

Perceptions of Graduates from a Canadian Bachelor of Nursing Program: Preparing for the Registered Nurse National Council Licensure Examination (NCLEX-RN) (Perceptions des diplômées d'un programme canadien de baccalauréat en sciences infirmières : préparation à l'examen pour infirmières autorisées du National Council Licensure Examination (NCLEX-RN))

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Background

Nursing regulatory bodies govern education standards and qualifications required of potential members, define practice standards, maintain professional discipline processes, and control the Registered Nurse (RN) designation (Brunke, 2014; Canadian Council of Registered Nurse Regulators [CCRN], 2015). An essential component that determines eligibility to use the RN title and engage in nursing practice in Canada is successful completion of a licensure examination. The purpose of this exam is to measure “essential knowledge, skills and judgment required by novice practitioners or those new to registered nurse practice in Canada” (Marquis & Trajan, 2012, p. 5).

The authority for regulating nursing in Canada evolved from the Associated Alumni of the United States and Canada organization to the Canadian Nurses Association (CNA) in 1908 (Brunke, 2014). As regulatory bodies became established in Canada, various licensure exams were employed, including those developed in individual jurisdictions or purchased from other provinces, territories or countries. A motivation to establish uniform registration requirements led to the development of the first CNA RN examination in 1970 (Canadian Nurses Association [CNA], 2006; Kovner & Spetz, 2013). Between 1970 and 2012 the structure of the national licensure exam was revised multiple times, with revisions including the CNA Testing Services Nurse Regulation Examination (1970-1980), the Comprehensive Examination in Nursing (1980-1995), the Nurse Registration/Licensure Examination (1995-2000), and the Canadian Registered Nurse Examination (CRNE) (2000-2012) (CNA, 2006).

A company owned by CNA, Assessment Strategies Incorporated (ASI), developed the CRNE using blueprints based on 148 nursing competencies required for entry-level nursing practice (Marquis & Trajan, 2012). Competencies were reviewed by content experts and test items were constructed according to defined percentages of four competency categories: professional practice, nurse-client partnership, health and wellness, and changes in health. Test items also addressed contextual variables such as types of health care recipients, lifespan situations, diversity, specific health situations, and practice environments. Test items were developed using Bloom’s taxonomy (40% application, 40% critical thinking, 10% knowledge, and an additional 10% in any domain) (Hobbins & Bradley, 2013). The CRNE was a written test, completed in large group sessions offered three times per year (CCRN, 2015). Each standardized exam contained 200 four-option multiple-choice questions and pilot items that did not contribute to test scores (Hobbins & Bradley, 2013). Short answer questions were also included for a brief period in the 1990s. With the exception of Quebec, examinations developed in Canada remained the entry-to-practice standard for over forty years (Elliott, Ruddy, & Villeneuve, 2013).

In 2011, the Canadian Council of Registered Nurse Regulators (CCRN) was established to create a national forum for regulatory issues representing the 12 regulatory jurisdictions in Canada (MacMillan, Oulton, Bard, & Nicklin, 2017). The CCRN announced that the Registered Nurse National Council Licensure Examination (NCLEX-RN) would become the standard for entry to practice in Canada as of 2015. Rationales for this change included the provision of a psychometrically proven assessment method and a format that enhanced exam security and increased access to testing sessions and results (CCRN, 2015). Furthermore, the change was described as supporting compliance with the Agreement on International Trade by enhancing the mobility of nurses across Canadian and American jurisdictions (Marquis & Trajan, 2012). The National Council of State Boards of Nursing (NCSBN), the American owners

of the NCLEX-RN, maintains a contractual agreement with a testing company Pearson VUE to administer the exam (CCRNR, n.d.). Exam development is based on a practice analysis that identifies typical nursing care performed within the first six months of practice as the foundation for testing knowledge, skills, and abilities deemed essential for entry-level nursing practice (NCSBN, 2016). Test questions are based on categories of client needs (safe and effective care, health promotion and maintenance, psychosocial integrity, and physiological integrity), and integrated processes (the nursing process, caring, communication and documentation, and teaching and learning). Each exam consists of a fixed percentage of multiple-choice and alternate-format questions adhering to the upper domains of Bloom's taxonomy (NCSBN, 2016). Employing a computer-adaptive method, each candidate completes a unique set of 75–265 questions sequenced according to individual performance. Similar to the CRNE, each exam contains a fixed number of pilot questions that do not contribute to the test score. The exam is delivered in computer-equipped testing centers throughout the year (NCSBN, 2016; Phalen, n.d.).

The decision to change the licensure requirement to the NCLEX-RN created considerable concern for nurse educators, including how this would impact standards unique to Canadian nursing practice and how students' exam preparations should be guided (MacMillan et al., 2017; McGillis Hall, Lalonde, Kashin, Yoo, & Moran, 2017; Pennell-Sebekos, 2015). Historically, attention directed toward preparing students for licensure exams varied within nursing programs. A prevailing assumption was that satisfactory completion of a nursing program was a suitable foundation to be successful with a licensure exam. However, some programs integrated comprehensive exit exams as a safeguard to assess exam readiness (Herrman & Johnson, 2009). Other forms of preparation included optional workshops focused on test taking strategies and review materials developed by publishing companies, with the primary responsibility for licensure exam preparation resting with learners.

Over the past 10 years, licensure exam preparation has received increased interest in both Canadian and American nursing programs, mainly due to declining pass rates (Herrman & Johnson, 2009; Pennell-Sebekos, 2015). In Canada, global pass rates of first-time CRNE writers declined from 96% in 2005 to 88.9% in 2010 (Hobbins & Bradley, 2013). This trend stimulated exploration of strategies for licensure exam preparation prior to program completion with the intent to identify knowledge gaps and provide remedial learning to improve exam success rates.

Revisions to the NCLEX-RN (i.e. elevated passing standards, emphasis on delegation, priority setting and pharmacology, integration of alternate format questions, and a computer adaptive approach) increased exam complexity and the potential for decreased pass rates. These changes resulted in increased integration of licensure exam preparation in American nursing curricula (Herrman & Johnson, 2009). Simultaneously, a myriad of commercial preparation products emerged, including standardized exams, remediation tests, and exit exams that have been integrated into most American nursing programs (Crow, Handley, Morrison, & Shelton, 2004). Herrman and Johnson (2009) suggest that exam preparation strategies have become as numerous as the number of programs providing pre-professional nursing education. Several reports describe the impact of integrating exam preparation materials into nursing programs on NCLEX-RN pass rates in American and Canadian curricula (Carr, 2011; Cobbett, Nemeth, & MacDonald, 2016; Crow et al., 2004; Davenport, 2007). It is evident that licensure exam pass rates have become associated with program recruitment, accreditation, and curriculum revisions in the United States (Carr, 2011; Herrman & Johnson, 2009). "Students' ability to achieve

success on the licensure exam the first time they take it is considered a visible measure of program quality” (Davenport, 2007, p. 30). This underscores the need for a body of evidence to support effective licensure exam preparation strategies. The literature currently provides limited knowledge regarding optimal licensure exam preparation initiatives, particularly for students in Canadian nursing programs.

NCLEX-RN Preparation in an Atlantic Canada Bachelor of Nursing Program

In 2014, a bachelor of nursing (BN) program in Atlantic Canada implemented a plan to support licensure exam preparations for upper-level students who would be part of the first full cohort of Canadian candidates eligible to complete the NCLEX-RN. To learn about the NCLEX-RN, educators attended workshops and webinars hosted by professional associations and reviewed information available on the NCSBN website. Additionally, an internal committee was established to gather and disseminate information about various exam preparation strategies.

Students entering the nursing program’s fourth year in 2014 were advised about information available on the NCSBN website, and encouraged to seek preparation resources and implement self-study plans. Educators developed and incorporated formative and summative testing methods based on NCLEX-RN methodology. A commercial exam preparation product, *PassPoint* developed by Lippincott publishing company, was also integrated as a mandatory student purchase and incorporated into several fourth year courses.

PassPoint is portended to support formative and summative evaluation through practice questions, adaptive quizzes, and comprehensive computer-adaptive tests (CAT). Students are able to access response rationales and remedial learning resources for each question. Mastery levels are identified as predictive benchmarks of licensure exam success (Lippincott PassPoint Prep U, 2016). Within the BN program, *PassPoint* materials were used as the basis of midterm and final exams in one course, and students were required to attain recommended mastery levels in a specified number of practice exams in two other courses. Students were also encouraged to use this resource for independent exam preparation before and after graduation.

Thirty-eight BN graduates were eligible to write the NCLEX-RN in 2015. A preliminary report of exam pass rates raised significant concern as candidates in this jurisdiction achieved one of the lowest pass rates among Canadian writers on their first attempt (Canadian Association of Schools of Nursing [CASN], 2015). Furthermore, the overall national pass rate was reported as 70.6%; a result more than 10% lower than previous CRNE trends and 8% lower than American exam writers (CASN, 2015). These results, contrasting with the longstanding global reputation of high-quality nursing education and practice within Canada, stimulated extensive dialogue among nursing stakeholders including educators, graduates, practice communities, provincial and territorial governments, and public media.

An important element in understanding NCLEX-RN results is to examine preparation strategies employed within the BN program, as well as independent methods chosen by exam candidates. With this intent, a descriptive inquiry was utilized to obtain perceptions of program graduates regarding their exam preparations and their experience with exam success.

Method

A survey was developed to capture graduates’ perceptions about the usefulness of preparatory strategies in supporting their NCLEX-RN success. Survey questions asked about exam preparation strategies utilized within the program, independent preparation strategies

utilized outside the program, and how these strategies aligned with participants' success in passing the exam. Participants were also invited to provide recommendations to faculty and future students related to NCLEX-RN preparations. This 27-question mixed-methods survey was designed using Qualtrics and hosted on the university server. Fifteen questions were closed ended (a combination of dichotomous and Likert-type). The remaining 12 questions were open ended to allow respondents to expand on responses to closed ended questions with feedback about their experiences and recommendations to faculty and future exam writers.

Ethical Considerations

Ethical approval was obtained from the institution's research ethics board prior to conducting the study. Potential participants were informed that investigators were faculty members affiliated with the program. Data collection was confidential and items such as Internet Protocol (IP) addresses, which could potentially identify individuals, were not shared. As the university maintained a site license for Qualtrics, data collection did not involve a third-party server. Participants were informed of their right to abstain from any portion of the survey. An electronic consent statement was embedded at the beginning of the survey, subsequent questions were only available to those who consented.

Data Collection

Graduates from the nursing program in 2015 (n=38) were recruited as potential participants through an email invitation sent to their university email accounts. The invitation included an explanation of the study, contact information for both researchers, an embedded link to access the survey, and encouragement to inform other graduates within the cohort about the study. Researchers also used chain sampling through face-to-face encounters with eligible participants in education and practice settings. The survey was available between November 2015 and January 2016. This timeframe enabled researchers to capture perspectives of graduates exposed to up to two iterations of the NCLEX-RN. Of the 24 graduates who responded to the email invitation, 23 gave consent and completed at least a portion of the survey. While specific demographic data was not collected to maintain anonymity, the majority of eligible participants were female Atlantic Canadians between the ages of 20 to 30 years.

Analysis

Quantitative data were tabulated on a computer spreadsheet and analyzed using Microsoft Excel. Qualitative responses were independently analyzed by each researcher to identify descriptive trends in narrative responses and a subsequent joint analysis was conducted. Relationships were identified between study strategies, perceptions of the helpfulness of exam preparation resources and exam success. Correlations were validated using Chi-Square testing, for which the level of significance was set at an alpha of 0.05. The analysis focused on participants' responses to quantitative questions, consistent narrative responses to qualitative questions, and the relationships between study strategies, preparation resources, and exam success.

Results

Analysis of descriptive and inferential survey data revealed four themes, broadly categorized as

1. exam success;
2. perceptions about the usefulness of *PassPoint*;

3. perceptions about the usefulness of other exam preparation strategies; and
4. recommendations for program faculty and students.

Exam Success

The distributed NCLEX-RN pass rates were almost even among the 23 survey participants with 12 (52%) successful and 11 (48%) unsuccessful first-time writers. Of the 48% who were unsuccessful, five (45%) participants were successful on their second attempt and six (55%) were unsuccessful. This distribution of exam results strengthens the quality of findings as it includes perspectives of candidates who were successful and unsuccessful in passing the exam. Although the data collection period allowed participants to identify the requirement for two or more NCLEX-RN attempts, information about success rates beyond the second attempt was not available during the data gathering timeframe.

Perceptions about the Usefulness of *PassPoint*

Eleven survey questions explored perceptions regarding the overall helpfulness of *PassPoint* for NCLEX-RN preparation. These questions included items based on a 4-point Likert scale, followed by related open-ended questions. Findings displayed in Table 1 illustrate the perceived utility of *PassPoint*.

Table 1

Helpfulness of PassPoint for NCLEX-RN preparation

Did you find the integration of <i>PassPoint</i> into year 4 of the BN program helpful to your NCLEX-RN preparation?		
Level of helpfulness	Percentage	
Very Helpful	22 % (5/23)	
Somewhat Helpful	43 % (10/23)	
Not Very Helpful	22% (5/23)	
Not Helpful	13% (3/23)	
Was <i>PassPoint</i> integration into core nursing course in 4th year helpful for NCLEX-RN preparation?		
Course	Yes	No
One: midterm and final exam	48% (11/23)	52% (12/23)
Two: set number of practice exams with required mastery level	48% (11/23)	52% (12/23)
Three: set number of practice exams with required mastery level	52 % (12/23)	48% (11/23)

Participants' responses to subsequent open-ended questions supported their perceptions. Primary benefits of *PassPoint* were identified as increased familiarity with the CAT method and extensive opportunities to complete practice questions. Examples of these perceptions as reflected in participants' responses were as follows: [*PassPoint*] "helped me understand the CAT

method,” “provided many questions and tests” and “being forced to do the tests – the more you do the more you learn that style of testing.” However, there were also consistently reported limitations detracting from the usefulness of *PassPoint*. Participants repeatedly stated practice questions did not appear to be equivalent to the difficulty of questions on the NCLEX-RN, describing the resource as “unrealistically easy” and “questions were drastically different from the actual exam.” Participants also indicated that incorporating the product at a late stage in their education was inconsistent with prior testing methods. For instance, participants stated that the resource’s testing methods were “not consistent with the program,” and had been “added at the end.”

Perceptions about *PassPoint* helpfulness and NCLEX-RN success, as denoted in Table 2, show a positive correlation ($P=0.005$) between the perceived helpfulness of *PassPoint* and NCLEX-RN success. Participants who passed the NCLEX-RN indicated *PassPoint* was more helpful than those who were unsuccessful.

Table 2

Perceptions of PassPoint helpfulness and NCLEX-RN success

Did you find the integration of <i>PassPoint</i> into the 4th year of the BN program helpful to your NCLEX preparation?	Were you successful on your first attempt at the NCLEX-RN?		
	Yes	No	Total
Helpful	11	4	15
Not helpful	1	7	8
Total	12	11	23

Note: $P\text{-Value}=0.005$

Participants were also asked if they used *PassPoint* after graduation. Of the 78% (18) of participants who reported using *PassPoint* after graduation, 66% (12) were successful on their first attempt with the NCLEX-RN. Of the five (22%) participants who did not use *PassPoint* after graduation, 100% were not successful with their first attempt of the NCLEX-RN.

Perceptions about the Usefulness of Other Exam Preparation Strategies

Preparation strategies. Participants were also asked, “did you use other NCLEX-RN preparation resources?” Of the participants, 96% (22) indicated using one or more NCLEX-RN preparation resource in addition to *PassPoint*. The only participant who indicated not using any additional resources beyond what was mandated in the program was unsuccessful on the first attempt at the NCLEX-RN. Participants also identified a variety of text-based and electronic commercial products selected as additional resources for NCLEX-RN preparations, as well as commercial courses and private tutoring. However, these findings are limited by a lack of data regarding how participants made decisions about selecting additional preparatory resources.

Time spent studying. Participants were asked about strategies related to the amount of time spent studying during preceptorship in the last term of their program and also after graduation. As shown in Table 3, this self-reported data indicates that study time increased after graduation. There was no correlation ($P=0.292$) between the amount of study time during preceptorship or after graduation and first time NCLEX-RN success. However, the interpretation

of these findings is limited as this study did not capture data about time-lapse between graduation and exam completion for each candidate. This finding is a worthwhile focus for future investigations.

Table 3

Reported NCLEX-RN success and duration of self-study

Were you successful on your first NCLEX-RN attempt?	How many hours a week did you study for the NCLEX-RN?					
	While in preceptorship			After graduation		
	<10	>10	Total	<10	>10	Total
Yes	5	7	12	1	11	12
No	7	4	11	1	10	11
Total	12	11	23	2	21	23

Note: *P-value=0.292*

Recommendations for Program Faculty and Students

Recommendations for faculty. Participants were asked, “what advice would you give to faculty regarding how to support students in preparing for the NCLEX-RN” and responses uncovered two distinct findings. The first recommendation was to alter existing curriculum content to align with perceptions about the content and style of questions encountered on the NCLEX-RN. Participants noted the importance of knowledge related to prioritization, delegation, assignment, mental health, maternal child health, health assessment, and pharmacology. One respondent identified the need for more content related to advanced skills stating “several items on the exam were not included in any of the four years. We had one class on ‘advanced’ skills (i.e. cardiac strips).” Another participant recommended that faculty “[spend] less time on the determinants of health (DOH). Although, the DOH are significant, there is way too much time spent on this topic throughout the degree, this time could be spent focusing on more of the science of nursing (i.e. pharmacology).” Recommendations were also offered about the importance of reviewing exams by discussing response rationales in class and incorporating computer-based testing in all years of the program.

The second finding illuminated participant’s perceptions of the program’s obligation to prepare students for the NCLEX-RN. Emotional undertones were evident in statements, such as “we the students are not responsible for coming up with the curriculum. It is your job to prepare us, and in that, I believe you failed” and “[the program] did NOT prepare us at all!”

Recommendations for students. Responses to the open-ended question “what advice would you give future students regarding preparing for the NCLEX-RN” focused on study and test-taking strategies as well as content areas. Recommendations such as “manage your emotions,” “study, study, study and do lots of practice exams,” and “don’t read into the questions” were prevalent responses.

Participants also stressed the importance of knowledge related to prioritization (citing the nursing process, and Basic Life Support sequencing), the nurse’s role in assignment and delegation, and pharmacology. One respondent summarized these recommendations as:

“Remember the nursing process, ABC, and levels of sickest, sicker and sick. Also important to know the role of the RN and the tasks that can [or] cannot be delegated... [and] familiarize yourself with medications.”

Discussion

The findings of this study provide a basis to inform future directions for licensure exam preparation. First, the main preparatory resource integrated into this program required students to purchase *PassPoint* in the final year of study. While participants consistently identified beneficial features of *PassPoint* such as providing exposure to CAT and a large volume of practice questions, concerns were identified about the disparity between the difficulty level of questions available in this product and those encountered on the NCLEX-RN. Participants also noted the usefulness of this resource was limited by integrating unfamiliar testing methods and question styles at a late stage in the program, which was perceived as negatively impacting grades in upper-level courses.

Individual learning styles may be an important consideration when implementing exam preparation strategies, as both the main commercial product integrated into the program and a variety of independently selected resources were viewed with diverse perspectives about helpfulness. Reliable information about the purpose and validity of exam preparation resources is essential, yet a paucity of information fuels the conundrum of identifying resources appropriate for students in Canadian nursing programs. While we assume perceptions about the usefulness of resource materials were influenced by overall exam success, our survey questions did not address *how* participants made decisions about the preparation resources they selected. Furthermore, we continue to anecdotally learn about students who appear to choose a multitude of licensure preparation resources with limited knowledge of their benefits or how a resource might align with their learning needs. It is evident that exam preparation tools are being marketed to both faculty and students, but the basis for making informed decisions about optimal exam preparation remains unclear.

A second implication of this study arises from participants' perspectives about the responsibility of the program to ensure graduates are prepared for the licensure exam. It was evident that some participants perceived the program did not fulfill its responsibilities in this regard. Given that approximately half the participants were unsuccessful in their first NCLEX-RN attempt, it is not surprising that some narrative responses conveyed emotions ranging from disappointment to overt anger about the effectiveness of strategies included in the program to support their exam success. The degree of responsibility for licensure exam preparation—which should be attributed to individuals or the amount of mandatory preparation that should be included in a curriculum—is an important consideration for educators and exam candidates. Active dialogue is needed between educators and students to clarify the intent of and responsibilities for required exam preparation after program completion to enter professional practice. Such dialogue should acknowledge how exam methods used in nursing programs provide exposure to the NCLEX-RN design and the simultaneous importance of students and graduates directing their own exam preparations.

Third, findings support the need for educators to continue exploring implications related to embedding NCLEX-RN preparations in curriculum. For study participants, some components of *PassPoint* had numerical values contributing to course grades, while others were graded with pass or fail criteria. Hobbins and Bradley (2013) noted the relationship between an exam

preparation tool and the academic consequences of the scores attained may influence the validity of the tool. In disciplines where students place a high value on academic achievement, there may be low levels of commitment to fully engage in preparation activities that have little impact on grades or progression in a program. Further investigations are needed to determine appropriate weighting of licensure exam preparation strategies incorporated into curriculum as well as the degree of responsibility that should be attributed to individual students. Beyond this, participant recommendations surrounding curriculum change underscore graduates' awareness that licensure exam success is the final gateway to professional practice. Participants suggested shifting curriculum content away from foundational Canadian nursing frameworks such as primary health care and the social determinants of health, and placing greater emphasis on content directly related to the licensure exam. For instance, participants reported scientific and technical aspects of nursing appeared to be most important in their exam experiences. Participant recommendations to alter the curriculum supports a prevalent concern expressed by educators throughout the transition to the NCLEX-RN regarding the alignment between this exam and major concepts emphasized in Canadian nursing education and practice. Congruence issues were raised prior to NCLEX-RN implementation and persist in numerous reports about the actual experiences of graduates who have completed the exam (MacMillan et al., 2017; McGillis Hall, Lalonde, & Kashin, 2016; McGillis Hall et al., 2017; Salfi & Carbol, 2017; Wiltshire, 2017). This concern contrasts with the well-defined relationship between CRNE exam blueprints and the Canadian Standards of Nursing Practice. Graduates' experiences with the NCLEX-RN have the potential to influence changes that devalue theoretical and conceptual forms of nursing knowledge in favour of technical content. If the benchmark for assessing entry-level competence for nursing is NCLEX-RN success, this requirement has the potential to significantly alter education by drifting away from the long-standing foundations that distinguish the profession of nursing in Canada. MacMillan et al. (2017) warn implementation of the NCLEX-RN "has significant consequences for Canadian content and integrity of educational programs... and the future of primary health care system reform" (p. 1).

Future Directions

While this study focused on perceptions of *PassPoint* as a mandated preparatory resource, a second Canadian study by Cobbett et al. (2016) also explored the outcomes of using required resources in Health Education Systems Incorporated (*HESI*) products. A recommendation of Cobbett et al. was to require students to meet specific program-set benchmark scores using *HESI* products as a means for improving NCLEX-RN outcomes. Participants in the current study reported diverse perceptions about the helpfulness of both required and self-selected exam preparation strategies. These findings, along with other reports about implementing licensure exam preparations in Canadian programs (Cobbett et al., 2016; Hobbins & Bradley, 2013), suggest the relationship between commercial resources and NCLEX-RN success is an important area of attention for nurse educators. Cobbett et al. acknowledged an absence of data regarding other exam preparation options as a limitation of their investigation. Independent exam preparation strategies were addressed in the current study, and findings indicate that participants accessed a broad range of materials in addition to using *PassPoint*. However, there was a lack of data on how participants learned about these materials or determined which types might best suit their individual learning needs. Additionally, others concur with our contention that the marketing and integration of exam preparation materials in nursing programs has ethical implications for faculty and financial implications for students and graduates (MacMillan et al., 2017; McGillis Hall et al., 2016). Ongoing research is needed to

determine how licensure exam preparations address learning needs, and the influence of integrating exam preparation strategies into curriculum as optional or required activities.

Similar to the recommendations of Cobbett et al. (2016), we also recognize the need to develop a national database around the NCLEX-RN. In response to this, we conducted a second survey with graduates who completed the NCLEX-RN in 2016. The survey underwent minor revisions to capture data related to how students selected preparation materials for independent study, as well as perceptions about the usefulness of HESI materials, which were added in 2016 as optional resources for students.

Dialogue regarding the outcomes of changing from a Canadian-based licensure exam to the NCLEX-RN continues to be a focus of discussion among all stakeholders. Findings of this study and those reported by Cobbett et al. (2016) are useful in understanding the relationship between preparation strategies and Canadian candidates' experiences with the licensure exam. However, preparation strategies address only one aspect of the licensure examination change. Reports are appearing about other issues related to implementing NCLEX-RN within Canada, including evidence that questions the validity of this exam for measuring fitness to practice in the Canadian health care system. A comprehensive report of exam-writing experiences across nine Canadian provinces revealed numerous concerns arising from the implementation of NCLEX-RN (McGillis Hall et al., 2016). These concerns include

- Test center accessibility and physical environment suitability where exams were conducted;
- Perceptions of inconsistencies between exam content and Canadian nursing practice;
- Inadequate translation of exam content and preparation resources for Francophone candidates;
- Jurisdictional inequities in the number of exam attempts allowed;
- Communications with regulatory authorities;
- Financial burden for students; and,
- Reputational injury to Canadian nursing (McGillis Hall et al., 2016).

Two studies completed by NCSBN presented as a basis for endorsing the applicability of NCLEX-RN content to Canadian test populations have been reviewed by Canadian researchers. The reviews indicate the studies produced insufficient evidence to support this endorsement and refute claims that the NCLEX-RN is an appropriate means of assessment for Canadian nursing (MacMillan et al., 2017; Salfi & Carbol, 2017). The Canadian Nursing Students' Association (CNSA) also point to evidence that challenges the validity of the NCLEX-RN for licensure in Canada. In a report submitted to CASN, the CNSA Board of Directors requested an audit of the NCLEX-RN to evaluate the content applicable to Canadian nursing practice and verify that entry-level competence and safety-to-practice are being appropriately assessed (Wiltshire, 2017). These requests were supported with evidence that a number of Canadian nursing competencies are underrepresented or absent, constitutional violations exist for Francophone exam writers, and declining pass rates create the potential for unwarranted human resource implications and compromises to public perceptions about the quality of Canadian nursing (Salfi & Carbol, 2017; Wiltshire, 2017). Additionally, a content analysis of media perceptions about the implementation of NCLEX-RN found the applicability of test questions, alignment with Canadian nursing curricula, translation concerns, and regulatory engagement with stakeholders continue to be significant issues (McGillis Hall et al., 2017). Echoing the sentiments of Wiltshire (2017), this

research highlights the potential for damage to the reputation of Canadian nursing associated with negative media about the implementation of the NCLEX-RN.

Although the requirement to pass a licensure exam after satisfying entry-level competence assessments in nursing programs is a well-established approach in Canada, this process is not universal in nursing governance beyond North America. The Nursing and Midwifery Council in the United Kingdom governs access to registered nurse licensure through a process similar to the accreditation and approval of nursing programs in Canada (Sellman, 2016). Sellman (2016) suggests the licensure examination is a redundant obstacle to practice after individuals complete programs accredited according to professional standards set by regulatory authorities. “If the approved educational institution is fit for purpose, then those students who successfully complete the program will be safe, effective practitioners of nursing” (Sellman, 2016, p. 227). Future research examining the NCLEX-RN should address the need to continue administering a licensure exam given the current rigorous and standardized processes of accreditation and approval of nursing programs in Canada.

It is clear that stakeholders associated with nursing education and practice in Canada have significant concerns about the use of the NCLEX-RN. It is also clear that all stakeholders share the common interest of ensuring nurses entering practice have been assessed using reliable and applicable measurements which support safe and effective health care delivery. Methods used to evaluate entry-level competence have evolved throughout the development of the nursing profession in Canada, yet there is much work still to be done to fully understand whether the NCLEX-RN is the most appropriate method of assessing competence required for contemporary nursing practice in Canada, and the alignment of licensure exam content with curriculum in Canadian nursing programs.

Limitations

The primary limitation of this study was the total number of individuals eligible to participate, with a graduating class of 38 students. As a result, this study is presented as a pilot with awareness of the limited generalizability of the findings. Additionally, participants were not required to answer all survey questions, and, thus, some questions had higher response rates than others. Graduates with negative perceptions of exam preparation and NCLEX-RN experiences may have been more inclined to participate in the study than those with positive perceptions, and data gathered solely through self-reporting may influence the reliability of the results. Furthermore, validity and reliability of the survey were not tested, and the questions did not address participants’ rationale for the independent preparatory resources they chose. Lastly, implications around time devoted to study remain unclear due to insufficient data regarding the time span between graduation and exam completion.

Strengths

Despite constraints of a small sample population, the relatively high response rate (65.7%) suggests a substantial amount of interest in sharing experiences related to licensure exam preparation. The data collection method was effective as the electronic survey was efficient to deliver and provided confidentiality and anonymity. Most significantly, results of this study provide useful information for understanding perceptions and experiences of exam writers, which will assist faculty within and outside of this program in curriculum development, and for informing future students as they prepare for the licensure exam.

The dissemination of this pilot study's findings and recommendations at regional and national conferences were anecdotally supported by stakeholders affiliated with Canadian nursing programs and practice environments. These findings contribute to a developing body of evidence-informed knowledge about Canadian experiences associated with the transition to NCLEX-RN. There are opportunities for replication and longitudinal data tracking of this study within and across multiple sites of the nursing program within our institution. In addition, other nursing programs may wish to explore exam preparation strategies using a similar framework.

Conclusion

This study illuminates numerous considerations for nursing stakeholders regarding licensure preparation. The findings reveal perceptions about commercial exam preparation tools and the alignment between curriculum content, exam preparation, and licensure exam experiences. Perhaps the most salient message in this study is the perception that nursing programs have a responsibility to actively participate in assisting learners with the exam preparation process. The findings of this and other emerging reports about Canadian experiences with the NCLEX-RN point to the need for further research.

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