, and problem-solving. In addition, members of each support group suggested topics pertinent to their specific support needs. In consultation with the research team, peer and professional mentors ensured that topics covered were related to the challenges faced by refugee new parents. The following topics were addressed during support group sessions: parenting education and personal development, parenting across cultures, how we discipline our children in Canada, teaching native languages and culture to our children, managing finances within a marriage, clash of cultures — coping with gender issues in families, health matters — weight gain among newcomers, and careers and education. Throughout the discussion sessions, peer mentors provided support to group members. Peer mentors used their personal experiences to help participants feel more comfortable sharing their own stories. Representatives of refugee-serving agencies were invited to make presentations relevant to participants' needs and requests (e.g., women's health, parenting skills). Online videos and reading materials were used as facilitation aids.

Data Collection

Qualitative interview guides and quantitative instruments were translated into the participants' first languages: Shona and Ndebele for Zimbabwean refugees and Arabic for Sudanese refugees. Surveys were reviewed by at least two people fluent in the language of the instrument and the surveys were pre-tested. Interviews were conducted in the participant's preferred language, which sometimes entailed switching between their first language and English. Consent forms were translated into Arabic for

Sudanese participants and into Shona and Ndebele for Zimbabwean participants, and were administered by research assistants who spoke the participant's language. Participants provided written informed consent. The study was approved by university ethics committees in Edmonton and Ottawa.

Qualitative Data Collection

Following each support group meeting, peer mentors used field notes to document the number of participants, topics discussed, types of support provided, and out-of-session contacts with participants.

Eight group interviews (n = 67), with a range of 4 to 13 participants in each group, and in-depth individual interviews (n = 37) were conducted following the intervention. Individual interviews yielded insights and clarification on issues raised during group interviews. Moreover, individual interviews with participants who were not available for group interviews ensured that the views of articulate and reticent refugees were represented. In both group and individual interviews, participants were asked about (1) factors influencing impacts of the intervention; (2) perceived impacts of the intervention (e.g., coping, loneliness); (3) communication with participants and peer or professional mentors outside group sessions; and (4) continued contact with other participants. For example, interview questions included the following: "Do you think differently about your situation as a newcomer? How? Why?" "Were the people in your life affected by your being in this program?" "Did this support program affect the way you cope with stressful situations/challenges in your life?"

In-depth individual interviews were conducted with all peer and professional mentors (n = 21) following the intervention. The semi-structured interview guide helped to elicit mentors' perceptions of impacts of the intervention. For example, questions included the following: "What did the participants in your group want to/need to talk about?" "Please describe the limitations of this support program." "What changes, if any, should be made to the program?"

Quantitative Data Collection

Standardized measures were administered at pre- and post-intervention to examine the impact of the intervention on (a) support needs — Personal Resource Questionnaire (PRQ) (Weinert, 2003); (b) loneliness and isolation — Revised UCLA Loneliness Scale (Russell, 1996); (c) coping, in particular support-seeking — Proactive Coping Inventory (PCI) (Greenglass, Schwarzer, & Taubert, 1999a); and (d) parenting stress — Parenting Stress Index (PSI) (Abidin, 1990).

The PRQ Part 2 (Weinert, 2003) is a 25-item scale based on five dimensions of support: worth, social integration, intimacy, nurturance, and assistance. Each item's response is scored on a seven-point Likert scale, with scores ranging from 25 to 175, higher scores indicating higher levels of perceived social support. In a systematic review the PRQ was found to be a reliable and valid tool for measuring perceived social support across a wide range of populations (Tawalbeh & Ahmad, 2013) and the alpha reliability of Part 2 has been demonstrated to be approximately .90 (Brandt & Weinert, 1981).

The Revised UCLA Loneliness Scale is a 20-item questionnaire measuring general perceptions of social connection or isolation (Russell, 1996). Participants are asked to rate each item on a scale of 1 (never) to 4 (always). After reverse coding appropriate items, the loneliness score is obtained by summing the 20 items, giving scores ranging from 20 to 80 with higher scores indicating higher levels of loneliness. This scale has been extensively used with a variety of ethnic populations and has been found to have a high degree of cross-cultural invariance (Chalise, Kai, & Saito, 2010; Wilson, Cutts, Lees, Mapungwana, & Maunganidze, 1992). The measure has internal consistency reliability ranging from 0.89 to 0.94. The reliability coefficient for the present study was 0.89.

The PCI (Greenglass et al., 1999a) is a multidimensional measure of coping wherein higher scores indicate increased coping. Participants indicate the truthfulness of statements in each subscale on a scale of 1 (not at all true) to 4 (completely true). The eight-item Instrumental Support Seeking scale focuses on obtaining advice, information, and feedback from people in social networks when dealing with stressors. Greenglass (2002) reports acceptable psychometrics for the scales, including cross-cultural validity. Greenglass, Schwarzer, Jakubiec, Fiksenbaum, and Taubert (1999b) report reliability coefficients of 0.85 for a Canadian sample and 0.84 for a Polish-Canadian sample. The alpha reliability coefficient for the present study was 0.71.

The PSI–Short Form (Abidin, 1990) was designed to measure relative stress in the parent–child relationship. This 36-item measure is used for early identification of dysfunctional parent–child interactions, parental stress, family functioning, and risk for child abuse and neglect. The Index yields a total stress score from three scales: parental distress, parent–child dysfunctional interaction, and difficult child. Higher scores indicate higher levels of parenting stress. Reliability and validity tests of the PSI found that parenting stress is a useful measure across diverse populations, with an internal consistency reliability of 0.80 to 0.91 (Abidin, 2012). The reliability coefficient for the present study was 0.96.

Data Analysis

All qualitative interview data were audiorecorded, transcribed, translated, and analyzed using thematic content analysis. Post-intervention interviews of participants and intervention agents (mentors) were analyzed for perceived impacts of the intervention and factors influencing its impacts. Qualitative data were organized and classified by one coder according to themes, concepts, and emergent categories. The coding framework contained key themes pertaining to the research questions as well as themes emerging from the transcripts. NVivo 8 software was used to organize quotations into themes. Common themes within and across groups were identified through the coding process. Data were analyzed until no new themes or categories emerged (Creswell, 2013). The final stage of qualitative data analysis involved interpreting the data followed by synthesizing data from the post-test group interviews and individual interviews of participants and post-test interviews of mentors.

Quantitative data analyses began with descriptive statistics employed to summarize demographic data (e.g., age, marital status, ethnicity). Nonparametric tests appropriate for a small sample size were employed in this pilot intervention study. The Wilcoxon signed-rank non-parametric statistical test was used to determine whether there was a median difference between paired or matched observations and to compare pre- and post-intervention scores on each instrument. This analysis was conducted only for participants who had complete sets of pre- and post-intervention quantitative data ($n = 59$).

Results

Increased Perceived Support (Research Question 1)

Increased information support. Peer mentors identified knowledge gaps revealed during group meetings and community resources to address these information support needs. They linked new parents who are refugee with community resources such as camping, sports, tutoring for children's homework, tenants' rights, immigration issues, and interpreter services. Moreover, representatives of community agencies were invited to share information on available services and access strategies. Participants indicated their degree of satisfaction with support provided during the intervention:

> *Now the practical support to each of them was that in some instances we were able to provide support of information about child care, child subsidy, and even we filled the forms and made follow-ups and a few of them were able to get it.* (Sudanese male mentor)

> *The support group gave me the opportunity to socialize with other Sudanese and South Sudanese women under the same roof while learning more about other services available to them in the area despite political differences back home.* (Sudanese female participant)

Through group discussions, participants gained valuable knowledge about subjects important to new parents who are refugee, such as diminishing marital disharmony, raising children in Canada, coping with youth facing drug challenges, enrolling children in recreation programs, and integrating into economic and social life in Canada. Participants revealed the value of gaining new information and support:

> *You know the information you gave us about how to register our kids for that 1-week overnight summer program? It gave me a whole week of rest and focus only on myself in a quiet and not very busy environment . . . it was great to have such a program, especially for some of us with no other relatives in this country.* (Sudanese female participant)

> *The best experience was sitting with a bunch of guys sharing information, something that we have never done, actually. When we used to gather we used to talk about something else. Family matters were always, like, untouchable subjects because you don't know how far you go. You don't want to offend someone.* (Zimbabwean male participant)

> *I think I am lucky to have been involved in the wealth of information, sharing, and support. I am more prepared to work with my pre-teen kids. It has made me a real and responsible parent with no excuses at all. I now think more of a settled adult than thinking I am just new waiting to go back to South Sudan.* (Sudanese male participant)

Improved spousal relationships. Participants talked extensively about marital challenges prevalent among refugee couples. Some participants were single parents, divorced or separated, while some married participants reported conflicts in their marriages. Peer mentors linked refugee parents with salient services and helped participants explore the root causes of marital challenges. Defining roles and responsibilities and managing family finances within the marriage were seen as leading causes of conflict. Mentors explained that marriages in Canada have legal implications and responsibilities. According to a peer mentor, female participants conceded that their husbands were struggling to adjust to Canadian society.

Comparison of challenges faced by spouses helped refugee couples understand that some of their domestic problems were experienced by other refugee families. While participants attributed marriage break-ups

to various factors, they concurred regarding financial costs and consequences for children and family. Participants believed that support groups helped them to avoid conflicts and disagreements and to deal with family matters. Some female participants believed that their self-worth was enhanced by the support group, as they realized that their husbands' extramarital relationships were not their fault. They felt more confident in their ability to deal with future family problems:

> *One of them said that since separating with his wife he has had time to think things through and reflect on his time with his wife. He blamed himself for failing to adjust to the new Canadian environment where women are more empowered. He advised all present to start making personal changes in their relationships. His advice was, "Please have time for your families and listen to them."* (Sudanese peer mentor)

Participants reported learning from support groups about the implications of Canadian society for gender roles in marriage. Resentment of Canadian society for perceived erosion of their masculinity and patriarchal status emerged during some men's support group discussions. Some male participants initially thought that their role as "head of the house" diminished when they came to Canada, because they perceived that their partners became more empowered to make decisions. Men reported that support group sessions focusing on the value of mutual decision-making, taking more responsibility for household chores, and raising their children were beneficial. Men noted that, after the intervention, they respected their wives more and embraced the new cultural setting in which they were raising their families. Some participants said that support group meetings improved their communication of concerns with partners:

> *It used to be either my way or no way. So I have changed that attitude which I had prior to this group meeting. I now try as much as I can to contribute in the house and in any things. I used to think that as long as I bring money in the house that's it, you don't need to worry about the rest. But now I understand it's more than that, because we are by ourselves here and if I don't put my effort in the house, then it falls back to all of us.* (Zimbabwean male participant)

> *As time went on, she benefitted from what I have learnt and we now have a better understanding of how to communicate and be a real team in the family.* (Sudanese male participant)

> *I have changed my ways. I am trying to be involved more, taking my son for swimming, soccer, and stuff like that, things that I usually did not do. So the group helped me that way.* (Zimbabwean male participant)

Participants shared strategies for handling money and expenses at home. Female participants believed it was their responsibility to ensure that family income was used to pay bills, purchase food, and support family members in their home country.

Enhanced engagement with ethnic community. Participants reported improved relationships with neighbours and members of their ethnic community following the intervention. Through teamwork and recreational activities offered during the support intervention, participants learned the importance of looking beyond ethnic differences and supporting members of their cultural community. To illustrate, Zimbabwean participants reported improved perceptions of other ethnic groups who spoke a different language (Ndebele versus Shona). Participants were inspired by the fact that group members congregated in times of adversity, which reinforced the importance of staying connected with each other and their ethnic community. Group members provided support to grieving participants. Support exchange continued after the conclusion of the intervention:

> *Now my son can go out and hang out with five neighbours or so and he can go into their house and play and everything. And the other kids do the same thing. And we have liked two people in the neighbourhood who offer to babysit for free just to help out.* (Zimbabwean male participant)

> *In my opinion they really supported each other well because they learned from each other and they were able to embrace the experiences of others.* (Sudanese male mentor)

Quantitative results for the use of personal resources, such as community support, were not statistically significant. An increase in median scores of the PRQ from pre- to post-intervention was found for 47.4% of all participants. A Wilcoxon signed-rank analysis indicated that the increase in the post-intervention median score was not statistically significant ($Z = 1.045$, $p = .295$).

Decreased Loneliness and Isolation (Research Question 2)

Participants reported feeling less lonely after joining the support group. Some female participants noted that before the intervention they did not make time for meeting their personal support needs, as their time was consumed with household chores and family needs. However, the support group provided an opportunity for them to connect with others outside their homes:

> *I like the group because . . . enhance social connections between us Sudanese women.* (Sudanese female participant)

Participants said that the support group brought them together with their peers and built trust and confidence among them. Friendships established during support meetings were extended to other aspects of their lives. By the end of the program, they reported attending each other's family birthday celebrations, visiting one another in hospital, providing support during bereavement, and attending cultural events together. One male participant who described feelings of loneliness as a single parent prior to joining the support group said that following the intervention group members became like his "uncles" or "brothers," providing timely support:

> *When I first arrived in Canada I felt frustrated and alone, life was so difficult . . . oh, my God, it was difficult! I felt like withdrawing from normal activities. I also felt the loneliness, isolation, and loss of everything that is important to me, like my family support and my culture. The support group and the community meeting gave me the senses that I am not alone.* (Sudanese female participant)

> *. . . most of the ones who were single mums and here without their families, it's really hard to get support apart from the group.* (Sudanese female mentor)

Some participants reported exclusion and isolation linked to discrimination. They observed that sharing experiences of racism and discrimination with their peers in the support group was beneficial. Parents maintained that learning how peers in the support groups coped with similar challenges informed them regarding their children's isolation and exclusion. They discovered that children of other parents had similar experiences of discrimination and exclusion, and they agreed that they could teach their children that they were not different from other kids:

> *My children . . . one is now doing Grade 1 and I think this is where this race thing begins. That's when they are beginning to notice about the differences. People laugh about the type of hair, whether they have short hair, colour of their hair, the hair is too curly — all these things start coming up, and I guess with the discussion that we had it will teach you how to approach it and how to talk to your son about it so that he can keep his confidence and know who he is and where he come from, be proud of that and not be discouraged by the fact that his hair is not straight and he is not as light as all the other children.* (Zimbabwean male participant)

The Revised UCLA Loneliness Scale was used to complement qualitative data on experience of loneliness. Half of the participants who completed this scale had lower mean scores after the intervention, indicating decreased loneliness. A Wilcoxon signed-rank test did not detect a

statistically significant change in perceived loneliness among participants ($Z = 0.313$, $p = 0.754$).

Increased Coping Strategies (Research Question 3)

Improved coping with stress. Support group meetings provided a platform for relieving stress from home or work. Discussing personal experiences and possible solutions with peers was viewed as a strategy to "de-stress." Participants reported that the group sessions provided relief and relaxation. Coping strategies learned to help ease marital friction included spousal communication, mutually approved family budget, anger management, and positive thinking. Participants noted that knowledge and coping strategies shared during support group meetings gave them more comprehensive perspectives on challenges affecting them as parents in a new country. They stated that the group had shaped and sharpened their skills for coping with stressful situations:

> *The group gave me a break from the family, especially the children, and when I get home I found that I am more energized and relaxed when dealing with family stressful situation.* (Sudanese female participant)

> *We also learned how to cope . . . especially in terms of parenting and family life, and to adapt to the culture of this country, like the fact that you cannot beat your child in this country.* (Sudanese male participant)

Enhanced capacity. Support meetings provided a platform for discussion of barriers faced by newcomers in the job market and relevant community resources. Although most participants received education in their country of origin, they believed that some employers did not value their qualifications. Group members and mentors shared ideas on training expected by employers, gaining Canadian work experience, and relocating to small towns with minimal competition for jobs. Parents' efforts to upgrade their own education were viewed as role modelling the value of education to their children. Participants made connections with other group members, leading to employment opportunities and upgrading of educational qualifications. Some participants secured employment through people they met in the support group:

> *I saw this guy at our last meeting. He told me he is in my line of work. I gave him the number and they talked to each other and now they work together, so I thought that was a positive [impact].* (Zimbabwean male mentor)

The PCI–Instrumental Support Seeking Subscale was used to measure coping. Analysis of data from the measure revealed that some participants (46.6%) had higher support-seeking scores following the

intervention. A Wilcoxon signed-rank test revealed that this encouraging trend was not statistically significant ($Z = .792$, $p = .428$).

Decreased Parenting Stress (Research Question 4)

Discussions of parenting challenges and strategies for managing stress during support group sessions were considered helpful and informative. Female participants discussed practices learned from their mothers, such as gradually feeding babies with solid food and giving the baby a soothing bath before bedtime. Parents talked about bullying and its effects on children and learned that some victims of bullying at school do not report this abuse. Parents agreed that good parent–child relationships increase the opportunities for children to disclose stressful events. They described improved parent–child relationships following the support group intervention:

> *When I interacted with the group, one thing I gathered was that it's not all about me being mad. It's all about me sitting down with my son and talking and say if anything like this happen next time this how we are going to deal with the situation. Before, the way I used to do things is, like, as soon as the mother tells me that he has done this, the only thing I think of is yelling at him or wanting to beat him up. That has kind of changed me. I take a different approach and say I have to sit down with him and talk to and try to find out why.* (Zimbabwean male participant)

> *Since the group, I pay attention to my children's schoolwork and stuff.* (Sudanese female participant)

> *I find it more relaxing when we just sit and talk, especially when we make comparison of the different child-rearing methods from back home and here in Canada, it makes me laugh . . . sometimes I am home and I think of some of the things that the other women were talking about and I will be laughing alone.* (Sudanese female participant)

Analysis of the PSI–Short Form revealed that 59% of participants who completed the measure had lower scores following the support intervention, suggesting decreased parenting stress. However, according to the Wilcoxon signed-rank test this difference between pre- and post-intervention scores was not statistically significant for this group of participants ($Z = 1.101$, $p = .27$).

Discussion

Newcomers to Canada face substantial cultural changes that, in combination with a lack of social support, challenge their ability to cope with

stress. This pilot intervention study demonstrated that a culturally sensitive intervention can increase participants' social support by (1) providing information on relevant resources, ranging from parenting resources to interpretation services; (2) enhancing spousal relationships through discussion of cultural differences in gender relations in Canada and the country of origin; and (3) helping them to engage with their ethnic community, thus decreasing loneliness and isolation. This pilot intervention also increased coping by helping participants to (1) identify strategies for coping with stress, (2) enhance their ability to secure education and job opportunities, and (3) improve their parenting competence with shared strategies ranging from infant-feeding to coping with bullying to increasing parent–child communication. As the world becomes more globalized and immigration continues, particularly from Sudan (Simich, 2006) and other troubled African nations (Bloch, Sigona, & Zetter, 2011), nurses who are employed in Canada and/or in similar multi-ethnic societies or work settings may appreciate the insights offered by both the findings and the intervention approaches.

This study has illuminated the merits of a participatory approach to program design and cultural sensitivity/appropriateness by focusing on marginalized African refugees representing two countries of origin. Foremost, the content of the intervention emerged from the knowledge gaps and learning objectives identified by individual groups and sought to address their unique ethno-cultural support needs and intervention preferences. This participatory approach ensured that participants received information that filled their gaps in knowledge and that allowed them to take advantage of formal support services and better navigate health, education, housing, banking, and other systems. Information enabled them to obtain concrete benefits for themselves and their families, and was perceived by them to have enhanced their sense of empowerment and their ability to function in Canadian society.

The group discussion format helped to reduce isolation, as other families were seen as facing similar issues. Group exchanges also reinforced the possibilities for ongoing mutual aid and helped to demonstrate the supportive power of like-ethnic peers, who in this instance were those who acted as peer facilitators as well as group participants. Another advantage of this format is its potential to ease intragroup tensions, as members of subgroups who may not have much interaction with one another had the opportunity to discuss challenges they had in common. Moreover, the group discussion format served as a spark for supportive relationships that continued post-intervention.

The ongoing nature of the intervention and the use of both peer mentors and professional information specialists allowed the group process to evolve, relationships to develop, and participants to feel com-

fortable sharing their concerns and opinions. Opening up about problems is often difficult in a group setting — even with those who share one's heritage and gender identity — particularly when one feels isolated. Peer facilitators created safe spaces where participants in gender-segregated groups could frankly discuss intimate family issues such as marital relations and intergenerational tensions. During these sessions, participants learned not only about patterns of responses and behaviours pertaining to family members' adjustment to Canadian society, but also about ways to deal with potential problems through more open communication and to mitigate the stress that some problems may cause. Importantly, gender segregation enabled participants to open up about their concerns regarding changing gender roles and ideologies. Some men felt that their status and masculinity were eroding; by working with peer mentors, they came to see the ways in which they could make important contributions to their family and to appreciate those of their female partner.

Moreover, the culturally appropriate support program and the support communicated in first languages by peers helped refugees to overcome challenges. Differences among refugees reinforce the need to elucidate the role of ethnicity in the design of culturally relevant social support interventions. Consideration of both gender and ethnicity in the composition of support groups and matching of peer facilitators with refugees in face-to-face groups is congruent with the reported need for ethnospecific interventions (Barrio, 2000; Beiser, Wiwa, & Adebajo, 2010).

Improved spousal relationships, enhanced engagement with the participants' ethnic communities, increased informational support and capacity, improved coping with stress, decreased parenting stress, and decreased loneliness and isolation were the main results of this study. The support intervention had two impacts: mobilization of coping strategies for dealing with stressful challenges, and an associated decrease in perceived parenting stress. Nurses need to be aware that social support is a resource for coping with stressful situations linked to migration, resettlement, and new parenthood. Support-seeking as a coping strategy for managing stressful situations has been linked to greater provision of support, whereas people who use distancing and avoidance coping strategies tend to have fewer support resources (Thoits, 1995). Social support and coping have bidirectional effects (House et al., 1988). For example, the ways in which refugees cope can provide clues to potential supporters about the types of support needed. Conversely, the amount and types of support received can influence refugees' choice of coping strategies. Thus, nurses ought to consider the stressors faced by patients who are immigrants and to offer or advocate for culturally sensitive supports in order to promote coping, build capacity, and reduce stress, social isolation, and loneliness.

Support can either endure or dissipate over time in stressful situations (Lawrence & Kearns, 2005) such as migration. Decreased loneliness was another reported impact of the intervention, likely linked to increased perceived support resources. Research suggests potential beneficial effects of social support in ameliorating isolation and resource deprivation (Simich et al., 2004; Warner, 2007) of newcomers and mediating discrimination (Brooker & Eakin, 2001; Din-Dzietham, Nembhard, Collins, & Davis, 2004). Other authors have also found that social support can reduce isolation and loneliness among refugees (Beiser et al., 2010, 2011; Bhui et al., 2006; Jaranson et al., 2004). However, previous support interventions were not designed to meet the unique needs of new parents who are refugee.

The multi-method approach (Tashakkori & Teddlie, 2003) enhanced the knowledge generated from the present study. Non-statistically significant trends were reinforced, supplemented, and interpreted by the qualitative data. To illustrate, the qualitative data revealed participants' sense of increased ability to seek support following the program, although the quantitative trend in increased support-seeking was not statistically significant. Moreover, the statistically non-significant decrease in loneliness was illuminated by the qualitative data, which indicated that refugees felt less isolated following the intervention. However, we need further nursing research using randomized controlled trial (RCT) designs, control groups, and larger samples. Such research might also use participatory methods to inform intervention design and maximize the likelihood of intervention effectiveness. Additionally, a multi-method approach can inform the design of subsequent community-based intervention trials. Future research based on participatory research principles could explore the support intervention preferences of refugees or other migrant groups in order to design and test interventions that are culturally appropriate and that address the unique support needs of each group.

Insights from this study contribute to knowledge that can inform nursing practice in diverse health-related settings, as well as program and policy development to support new parents who are refugee. The experiences of Sudanese and Zimbabwean refugee participants reveal the importance of targeted services within health-care systems for which nurses can advocate. Moreover, nurses could promote coordination and communication among agencies and organizations that provide health services, while programs could mobilize and sustain support for new parents who are refugee. Potential outcomes include improved cultural relevance and uptake of health interventions; improved ability of new parents who are refugee to manage health risks and challenges; increased use of accessible, appropriate programs to address health inequities faced

by refugee families; and expanded research and knowledge mobilization capacity relevant to vulnerable refugee parents and children.

Limitations

The study had several limitations. The sample was small, only 70% of participants completed both pre- and post-intervention quantitative measures, and the measures were self-report. The volunteer sample, which could be viewed as a study limitation, seemed sufficiently robust to provide relevant qualitative data to address the research questions. Psychometric evaluation of the quantitative measures had not been conducted with the two specific populations in the study, although these measures have been used with ethnically diverse populations by other researchers and were translated and administered to these unique cultural groups in other studies conducted by the research team (comprising four nurses, two sociologists, and one anthropologist). These measures may not have been sufficiently sensitive to detect significant differences following the intervention. While the intervention was not explicitly evaluated for relevance and feasibility, qualitative data pointed to acceptability and the fact that 70% of participants completed the post-test measures is evidence of acceptability for the majority of potential participants. In future, an external evaluation could be conducted to assess these factors.

Conclusion

This pilot intervention study provides insights and evidence that advance the body of knowledge needed to guide support for refugees and newcomers to Canada. The findings demonstrate that peer support interventions can help to diminish African refugees' loneliness and parenting stress, address factors that influence health, and enhance support-seeking skills for coping with health-related challenges. Culturally and linguistically appropriate, gender-sensitive support programs could be adapted and tested in community-based intervention trials prior to integration into health services for vulnerable refugees. The next research step would be to conduct a larger RCT to examine clinical outcomes among these parents (e.g., postpartum depression, parental stress, co-parenting). The present findings underline the need for culturally appropriate nursing practices and programs that support new parents who are refugee from diverse cultures. Knowledge about cultural diversity is vital in all areas of nursing practice, including research. Canada is a plural society of immigrants from diverse cultural backgrounds. The need for culturally relevant health care has become a national concern given the escalation in global migration. While nurses and other health professionals must attend to the cultural aspects of healing, we need more nursing research in order to

collect and publish valid and reliable information with respect to immigrant populations, particularly visible minorities. Nursing research approaches and designs must be culturally appropriate, especially to new immigrants. Culturally suitable research provides nurses and other health professionals with valid and reliable knowledge about the health-support needs of new immigrants. It also enables nurses to develop theory and practice that translate into culturally suitable care (Clarke, 1997). It is no longer sufficient, in culturally diverse societies, to implement dominant cultural models in the construction of research approaches. Ethnocentric approaches to nursing research and practice are ineffective in meeting the health-care and health-support needs of diverse populations. Knowledge about cultures and their impact on health-care interactions is essential for nurses, whether they are practising in clinical, educational, research, or administrative settings. Because nurses are in a position to influence policies and practice, they should continue to look for ways and means to satisfy the health-care needs of Canada's various population groups.

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