

Nursing Students' Exposure to Interprofessional Education Experiences:
Exploring Narratives through a Lens of Transformative Learning

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ABSTRACT**Nursing Students' Exposure to Interprofessional Experiences: Exploring Narratives through a Lens of Transformative Learning**

For schools of nursing located across Canada, the challenge of providing opportunities for student nurses to engage in educational sessions with students from allied professions has resulted in diverse approaches to interprofessional education (IPE). The purpose of this study was to explore the narratives of nursing students exposed to formal IPE and those without formal IPE experiences.

Twelve students in their final year of preparation for nursing responded to a telephone interview about their experiences with both curricular and extracurricular interprofessional education activities in clinical and classroom settings. Examined through a lens of transformative learning, the narratives indicated that, regardless of the program, nursing students had opportunities to learn with, from and about students and professionals from allied health professions in preparation for interprofessional collaboration (IPC). As nursing students in clinical settings begin to articulate their roles and responsibilities in alignment with the other professions, defining their edges as one participant put it, they are transforming from the nursing profession as separate toward nursing as integrated within a health profession team. The students with formal IPE experiences shared stories demonstrating an awareness of their role in making IPC happen rather than waiting for it to happen for them. By accessing the narratives of students immersed in the training process, this study contributes their perspectives to the current body of knowledge and informs those involved in curriculum development and evaluation.

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**Nursing Students' Exposure to Interprofessional Experiences:
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Academic institutions providing training for future health care professionals across Canada are undergoing rapid change to meet accreditation standards for interprofessional education (IPE) to support future interprofessional collaboration (IPC). Despite the need to prepare health care providers for collaborative practice, however, IPE curriculum has yet to be firmly established in all training institutions across Canada. For schools of nursing located across the country, the challenge of providing opportunities for nursing students to engage in educational sessions with students from allied health professions has resulted in diverse approaches to IPE. In part, the availability of a range of allied professional training programs in a given community impacts the delivery of training programs allowing for students to learn with, from and about each other and to prepare for collaborative practice resulting in improved health outcomes. Just as access to multiple health professions in universities and colleges across Canada vary, so too do the IPE opportunities offered for students.

The purpose of this study is to explore the narratives of nursing students exposed to formal IPE opportunities and nursing students without formal IPE opportunities through the lens of transformative learning. The aim of the study is to explore variations in nursing student's collaborative learning experiences as shared in narratives where nursing students talk about their interprofessional experiences during their training. Early research by Bainbridge and Wood (2012) sought to clarify descriptions and identify key characteristics of IPE to inform future understanding and development of curriculum, service delivery and policy. They used a mixed method approach to access both student

and faculty perspectives used to clarify descriptions and develop a taxonomy of IPE (Bainbridge & Wood, 2013). As suggested by Bainbridge and Wood, there is further need to discover ways to best describe IPE experiences to inform and evaluate curriculum. Therefore, by accessing the voices of students immersed in the training process, this study contributes additional perspectives to the current body of knowledge by focusing on student experiences in interprofessional contexts. Bainbridge and Wood describe transformative learning theory as a “strong theoretical base for IPE (2012, p. 457).” Transformative learning theory is applied in this study as a lens through which the nursing student narratives are examined for themes related to their interprofessional experiences with particular attention to opportunities for interactive processes with the potential to change thinking and understanding as nursing students prepare for professional practice.

The Centre for the Advancement of Interprofessional Education (CAIPE) (2002) definition suggests that IPE occurs “when two or more professions learn with, from and about each other to improve collaboration and quality of care.” While some IPE programs, particularly in nursing and medical schools, are established and have been the focus of research investigations over many years, others are less advanced in curriculum development. The potential for IPE activities to result in powerful change is rooted in activities providing students with exposure to team structure, the roles and responsibilities of other health professionals, and opportunities to engage in critical examination of team structure and processes. Approaches to the cultivation of a culture of collaboration initiated during training for entry to practice health care professionals vary

as programs with a traditional uni-professional approach to training attempt to move forward.

Freeth, Hammick, Reeves, Koppel and Barr (2005, as cited in Hammick, Freeth, Koppel, Reeves & Barr, 2007) described a spectrum of IPE opportunities using three categories. First, *formal* opportunities refer to situations where the planning of IPE opportunities is explicit. Second, *informal* when IPE occurs within another planned activity. Third, is described as *serendipitous* encounters between different professions where ad-hoc interprofessional exchanges or learning occur. For Canadian nursing students in their final year of study, this broad view of IPE serves as the starting point for the description of their experiences completing nursing programs with diverse approaches to IPE.

The Canadian Interprofessional Health Collaborative (CIHC) stated that interprofessional collaborative practice is a goal within the context of health care delivery in Canada (CIHC, 2010). Interprofessional working relationships developed and maintained with learners/ practitioners/ clients/ families and communities working together to optimize health outcomes represent IPC as defined by the CIHC. The body of evaluation research around IPE and IPC internationally has culminated in mixed outcomes arising from varying theoretical and methodological approaches. This is not surprising given the range of approaches and practices applied across health care training and research institutions (Reeves, Tassone, Parker, Wagner & Simmons, 2012).

Interprofessional collaborative care has been found to impact patient outcomes as well as health care professional practice. The Canadian Health Services Research Foundation (CHSRF, 2012) commissioned a scoping review of interprofessional teams

that included registered nurses and/or nurse practitioners as part of the team. This publication offers evidence for the impact of IPC on patient outcomes. Examples of health system outcomes identified in the report include better coordination of care, use of resources and provision of a broader range of services. Patient outcomes are evidenced through better access to services, improved wait times, enhanced self-care and patient knowledge of health conditions. Additionally, greater satisfaction was found for health care providers working in an interprofessional environment. Initiatives developed to train students in interprofessional care are grounded in this supportive research. However, best practices for training in IPC are still under development in Canada.

The evaluation of a range of IPE program approaches is required in order to establish a body of evidence of practices resulting in the achievement of the intended outcomes of IPE, in particular IPC. Current research studies have included evaluation of established IPE programs often without the application of theoretical frameworks. Hean (2011) asserts that research linking specific points of education (or practice) and contexts with relevant theory will strengthen the evidence base. To this end, this research study is designed using a framework of transformative learning to examine insights from participants regarding their experiences with IPE that resulted in increased understanding and awareness of IPC in practice. Transformative learning, according to Mezirow (2000), is an interactive process whereby individual recognition of existing ways of thinking, critical reflection, and reframing result in new understanding as a result of discourse. Of interest in this study is nursing students' direct experience engaging in interprofessional activities with the potential to allow them to learn with, from and about each other and to prepare for collaborative practice as defined by CIHC (2010).

Review of the Literature

The challenge of creating an academic program to meet the needs of a clinical profession, increased technology, and consumer demands and expectations has increased over many years. Within the context of Canadian nursing education, the introduction of IPE curriculum has begun across many campuses. This is largely a result of new accreditation standards, which require schools of nursing across the country to find ways to meet the expectation of compliance with accreditation standards around collaborative practice. Currently, IPE evaluation research suggests a need to identify best practices for IPE that result in the knowledge, skills, attitudes, and values necessary for IPC and improved patient outcomes (e.g., Bainbridge & Wood, 2012; 2013). As some schools of nursing are still in the stage of transitioning to the introduction of an IPE curriculum component, the timing for the implementation of a comparative study between programs with and without IPE is optimal. The following review of the literature provides a background on nursing education in Canada and IPE evaluation research, and reviews interactive approaches to teaching and learning. This foundation supports the direction of current research studies positioned to provide a comparison across programs with and without an IPE component.

Canadian Nursing Education

Over twenty-five years ago, Bramadat and Chalmers (1989) reviewed the history of nursing education in Canada. As a shift toward a baccalaureate as entry level into nursing was beginning, the need to respond to the ever changing demands of the rapidly transforming health care system was a dominant theme of the day. The question of how best to prepare nurses was raised within a new context emphasizing theoretical pluralism

and diversity of curriculum models. Although nursing education has progressed with a distinct body of nursing knowledge, preparation for the realities of the “present” context of health care is constantly juxtaposed with the realities of the structures of the university system and academic disciplines of the day, such as changing academic roles, innovative learning initiatives, and interprofessional contexts. The expectation of collaborative practice compels nursing education programs to deliver interprofessional curriculum to prepare students for their future practice. For instance, the Canadian Association of Schools of Nursing (CASN) has recently added accreditation standards that require nursing programs to provide IPE opportunities to prepare learners for IPC (CASN, 2013). For example, CASN (2013) accreditation standards include requirements such as evidence for institutional support for IPE, placement sites that facilitate IPC and opportunities for collaborative learning with students and practitioners of other professions appropriate to the context, as well as opportunities to learn as a member of an interprofessional team. The CASN standards are relatively new; therefore, most accredited programs have yet to undergo an accreditation process that audits the IPE elements. Eventually, IPE will become established within the curriculum across nursing education programs throughout Canada.

Currently, nursing students are coming into increased contact with individuals from diverse professional backgrounds within medicine, allied health, and social service disciplines – not to mention the diversity of sub-specialties arising from within nursing (e.g., practical nurses, registered nurses, nurse practitioners, nurse educators, clinical nurse specialists). As experiential clinical care has always been a component of nursing education, occasions for students to interact with a diverse body of professionals with a

shared function of providing direct or indirect patient care have expanded along with the complexity of health care delivery. Because the World Health Organization and Canadian educational institutions support diverse approaches to training for collaborative patient-centred care, program timing, group composition, interactive learning approaches, facilitation, and formal and informal activities all vary (Reeves et al., 2012). Although a narrative of collaborative patient-centred care and IPE is a requirement of health care training for accreditation purposes, individual level perspectives and viewpoints have yet to be what Tomasselo, Carpenter, Call, Behne and Moll would call an “institutional fact” (2005, p. 680). There is more work to be done as these IPE programs become common. To support this change, there is a need to evaluate program approaches to document the achievement of the intended outcomes of IPE.

Interprofessional Education Evaluation Research

Recently, Brandt et al. (2014) conducted a systematic review of IPE and IPC and found half of the manuscripts focused on an assessment or evaluation of a specific IPE program or intervention; the remaining studies focused on research into IPC, instruments and program development. Brandt et al. were looking for an evidence-base related to the US context and found the current body of research they reviewed to have a narrow focus on immediate and short-term outcomes. Brandt et al. assert that efforts to explicitly map the complex effects of IPE and IPC on improved patient care, health outcomes and health care costs, referred to as the triple aim, are necessary to demonstrate improved public health. Research focused on behaviour change, organizational outcomes and patient outcomes, as noted by Brandt et al., is challenging and would require a longitudinal approach. While this research is important and much needed, researchers from higher

education maintain an interest in students' perceptions around IPE and IPC experiences. Looking at student outcomes can inform curriculum and evaluation of interprofessional learning (Bainbridge & Wood, 2012).

In a systematic review of the effectiveness of IPE in health professional programs, Lapkin, Levett-Jones and Gilligan (2013) found that student attitudes toward IPE and clinical decision-making might be enhanced through IPE. However, outcomes specific to communication skills and clinical skills were inconclusive. The authors assert that improved methodology practices, such as randomization, larger sample sizes and the inclusion of control groups would enhance future investigations designed to build evidence for the effect of IPE on specific communication and clinical skills. This is consistent with Pauzé and Reeves (2010) who suggest an improvement in methodological rigor in research design, particularly the use of mixed methods designs, to improve the quality of evidence and strengthen investigations of IPE. Reeves et al. (2012) further suggest a specific focus on change in student's perceptions around their ability to perform IPC over time, increased awareness of the roles of others, team dynamics and opportunities for collaboration with other professionals and client patients. Research investigations examining the potential of IPE to improve IPC have been undertaken since the 1970s (Brandt et al., 2014; Reeves et al. 2012). Granted the evidence-base has yet to establish the effectiveness of IPE at the level of change to organizational practice and benefits to patients/clients.

Interested in identifying levels of educational outcomes for IPE, Barr et al. (2005) modified Kirkpatrick's (1996) educational outcomes typology. Six levels were described in an effort to classify current research designed to evaluate IPE. The second level (2a)

evaluates the modification of attitudes and perceptions toward other professional groups and IPC. This study examines nursing student narratives for evidence of changes that may have resulted from their exposure to interprofessional learning experiences as described in the typology.

In Canada there is a need to identify best practices for establishing the integration of the interprofessional competencies during health related professional training. Given IPE is in the early stages of implementation in Canada and just now moving toward IPE as an accreditation standard, the timing is right for catching programs in the midst of transition. Opportunities to compare learners across programs still remain as changes to curriculum emerge and programs strive to meet accreditation in the future.

Interactive Learning Approach

The application of principles of adult learning has been found to be effective when used in the delivery of IPE (Reeves et al., 2012). Reeves and colleagues outline six learning approaches that are essential to interactive learning, including: exchange based learning, observation-based learning, action-based learning, simulation-based learning, practice-based learning, and E-learning. Reeves found examples of all approaches in the IPE literature in combinations and with varying levels of faculty expertise guiding the experience. Doucet, Buchanan, Cole and McCoy (2013) provide an example of team based learning (TBL) as an interactive learning approach in a course co-taught by instructors from three disciplines. The communication course focuses on fundamental communication skills and interprofessional competencies, teams and team activities as the key elements supporting interprofessional interaction among students. Participants in

Bainbridge & Woods study (2012) agreed that active engagement is required for IPC preparation, for example learning *with* others.

The familiarity and expertise of the facilitators in supporting students' active engagement as they interact with other professions is an additional factor for consideration. The fit between the uni-profession focus of traditional nursing, for example, and the need for explicit interprofessional interaction between professions creates a challenge, as the strength of the delivery of IPE is dependent upon the familiarity and expertise of the facilitators. Egan-Lee, Baker, Tobin, Hollenberg, Dematteo and Reeves (2011), in a study of neophyte facilitators, identified potential gaps or disjunctures that exist for IPE facilitators/nurse educators as they move forward with IPE curriculum. The descriptive word used by Egan-Lee et al., "prickly", captures a sense of discomfort in moments that challenge potential biases, perceptions and frustrations among various professions that arise during interactive learning experiences. Similarly, Doucet et al. (2013) recognize the potential that poor communication or a lack of collaboration between facilitators could have on interprofessional learning. Critical to the IPE learning process, these moments of learning with, from and about others may create tensions that require exploration and integration as the various professions learn together and move beyond an us-them perspective under the guidance of an IPE facilitator.

Informal or social interprofessional activities that occur without the guidance of an IPE facilitator may also result in exploration and integration among the various professions. Social interprofessional experiences can take many forms and occur when students from multiple professions are provided opportunities outside the curriculum to engage in interactive learning. For example, extracurricular interprofessional activities,

such as the Code Blue Challenge (Doucet, Buchanan & Cole, 2012), may contribute to the evidence-base supporting a variety of approaches to successful interprofessional learning.

Theoretical Approach

Transformative Learning Theory is one of the most researched topics in adult education (McAllister, 2011). According to Mezirow (2000), transformative learning is a process for the formulation of beliefs that are dependable; beliefs that have been reached through a critical discourse characterized by collaborative thinking and a willingness to seek new understanding. The process involves: i) individual recognition of existing ways of thinking of self and others, ii) critical assessment of assumptions of self and others, and iii) the reframing of their own terms of reference resulting in their new understanding. The principles of the Transformative Learning Theory can provide a strong theoretical base for IPE programs where students are being asked to revise and replace habitual ways of thinking with new ways of thinking about other professionals, for example. Transformative learning is also an appropriate framework to apply when exploring the interactive learning opportunities provided in IPE curriculum for nursing students and related health professionals to support learning with, from and about each other.

According to Mezirow (2000), personal transformation occurs once new frames of reference are formed and a new world view is created. Within nursing programs without IPE, it is not known whether the uni-professional approach to thinking and practice around IPC provides adequate opportunities for those elements suggested to be essential by transformational learning theory, such as interactive learning. In contrast, nursing

programs with IPE are designed specifically to require students across professions to actively engage in reflection on their own profession, share their world view with others, and engage willingly in open dialogue that allows for critical discourse. During critical discourse those prickly moments described by Egan- Lee et al. (2012) arise where the intent, meaning and subtext behind assumptions are interrogated potentially leading to new interpretations. For the student engaged in IPE, the sharing of personal perspectives within a context of multiple perspectives results in an explicit exposure of one's taken-for-granted belief to be scrutinized through constructive discourse. From this process, new interpretations can arise to replace old ways of thinking and serve to guide future practice.

According to Mezirow (2000), moments of individual and group disorientation and dilemma can become triggers for deep learning. It is during these moments that educators have an opportunity to assist students to reflect and reach new understandings that will support their collaborative practice. When examined through a lens of transformative learning, these moments can be viewed as activities fundamental in preparation for IPC: learning from experience, critical reflection and personal development (Sargeant, 2009).

Further, IPE can be approached from an attitude of inclusion, discrimination among ideas, and openness to new ideas (Mezirow, 2000). In preparation for IPC, students require opportunities to learn how to examine their own assumptions, listen to assumptions of others, compare the evidence across professions, and ultimately form new co-created knowledge within an interprofessional learning environment (Bainbridge & Wood, 2012, 2013). Following these earlier studies by Bainbridge and Wood, this study

also explores interprofessional learning experiences from a perspective of transformative learning.

Study Purpose

This study was designed to explore the narratives of nursing students exposed to formal IPE opportunities and nursing students without exposure to formal IPE opportunities through the lens of transformative learning. The aim of the study is to explore variations in student learning experiences as shared in narratives where students talk about their interprofessional learning activities. Transformative learning theory provides a lens through which the nursing student narratives of activities that support collaborative learning will be examined for evidence of a shift toward new ways of thinking.

Research Questions

The following research questions were addressed:

1. How do the experiences of nursing students with exposure to formal IPE opportunities vary in comparison to nursing students without exposure to formal IPE opportunities?
2. How do the IPE experiences described by the nursing students contribute to their experiences with interprofessional collaboration?
3. How do IPE experiences allow for transformative learning to occur for the nursing students (Mezirow, 2000)?

Methods

Research Design

The study uses a qualitative design for the examination of content of nursing student narratives for evidence of interprofessional experiences during their nursing training. A narrative inquiry approach to the investigation was selected to best answer the research questions posed. Fry (2002) asserts that a narrative method accepts the idea that knowledge can be held in stories that can be relayed, stored and retrieved. To this end, the stories are the units of analysis to be used to research and understand how the nursing students make meaning of their experiences during training. By encouraging the participants to share stories in response to open ended questions, it is what they choose to communicate during the interview that is the focus rather than the preconceptions of the researcher. By eliciting narratives, different perceptions of IPE and IPC can be explored as participants review and describe their personal experiences and interpret their meanings specific to their nursing training.

In contrast to a quantitative approach, strong preconceptions or hypotheses have not been defined. Instead, the researcher aimed to approach each interview with an open mind in order to access the point of view of each participant rather than introduce personal bias or distortion. Aligned with the views of constructionist approaches to qualitative research, the researcher assumes that different people may come to interpret specific situations in diverse ways. That is, each participant will define and interpret what is happening in her own way. Identification of variations in the narratives of the nursing students is of interest to the researcher and the focus of the thematic analysis.

According to Braun and Clarke (2006), a constructivist framework used to guide a thematic analysis focuses attention on the context and structural conditions within which the participants provide responses. Constructivist methods examine ways in which the context and structures, for example of the nursing program, affect the experiences communicated by the participants in response to the interview questions. The research questions were informed by narrative inquiry as the stories told by the nursing students about the experiences were of interest to the researcher. The student nurses' experience in formal and without formal IPE programs provide the context from which IPE experiences are examined.

Participants

The population of interest is nursing students in their final year of study from universities across Canada. Prior to contacting potential participants, the study received ethics approval at Mount Saint Vincent University and the University of New Brunswick. After repeated attempts to recruit participants from the two University of New Brunswick School of Nursing programs (Saint John and Fredericton) the decision to recruit from Schools of Nursing across Canada proceeded. Following URB approval (MSVU and UNB), a review of university websites was conducted to identify schools of nursing and appropriate contacts. Invitations were sent to 32 programs; ten agreed to share the invitation with their student population. Nineteen students responded to the invitation. Twelve signed and submitted consent forms, arranged an interview and completed the study. Participants received a \$15 Tim Horton's gift card for their participation. Seven nursing programs in four Canadian provinces are represented in the study. Program

contacts stated a preference for the maintenance of anonymity. To this end, the schools of nursing are not identified in the study.

Data Collection

Nursing students from campuses across Canada participated in individual interviews during the months of February and March 2016. Potential interview participants were contacted by email. The individual interviews were held by distance (e.g., phone, skype) and lasted approximately 35 minutes.

A flexible topic guide including open-ended questions and probes was used to ensure participant-driven data and allow participants to tell stories in their own words (Appendix A). The researcher used the guide to prompt participants to recollect their interprofessional education experiences. Additionally, program websites associated with study participants were reviewed prior to each interview to identify IPE requirements or available activities. This information was used to assist the interviewer in probing experiences related to IPE. Each interview opened with participants asked to reflect on their training to recall and describe interprofessional experiences that included participation with multiple professions. As events were recalled, participants were prompted to expand on interactions considered good and poor examples of interprofessional collaboration, opportunities for dialogue, information exchange among professions and learning outcomes. Additionally, questions were posed to the nursing students to elicit narratives reflective of changes that may have occurred as a result of interprofessional experiences, for example, “Are there interactions you can recall that you feel demonstrated good interprofessional collaboration at work?” Consistent with

qualitative research approaches, the guide was flexible to give participants a chance to tell their experiences in their own words.

Data Analysis

Individual interviews were audio-recorded and transcribed verbatim. A qualitative method was applied using thematic analysis, which is a method for identifying, analyzing and reporting themes within the data (Braun & Clarke, 2006). The analysis was guided by the six phases of analyses of Braun and Clarke (2006): (i) familiarize self with data, (ii) generate initial codes, (iii) search for themes, (iv) review themes, (v) define and name themes, and (6) create a report.

Following verbatim transcription of the digital files, the transcripts were printed and hand coded following a modified process of the description provided by Braun and Clarke (2006). Following multiple readings of each transcript, the researcher approached the first step of analysis guided by transformative learning theory. To this end, attention was noted to manifest content related to interprofessional experiences and learning outcomes, particularly when the participants referenced an examination of their own assumptions, listened to the assumptions of others, compared evidence across professions and revealed an experience of new co-created knowledge.

For the second step, working definitions were composed for content related to students' examination of their own assumptions, listening to the assumptions of others, learning arising from interactions, and comparing evidence across assumptions (meaning units). In the third step, the definitions were applied and the data set was coded to reflect the content of the narratives deemed important to the research questions and reflective of a pattern across narratives (Braun & Clarke, 2006). As a result, adjustments made to the

codes reflect a focus on the experiences described by the participants rather than the concepts from transformative learning theory. These are described as themes, as each links the underlying meanings that re-occur across the narratives (Grabeheim & Lundman, 2004). According to Grabeheim & Lundman, themes are not mutually exclusive and themes can be constructed with sub-themes.

Trustworthiness

Attention to the achievement of trustworthiness in the processes and procedures applied to generate the findings was maintained. Credibility, dependability and transferability, as described by Grabeheim and Lundman (2004), are concepts used to explain the trustworthiness of the reported findings.

Credibility refers to the accuracy of the description of a phenomenon under investigation. To ensure credibility, transcription was completed and checked against the recording for accuracy. Further, the appropriateness of the recruitment and the composition of the final sample are reflective of the diversity of Canadian schools of nursing. The credibility of the findings may be enhanced by the variety of perspectives presented. Dependability ensures that the integrity of the findings is not compromised over time as the thematic analysis proceeds. The coding process was thorough, inclusive and comprehensive, and themes were checked against each other and back to the original data set. The reported data present a coherent interpretation that is linked with extracts to support thematic claims and dependability of the analysis. Transferability is a concept determined by readers as they view the presentation of the study process and results to find meaning relevant to their own situations. The participants involved in this study represent a variety of aspects of interprofessional nursing student experiences from

campuses across Canada. Therefore, transferability of the findings to programs across Canada will likely be meaningful.

Results

Participants came from programs with different levels of formal and informal IPE experiences (See Table 1). For the purpose of this research study, nursing programs with formal IPE are defined as programs where at least one required IPE course is included in the curriculum program. However, nursing students may have the opportunity to learn with, from and about students from two or more professions through additional activities on campus (without formal IPE) or in clinical settings. All of the participants were female. Age ranged from 21 years to 35 years of age and the mean age was 25.5 years.

Program Type	BSc.N. (4 year)	Post Degree BSc.N. (2 year)	RPN (2 year)
With Formal IPE Course Requirement	3	1	0
Without Formal IPE Course Requirement	2	3	3

Table 1. Program type and IPE requirement

Variations in interprofessional activities were identified in the student narratives that allow for associations among IPE features of nursing programs and nursing student views on IPE. One global theme, *Interprofessional Experiences*, reflects the essence of the narratives of the student nurses interviewed during their final year of training. Two organizing themes provide the context for the experiences described by the nursing

students (*Formal Interprofessional Experiences, Informal Interprofessional Experiences*).

A number of sub-themes reflect the nuances of students' thoughts around their experiences with formal interprofessional experiences, informal interprofessional experiences and clinical placements. Figure 1 illustrates the overarching theme, themes and subthemes. Participant status (Formal IPE student, Without Formal IPE student) is identified for each quote presented the text that follows.

Overarching Theme: Interprofessional Experiences

The interprofessional education experiences described in the narratives include reference to many types of exposure to students from other programs, health care professionals, and related professions (e.g., child and family workers, police, teachers). Classroom, campus and healthcare settings afforded opportunities for students to engage with others in formal, informal and clinical environments. The interactions described by the nursing students range from classroom or campus activities, observation of others in a range of clinical placements, and interactions that involved working with as well as learning from and about students from other professions. See Table 2 for a summary of participant reported interprofessional experiences.

Program Type	BSc.N. (4 yr)	Post Degree BSc.N. (2 yr)	RPN (2 yr)
IPE formal course simulation/ role play/ case study	3	1	0
IPE informal simulation/ role play/ case study	1	0	3
Informal and serendipitous clinical experiences with IP students	5	4	3
Informal and serendipitous clinical experiences with post-licensure professionals	5	4	3

Table 2. Participant Report of Experiences with Other Professionals

Formal courses discussed reference only those that include students from allied health professions. Informal interprofessional activities noted also involved allied health students working on interprofessional simulations and case studies often with role-play. Clinical activities with other students as well as professionals include observations, clinical rounds and team meetings. Additionally, some participants in clinical settings mentioned actively seeking information about allied health professionals as independent initiatives to expand their own interprofessional education.

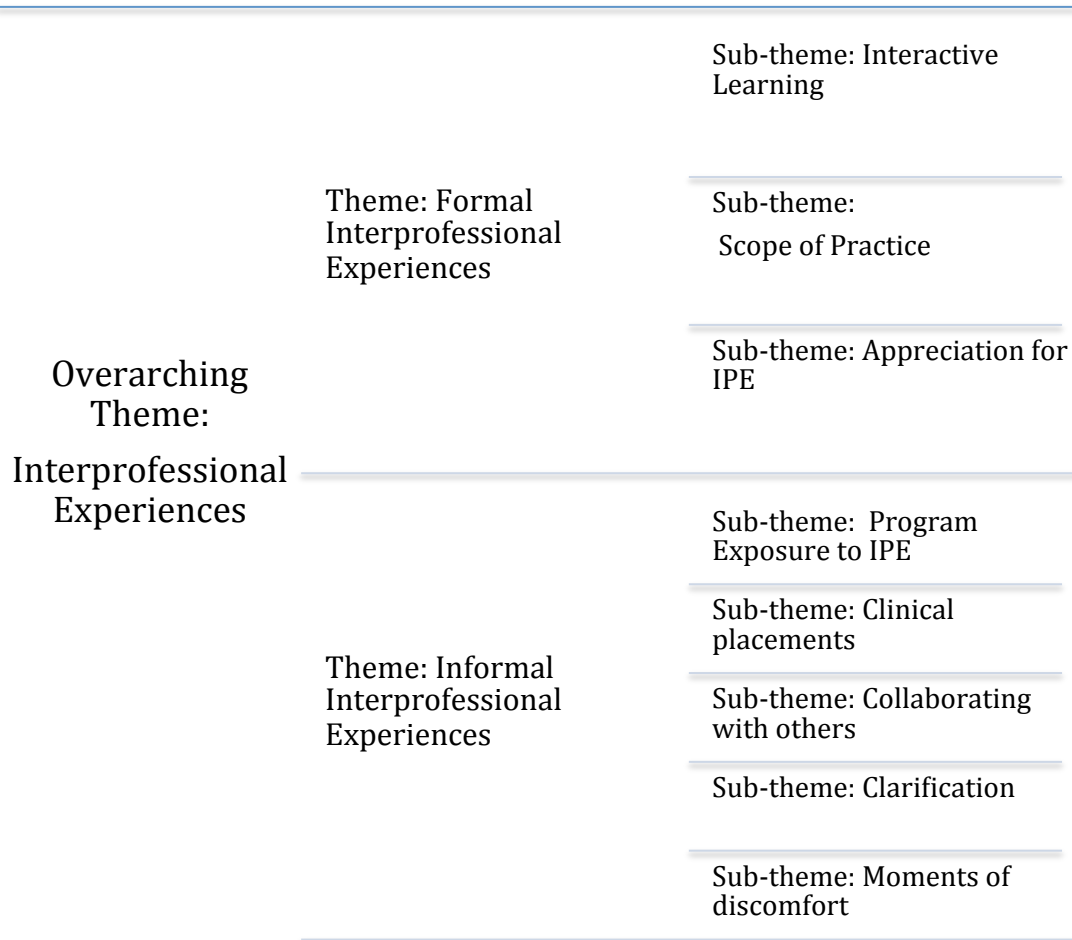


Figure 1: Participant Reported Interprofessional Experiences

Theme: Formal Interprofessional Experiences

Four participants described a range of approaches to the formal IPE components of their program. Some courses were classroom based with mandatory student sessions involving multiple professions working on shared cases. One course engaged students with joint interprofessional activities scheduled during a single evening; another program sequenced IPE across mandatory sessions. In another case, the participant stated that interprofessional collaboration was also discussed across other seminars and lectures. Additionally, students may have attended conferences, or interprofessional events on

campus. Only one participant suggested that the interaction among professions was limited. Others emphasized the interactions in the sessions:

“It was just group work where we would get together and there would be maybe four nursing students, two med students, two pharmacy, one PT, and one social work. We would get together to discuss different cases (Formal IPE student).”

Sub-theme: Interactive Learning. The interactive elements of the formal requirements were apparent in the narratives. An emphasis on group work as a model of team composition was seen as a benefit in the following typical comments:

“It creates dialogue. Each group can be like a team, like interprofessional teams later on the floor (Formal IPE student).”

“We actually sat down as a team with medical students, with nurses, with pharmacists, dieticians. And we actually spoke to each other about the goals of care for that patient specifically assigned to us (Formal IPE student).”

Still another participant, who had taken additional IPE credits above the mandatory requirement of her school, saw the strength in interactive learning as an opportunity to learn about perspectives that are different from her own,

“It’s like a mutual learning experience. I am really curious to learn what the professionals have to say and where everyone is coming from. For example, to see various patient problems through a different lens (Formal IPE student).”

Sub-theme: Scope of Practice. All of the students from the formal IPE programs understood the value of opportunities for learning and sharing scope of practice knowledge across professions. Recognition of the importance of learning about the various health care professions is noted in the following comment:

“Part of our job is to make sure we understand every other profession and make sure we understand when to take a step back (Formal IPE student).”

The interactive opportunities prior to clinical experiences allow students to clarify stereotypes and assumptions as they learn the scope of practice with, from and about each other. One participant articulated this point by reflecting on her own assumptions and recognizing the limitations of her prior knowledge,

“It was really interesting to see what the physiotherapist brought forward as far as information and perspective because it was different from mine and what I expected from medicine and pharmacy, but is also very valuable because I was able to kind of see a little bit of their role even that I have never seen it prior to that (Formal IPE student).”

Sub-theme: Appreciation of IPE. Appreciation of the learning that was facilitated in the IPE programs is evident as students expressed a desire for more interaction with students. Examples of suggestions include the following,

“I think it would be helpful to have a few classes where you can form teams with other students and work on case studies and just be able to communicate with them ... just more interaction with students from other professions (Formal IPE student).”

Appreciation is also noted as participants articulate long-term benefits for patients. For example, through interaction during hypothetical scenarios as expressed in the following,

“This is what happens later in a hospital. You are going to have this patient. You really need to find this safe place for learning. Like you know what those professionals have to say in a hypothetical scenario, which is better than trying to

find solutions to really a complicated case in reality. So, I think it is an opportunity to learn (Formal IPE student).”

Theme: Informal Interprofessional Experiences

All of the participants (n=12) described a range of approaches to informal components of interprofessional experiences. A few one-off interactive learning experiences that took place, both informal campus-wide and inter-campus initiatives, were described in addition to a range of clinical experiences. Interactive components varied as students from a range of professions got together for various activities. One student mentioned attending a conference:

“It was kind of sit-in conference and there they had a few physicians, a few home care nurses, caseworkers for all those people, I believe the pharmacists came, wound care specialists came. So I was kind of a fly on the wall in that situation (Formal IPE student).”

Two RPN students talked about working on case scenarios and participating in exercises where small groups of students from allied health professions such as food and nutrition and social work, pretended to play the part of health professionals. The following quote offers a description,

“We were assigned roles like as if me being RPN, I played a role of social worker. Sometimes we would act in the roles of, like pretend that we were having a family meeting for a patient. People would play family members, social worker, there was a nurse there, and there was food manager, dietician I mean, and the PSWs as well. So we just acted it out and the patient was there too. (Without Formal IPE student).”

One student communicated her awareness of the limitations of role-play,

“But it’s kind of hard to engage in this kind of exercise when you don’t know what that person does (Without Formal IPE student).”

Finally, one student provided a detailed description of the interprofessional activity experienced over the course of a full day mock disaster. Multiple allied health program students participated in a simulation of a mock emergency. She illustrated an exchange when roles and responsibilities were clarified among the students actively engaged in the care of mock patients in an informal IPE activity (not required),

“ The girl I was working with, she talked to the doctor and she explained ‘yes we’re students but we already learned how to do IVs, how to give medications, how to clean wounds, how to dress wounds.’ So after she spoke with the student doctor, we were then given more roles. But he had no idea what we could do until she spoke to him (Without Formal IPE student).”

The strength of the all day interactive program was communicated by the student who recognized the value of learning with, from and about the other professions:

“So as the day progresses our interpersonal relationship and our team gets better and better. As we speak to one another we learn, ‘So this is what you do, this is what we can do together’. (Without Formal IPE student).”

Sub-theme: Program exposure to IPE. There were some mixed perspectives on formal IPE expressed by the nursing students without the formal IPE. A few of the

participants stated they had no opportunities with other students in the classroom as reflected by this student,

“We would not have anybody come in and speak to us from other programs. I don’t think our first year we had any exposure to people from different disciplines (Without Formal IPE student).”

Some reasons suggested include that an interaction was scheduled but did not happen, that nursing classes are specialized or only general courses like anatomy might be relevant for interprofessional classes. Finally, two students could not see how it could work as expressed in the following excerpts stated in contrast to their clinical experiences,

“I don’t know that if you learned more what different disciplines can do in the classroom setting, I don’t know that it would be overly effective for us (Without Formal IPE student).”

“I don’t know that if it were in a classroom setting. I don’t know if that information would feel important enough to us at the time to really stick in our mind (Without Formal IPE student).”

In contrast, many of the respondents recognized the importance of interacting with students from other disciplines. Suggestions for interprofessional or collaborative days when students would work together on cases, scenarios or role- play were mentioned.

The aspect suggested to be integral to this type of event was interaction,

“I think if we were going to sit in a class and have a professor standing at the front of the class like we usually do and say, ‘this is what speech and language

therapy does' ... I don't think it would really benefit us very well. It would have to be something interactive (Without Formal IPE student)."

Sub-theme: Clinical Placements. All of the study participants had exposure to multiple post-licensure professions during their clinical experiences. Whether in hospital, clinic or community settings students had opportunities to interact with students and professionals from other professions. For some nursing students, the notion that the student is responsible to initiate contact was clear. Others felt the instructors were responsible for ensuring interactions took place among students and professionals. The following segment allows that responsibility is shared, with the instructor supporting the student who is ultimately responsible for their own learning,

"Our clinical tutors will guide us to talk to the doctors and call the pharmacists and stuff like that but it was always the student has to take initiative to do that and to seek out those conversations and those relationships (Formal IPE student)."

Still others felt that the onus is on the other professions. A few students without formal IPE suggested that other professionals are perceived as too busy or that they stick to themselves or there was a hierarchy of achieved education that provided a block. There were also suggestions that as nursing students they did not take advantage of opportunities or were not well enough prepared to initiate a conversation with another profession. For example, one student suggested,

"I think maybe they could push a little bit more for us to interact with them but I think it's OK. I don't think anyone is going to come out of the program having never spoken to somebody from another discipline, never having input from them, never benefitted from speaking to them (Without Formal IPE student)."

Sub-theme: Understanding Interprofessional Teams.

Two ways that the nursing student study participants expressed an understanding of the roles and responsibilities of teams composed of many professionals include via observation and through participation on a care team. Observations were frequent in clinical settings. One relayed an experience in the operating room that is common to others with experiences in other health care areas,

“I got to go into the OR room and I didn’t, you don’t get to help or anything, but you definitely get to observe different disciplines working together (Without Formal IPE student).”

Participation on care teams resulted in participants expressing recognition of the importance of learning about the roles and responsibilities of others and the sharing of their roles and responsibilities for others to learn. Some were surprised at the scope of responsibilities to which they had not had previous exposure. For example, that speech language pathologists assess a patient’s ability to swallow before the dietician prescribes an appropriate diet. Here is a summary statement from one participant,

“We had daily interdisciplinary rounds where we would sit together... in the room and we would talk about aspects of care that we felt were most relevant.”
(Without Formal IPE student).”

Some participants described the learning that resulted from the sharing of knowledge as reflected in the following statement,

“ So the doctor and physiotherapist talked to each other. They also included me in the conversation because I was the primary caregiver of the patient. I really appreciated the fact that they included me as a nurse and I actually got to learn

more about the importance of not sitting for a long time, and performing calf pumps.”

(Without Formal IPE student).”

Sub-theme: Collaborating with others. Because most students described interactions with other professionals that focused on a shared patient care goal, it is apparent that collaboration experiences are available to student nurses during their clinical placements. Collaboration with doctors, physiotherapists, occupational therapists, respiratory therapists, psychologists, social workers, speech language pathologists and dieticians were mentioned (as well as unfamiliar professions with titles the participants could not recall, e.g., lifestyle person). As they spoke, participants demonstrated an understanding of the need for collaboration to support patient care goals. One student from a formal IPE program shared a story of collaboration with another student during an adverse event,

“The charge nurse really didn’t have time to deal with it so we were kind of left to deal with this situation on our own and we ended up having to contact security (Formal IPE student).”

Another student witnessed a collaboration with a psychologist who was called during a difficult situation,

“So that was quite interesting to see and just read all of his charting and his recommendations and seeing the nurses and doctors collaborate because there was an issue we could not understand. He came in and really helped with that (Formal IPE student).”

Finally, one student described how her patient care plan was adjusted following collaboration with another professional,

“The physiotherapist was able to tell me exactly the limitations and the goals that they made so I was able to create new goals between me and my patient and she gave me a lot of information that I was able to use for myself and to benefit the patient. That was kind of surprising that she was able to work with me on that (Without Formal IPE student).”

Sub-theme: Clarification. Student nurses were able to clarify their roles and responsibilities relative to the others as they engaged with other professionals during clinical placements: they could see where their role ended and another began. Some participants used vocabulary that hints to their level of recognition that opportunity to engage in interprofessional discourse was beneficial to all professionals and the patients in their care. First, nursing students mentioned the benefit of clarifying stereotypes and assumptions prior to entering clinical placements as a way to nurture positive experiences. Second, acceptance of the fact that perspectives are different not only based on the specific profession but also based on prior experiences was expressed. For example, one student mentioned how rounds led by nurses can influence the lens through which physicians perceive the role of nurses. Similarly, one student nurse told a story of a physician who practiced his belief in sharing knowledge and took the time to facilitate her knowledge about a specific patient. Her expression of appreciation indicated her shift in perspective around relationships with doctors.

Additionally, a few nurses demonstrated insight as they described how learning about the role of others helps them to clarify their own roles and responsibilities. Here is an excerpt to capture the essence of the point,

“It’s up to me to learn about everyone else. That means that they want to learn about me too. It’s my responsibility to know what their roles are. Then it helps me to find the edge of my role and it also helps me to understand how to facilitate their learning about myself (Without Formal IPE student).”

This point is extended when a couple of participants explored the place of the nurse within a greater pool of professionals providing care and service in health care settings.

“We start to realize that we don’t do everything, we can’t do everything, we don’t need to do everything, and not everything is in our scope of practice (Without Formal IPE student).”

This type of clarification was experienced as the nursing students interacted in the clinical settings. A few were able to express greater understanding of the impact of interprofessional collaboration on the bigger picture of health care outcomes. The following student explains:

“I think we would waste less time if we had better understanding and I think patients would get seen sooner and their problems would get addressed more efficiently and sooner if we know who to call and when to call and we wouldn’t just call a doctor every single time something went wrong. I think we should be using each other more (Without Formal IPE student).”

Sub-theme: Moments of Discomfort. Participants were asked to identify any situations where they struggled to find common ground during their IPE or IPC experiences as a

student so far. One of three stories is described here to illustrate the student experience on the journey toward interprofessional collaboration. One student nurse relayed her experience with a medical intern. The medical student had directed her to empty his patient's catheter bag: interrupting her while she was caring for a patient who was in a lot of pain. Here are her words,

“I had to compose myself because I didn't really like the way I was just spoken to; saying that we are both students and we are both learning and both doing our jobs and so I just explained to him that although this is a part of my role emptying the catheter bags into the bedpan, I was busy dealing with another patient who was in a lot of pain, who needed the pain medication and so and it wasn't OK for him to ask me to leave my task at hand to attend to one of his needs. So, I think that hopefully contributed to him understanding that nurses are not always at the call of the physician, that we have our own identity and our own role and tasks and diagnoses that we need to complete and intervene in (Without Formal IPE student).”

Despite that support from a supervisor was not mentioned, this student appears to have managed the situation by speaking up and clarifying her role to another professional. In two other stories found in the interviews, a supervisor did not step in to facilitate an interprofessional discourse at the moment of struggle. Rather the student spoke up independently as the supervisor observed, in one case as a physician challenged the student's practice, in another case as an assigned nurse buddy breached patient care protocol. The lapse in supervisor engagement perhaps speaks to the perceived confidence

in the student to manage a situation, or minimal aptitude for the facilitation of interprofessional discourse.

Discussion

The study is designed to explore the narratives of nursing students in their final year of study. Twelve participants from seven programs across four provinces representing both programs identified as with formal IPE and without formal IPE volunteered and gave their consent to an individual interview about their experiences with IPE. Inductive analysis resulted in the description of themes around interprofessional experiences. Examination of nursing student narratives around formal IPE and without formal IPE as well as clinical experiences contribute to the following discussion of the three research questions.

How do the experiences of nursing students with exposure to formal IPE opportunities vary in comparison to nursing students without exposure to formal IPE opportunities?

Four of the nursing students participating in this study experienced a formal IPE course. To be considered an IPE course, nursing students had the opportunity to learn with, from and about students from two or more professions to enable effective collaboration and improve health outcomes in a required course. Although nursing program summaries available on official program websites confirm IPE course requirements, the actual IPE course provided for the students reveal variation across experiences. For example, one was a single evening event; another was delivered across sessions. The students in the formal IPE course participated with students from other professions in interactive learning activities and appreciated opportunities to learn from

others during interactive sessions and learned about the scope of practice of other professions.

The remaining eight nursing students were from nursing programs without a formal IPE curriculum component. Some nursing students did engage in role-plays but without other health profession students participating. Others participated in serendipitous interprofessional activities with other students and professionals, for example during clinical placements. None of the participants referred to formal clinical IPE activities. Program type did not seem to influence the opportunities available for interprofessional experiences: as two of five 4-year programs did not offer formal IPE, and three of four 2-year programs did not offer formal IPE. All three RPN programs did offer at least one voluntary interprofessional activity.

The amount of interprofessional interaction offered in programs discussed by the participants (independent of the clinical experiences) was limited. Students in the formal IPE programs appreciated the opportunities and recognized the benefit of interacting with students from other professions. These students indicated preparation for and understanding of the need for teamwork as a means to learn about the scope of practice of others, determine the edges of their practice, and engage in discourse in a safe learning environment prior to practice entry. However, they agreed that more opportunities planned at different stages of the professional program would be beneficial. Similarly, those students who participated in the extracurricular interprofessional activities, and even those who did not have interprofessional experiences, also saw the benefit of more frequent planned engagements with students across the health professions. As noted by one participant, the interactive learning with others is the key factor of interest.

The various approaches to interprofessional activities described by the participants perhaps reflect that programs are in a stage of transitioning toward the integration of an IPE curriculum component. It is possible that the location of the school of nursing may not allow for access to a full range of health professions. It may also be that program evaluations have not focused on accessing student perspectives with an eye to build a meaningful curriculum aligned with student interests. The aim of the present study was to access the voice of students and document variations across experiences with interprofessional activity. As indicated by Bainbridge and Wood (2012), student evaluations can inform and help shape emerging curriculum. Based on the results of this study, students across programs concur that opportunities for IPE are valued.

The contributions of the participants support Reeves et al. (2012) determination that Canadian educational institutions provide diverse approaches to training for collaborative patient-centred care. The primary distinction between the formal IPE and non formal IPE narratives is that schools of nursing with IPE curriculum include engagement of students from multiple professions in their program course requirements. This distinction does not indicate that the experiences of nursing students in non formal IPE programs were inferior. IPE experiences occurring beyond the classroom also provide nursing students with a variety of prospects that allow for learning with, learning from, and learning about both students and professionals from allied health professions. Therefore, the narratives vary in the type of experience provided to the students with and without the IPE course component. However, the identification of ways in which the students experience IPC requires a look beyond the classroom experience and into the clinical settings.

How do the IPE experiences described by the nursing students contribute to their experiences with interprofessional collaboration?

All of the participants were in their final year of training but their progress toward articulating IPC practice varied in a number of ways. Stories of interprofessional experiences and the inevitable intersection of professions occurring as students and professionals mixed in the clinical care setting were abundant. First, the clinical experiences overall provided students with opportunities for IPC through observation, engagement, and preparation for practice entry. Second, those students with the formal IPE experience communicated a stronger sense of preparedness for working, particularly on teams, with other professions. Finally, those students without the formal IPE course perhaps did not even know what they were missing. These participants were focused on the learning that occurred during clinical placements with informal and serendipitous IPE opportunities without an understanding of what formal IPE could offer.

Participants seem well aware of good versus bad exchanges among the professions in terms of interprofessional communication, team functioning, collaborative leadership or interprofessional conflict resolution. Reeves et al. (2012) refer to interactive learning approaches as both effective and essential in the delivery of IPE. Some of the six approaches described by Reeves et al. were observed in both formal IPE and without formal IPE student narratives. In addition to the observation-based learning, for example teamwork in the OR, the benefit of action-based learning was illustrated in the narratives. The example of interprofessional engagement of students during a mock emergency identifies the importance of communicating across professions. So too does the example

of learning activities that allow students to create and maintain teams focused on a common patient case.

Additionally, exchange based learning was described, for example, when student nurses talked about sitting down with other students and the cross professional discourse that occurred. Just as the learning opportunities presented to the formal IPE and without formal IPE nursing students varied so too did the learning outcomes described by the interviewees. Specifically, students spoke of learning about the scope of practice of other professionals, interprofessional team functioning, and refining their understanding of nursing practice. Descriptions of the benefits of experiential learning interactions among professions can be identified and support diverse approaches to IPE across Canada (Reeves et al., 2012).

Researchers Egan-Lee et al. (2011) and Doucet et al. (2013) suggest the ability of facilitators to provide interprofessional experiences impacts student learning. However, student recollections made little mention of the nursing educators facilitating the IPE experiences for either group. Student discussions focused on experiential clinical care experiences included an occasional reference to supervisors, preceptors or a buddy nurse. In contrast, learning from other health care professionals during clinical rotations was mentioned frequently: interactions with physicians, physiotherapists, occupational therapists, pharmacists, respiratory therapists, dieticians and social workers were described. It seems, the professionals in the clinical setting often served as facilitators through naturally occurring moments for learning.

The experience of engaging in student-to-student interactions as a course or program requirement was appreciated by all of the participants. While those that had

engaged in the interprofessional experiences communicated an understanding of what they had gained through sharing with, from and about the other professions, some of the without formal IPE students appeared not to comprehend what they might be missing. A few of the without formal IPE students could not envision the configuration of an IPE course requirement as they were restricted by their own experience without such exposure. Because, for students without formal IPE, experience with IPE was limited to the clinical setting. Their understanding was that the clinical experience is where one would learn about the scope of practice of the other professions, engage with the other professions, and clarify their role in relation to the others. This contrasts with the expectation of the formal IPE students of a responsibility to facilitate learning with, from and about professionals in the clinical setting. Indeed, the formal IPE students seemed aware of their role in making IPE happen rather than waiting for it to happen for them.

How do IPE experiences allow for transformative learning to occur for the nursing students?

Hean (2011) asserts that work linking specific points of education (or practice) and contexts with relevant theory will strengthen the evidence base. Accordingly, Transformative Learning Theory was used to examine the nursing student narratives for activities that support collaborative learning and for evidence of a shift toward new ways of thinking. Even though evidence of the deep learning essential for transformative learning as described by Mezirow (2000) is limited in the student nurse narratives, the narratives nonetheless are enlightening. According to Mezirow, it is during moments of disorientation or dilemma that educators have an opportunity to assist students to reflect and reach new understandings. Because IPC is a process rather than an outcome, the

application of transformative learning theory to the interprofessional experiences described by the participants can pinpoint moments where the potential for transformative learning is apparent.

Opportunities for student reflection and understanding to support collaborative practice have the potential to occur during nursing training with or without an IPE facilitator. One example is the story of the nursing student clarifying her role with the medical student during the mock emergency. Another example is reflected in the comments from a few of the participants who were surprised at what was learned about another profession during an informal interaction and how that knowledge influenced their understanding and practice. When students recognize or react to an interaction in ways that result in a shift in understanding, the potential for transformative learning is there. The student telling the story of the mock disaster recognized that the communication from the nursing student to the medical student allowed for the dynamic of the scenario to change: the medical student viewed the nursing students as competent health care providers. As nursing students in clinical begin to articulate their roles and responsibilities in alignment with the other professions, defining their edges as one participant put it, they are transforming from the nursing profession as separate toward nursing as integrated with a health profession team.

Additionally, the presence of an IPE facilitator with good communication and collaborative skills to guide students during moments of discomfort could further enhance the process of IPC for students (Doucet et al., 2013; Egan-Lee et al., 2011). Some participants did identify examples of moments of discomfort during clinical rotations. Although the participants shared meaningful stories, there was no mention of a

facilitator to serve as a guide to further engagement. Guidance by a skilled facilitator could encourage student reflection about the assumptions around the role of nurses, the role of others and, as suggested by Hean (2015), the next step would involve engaging with others in collaborative dialogue to expand learning beyond its present condition. These stories reveal missed opportunities for the facilitation of transformative learning. Unfortunately, they are simply stories of conflict that remain unexamined through interprofessional discourse with unexplored potential for co-created knowledge.

Doucet et al. (2011) suggest interprofessional activities come from many approaches. This may be true. However, the intention to provide interprofessional learning as a focus of activities and experiences requires greater attention if transformative learning is expected during interprofessional interactions. What appears to be missing from the narratives is evidence of a level of engagement from which to actualize a depth of learning associated with moments of learning with, from and about others during episodes of tension requiring exploration and integration. Participants certainly observed some good and some bad examples of interprofessional activity. However, the opportunity to engage was gauged to be limited in the nursing student narratives. It is apparent that not all educational programs have access to other health care professional schools in their communities. The requirement of engagement with other professionals must be met to expect transformative learning to be experienced by nursing students. Additionally, the presence of an educator to support the potential for meaningful discourse to result in new ways of understanding must also be met if student nurses are to enter their professional lives prepared to engage in IPC.

For the most part these nursing student narratives did not include references to the contexts or support from an IPE facilitator necessary for transformative learning to occur. Examples of students learning from others varied: in many cases descriptions revealed a shared experience with professionals in the clinical setting. It is important not to overlook that those interprofessional experiences occurring without the guidance of an IPE facilitator may also result in exploration and integration among the various professions.

Limitations

Although the study offers insight into the perspectives of student nurses around their experiences with IPE, the study is not without limitations. First, the content of the narratives may be limited due to the fact that the skills of the researcher are in the process of emerging. While the interviewer did gain insight as interviews progressed, he was perhaps hampered as a novice in his ability to refine and adjust the focus of the questions and probes. Therefore, dependability is reduced due to the inflexibility of the interview structure as the study progressed. Second, the student nurses who volunteered for the study may hold biases that differ from the majority of student nurses in their final year of study across the country. The sample was small and reflected a small portion of schools of nursing available in Canada. Third, participant recall of IPE experiences may be a factor. Nursing training is a complex process involving many and various experiences. The expectation of full recall during a single telephone interview reflects a limitation on the study design. Extended engagement with multiple sources of information (e.g., completion of a background questionnaire prior to the interview) could enhance the information provided to the researcher.

Finally, the operational definition of interprofessional education applied in this study is limiting. As revealed in the narratives, interprofessional education activities are varied. Initiating the study with the intention of sorting programs into those with formal IPE and those without formal IPE proved difficult as the informal IPE activities described sometimes appeared to offer as much, and sometimes more interprofessional engagement than required courses. Greater attention to the program content, particularly the informal activities, across campuses could have allowed for a better understanding of what IPE means in terms of the experiences of the nursing students. Rather than approach future study design with a preconceived definition of IPE, researchers may benefit from an open-ended flexible view of IPE as programs strive to meet future accreditation requirements.

Conclusion

The aim of the study was to explore variations in nursing students' collaborative learning experiences as shared in narratives where nursing students tell their story of interprofessional experiences during their training. Overall, students, regardless of their program, engaged in some form of IPE and IPC. Those with formal IPE training applied that learning in the clinical setting as a means to clarify roles and responsibilities as they moved forward in collaborative practice. Those without the formal IPE piece looked toward instructors and other professionals to support their movement toward interactions that would allow for the clarification of roles and responsibilities and interprofessional collaborative practice. As interprofessional collaboration is a process, it may be worth exploring the idea that those students with formal IPE are further along in their

development as collaborative practitioners due to the learning with, from and about other health care professions facilitated in their respective nursing programs.

Researchers from higher education maintain an interest in students' perceptions, awareness and opportunities for IPE and IPC. This study contributes to the research base as it addresses the experiences of the nursing students directly. Although opportunities to learn with, from and about others occur, they are not concentrated – in fact, they may occur in fragmented moments rather than integrated to result in transformative learning. For example, an observation may allow a student to see professionals working collaboratively but not have the opportunity for discourse and the potential for co-creating new knowledge. Student perceptions gathered in this study show that levels of exposure to IPE and IPC during their training vary. Because students came from programs across the country, the study provides a broad indication of the breadth of approaches to IPE experienced by student nurses in Canada. There is more work to be done in the establishment of best practices shared across Canadian institutions. What is clear, is that nursing students appreciate and value the potential for learning provided during interactive interprofessional activity.

Future researchers interested in exploring the perspectives of student nurses directly could benefit from a multi-site approach with specific investigation of student experience around the various interactive learning approaches and mode of delivery of those experiences (e.g., in-course, extracurricular, inter-university, e-learning). For example, many programs across the country may offer a mock emergency scenario as an approach to interprofessional activity. A large experimental study across programs could

be initiated during this time of transition when IPE curriculum is still under development in many college and university programs.

The opportunity to compare learners across programs highlights variations among schools of nursing as changes to curriculum emerge and programs strive to meet accreditation. The importance of accessing the voice of the students to describe their own experiences can be enhanced in future studies developed to target the nature of relationships among students, IPE educators and clinical contexts.

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APPENDIX A**Semi-Structured Individual Interview Guide**

Thank you for agreeing to participate in this individual interview.

Before the interview begins, I will review the informed consent letter to confirm your understanding of the information about this study and verify your agreement to participate in the interview. (add my signature to the participants informed consent form)

I will ask for your verbal consent at the end of the interview to confirm permission to use quotes. Are you still interested in participating in this interview? (If yes, ask if they have any questions before we start. If no, thank them for their time).

Sociodemographic Questions

1. How old are you? ____ Years

2. Gender: Male Female

3. Nursing Program Site: _____

4. Prior post-secondary education

4.1 Number of years of college BEFORE entering your current health professional program:

No college One year of college Two years of college

4.2 Number of years of university BEFORE entering your current health professional program:

One year of university Two years of university Three years of university

- Four years of university Five or more years of university

4.3 Highest level of educational achievement BEFORE entering your nursing program

- Baccalaureate degree Master's degree PhD degree Other
- _____

5.0 Prior interprofessional experience

5.1 Did you train as a licensed health care professional BEFORE entering your current health professional program?

- YES NO If YES, for how many years? _____

5.2 Did you work in an interprofessional work environment that was NOT health care, before entering your current health professional program?

- YES NO If YES for how many years? _____

Interview Questions

1. I understand you have just completed your degree. Can you tell me about your experiences with interprofessional collaboration as a nursing student?

- a. Probe for experiences involving other health and social care professions.
- b. Probe for formal and informal experiences
- c. Probe for experiences in the classroom and the clinical environment

2. Are there interactions you can recall that you feel demonstrated “good” interprofessional collaboration at work?

- a. Can you give some examples of what you believe was good about the interaction.

3. Do you have any examples of experiences of interprofessional interactions that you feel contributed to your understanding of other professionals' roles and skills?
 - a. Probe: what was the incident that took place
 - b. Probe tell me about the dialogue you had with members of other professionals
 - c. Probe how did the interaction with other professionals impact your opinion about their skills and roles as health professionals?

4. Now for the reverse. Please tell me about a situation you were in that you feel contributed to other professionals' understanding of your role and skills as a nurse?
 - a. Probe: what was the incident that took place
 - b. Probe: tell me about the dialogue you had with members of other professionals
 - c. Probe: are there any specific elements of the interaction that you identify as contributing to their learning?

5. Is there an incident you can recall where you struggled to find common ground when you were expected to work collaboratively? E.g., to solve a problem
 - a. Probe what did you do to try to reach agreement?
 - b. Probe was there a dialogue among the professions?
 - c. Probe were the perspectives of all participants explored?
 - d. Is there any specific learning that you can share that occurred as a result of this situation?

6. Are there interactions you can recall you feel demonstrated “poor” interprofessional collaboration at work?

- a. Probe Can you give some examples of what you believe was poor about the interaction.

8. Is there anything else you would like to share about your collaborative learning experiences as a nursing student?

I will ask for your verbal consent to confirm permission to use quotes in any publications of the research.

I will send you a copy of your transcribed interview for you to verify or to revise or exclude information you are not comfortable including. To what email address should it be sent?

Would you like to receive a summary of the study? To what email address should it be sent?

Neutral Nondirective Probes that will be used:

1. Could you tell me more about that?
2. Is there anything else?
3. Are there any other reasons?
4. Can you please elaborate?
5. Go on.
6. Would you tell me what you have in mind?
7. There are no right or wrong answers; we would just like to get you thinking.
8. Could you provide an example?

9. Could you explain that again?
10. Can you help me understand what you are saying?
11. What happened next?