OTA AND PTA GRADUATES' TRANSITIONS INTO CLINICAL PRACTICE

TRANSITIONING INTO CLINICAL PRACTICE: OCCUPATIONAL THERAPIST ASSISTANT AND PHYSIOTHERAPIST ASSISTANT GRADUATES' PERCEPTIONS OF CLINICAL COMPETENCE

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TITLE: Transitioning into Clinical Practice: Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Clinical Competence

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Lay Abstract

Currently, there are changes in health care services that require modifications to the delivery of the treatment. Occupational Therapist Assistants and Physiotherapist Assistants (OTAs and PTAs) work within patient rehabilitation; however, their perceptions of competence have not been assessed. This study reviews the perceptions of the OTAs and PTAs when completing their role with patients by interviewing them and interviewing the staff that work with them. The data from this thesis will provide us with an enhanced understanding of the perceptions of OTAs and PTAs and the supports they believe enable them to be competent and confident health care professionals. This information will facilitate the identification of the next steps in research specific to OTAs and PTAs in the areas of competency and educational programs.

Abstract

Health care changes, including increased hospital admissions, an aging population and the chronicity of diseases and conditions have led to increased collaboration with unregulated professionals. Within the professions of occupational therapy and physiotherapy, there is a paucity of literature that addresses the perceptions of Occupational Therapist Assistants and Physiotherapist Assistants (OTAs and PTAs) with respect to their competence in clinical practice.

This research study investigates the perceptions of clinical competence of OTA and PTA graduates from one Ontario community college. A phenomenological theoretical framework was used to explore the participants' lived experiences. Eight individual in-depth interviews were used to gather data representing the graduate OTAs and PTAs' perspectives. In addition, the viewpoints from a stakeholder focus group of eight participants comprised of occupational therapists, physiotherapists, and administration personnel from one Ontario hospital were used to triangulate the data..

Four themes emerged: 1) employing effective communication, 2) emerging knowledge, skills and competencies in clinical practice, 3) transitioning into clinical practice, and 4) developing confidence as an OTA and PTA. The Person Environment Occupation (PEO) model (Law et al., 1996) was used to organize the themes and to assist in determining the optimal fit between the themes. Confidence was articulated as a continuous concept that facilitated the graduates' competence in their clinical skills.

Proficiency in their roles, a supportive transition, and demonstrated competence were the presenting factors that empowered the graduate OTAs and PTAs to affirm their competence in clinical practice. This research study is foundational for future

research related to OTAs and PTAs in the areas related to use of title, educational credentialing, and collaborative competency documentation.

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List of Abbreviations

ACOT -	Alberta College of Occupational Therapists
APTA -	American Physical Therapy Association
CAOT -	Canadian Association of Occupational Therapists
COTO -	College of Occupational Therapists of Ontario
CPA -	Canadian Physiotherapy Association
CPO -	College of Physiotherapists of Ontario
CPTBC	College of Physical Therapists of British Columbia
MTCU -	Ministry of Training, Colleges and Universities
NPAG -	National Physiotherapy Advisory Group
OTA -	Occupational Therapist Assistant
OTA and PTA EAP -	Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation Program
PEAC -	Physiotherapy Education Accreditation Council
PEO -	Person-Environment-Occupation
PTA -	Physiotherapist Assistant

Declaration of Academic Achievement

This thesis was written by Deborah Francis under the supervision of Dr. Bonny Jung. The following is a declaration that within the research study, Deborah Francis designed the interview guides, conducted the interviews and focus group, and completed the data analysis. Dr. Bonny Jung, Professor Lorie Shimmell and Dr. Kelly Dore oversaw the research process and the completion of this thesis. Professor Sue Baptiste provided guidance as the external reviewer.

This research study is focussed on occupational therapist assistant and physiotherapist assistant graduates' perceptions of competence in clinical practice and will be submitted to academic journals.

CHAPTER 1: Introduction

Internationally, there exist ongoing pressures with the provision of health care services in the form of increased hospital admissions and readmissions, chronicity of diseases and conditions, an aging population, health care professional staff shortages, changes in consumer knowledge and expectations, and issues with staffing retention and attrition (Munn, Tafanaru, & Aromataris, 2013; Stanmore & Waterman, 2007). These challenges may lead to the increased need for collaboration between unregulated and regulated professionals to meet the identified needs in current health care organizations (Salvatori, Williams, Polatajko, & MacKinnon, 1992; World Health Organization (WHO), 2008).

In Canada, clinicians in the professions of occupational therapy and physiotherapy include Occupational Therapists (OTs), Physiotherapists (PTs), and non-regulated professionals who support Occupational Therapists and Physiotherapists (CAOT, 2011; National Physiotherapy Advisory Group, 2012). These non-regulated professionals are known by a variety of titles (i.e., support personnel, rehabilitation assistant, occupational therapist assistant, physiotherapist assistant, rehabilitation support worker, occupational therapy assistant, or physiotherapy assistant) and may or may not have graduated from a recognized Occupational Therapist Assistant and Physiotherapist Assistant (OTA and PTA) program (COTO, 2011). The understanding that the unregulated professional is aligned with and under the direct assignment or supervision of a specific occupational therapist and/or physiotherapist is accepted widely in the field of rehabilitation in Canada (COTO, 2011; Knight, Larner & Waters, 2004; Robinson, DePalma, & McCall, 1995). Although rehabilitation support personnel

work under the supervision of a regulated OT or PT, acting as an assistant, these unregulated professionals remain responsible for their own performance (White Report, n.d.). For the purposes of this research study, the title Occupational Therapist Assistant and Physiotherapist Assistant (OTA and PTA) will be used, as this assisting role attaches the accountability to the professional (Occupational Therapist or Physiotherapist), as opposed to the profession or program (occupational therapy or physiotherapy) (COTO, 2011; National Physiotherapy Advisory Group, 2012).

However, despite their association and accountability to a regulated health care professional, there is some evidence that questions how these professionals perceive their competency to meet practice and health care demands (Barnitt & Salmond, 2000; Hay et al., 2012; Hodgetts et al., 2007; Smith & Pilling, 2007). This gap in the literature regarding perceptions of competence of health care professionals (HCPs) is particularly evident within the professions of occupational therapy and physiotherapy (Tryssenaar & Perkins, 2001). The studies that have addressed the topic of self-perceptions related to clinical competence were conducted with small sample sizes that lack the potential for generalizability (Atkinson & Stewart, 1997; Lee & Mackenzie, 2003).

Jung, Salvatori, and Martin (2008) documented that OTAs are recognized as integral to the occupational therapy workforces, as they support the delivery of occupational therapy services. The Ministry of Training, Colleges, and Universities (MTCU) (2011) Employee Profile from 2009 – 2010 revealed that 90% of OTA and PTA graduates from six Ontario community colleges were employed within their chosen profession. This high employment rate of new graduates indicates that they are well placed in the employment market to meet the demands of the health care system. However, limited evidence is documented to understand OTAs and PTAs' experiences

and perceptions with respect to their clinical competence while employed. The purpose of this study is to identify, OTA and PTA graduates' perceptions of competence in clinical practice, following one year of clinical practice. The time frame of one year was selected as research has supported that practitioners have identified increased confidence and competence with the new role, including socialization within their respective profession(s) within this period (Edwards, Smith, Courtney, Finlayson, & Chapman, 2004; Wolff, Regan, Persut, & Black, 2010).

Background of the Problem

In Ontario, Canada, community colleges that are publicly funded provide educational programs that prepare OTAs and PTAs for the workforce (MTCU, 2008). Graduates earn an Ontario college diploma following two years of post-secondary studies (MTCU, 2008). The designation of HCPs who support the professions of occupational therapy and physiotherapy varies both nationally and internationally, as does the credentialing. Education ranges from a two-year post-secondary community college diploma in Ontario to a two year associate degree in the United States, which includes the completion of a certification exam administered by either the National Board for Certification in Occupational Therapy for OTAs or The Federation of State Boards of Physiotherapy for PTAs (AOTA, 2015; APTA, 2015; Salvatori, 2001).

Of the 25 community college OTA and PTA programs in Canada, all graduates receive a diploma in OTA and PTA, with the exception of three academic programs (Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation Program (OTA and PTA EAP), 2015). These three programs provide a Therapist Assistant Diploma in OTA/PTA/Recreation Therapy Assistant,

OTA/PTA/Speech Language Assistant, and PTA respectively (OTA and PTA EAP, 2015). The variation in educational programs (both publicly funded and privately funded) may challenge clinicians' and employers' understandings of OTAs and PTAs' competencies following graduation (White Paper, n.d.)

The OTA and PTA EAP, responsible for the voluntary accreditation of OTA and PTA programs in Canada, is administered by the Physiotherapy Education Accreditation Council (PEAC) under the governance of the PEAC and the Canadian Association of Occupational Therapists (CAOT) (OTA and PTA EAP, 2015). The inception of the program evolved from an expressed need from OTA and PTA programs in Canada to ensure consistent quality in education (Burnett, 2012). The introduction of the OTA and PTA EAP in 2009 facilitated a mechanism for OTA and PTA programs "to provide evidence and demonstration of compliance with the established accreditation standards and criteria" (Davidson, 2015, p.11). The inquiry about the accreditation process from individuals who are interested in enrolling in OTA and PTA programs and current OTA and PTA students (Davidson, 2015) suggests an early commitment to the profession by ensuring that the educational environment adheres to the standards that will foster their achievement of OTA and PTA competencies.

The Canadian Association of Occupational Therapists (CAOT), which is the national professional organization for OTs, refers to support personnel in occupational therapy as "individuals who have the job related competencies to support occupational therapists in delivering occupational therapy services" (CAOT, 2009, p.3). Despite the need and presence of OTAs in health care (CAOT, 2011; Nancarrow & Mackey, 2005), CAOT has not formulated a definition for OTAs. The CAOT has amalgamated all

support personnel in occupational therapy under one category despite the differences in education, titles and roles (CAOT, 2011).

The National Physiotherapy Advisory Group (NPAG) utilizes the term "Physiotherapist Assistants" in Canada when referencing "personnel who assist in the provision of physiotherapy services under the direction and supervision of a registered/licensed physiotherapist" (NPAG, 2012, p.6). This conflicting use of titles within the occupational therapy and physiotherapy national professional organizations poses several challenges. The principal investigator believes that inconsistencies in title may impact the perceived or actual competency level experienced by the public, patients, and the clinicians themselves.

The roles of OTAs and PTAs include both clinical and non-clinical skills within a variety of practice settings including hospitals – acute and chronic, rehabilitation centres, long term care facilities, retirement residences, childrens' treatment centres, and publicly funded and privately funded clinics. Graduates from Ontario community colleges are educated with a core set of theoretical knowledge and clinical skills allowing them to function effectively as clinical support workers (MTCU, 2008), including the completion of field placements within occupational therapy and physiotherapy practice environments (MTCU, 2008). Based on the practice setting, the roles of OTAs and PTAs vary and include direct client care or clinical skills (i.e., carrying out the treatment plan established by the registered OT and/or PT) and indirect client care or non-clinical skills (i.e., workload measurement and equipment maintenance) (MTCU, 2008). Ongoing challenges that lead to blurring of professional boundaries between OTs, PTs, and OTAs and PTAs include: the lack of clarity around the roles of the OTAs and PTAs from the perspectives of OTs, PTs, and other members of the

interprofessional team; an unwillingness of OTs and PTs to relinquish duties to OTAs and PTAs (professional territorialism); and, a decreased awareness of the knowledge and skills of the OTAs and PTAs (Munn, Tufanaru, & Aromataris, 2013). An additional contributor to the identified problem is the absence of a consistent and collaborative framework of competency for OTAs and PTAs.

Existing Competency Frameworks

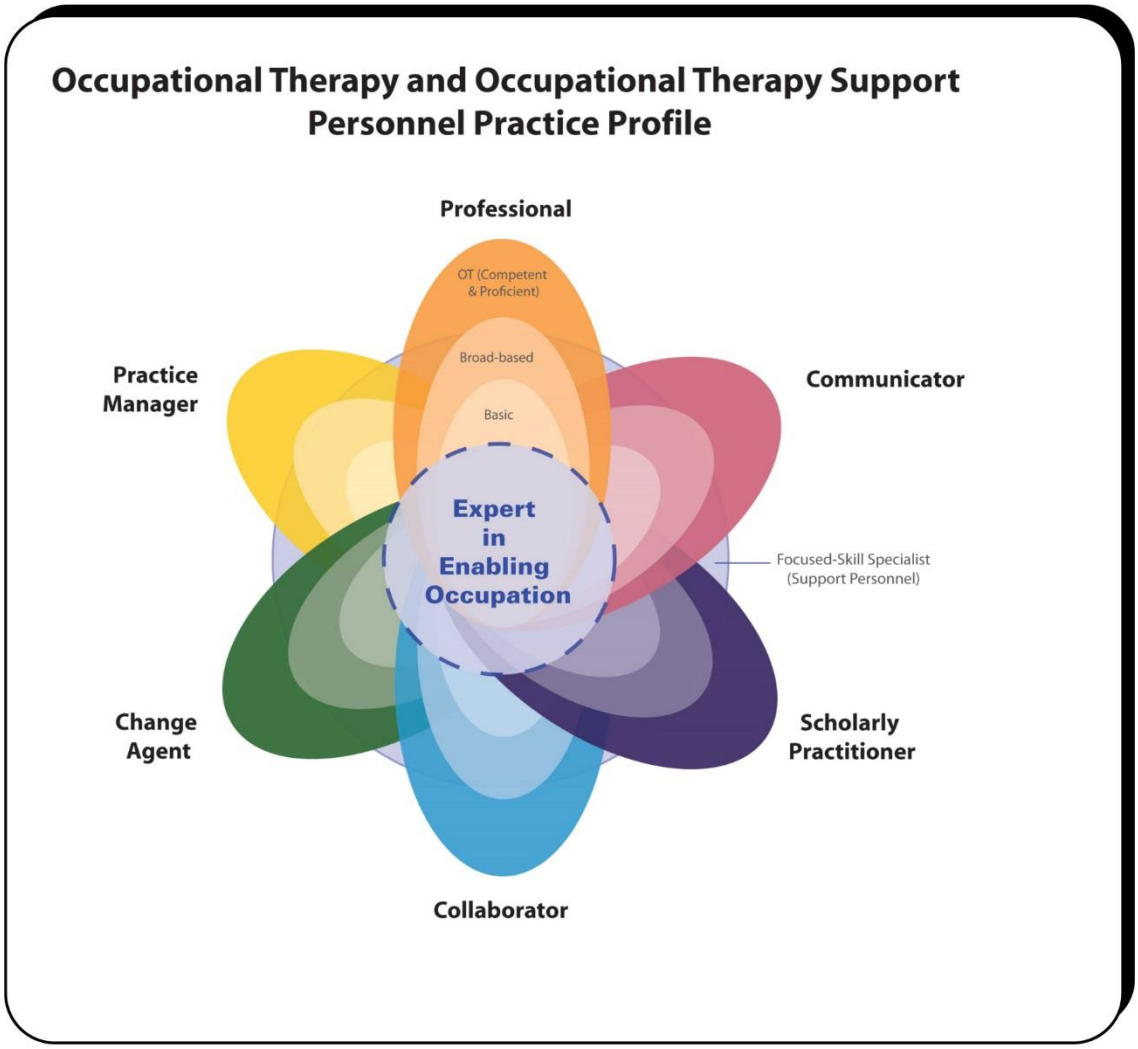
The Canadian Medical Education Directions for Specialists (CanMEDS) is a physician competency framework that was developed to equip physicians to excel within the changing landscape of health care (Stutsky, Singer, & Renaud, 2012). This framework has been adopted by other health care professions, including occupational therapy in Canada, as a competency-based approach to education (Parent, Jouquan, & De Ketele, 2013).

The CanMEDS' trademarked diagram of a flower is represented by the central role of medical expert located in the middle with the other core roles interconnecting as petals, of equal size and importance around the centre (Stutsky et al., 2012). Complementary to the CanMEDS' flower is a similar diagram displayed in the Practice Profile for Support Personnel in Occupational Therapy with its central role as an expert in enabling occupation (CAOT, 2009). The Profile was created to provide a description of OTs' expectations for entry level OTAs who have received formal educational training (CAOT, 2007) and describes competency development as a dynamic process (CAOT, 2009).

The Profile establishes roles that include expert in enabling occupation, communicator, collaborator, practice manager, change agent, scholarly practitioner, and

professional under the three exemplar classifications of basic, focused, and broad-based competencies (CAOT, 2009; CAOT, 2007). Each role has assigned key competencies to outline the expectations of achieved competence.

Figure 1 – Practice Profile for Support Personnel in Occupational Therapy (2009). Retrieved from http://www.caot.ca/default.asp?pageid=1013. Published by CAOT Publications ACE. (Appendix A)



In contrast, the Essential Competency Profile for Physiotherapist Assistants in Canada (NPAG, 2012) employs a functional framework versus a role-based framework

whose focal point is the performance outcome or achievement of the respective competency. The fundamental knowledge, skills, and attitudes of a PTA includes six units: accountability, collection of client information, intervention, communication, organization of the delivery of physiotherapy services, and professional development (NPAG, 2012). Within each unit, there are identified competencies and performance criteria that reinforce the progression of competence within the context of clinical practice (NPAG, 2012).

There is a challenge for OTA and PTA graduates who work within two different competency frameworks (occupational therapy and physiotherapy) that guide their practice and ultimately can contribute to the formation of their professional identity. In addition, OTA and PTA graduates are accountable to two professional groups each with its own distinct body of knowledge. There is evidence for the need to provide a foundation for the establishment of clinical competence for OTAs and PTAs in the common domains of client safety, knowledge, skills and attitudes (CAOT, 2009; NPAG, 2012). Currently, the professions of occupational therapy and physiotherapy in Canada have adopted different frameworks to present and explain the competencies.

In summary, the investigation of the graduate OTAs and PTAs' perceptions of their competence in clinical practice is challenged by a number of inconsistencies. Nationally and internationally, there are variations in the titles assigned to clinicians who support OTs and PTs in clinical practice. Although the roles of these non-regulated clinicians are similar, their titles differ. There is a lack of clarity of the roles of OTAs and PTAs expressed by OTs, PTs and other members of the interprofessional team leading to potential professional role blurring.

The educational credentialing ranges widely for OTAs and PTAs in Canada and abroad. The introduction of the OTA and PTA EAP in Canada is an advantageous initiative to ensure the consistent quality in the education of OTA and PTA graduates. This voluntary accreditation program provides graduates, educators, and employers with the assurance that the respective OTA and PTA program has adhered to the established standards for graduates to achieve the required OTA and PTA competencies. The two national competency frameworks define the expected knowledge, skills, and attitudes. However, the lack of a collaborative competency framework for both OTAs and PTAs contributes to the background of the problem.

Research Question

Despite the availability of common frameworks to identify and measure the demonstration of OTA and PTA clinical competency within a variety of contexts (CAOT, 2009; NPAG, 2012), there exists minimal data related to OTA and PTAs' perceptions of clinical competence. An analysis of current health sciences literature in the fields of rehabilitation, nursing, and social work revealed that health science practitioners' perceptions of clinical competence are underrepresented (Barnitt & Salmond, 2000; Hay et al., 2012; Hodgetts et al., 2007; Smith & Pilling, 2007). Although, the literature discusses the transition from graduate to clinical practice, it omits qualitative components related to perceived competence to meet clinical expectations (Newton et al., 2009; Tryssenaar & Perkins 2001; Wolff et al., 2010). In an effort to address this gap, the following research question emerged,

"How do OTA and PTA graduates from one Ontario College perceive competence with clinical skills following one year of clinical practice?"

Research Design

Qualitative research is an interactive methodology that involves the associative relationship between the researcher and participants (Smith, 1996). Pope and Mays (1995) noted that qualitative methodology has been used extensively in health care to research the emerging and evolving roles of HCPs. Creswell, Hanson, Plano Clark, and Morales (2007) state that qualitative researchers describe a phenomenon as "an object of human experience" (p. 252). Phenomenology is a research method that explores the human experience using a holistic viewpoint and an acceptance of all of the data that is gathered from the participants to gain an understanding of their lived experiences (Omery, 1983). This methodology has been used in research studies that address individual perceptions and learning (Van Kaam, 1966), similar to this study that investigates the perceptions of graduate OTAs and PTAs regarding competence in clinical practice.

The principal investigator chose phenomenology as the theoretical framework of this research study to address the perceptions of graduate OTA and PTAs with respect to their competence in clinical practice. This research study examines the descriptive, reflective and informative perceptions of graduate OTAs and PTAs who have had minimal opportunities to share their lived realities. The purpose of this research study is focused on the graduate OTAs and PTAs' perceptions of competence with clinical skills in clinical practice.

The perceptions of the graduate OTAs and PTAs regarding competence in clinical practice are of significant interest to the principal investigator, as she is an educator of OTAs and PTAs and their viewpoints are meaningful to her. Phenomenology was the conduit that provided the principal investigator with the

opportunity to collect data from participants who spoke with understanding, purpose, and feeling based on their fundamental experiences with the question under study (Creswell et al., 2007; Ohman, 2005).

As a professor who teaches in the OTA and PTA program at one Ontario college, the principal investigator acknowledged the importance of reflexivity, at the onset and during the study. Within qualitative research, the role of the primary investigator is to appreciate one's identity in relation to the participants by acknowledging if one knows them in a personal or professional manner, as well as appreciate the similarities and differences between oneself and the participants (Creswell, 2014). This acknowledgement is identified as reflexivity. The principal investigator discussed with each participant her personal and professional background and experiences, in an attempt to reduce bias and enhance awareness of how the principal investigator's cultural exposure may configure the direction of the study (Ohman, 2005).

Significance of the Study

As there is a lack of national and international evidence that addresses perceptions of graduate OTAs and PTAs' competence in clinical practice, this research study provides a starting point to investigate these perspectives. The profession of OTA and PTA is unique, as one of two health care professions with professionals who are educated and are employed within two disciplines. Another similar health care professional role is communications disorders assistant educated in the professions of speech language pathology and audiology.

The results of this research study will benefit health science education, specifically the professions of occupational therapy and physiotherapy. Exploration of the perceptions of one Ontario college's OTA and PTA graduates may yield findings

that can facilitate changes in curriculum design and increase the profile of the profession of OTA and PTA. Through this process, a focus on the profession might encourage the initiation of research specific to OTAs and PTAs. The documented evidence of HCPs' perceptions related to clinical competence will first be explored through the literature review.

In chapter two, the review of literature within the fields of rehabilitation, nursing, and social work, examines issues related to this investigation including concepts of clinical competence, evolution of the profession of OTA and PTA, the differences between supervision, delegation and assignment of tasks, and the clinical and non-clinical roles of OTAs and PTAs in practice. In chapter three, the methodology and rationale for the research design are discussed including the details of the sample, data collection and analysis. Chapter four presents the results of the study including the identification of codes, classification of data, and establishment of themes. In chapter five, the discussion links results and literature to formulate a response to the research question. The strengths and limitations of the research study are also explained. In chapter six, the conclusion identifies the clinical implications for the rehabilitation community and stakeholders including OTAs and PTAs, OTs, PTs, administrators, educators, and employers.

CHAPTER 2: Review of Literature

Overview

The purpose of this literature review is to provide an overview, analysis and critical evaluation of the concept of clinical competence as it relates to HCPs. This includes: providing a historical perspective of the profession of OTA and PTA in Canada; distinguishing between supervision, delegation, and assignment of tasks in the professions of OT and PT; and, outlining the documented roles of OTAs and PTAs in Canada. Sources of evidence were peer-reviewed literature, provincial educational documents, and national and international occupational therapy and physiotherapy professional association documents.

An examination of the literature utilized a search of five databases (MEDLINE, ERIC, CINAHL, Academic Search Complete, and Google Scholar) with the review dates of 1975 to 2015. The following key terms were searched (either individually or in combination),

- clinical competence,
- competency,
- self-efficacy,
- professional perspective,
- graduates' perceptions,
- allied health support personnel,
- rehabilitation assistant,
- occupational therapy assistant, and
- physiotherapy assistant.

A total of 189 articles was identified. Of those 189 articles, 44 articles/studies were deemed to reflect issues related to the history, roles and skills of the OTA and PTA, clinical competence of health care support personnel, and the evaluation of the role of the OTA and PTA and therefore were included in this thesis. As this research study examined graduate OTAs and PTAs' perceptions of clinical competence, the first concept reviewed is that of clinical competence.

Clinical Competence

According to Merriam-Webster online (n.d.) "To be competent is to be proper or rightly pertinent, to have requisite or adequate ability or qualities, to be legally qualified or adequate, or to have the capacity to function or develop in a particular way". Within health care literature, while the concept of competency is widely discussed, there is no common definition (Tilley, 2008). Whittaker, Carson, and Smolenski (2000) noted that stakeholders including clinicians, students, and employers each define and perceive competency through a different lens, leading to a challenge for employers to validate the competencies established by educators and/or regulatory bodies.

Brooks (2002) noted that the concept of competency is highly regarded in medical education. He stated that competency is associated with the act of completing a "defined task or set of tasks" (Brooks, 2002, p. 91). According to Naquin and Holton (2003) competency is action-oriented. Epstein and Hundert (2002) and Tilley (2008) agree that competency from medical and nursing perspectives must include a minimum set of standards, the application of clinical reasoning and technical skills in all domains for the established practice role.

The terms competence and competency are used interchangeably in literature (McMullan et al., 2003). These authors differentiated between competence and

competency by stating that competence describes the action and competency focusses on the individual's behavior underlying the competent performance.

Tilley (2008) implemented a concept analysis process to assess various elements of competence. She identified the nursing core competencies and defined the attributes of competency in nursing education to demonstrate the application of the competencies.

Table 1 – Tilley's Content Analysis to Assess Competence

Nursing core competencies	Defining attributes of competency in nursing education
• assessment and intervention • communication • critical thinking • teaching • human caring relationships • management • leadership • knowledge integration skills	• application of knowledge, interpersonal, decision-making, and psychomotor skills expected for the practice role • instruction and assessment that places primary emphasis on identifying and measuring specific learning outcomes or competencies • grounded in real-life experiences • focused on fostering learners' ability to self-assess • criteria driven, focused on accountability in reaching benchmarks and, ultimately, competence

In 1990, Miller devised a framework incorporating a pyramid to assess clinical competence in a hierarchical manner. The pyramid integrates knowledge, skills, and attitudes, progressing from novice to expert. The base of the pyramid represents "knows", which is the level related to knowledge and knowledge acquisition (Miller, 1990). The student is required to learn information at a foundational level in order to apply the content. Miller (1990) noted that the application of knowledge leads to the next level, "knows how" and the emergence of competence. These two levels focus on

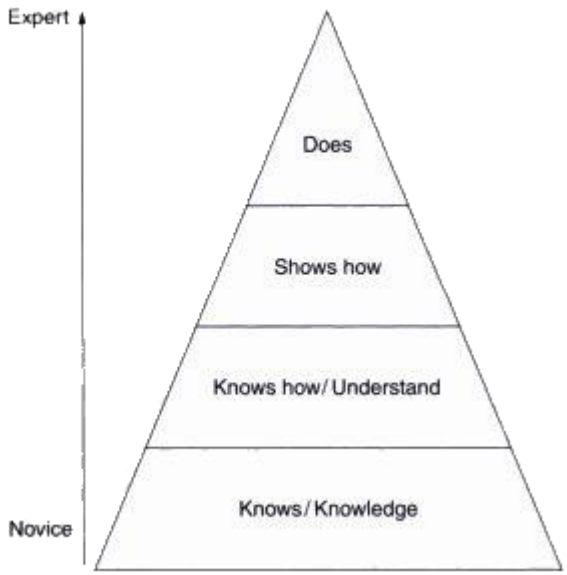
cognition from a hierarchical perspective; these levels are where the novice student would be positioned. The penultimate level is “shows how” where the student performs the related skill and demonstrates learning. The top of the pyramid is “does” or the action and is the consistent application of the student’s knowledge in the context of clinical practice. Miller (1990) stated that these last two levels address the student’s behaviour. As students progress from novice to expert, there is a demonstration of the integration of their knowledge and skills.

The application of Miller’s pyramid to assess clinical competence in the profession of OTA and PTA can be demonstrated using the example of patient transfers. At a foundational level or “knows”, the student OTA and PTA is taught the principles of body mechanics and knowledge of patient transfers, including safety, positioning, and the required equipment when assisting a patient to move from one location to another. To assess the student’s application of knowledge at the “knows how” level of the pyramid, the educator might administer a multiple choice question or short answer evaluation on content related to patient transfers. The performance of the patient transfer or “shows how” occurs when the student demonstrates the knowledge and skills with a peer in the classroom or a standardized patient during a practical/clinical test. The top of the pyramid or “does” would require the student to apply the knowledge and skills consistently in the clinical environment during field placement with actual patients and is evaluated by a clinical preceptor.

Although Miller’s pyramid of assessment for clinical competence was created to link evaluation to the level of competency, this framework might have other potential benefits. These advantages include, the development of course objectives and the organization of content delivery in the hierarchical manner of Miller’s pyramid. Initially,

the students learn the foundational knowledge, apply the knowledge, and then demonstrate the required skill while integrating their knowledge in an iterative process (Norcini, 2003). Throughout the evolution of the levels, assessments are administered to evaluate clinical competence. Despite success with a specific level of assessment, there is a lack of documented evidence that considers the students' perceptions of clinical confidence. Achievement at either the level of "shows how" or "does" may not indicate the students' perceptions of clinical competence.

Figure 2 – Miller's Pyramid of Assessment of Clinical Competence (Miller, 1990).



Bandura (1977) postulated that self-efficacy is characterized by an individual's perceptions regarding his or her ability to achieve tasks successfully. He developed the theory under the framework of social cognitive theory, which addresses the elements of changes in behavior (Bandura, 1986). Self-efficacy is defined as "people's judgments of their abilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Hackett and Betz (1997) characterized task attainment by the degree of optimal performance, the amount of productivity and

the level of endurance required, especially with identified challenges. Schunk (1991) stated that individuals gain information and examine efficacy from their performance and experiences and highlighted that “an individual’s own performance offers the most reliable guide for assessing efficacy” (p. 207).

According to Bandura and Locke (2003), there are three ways that self-efficacy impacts learning and performance in the workplace. These influences provide evidence of a correlation between individuals with increased self-efficacy and enhanced career related performance outcomes.

1. The influence of self-efficacy on the goals that employees choose is the first way that self-efficacy impacts learning and performance in the workplace. Bandura and Locke believed that individuals perform at the level of their perceived self-efficacy. For example, high personal goals are set by individuals with high self-efficacy and those individuals with low self-efficacy will set low individualized goals.
2. The second influence acknowledges that self-efficacy impacts an individual’s learning, in addition to the degree of effort that is exerted at work. Employees with high self-efficacy are confident that their outcomes will be successful. Based on this success, these employees will work hard to learn how to complete new and complex tasks. On the other hand, employees with low self-efficacy may apply less effort when learning and performing these same tasks. Past performance is a key indicator as to why these individuals may experience uncertainty around a successful outcome.
3. Lastly, Bandura and Locke postulated that the amount of persistence with which individuals attempt new and challenging tasks is influenced by the degree of their

self-efficacy. When issues arise with tasks, individuals with high self-efficacy will problem solve and persist based on their confidence with learning and performing that task successfully. Individuals with low self-efficacy may perceive that they are not capable of learning and performing difficult tasks and will not persevere if a problem arises.

Although there is no consensus regarding a definition for competence, the literature outlines key components that should be considered when discussing the concept including: successful completion with certain tasks, action-orientation, application of clinical reasoning, and the inclusion of emotions, values, and professionalism. Self-efficacy is linked to work related performance from the perspective that with a higher perception of self-efficacy, this individual will set more individual goals, exert more effort, and persist with new and challenging tasks. By contrast, an individual with a perception of low self-efficacy will exhibit the opposite behaviours.

Miller (1990) created a pyramid of assessment of clinical competence as a framework to facilitate a student's progression from novice to expert. This framework can be implemented within health science education to ensure that students are educated in a manner that builds on their foundational knowledge and skills. Ultimately, students will integrate and demonstrate their knowledge and skills consistently in the clinical environment, initially during clinical placement and then when employed. Despite the utilization of Miller's pyramid of assessment of clinical competence, there remains disagreement between educators and employers regarding viewpoints of competency.

Definition of Competence related to the OTA and PTA

Within transitions from students to clinicians in health science education, theory and practice often appear far apart and this is known as the “theory-practice gap” (Newton, Billett, Jolly, & Ockerby, 2009, p. 315) or reality check between education and employment (Mirsaleh, Rezai, Kivi, & Ghorbani, 2010). Kumar et al. (2006) articulated that there is a gap in the literature, specifically in the therapy professions, regarding the constitution of competency, as well as how to measure competency. Students, graduates, educators, and employers all play important roles in the health science graduates’ transitions, by acknowledging the difficulties experienced by each participant during this transformative process (Hodgetts et al., 2007). There is a lack of congruence amongst what the graduates, educational institutions, and employers each perceive to be the most essential skills and/or competencies required for effective and efficient clinical practice (Smith & Pilling, 2007).

Epstein and Hundert (2002) noted that competency emerges over time and is nourished when the clinician has the opportunity to reflect on clinical experiences. They suggested that graduates’ smooth transitions into clinical practice are related to the application of their academic knowledge within the context of their professions. The transitions are challenging when there are incompatible expectations between the academic institutions and employers. The graduates may be required to re-evaluate their academic knowledge to ensure its effective application in the workplace.

Although there is literature that discusses the role of the PTA (Ellis & Connell, 2001; Ellis, Connell, Ellis-Hill, 1998; Jelley, Larocque, & Patterson, 2010) and the value of the rehabilitation assistant (Knight, Larner, & Waters, 2004; Pullenayegum, Fielding, Du Plessis, & Peate, 2005), there is no documented evidence that reviews the dually-

trained role of the OTA and PTA. This dually-trained role is specific to the educational credential awarded in Canada (OTA and PTA EAP, 2015). Research in this area has been limited, perhaps due to the continuing evolution of the combined OTA and PTA role in health care environments. An understanding of the evolution of the role of the OTA and PTA is important when examining clinical competence.

History of Therapist Assistants

In Canada, the United States, United Kingdom, and Australia, the delivery of accessible, effective, and efficient health care is carried out by regulated HCPs and health care assistants (Ellis et al., 1998; Ellis & Connell, 2001; Jelley et al., 2010; Munn et al., 2013). Munn, Tufanaru, and Aaromataris (2013) define health assistants as "workers who provide assistance and support to health professionals by whom they are directly or indirectly supervised" (p. 4). The professions of OTA and PTA fall within this definition.

Ellis et al. (1998) documented that in 1995, physiotherapist assistants (PTAs) formed over one fifth of the staff within physiotherapy departments in the United Kingdom and despite their significant contribution to client care, the role of the PTA was neither defined nor researched. The role of the therapist assistant emerged in the late 1990s in high income countries (Ellis & Connell, 2001). A landmark research study was initiated in 1997 by Loomis, Hagler, Forward, Wessel, Swinamer, and McMillan to address the scope of practice of PTAs in Canada. Loomis et al. (1997) recommended that: the roles of the PTAs should be developed from the roles of the PTs, there should be standardization among the educational programs for PTAs, and within PT educational programs the curriculum should include supervisory methods of PTAs. However, since that time, there has been minimal research to address the topic.

In the United States, physical therapist assistants receive an associate degree following two years of college education and are eligible for regulation following the successful completion of a licensure examination in 48 states and the District of Columbia (White Paper, n.d.). The American Physical Therapy Association (APTA) provides membership for both PTs and PTAs (APTA, 2015). In the 1990s, Canada, the United States, New Zealand, and the United Kingdom all concurred that PTAs cannot complete initial client assessments and initiate significant changes to established treatment plans (Parry & Vass, 1995).

Salvatori (2001) provided a comprehensive perspective on the history of OTAs in Canada by comparing education and certification with those in the United States. Within both countries, there was an expressed need for the development of occupational therapy services following World War I (Jongbloed, 1984); however, the United States would commence profession-specific training (i.e., certificate and associate degrees) approximately 40 years prior to Canada's generic training (Salvatori, 2001). Canada and the United States concurred that the primary role of the OTA is to "carry out prescribed treatment plans under the supervision of occupational therapists" (Salvatori, 2001, p. 224).

Accreditation of OTA and PTA programs is a new concept in Canada with the first group of community colleges achieving candidacy status in 2011 (OTA and PTA EAP, 2015). The United States has had national standards of education and a formalized accreditation process for OTAs since 1958 (Salvatori, 2001). Both OTs and certified OTAs are regulated in all 50 states, the District of Columbia, Puerto Rico, and Guam (AOTA, 2015), whereas only OTs are regulated in Canada in all 10 provinces and three territories (CAOT, 2011). The accreditation of OTA and PTA programs

contributes to the stakeholders' understanding of the OTA and PTA competencies in clinical practice. Even though, the OTs and PTs have acquired an appreciation of the academic credentialing of OTAs and PTAs, there remains confusion about their roles in supervising, delegating and assigning tasks with OTAs and PTAs.

Supervision/Delegation/Assignment

An ongoing challenge for health care professionals, as identified in the literature, is how to determine which tasks can be performed by unregulated professionals (Bashi & Domholdt (1993). Occupational therapists and physiotherapists in Canada have three options to consider when choosing tasks to be carried out by OTAs and PTAs (CAOT, 2011; White Paper, n.d.). The three options for OTs and/or PTs are supervision of, delegation to, and assignment to OTAs and PTAs. When determining the type and level of task supervision, delegation, or assignment, the OTs and/or PTs should consider the:

- OTAs' and/or PTAs' skills,
- demands of the job, and
- workplace expectations (CAOT, 2009; NPAG, 2012).

Supervision of OTAs and PTAs is an interactive process where the regulated professional monitors the care provided to determine competency, either directly (face-to-face) or indirectly (when the therapist is not present physically) (COTBC, 2011; CPO, 2011). *Delegation* is the transference of authority from one HCP to another in relation to controlled acts (COTO, 2000). Occupational therapists and physiotherapists in Ontario do not use the term delegation in relation to OTAs and PTAs, as OTs do not have controlled acts and PTs have two – suctioning and manipulation, both which require additional education to complete competently (COTO, 2009; White Paper, n.d.).

The additional education is completed by the PT as an enhanced clinical skill. The controlled acts of suctioning and manipulation would not be within the scope of OTAs and PTAs. *Assignment* occurs when either OTs or PTs designate specific aspects of the treatment plan to be completed by OTAs and PTAs (CAOT, 2009; NPAG, 2012). The recipients of the service are required to be patients of the OTs or PTs and the OTAs and PTAs are expected to function within their scope of practice (CAOT, 2009; NPAG, 2012). When either OTs or PTs assign tasks to OTAs and/or PTAs, they are allocating parts of the service to recipients who are patients of OTs or PTs (CAOT, 2007; NPAG, 2012).

To enhance the understanding of supervision, delegation and assignment of tasks to OTAs and PTAs, many regulatory colleges including the College of Physical Therapists of British Columbia (CPTBC) (2013) and the College of Occupational Therapists of Ontario (COTO) (2000) have decision-making tools. These tools assess the degree of risk when assigning a task to a PTA and OTA respectively. The principal investigator agrees with Nancarrow and Mackey (2005) who support the implementation of these decision-making tools as a conceptual framework to assist in alleviating this perceived knowledge deficit expressed by OTs and PTs.

Roles

Munn et al. (2013) identified that a challenge to the successful collaboration with therapist assistants is the lack of role clarity and related skills among OTAs and PTAs and OTs and PTs. Lizarondo, Kumar, Hyde, and Skidmore (2010) refer to this extended scope of practice as a combination of role enhancement and role substitution. Role enhancement involves augmenting the current depth of the job by expanding the associated roles of an assigned group (Lizarondo et al., 2010). On the other hand, role

substitution spreads out the breadth of a job by exchanging one type of employee for another (Lizarondo et al., 2010). The professions of occupational therapy and physiotherapy have embodied both concepts; however, role substitution has created a fear of job security and a "threat to practice" (Munn et al., 2013, p. 4).

Nancarrow and Mackey (2005) stated that within health care, there are some skills and roles that can be delivered by more than one type of HCP. The authors noted the trend in health care requires HCPs to spend more time with patients with complex needs and assign a proportion of their tasks to health care support personnel (Nancarrow & Mackey, 2005). Buchan and Dal Poz (2002) found that HCPs with an overlap in skills leads to efficiency within the organization and effectiveness with patient care.

There is variance in the tasks performed by OTAs and PTAs in clinical practice. These are contingent on a number of factors, such as the education completed by the OTA and PTA, clinical context, trust and confidence in the OTAs and PTAs' competence by the OT and/or PT, and length of time employed as an OTA and PTA (Alberta College of Occupational Therapists (ACOT), 2005; Knight et al., 2004; Lizarondo et al., 2010; Pullenayegum et al., 2005). Australia, Canada, New Zealand, the United Kingdom and the United States all identify that the primary role of OTAs and PTAs is to carry out rehabilitative treatment plans that have been developed by the registered occupational therapist and/or physiotherapist (CAOT, 2007).

The roles and skills of OTAs and PTAs fall under two categories, clinical/direct or non-clinical/indirect with respect to client care (ACOT, 2005; Nancarrow & Mackey, 2005; White Paper, n.d.). Regardless of the identified roles and skills, the overall goals for OTAs and PTAs in clinical practice include ensuring client-centred practice and client

safety, assisting in the client's treatment plan, communicating with the therapist responsible for the development of the treatment plan implementation, collaborating with interprofessional team members and the client's support system, and recognizing the boundaries of service provision (Ellis & Connell, 2001; Lizarondo et al., 2010; Nancarrow & Mackey, 2005). The roles of OTAs and PTAs are diversified and responsive to the current barriers in health care including language issues, socio-economic barriers, lack of awareness of health care services and coverage, and systemic hurdles (such as hours of operation, transportation, lack of family involvement) (WHO, 2008).

As active members of the interprofessional team who provide continuous holistic client care, OTAs and PTAs complete the following clinical/direct client care tasks and skills in Canada, which is consistent within the United Kingdom and Australia:

- consultation with the OT and/or PT to articulate if there is any aspect of the treatment plan that is not understood;
- client physical and social support in a safe and ethical manner; handling skills, including range of motion and manual muscle testing following the completion of the initial assessment by the OT and/or PT;
- ambulation and mobility education; transfers, lifts, and client positioning;
- completion of activities of daily living (bathing, dressing, grooming, toileting, and eating) development or retraining;
- administration of electrotherapy modalities;
- client education;
- provision of equipment;

- implementation and supervision of therapeutic exercise, either individually or group;
- splint/orthoses repair and education;
- observation of the completion of the assessment by either the OT and/or PT;
- communication with the client, OT, PT, client support system, and interprofessional team members; and
- participation in client meetings

(ACOT, 2005; CAOT, 2007; Ellis et al., 1998; Lizarondo et al., 2010; Pullenayegum et al., 2005).

To support positive client experiences, the OTAs and PTAs complete non-clinical/indirect activities such as cleaning, maintaining, and inventory of equipment and supplies for the client and practice area, scheduling appointments, billing for services, completion of workload measurement, attending and participating in staff meetings, and documentation (ACOT, 2005; CAOT, 2007; Ellis et al., 1998; Lizarondo et al., 2010; Pullenayegum et al., 2005). Additionally, there are certain tasks that cannot be assigned to OTAs and PTAs. These tasks are completed by OTs and PTs, as they require their professional proficiency and are within the scope of practice of OTs and PTs. The Canadian Association of Occupational Therapists (2011) and the National Physiotherapy Advisory Group (2012) concurred that the following tasks should not be assigned to OTAs and PTAs and should be initiated and carried out by a regulated OT or PT

- interpretation of a referral,
- providing a diagnosis, prognosis, or assessment outcomes,
- determination of therapeutic goals,

- designing and independently changing a treatment plan,
- the allocation of clients to a caseload,
- discharge decisions, and
- providing counselling to clients or members of the client's support system.

Despite the clear delineation of roles and responsibilities, Knight et al. (2004) described difficulties with the role of the rehabilitation assistant (RA) in a variety of practice settings. These difficulties included potential role blurring between the RA and the OT and/or PT, in addition to the prioritization of roles based on issues with time management that may cause conflict between health care providers.

Increased contact time with clients to build rapport and trust, additional time for the OT and/or PT to accommodate the evolving model of service provision and to provide creative client-centred practice are some of the benefits of the employment of OTAs ad PTAs in health care (White Paper, n.d.). Potential challenges that may arise with the collaboration with OTAs and PTAs are the knowledge of the OTs and PTs regarding education, skills, and competencies, the demands on the OTs' and/or PTs' time to provide support (if required), the identification of the scope of the OTAs and PTAs from their perspectives, as well as those of other members of the interprofessional team, and the comfort level of the OTs and/or PTs with delegating or assigning tasks (Nancarrow & Mackey, 2005; Robinson et. al., 1995).

Summary

The literature review provided an examination of the profession of OTA and PTA by reviewing the various concepts of clinical competence, defining competence related to the OTA and PTA, discussing the history of the profession, distinguishing between supervision, delegation, and assignment, and outlining the roles of OTAs and PTAs in

clinical practice. The information highlighted an inadequacy of evidence related to the perspectives of OTAs and PTAs in the areas of use of title, scope of practice, roles, and perceptions of clinical competence. Although, academic credentialing is different internationally, the education provided within OTA and PTA programs focuses on students acquiring the required knowledge, skills and attitudes to utilize in a variety of practice settings. The expectation is that OTAs and PTAs have the foundational competencies to carry out their roles within their chosen employment.

The evolution of the profession of OTAs and PTAs in response to our changing health care system is encouraging; however, there is a lack of consistency provincially, nationally, and internationally with respect to education, scope of practice, and competencies (Lizarondo et al., 2010) that might impact graduates' readiness to practice upon completion of these programs. Within this chapter, useful research has been identified that is pertinent to understanding the graduate OTAs and PTAs' perceptions of competence with clinical skills in practice. The principal investigator did not uncover any literature that examined this phenomenon from the perspective of an OTA and PTA.

This research study investigates the perceptions of competence with clinical skills in practice of graduate OTAs and PTAs from one Ontario college. The viewpoints of OTs, PTs, and administration from an Ontario hospital regarding the competence of OTAs and PTAs are also considered to further understand and highlight any existing disparity between perceived and actual competence.

CHAPTER 3: Methodology

Overview

In this chapter, the methodology utilized to investigate the research question under study is explored. The identification of the theoretical framework, selection of the participants, administration of individual interviews, facilitation of a focus group, collection and analysis of data are discussed to provide a comprehensive understanding of the principal investigator's execution of the methodology of the research study. The intent of this research study was to gain an understanding of the participants' experiences and the meanings attached to these lived experiences. Based on this philosophy, the research is aligned with a phenomenological approach (Giorgi, 2012). Throughout this chapter, the term patient as opposed to client is used, as this term was utilized by the participants in this study.

Experimental Design and Methods

Phenomenology is the selected qualitative approach employed within this study. The focus of this phenomenology is to explore the lived experience of OTA and PTA graduates from one Ontario college and to understand these lived experiences by completing multiple in-depth interviews with the primary sample (Finlay, 2009; Omery, 1983). Tuohy, Cooney, Dowling, Murphy and Sixmith (2013) noted that the aims of phenomenology are to avoid assumptions, describe the lived experience in the manner in which the experience occurred by obtaining descriptions of those experiences, and employ objectivity on the part of the principal investigator. The information from this study may lead to an enhanced understanding of the concept of clinical competence as it relates to graduate OTAs and PTAs from one Ontario college.

With phenomenology as the chosen approach a focus group was utilized as a data gathering approach to gain an appreciation of the participants' feelings, perceptions and thinking (Belzile & Oberg, 2012) related to the clinical competence of OTAs and PTAs. The principal investigator was the facilitator of the focus group; however, became an interactive member. To gain an appreciation of the participants' lived experiences and abstain from referencing her previous experiences, the principal investigator accepted the perceptions provided by the participants as their interpretation of their world experiences. Husserl (1982), as discussed in Bevan (2014), identifies this acceptance and phenomenological reduction on the part of the principal investigator epoche. Epoche is "seen as a critical-position-taking attitude that requires the phenomenologist to adopt and take nothing for granted" (Bevan, 2014, p. 139). The principal investigator presented the data without imparting any of her preconceived ideas about the shared information (Noble & Smith, 2015).

Ethics approval

As the research study involved collecting data from individuals, the protection of research participants is paramount. Ethics approval was granted through the Hamilton Integrated Research Ethics Board (HIREB) (Appendix B), the Niagara College Research Ethics Board (Appendix C), and the Niagara Health System Research Ethics Board (Appendix D). These applications reinforced that all data would be kept confidential, in secure storage for seven years, followed by destruction after that time period and that audio recordings would be retained by the principal investigator for two years and then erased. The anonymity of subject participants was protected by assigning participant codes as identifiers. A letter of introduction and written consent form for both the in-depth face-to-face interviews (after this point will be referenced as

the individual interviews) (Appendix E) and focus groups were reviewed with all participants to obtain informed consent to participate (Appendix F).

Sample

Inclusion criteria for individual interview participants focused on graduates from one Ontario college OTA and PTA program from the classes of 2011, 2012, or 2013 who have been working clinically as an OTA and/or PTA for a minimum of one year. A list of eligible participants was obtained through the college Alumni Relations Officer for participation in the individual interviews. The Alumni Relations Officer completed an electronic search of the college's alumni database for graduates from the OTA and PTA program and sent the email recruitment script to potential participants (Appendix G). This sample field was selected purposefully to engage participants who could effectively respond to the research question. Their responses were based on their knowledge and experiences working as OTAs and PTAs in clinical environments, in addition to their perceptions of clinical competence (Guest, Bunce, & Johnson, 2006).

The study site for the interviews was a mid-sized community college noted for over 100 post-secondary diplomas, baccalaureate degrees, and advanced level programs located in the region of southern Ontario in Canada. The OTA and PTA program accepted the first cohort of students in 2009 offering a two year diploma program with the intent to provide a wide variety of field placement experiences scheduled throughout the program, emphasize experiential learning through labs and field placements, produce a curriculum that provides broad base knowledge development, and expose students to a unique interprofessional education experience with other students in the division of Community and Health Studies. There is an

annual maximum admission of students in September of 30 students to the OTA and PTA program (Niagara College, 2015).

The Ontario hospital in this research study is part of a six site hospital corporation in southern Ontario. Within the six hospitals, there are inpatient and outpatient services that provide acute care, emergent care, mental health services, long term care, cancer care, and hemodialysis. The Research Department within this Ontario hospital reviews all research applications for studies proposed to be conducted. As the focus group participants were employees of the Ontario hospital and the focus group took place at one of these hospital sites, the principal investigator adhered to the outlined expectations of this Ontario hospital's research ethics board.

The focus group email recruitment script (Appendix H) was sent by the Ontario hospital's research department to the supervisors of OTs and PTs working with OTAs and PTAs. The supervisors distributed this script to the OTs and PTs who notified their supervisors of their intention to participate. The supervisors advised the research department that distributed the letter of information/consent to the OTs and PTs who had agreed to participate. The focus group consisted of registered OTs and PTs who have worked with OTAs and PTAs. These participants were interviewed and shared their subjective outlooks about the phenomena under study.

Data Sources

In order to obtain comprehensive and inclusive data, two approaches were used in the study for data gathering:

1) eight individual interviews with the Ontario college OTA and PTA graduates from the graduating classes of 2011, 2012, and 2013, who have worked clinically as OTAs and/or PTAs for a minimum of one year and

2) a focus group of eight participants, including OTs, PTs, and administration personnel from an Ontario hospital who have worked with OTAs and PTAs in clinical practice. The individual interviews occurred prior to the focus group. The benefit of conducting a focus group following the interviews is the collection of supportive information obtained from individuals who work with and may evaluate the sample population (Brenner, 2006; Webb & Kevern, 2000).

Belzile and Oberg (2012) described a focus group as a dynamic process between participants that permits the researcher to focus on the interaction of the group members, obtain multiple perspectives and emotional responses simultaneously in a group context, in addition to analyzing the information that is shared. The focus group provided an interactive discussion of information that may not have been identified and addressed in an individual interview (Webb & Kevern, 2000). The facilitation of this focus group enabled the primary investigator to realize and appreciate the everyday knowledge that the participants experienced with the OTAs and PTAs, through her immersion within the group.

Field notes were used in this study to document the nuances (both verbal and non-verbal) during the participant interactions. The participant interactions were interpreted in both the data collection and data analysis phases of this research study.

Data Collection

An email invitation that identified the purpose of the research study, the agreed parameters of the study (i.e., time, date, and location), and a written consent form were sent to the participants for the individual interviews in July 2014 and the focus group in September and October 2014. Data were collected conforming to the ethics requirements of the associated organizations.

At the onset of both the individual interviews and the focus group, the principal investigator set the boundaries for the study and outlined the purpose of the investigation. Within the focus group, the principal investigator set the ground rules, which included: one participant speaking at a time; active listening and no separate conversations; respect of confidentiality; tape recording of sessions; field notes of observations written by the research assistant; encouragement of the exchange of viewpoints among all focus group participants; and respecting each participant's opinions (Webb & Kevern, 2000). Focus group participants did not add to the established ground rules. These rules were initiated to ensure ease of discussion, maintenance of focus on the interaction, and inclusion of each participant's viewpoints during this one time encounter (Belzile & Oberg, 2012).

Based on their involvement with OTAs and PTAs and their employment within an Ontario hospital, the focus group participants had established working relationships with each other which were conductive to enriching their group interactions. These factors encouraged the participants to feel more comfortable with each other, as well as with the principal investigator. Although the focus group participants were comfortable with one another, this level of familiarity might have deterred participants from sharing their true feelings for fear of ostracism from their peers.

As an OT who is employed as a professor and program coordinator in the OTA and PTA program at the college, the principal investigator reflected on the essential phenomenological concept of bracketing. Through journaling, the principal investigator reviewed her role, experiences, and professional background and considered how her judgements might influence the direction of the study (Creswell, 2014). In preparation for the individual interviews and focus group, the principal investigator contemplated her

previous client interviews and pilot interviews and noted what went well and what could be improved. As the purpose of the study was to discover the OTA and PTA graduates' perceptions of competence in clinical practice, the principal investigator set aside her ideas and beliefs about the phenomena and ensured that the individual participants shared their perspectives.

Interview Format.

Prior to the commencement of both the individual interviews and the focus group, the principal investigator reviewed the letter of information/consent form verifying informed consent was obtained from each participant. The principal investigator reiterated that the participants could withdraw from the research study at any time with no penalties associated with their choice to not participate.

The principal investigator demonstrated transparency regarding her role in the research study by ensuring that the participants understood that undertaking this research study was a requirement for the completion of the Master of Science in Health Science Education program and was in no way related to her role as the professor and coordinator of the OTA and PTA program at an Ontario college. The strategy of referencing the difference between the roles with each participant was determined as a viable strategy to ensure transparency. Upon receipt of informed consent from each participant, the principal investigator provided a signed copy of the letter of information/consent form for their records.

The principal investigator collected data through semi-structured individual interviews (Appendix I) and a focus group using the respective interview guides (Appendix J) and explained that the sessions would be audio taped and transcribed to verify the accuracy of the interactions.

The principal investigator completed individual pilot interviews with four OTAs and PTAs on June 4th, 2014, who were not graduates from the OTA and PTA program in the study. The pilot interviews were conducted to obtain feedback regarding the clarity of the interview questions and to omit any potential directive questions. Also, having this experience helped to provide fluidity with the administration of the individual interview guide. The data obtained from the pilot individual interviews were not included in the data analysis for the research study because the participants for the pilot interviews did not meet the inclusion criteria of the study. In addition, these interviews were testing the process and refining the interview guide prior to the initiation of the individual interviews.

Interview Guides.

The interview guides for both the individual interviews and the focus group were formulated to ensure that the questions encouraged participants to share their viewpoints with minimal prompting from the principal investigator (Smith, 2007). Turner (2010) describes the interview guide as the "most crucial component of the interview design as each of the questions will allow the examiner to dig into the experiences of the participants in order to gain maximum data from the interviews" (p. 757). The principal investigator reviewed literature focused on qualitative interviewing and participant and focus group interactions (Belzile & Oberg, 2012; Bevan, 2014; Brenner, 2006; King, 1994) and used personal knowledge and experiences to create the interview questions. All questions were open-ended with the intention that the participants speak freely about their experiences and the meanings associated with those experiences (Smith, 2007).

Following the completion of the pilot individual interviews and feedback from the principal investigator's thesis supervisor, the principal investigator changed the wording of two introductory questions to ensure question clarity and flow of the interview.

The principal investigator followed the recommendations as suggested by King (1994) when designing the interview guides and did not include the following: multiple concepts in a question, challenging questions at the end of the interviews, and the formulation of leading questions with a focus on the principal investigator's perceptions.

DiCicco-Bloom and Crabtree (2006) discussed that the initial questions should be geared toward building rapport and trust with the participants. Within the individual interview guide, the principal investigator asked opening questions to facilitate participant engagement and initiate rapport building. The opening questions were not challenging and focused on the participants' feelings as an individual, a key phenomenological concept (Ohman, 2005).

To encourage the participants to elaborate on their responses, the principal investigator created verbal prompts as part of the interview guide. Although these verbal prompts were prepared, they were not used as the participants spoke freely about their experiences and their responses required minimal clarification and redirection.

The purpose of the opening questions was to inspire the participants to start thinking about their connections with the phenomena. The questions used for data gathering consisted of open-ended and probing questions plus probing statements. These key questions fall within what DiCicco-Bloom and Crabtree (2006) refer to as the exploration phase. During the exploration phase of the individual interviews, the principal investigator was required to clarify the word 'competency' for four of the eight

participants. The principal investigator applied examples to provide an explanation of the term in a familiar context (i.e., current workplace). Four of the eight focus group participants were uncertain about a question addressing their involvement with employment interviews with OTAs and PTAs. The principal investigator paraphrased the question and, following the responses by two participants, inquired if the participants required further clarification.

The individual interviews varied between 47 and 71 minutes in duration. The principal investigator documented field notes simultaneously during the individual interviews. The focus group was 65 minutes in duration and the principal investigator facilitated the focus group. The research assistant, who was known to the participants in her role as the field placement coordinator at a community college OTA and PTA program was present but sat apart from the participant grouping and took field notes, thus enabling full engagement by the principal investigator. Despite the familiarity with the focus group participants and the establishment of the ground rules, the principal investigator considered a number of factors that may impact the data. These challenges included the uncertainty that all of the participants were engaged to their full extent, participants may have preferred not to share their viewpoints if they were contradicting the expressed perspective of another focus group member, and there might be underlying cultural (workplace) dynamics that may have prevented participants from sharing.

During the administration of the individual interviews and focus group, the principal investigator was cognizant to maintain a neutral attitude. This demonstration of neutrality or what is phenomenologically known as the “modes of appearing” permits the principal investigator to experience each participants’ viewpoint from a different

perspective (Bevan, 2014, p. 137). While interviewing, the principal investigator provided affirmative verbal and non-verbal responses to demonstrate her active listening skills.

Field Notes.

Field notes can be descriptive when the information is written during the observation/interaction of the individual interview and/or focus group; also these notes can be self-reflective statements, when thoughts or questions are completed by the researcher following interactions with the study participants (Mays & Pope, 1995; Mulhall, 2003). The principal investigator utilized a descriptive format, as she documented the observations and interactions of the individual participants during the individual interviews. The information was a description of the participants' responses to the questions, as well as non-verbal communication associated with the responses.

The research assistant wrote the field notes during the focus group. The notes provided an overview of seating arrangements, participants' non-verbal and verbal communication. The notes reaffirmed participants' responses which helped when some identification information was inaudible on the audiotape.

The commencement of data analysis occurred following the completion of the initial interview. Field notes provide valuable information used to analyze the data. The field notes documented in this study combined descriptions of the environment, the participants' actions and written dialogue about the responses to the questions during the individual interviews and focus group (Mulhall, 2003). Relevant content was obtained and used during the analysis phase as a way to triangulate the data; thereby, assisting in authenticating the information that was transcribed.

Table 2 – Examples of Field Notes from Focus Group

Event	Non-verbal response	Interpretation
After the introductory question was read	Two participants glanced at each other	Acknowledgement of a response and determining who would answer first
Following asking question related to participation with interview OTA and PTA applicants	Shifting in chairs; facial grimacing; quizzical looks	Uncertainty of intent of question and requiring clarification of the question
Answering transitional questions	Nodding in agreement to other participants' responses	Understanding of the shared viewpoint
Question clarification by principal investigator	Smiling; nodding in agreement; focused eye contact on speaker	Concurred with explanation; engaged in the conversation
Laughter after participant response	Laughter; smiling	Collegial; active participant interaction; enhanced participant conversation based on comfort

In Table 2, the non-verbal responses to the events during the focus group validated the principal investigator's group facilitation skills. The focus group participants were smiling and nodding following the clarification of a question pertaining to their participation in the process of interviewing OTAs and PTAs for employment. The non-verbal affirmative responses demonstrated the principal investigator's ability to resolve the confusion and proceed with the facilitation of the focus group.

Data Analysis

Giorgi (2012) outlined a phenomenological method to assist in data analysis including:

- Stage 1 – Reading through the entire protocol to make sense of the information;
- Stage 2 – Uncovering the natural meaning as shared by the participants;
- Stage 3 – Interrogating in terms of the specific purpose of the study; and

- Stage 4 – Arising themes.

The principal investigator felt that as a novice researcher a structured approach would facilitate the organization of the data. The application of Giorgi's phenomenological method is:

Stage 1 – Reading through the entire protocol to make sense of the information

The principal investigator read the transcripts to gain an appreciation of the information. During the iterative data collection and data analysis, the principal investigator employed phenomenological reduction (bracketing) (Husserl, 2012). He described bracketing as the goal of dismissing any preconceived ideas, thoughts, or judgements of the phenomena under study. Whiting (2002) stated that the phenomena are only discovered through the lens of the participants.

The analysis of the data was a lengthy, but informative experience based on the quantity of the transcribed data, as well as the multiple times that the principal investigator listened to and read the information to gain an appreciation of the participants' experiences and associated meanings (Giorgi, 2012; Omery, 1983). The analysis of the data commenced after the initial interview on September 8th, 2014 and was completed when saturation occurred and no new data were revealed (Bowen, 2008). The audio recordings were transcribed verbatim.

Stage 2 – Uncovering the natural meaning as shared by the participants

The transcripts were read by the principal investigator. Field notes were also reviewed with the information amalgamated in the margins of the transcripts. Line-by-

line content analysis was employed to discover codes. The principal investigator identified the individual codes by highlighting the information as it appeared within the transcript. By reviewing the codes within the transcript, the principal investigator was focusing not only on what was said but the context in which the comments were generated.

The principal investigator cut the coded information from the original transcript and pasted the content into “nodes” in NVivo (Version 10; QSR International Pty Ltd., 2012). A node is a collection of references about a specific concept, theme, or area of interest (NVivo, Version 10; QSR International Pty Ltd., 2012). The principal investigator gathered the nodes by coding the data from the individual interviews, focus group, and field notes. The organization of the data was beneficial for the principal investigator to re-read all of the information with open mindedness and to start identifying themes.

Transcription is described as a “process that is theoretical, selective, interpretive, and representational” (Davidson, 2009, p. 37). Transcription is not mechanical; however, it is an integral practice in qualitative research (Davidson, 2009). Oliver, Serovich and Mason (2005) considered transcription on a continuum with naturalism on one end and denaturalism on the other. These authors defined naturalism as a transcription practice that seeks to provide “as much detail as possible” and denaturalism as practices where “idiosyncratic elements of speech (e.g., stutters, pauses, nonverbal, involuntary vocalizations) are removed” (pp. 1273-1274). Naturalism and denaturalism are said to “correspond to certain views about the representation of language” (p. 1274).

Adhering to phenomenological principles, the principal investigator chose naturalism which is the inclusion of all information from the audiotaped interviews. To appreciate the lived experience, Ohman (2005) discussed how phenomenology considers holism and all aspects of the participants related to their social environments. As the research question addresses the OTA and PTA graduates' perceptions of competence with clinical skills in practice, the principal investigator chose a naturalistic approach to transcription, to appreciate the precise language used to explore the participants' world. The inclusion of all data provided the principal investigator with the opportunity to reflect on "as much detail as possible" (Oliver et al., 2005, p. 1273), therefore, contributing to a holistic understanding of the participants' lived experiences.

Upon receipt of each transcribed interview and the focus group, the principal investigator listened and re-listened to the audiotaped interviews and compared the audiotaped information to the transcription. Following the comparison, the principal investigator made modifications by: adding the inaudible information from the audiotape based on the data from the field notes; correcting the identification of the speakers; and, amending the required terminology. Most of the terminology modifications were related to jargon used in either the field of rehabilitation or health care in general.

Once the transcription and field notes were aligned, the principal investigator read the raw data from each interview five times, line-by-line to analyze the content, to categorize phrases and identify recurring and isolated themes from those phrases (Zhang & Wildemuth, 2010). During the line-by-line analysis, the principal investigator used colour coding and a legend to assist with the identification of codes. For example, all of the data within the transcripts and the field notes related to communication were highlighted in green, confidence in orange, preparation for practice in red, emotions in

blue, and competence underlined using red ink. The colour coding assisted in locating the relevant information quickly. Codes were single words or phrases that expressed a certain idea that was either common or disparate among the participants (Creswell, 2014).

A code was assigned to a single sentence, a paragraph, or multiple paragraphs depending on the nature of the participants' responses, as long as the code represented a specific concept. The codes developed from the individual interviews' data included confidence following graduation, development of self-reflection, communication – patient, peer, and administrative, roles and skills, confidence, self-awareness, continuum of emotions throughout the employment journey, and academic preparation. From the focus group, the codes were similar from the perspectives of communication and academic satisfaction.

All the individual participants discussed the evolution of their emotions from nervousness, fear, a sense of being overwhelmed, excitement, and joy at the onset of their clinical career to feelings of pride and fulfillment now. Confidence or a sense of self-assurance was articulated numerous times within each individual interview. The importance of the concept of individual confidence will be discussed in the next chapter. Table 3 describes the identified codes that evolved during the data gathering and data analysis phases with the individual participants.

Table 3 – Data Analysis of Individual Interviews

Codes	Participants	Number of Participants
Communication		
Sub-Codes:		
• Patient communication	IIP1, IIP2, IIP3,IIP4,IIP5, IIP6, IIP7, IIP8	8
• Communication with peers and co-workers	IIP1, IIP2,IIP3, IIP4, IIP5, IIP6, IIP7, II08	8
Confidence		
Sub-Code:		
• Emerging across a continuum	IIP1, IIP2, IIP3, IIP4, IIP5, 11P6, IIP7, IIP8	8
Competencies		
Sub-Code:		
• Identifying roles and skills	IIP1, IIP2, IIP3, IIP4, IIP5, IIP6, IIP7, IIP8	8
Academic Preparation		
Sub-Codes:		
• Organizational structure of the OTA and PTA program	IIP1, IIP4, IIP8	3
• Support from OTA and PTA program faculty	IIP2, IIP3, IIP4, IIP5, IIP6, IIP7, IIP8	7
• Life-long learning	IIP3, IIP6, IIP7	3
Self-reflection		
Sub-Codes:		
• Emotional journey	IIP1, IIP3, IIP4, IIP7	4
• Recognizing strengths and areas of development	IIP1, IIP2, IIP3, IIP4 IIP5, IIP7, IIP8	7

Stage 3 – Interrogating in terms of the specific purpose of the study

At this stage, the principal investigator engaged in bracketing. Interrogation refers to the process of questioning the meanings of the data as they emerge, in relation to the purpose of the study. Giorgi acknowledges that the researcher will have preconceived ideas; however, the researcher should admit these biases. This admission on the part of the researcher forms phenomenological reduction. The principal investigator acknowledged any preconceived ideas which might impact her

ability to understand the participants' views. Following the admission of the principal investigator's presuppositions, she commenced reviewing the codes that emerged. The codes are compared with the transcripts to ensure internal consistency of the data. The principal investigator questioned the meaning of the codes in relation to the phenomena under study.

Following the data analysis of the first individual interview, eight codes were created and then as the individual interviews progressed, these codes were used multiple times, in addition to the introduction of new codes. The principal investigator enlisted the assistance of an OTA and PTA educator to read the transcripts and independently code the data. The codes were corroborated with a discrepancy of 33 coded excerpts of data between the principal investigator and the OTA and PTA educator. The principal investigator reviewed the incongruities and incorporated all codes identified by the OTA and PTA educator. Upon auditing the information, the principal investigator agreed that she would code the identified data using similar codes. This cross checking of the data and achievement of inter-coder agreement (Creswell, 2014) demonstrates trustworthiness of the data. The established code of a continuum of emotions throughout the employment journey resonated with all of the participants.

Stage 4 – Arising themes

Following the code identification, the principal investigator examined the data for patterns and commonalities. Four themes emerged from the codes, which are discussed in detail in the next chapter. The four themes provided the principal investigator with an awareness of OTA and PTA graduates' perceptions of competence with clinical skills in practice.

The audio recordings and transcribed information were entered into the NVivo qualitative data analysis computer software program (Version 10; QSR International Pty Ltd., 2012). This program was used to assist in organizing, managing, and coding the data and provided the principal investigator with visual presentation of the data. The transcribed information was organized by tagging the "nodes" (NVivo, Version 10; QSR International Pty Ltd., 2012). Once the categories were identified, the data was re-analyzed leading to the establishment of common themes (Chiovitti & Piran, 2003), including employing effective communication, emerging knowledge, skills and competencies in clinical practice, transitioning into clinical practice, and developing confidence as an OTA and PTA.

Lastly, the themes were cross-referenced back to the original audiotaped individual interviews and focus group to validate occurrences (Kelly & Ahern, 2008). As the collection and analysis of the data were iterative processes, the principal investigator returned to the data following the refinement of the themes to ensure that there were no new themes emerging and employed a mechanism to connect to the original data (Spencer, Ritchie, & O'Connor, 2003). From a phenomenological perspective, the end result of the data analysis was to guarantee that the information presented was focused on the participants' own words and there was no subjectivity demonstrated by the principal investigator (Belzile & Oberg, 2012).

The field notes from the focus group revealed that most participants demonstrated open body language and tones of voice that reflected the topic under discussion. On two occasions, the principal investigator observed facial grimacing from two focus group participants denoting confusion when questions were asked. The principal investigator noticed that the focus group used non-verbal body language

including smiling and nodding when they were in agreement with one another's responses. The focus group laughed and used humour when coming to the realization that at times, their expectations for OTAs and PTAs were unrealistic. The principal investigator believed that their laughter was in response to their awareness of shared similar experiences. This realization was not evident to the participants until discussed during the focus group interaction. DiCicco-Bloom & Crabtree (2006) illustrated the importance of including observations of group dynamics and encouraged the integration of the group dynamics within the analysis of the data.

Following review of the data, the principal investigator categorized the data with NVivo (Version 10; QSR International Pty Ltd., 2012). During the data analysis, a conceptual framework was chosen that helped with explanation of the codes and themes and linkages between themes. As an OT, the principal investigator had extensive knowledge and familiarity with this framework. The framework used by the principal investigator is the Person-Environment-Occupation (PEO) Model (Law et al., 1996).

Trustworthiness

Lincoln and Guba (1985) discuss strategies that assist in the facilitation of added credibility to qualitative research including observation, exposure in the field, triangulation, peer debriefing, and member checking. The principal researcher sought out the perspectives of the participants by asking questions related to their experiences and invoked the process of bracketing. Trustworthiness of a research study proves its worth and involves the establishment of:

- **credibility** – ensuring that there is truth in the information that is revealed,

- **transferability** – applicability in other contexts,
- **dependability** – the consistency and replication of the findings, and
- **conformability** – the neutrality of the study and ensuring that study's findings are shaped by the participants and not the researcher (Lincoln & Guba, 1985).

To ensure trustworthiness of the research study, the principal investigator was open and honest about her previous experiences during the individual interviews and focus group. She articulated that her previous knowledge and emotions would not impact the data collection, analysis, and interpretation of the study.

As previously discussed, bracketing is a process where the principal investigator shifts the focus of attention from any pre-conceived thoughts, ideas, interpretations, judgments, and biases, to the reflective orientation of the information shared by the participants (Pallikkathayil & Morgan, 1991). Trustworthiness is heightened by the process of bracketing, as the spot light is on the participants' lived experiences.

The principal investigator coded each interview and the focus group to incorporate internal consistency. Peer reviewers consisted of a postgraduate educator who does not teach in the OTA and PTA program, an occupational therapist with over 30 years of clinical experience, and a researcher who has expertise in qualitative research. They each reviewed the data at the completion of data analysis to ensure trustworthiness. Methodological triangulation was achieved by using multiple sources of data, such as interviewing the individual participants and the focus group, peer reviewing, and member checking. The principal investigator also triangulated the data by revisiting the literature consistently during the process.

As the principal investigator completed the interviews and the focus group, there was in-depth understanding of the environment. The principal investigator identified the potential bias as an educator of OTA and PTA graduates from the Ontario college at the onset of each individual interview and focus group. To address this potential bias, the principal investigator reviewed the letter of information/consent that outlined the principal investigator's role during the research study.

Creswell (2014) refers to qualitative validity as "a means that the researcher checks for the accuracy of the findings by employing certain procedures" (p. 201). Member checking is a strategy that determines the accuracy of the research study (Lincoln & Guba, 1985; Schilling, 2006). The principal investigator employed member checking by emailing a summary of the responses to the interview questions to the participants for feedback in January 2015. The purpose of the summary was to obtain acknowledgement that the information resonated with each individual interview participant (Appendix K) and focus group participant (Appendix L). The participants were asked to respond and the principal investigator sent a reminder email five days prior to the requested deadline. Eleven out of 16 responses were received. Of those 11 participant responses, there was 100% agreement with the summary information indicating that the participants felt that the information was credible.

Reflective Journaling

The principal investigator completed a journal throughout the research process. Based on the chosen theoretical framework of phenomenology, the purpose of the journal was the development of the principal investigator's affective skills, especially during the interview process. Blake (2005) explains that by journaling, individuals

uncover “connections between self and others, penetrate barriers to understanding, and come to know more deeply the meanings of their own historical and cultural narrative” (p. 6). This approach aligns with phenomenology whereby the focus is on the participants’ viewpoints and the principal investigator has the opportunity to gain insight into that experience.

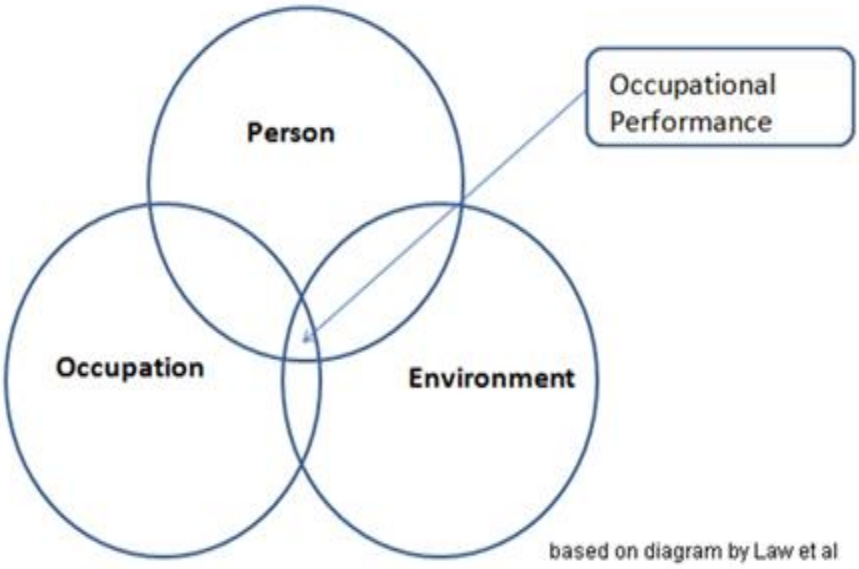
The principal investigator assessed that in order to embrace the participants’ lived experiences, analysis of her own experiences and feelings was necessary. Journaling provided a medium through which the principal investigator evolved during the research study. The journal entries were contingent on the event, such as the frustration with the loss of coded data with a computer software upgrade to the elation with the number of participants who were interested in the research study.

During the data collection and analysis phases of the study, reflective journaling assisted the principal investigator in comprehending the participants’ perceptions. The principal investigator transformed her thinking from concentrating on the process of the research study to the realization of the perceptions of the participants through their individual lenses. The opportunity to journal encouraged the principal investigator to devote time to release stress in a productive and therapeutic way. Reflective journaling contributed to the principal investigator’s development as a researcher. The autonomy to read the journal entries at any point in time and contemplate the principal investigator’s growth in critical thinking throughout the research process was inspiring and motivating. The principal investigator demonstrated her critical thinking skills when choosing the PEO Model as the conceptual framework to organize, explain and link the codes and themes that emerged from the data by relying on her previous knowledge regarding the applicability of the model.

Conceptual Framework

The PEO Model is a dynamic transactional conceptual framework rooted in the profession of occupational therapy and founded by Law et al. (1996). The focus of the model is on the interactions between the person, environment, and occupation over time and how these three areas interplay to produce optimal occupational performance (Strong et al., 1999). Occupational performance is defined as "the dynamic experience of a person engaged in an occupation within an environment over time" (Strong et al., 1999, p. 124). The three dimensions: person, environment, and occupation are represented as three spheres or a Venn diagram. The greater the degree of congruency between the three spheres, the increased amount of fit or occupational performance (Law et al., 1996).

Figure 3 – Person-Environment-Occupation Model (Law et al., 1996, p. 15).



Law et al. (1996) describes the three components of the PEO model as:

- **Person** – skills and roles that change across the lifespan and are used to participate in occupational performance with a holistic viewpoint including physical, affective, cognitive, and spirituality (purpose and meaning) aspects,
- **Environment** – includes physical, cultural, socio-economic, and institutional which also impact occupational performance, and
- **Occupation** -including the domains of self-care, productivity, and leisure and are "self-directed, functional tasks and activities" (p. 16).

The recognition that the PEO Model could be useful in describing the phenomenological experiences of the participants emerged during the analysis of the data. This framework assisted in the categorization of the codes and ultimately themes that emerged during data collection and data analysis of this research study as its viewpoint is one of holism. The PEO examines the individual from a number of perspectives. Although the PEO Model evolved to assist occupational therapists in clinical practice, the conceptual framework also provides the opportunity for other disciplines to classify and integrate information within the three spheres to highlight optimal fit (Strong et al., 1999).

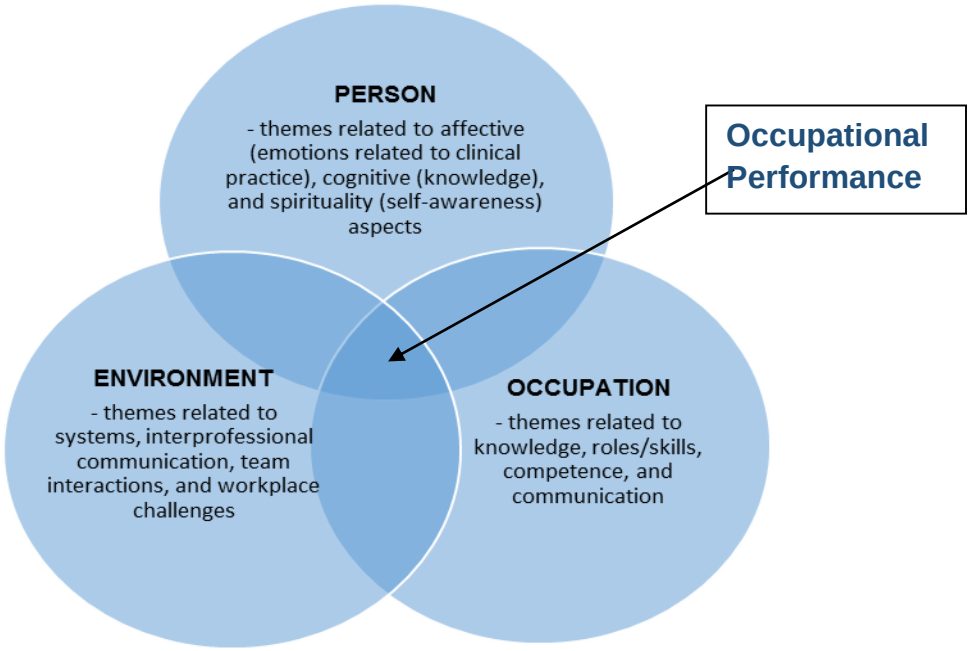
To assure that this chosen framework resonated with clinicians other than OTs, the principal investigator enlisted three colleagues (a physiotherapist, a registered nurse, and a social worker) to review the content and provide comments on the selected framework. All confirmed that terms and methodology were explained clearly and

sufficiently. They surmised that they had a good understanding of the PEO Model in relation to the context of this research study.

Referring to the work on self-efficacy by Bandura (1986), Law et al. (1996) proposed that the PEO Model engages individuals to meet their own needs as a method of self-contentment. By identifying and carrying out their identified roles and activities within the context of their occupations, individuals have the potential to achieve optimal occupational performance (Law et al., 1996). The results of this research study are categorized using the following:

- **Person** – themes related to affective (emotions related to clinical practice), cognitive (knowledge), and spirituality (self-awareness) aspects,
- **Environment** – themes that encompass systems related, interprofessional communication, team interactions, and workplace challenges, and
- **Occupation** – themes incorporating roles/skills, competence, and communication with occupational performance/degree of fit, represented by OTAs and PTAs' perceptions of competence with clinical skills in practice. This conceptual framework will set the stage for the interpretation of the data in the next chapter.

Figure 4 - Interpretation of the Person Environment Occupation Model related to Themes (Adapted from Law et al., 1996)



Summary

Phenomenology addresses the lived experience by utilizing naturalistic methods such as talking and reading about the participant group being studied (Smith, 1996). Through the completion of individual interviews with graduates from the Ontario college's OTA and PTA program, as well as the facilitation of one focus group with OTs, PTs, and administration personnel from an Ontario hospital, consistent viewpoints

emerged related to the perceptions of competence of OTAs and PTAs' clinical skills in practice.

The qualitative interactive methods provided the participants with the freedom to share their perceptions related to the posed questions from the respective semi-structured interview guides. The transcribed audiotaped data using a naturalistic transcription practice and documented field notes were analyzed through the NVivo (Version 10; QSR International Pty Ltd., 2012). NVivo (Version 10; QSR International Pty Ltd., 2012) enhanced the exploration of trends and patterns of the obtained data (from all sources) and assisted in the classification and discovery of themes. Continuation of the data analysis by data comparison and the utilization of the word frequency queries in NVivo (Version 10; QSR International Pty Ltd., 2012) revealed data trends (Jelley et al., 2010).

Triangulation of the data, member checking, peer reviewing, and bracketing by the principal investigator all supported the trustworthiness/credibility of the research study. A number of themes emerged from the classification of the data which will be discussed in detail in the next chapter.

CHAPTER 4: Results

Overview

A review of the data from the individual interviews, the focus group, field notes, as well as the principal investigator's reflective journal was completed and the information was coded based on the criteria outlined in chapter three. Four themes emerged through the data analysis phase of the research study and these are examined in this chapter.

Participant Demographics

Throughout this chapter, the participants are referenced by their coded identifiers, for example, individual interview participant 1 is IIP1 and focus group participant 1 is FG1.

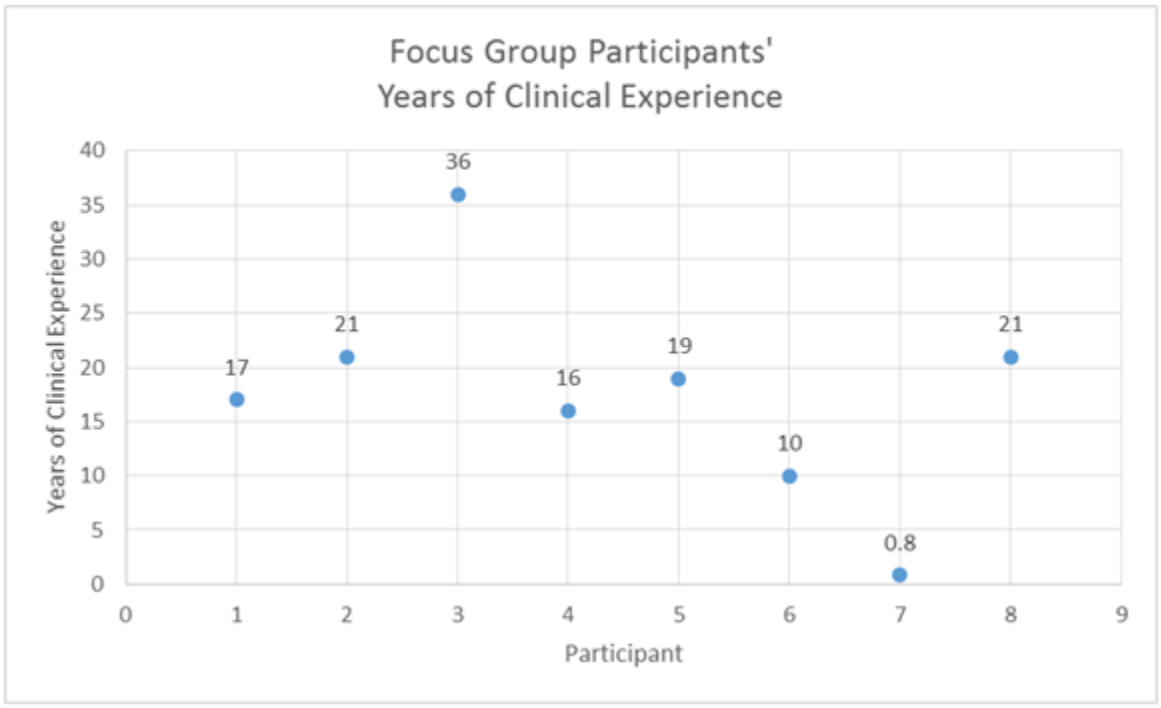
The eight individual interview participants were graduates from the Ontario college's OTA and PTA program. There was a total of seven female and one male participants whose ages ranged from 21 – 29. From the graduating class of 2011, there was one participant, five participants from the graduating class of 2012, and two participants from the graduating class of 2013.

Figure 5 – Individual Interview Participants' Year of Graduation

All of the participants were working in urban settings. Five participants were employed in a hospital, one participant in a private clinic, and two participants were employed in long term care facilities. Five of the participants were working in the dual role of OTAs and PTAs, under the assignment of either an OT and/or PT. Three participants were working as PTAs only.

Within the focus group, there were four occupational therapists, three physiotherapists, and one administrator, all employed by an Ontario hospital. The focus group consisted of six females and two males with clinical experience ranging from 10 months to over 30 years in their professions.

Figure 6 – Focus Group Participants' Years of Clinical Experience



The focus group participants worked in a variety of practice areas including acute medicine, surgical, complex continuing care, and active rehabilitation.

The Interview Setting

The principal investigator conducted the individual interviews in her office at the Ontario college. This office environment was familiar to all of the participants, as the primary investigator was their professor during their education in the OTA and PTA program. This principal investigator's office might evoke different emotional responses for each participant depending on his/her association with this environment. Based on the environment and their feelings, their level of participation and engagement in the research study might range from low to high. Even though it appeared that all of the individual interview participants were highly engaged based on their levels of participation, the principal investigator did not employ a method of validation.

After the initial individual interview, during which the principal investigator subsequently received a telephone call during the interview, the principal investigator,

- scheduled the interviews at the end of the day when there were less student inquiries,
- placed signage on the office door to advise that an interview was in progress and please do not disturb, and
- programmed the telephone to voicemail directly, to prevent environmental disturbances during the completion of the individual interviews (Easton et al., 2000).

The individual participants related to the environment with feelings of fondness. This expression of familiarity provided the principal investigator with expedited rapport building and trust with the participants. Individual Interview Participant seven (IIP7) felt strange returning to the Ontario college, as the association with this environment was one of education and to visit for another reason seemed out of place.

The individual interviews ran smoothly and the candid discussion during the administration of the interview guide facilitated the participants' levels of engagement when answering the questions. The principal investigator struggled with the balance of familiarity versus the role of researcher prior to the individual interview with IIP1. The principal investigator reflected on this concept within her journal:

> *"Well, tomorrow is my first individual interview! Although I am comfortable with administering the interview guide, I am hyper-cognizant that my role is that of a researcher and not a professor. I anticipate that the interviews will be more of a conversation than an interview based on my closeness with the participant. Despite my positive relationship with the participant, I realize that I have a*

minimal appreciation for her perception of competence in clinical practice, but I will soon!" (September 7th, 2014).

The focus group was conducted in a board-room at an Ontario hospital. Although the board room may not have been familiar to all of the focus group participants, this environment was in their place of employment where they were accustomed to the location and layout.

Following the iterative process of data collection and analysis, the data revealed four overarching themes. These themes are similar to the competencies outlined in both competency profiles. The themes demonstrate a calibration with the expectations of clinical competence by OTA and PTA programs and national organizations with the perceptions of OTAs and PTAs in clinical practice.

Themes

The participants' responses demonstrated a comprehension of the posed questions from the interview guides. The participants' level of engagement based on their immediate responses displayed an awareness of the key concepts that impacted their clinical competence as OTAs and PTAs. The key concepts impacting their perceptions of competence included education, transition into clinical practice, clinical strengths and areas of development, and self-awareness. The following are the four overarching themes that emerged from the data that influence the OTA and PTAs' perceptions of competence with clinical skills in practice:

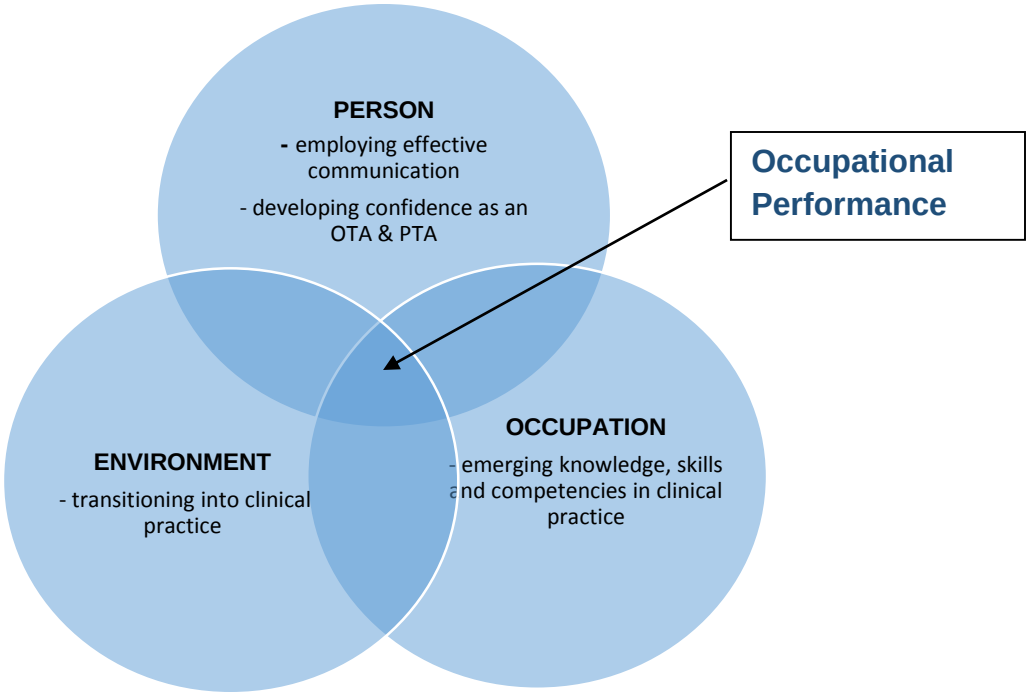
- **Employing effective communication**
- **Emerging knowledge, skills and competencies in clinical practice**
- **Transitioning into clinical practice**
- **Developing confidence as an OTA and PTA**

The participants' experiences and the themes which emerged related to their occupational performance can be examined using the PEO Model within the following categories,

- **Person** – employing effective communication and developing confidence as an OTA and PTA,
- **Environment** – transitioning into clinical practice, and
- **Occupation** – emerging knowledge, skills and competencies in clinical practice.

As illustrated in Figure 7, the overlap between the concepts of person, environment, and occupation, depicts the optimal fit with the graduate OTAs and PTAs' lived experiences and the meanings associated with those experiences. The interaction is "the dynamic experience of a person engaged in an occupation within an environment over time" (Strong et al., 1999, p. 124).

Figure 7 – Person Environment Occupation Model for OTAs and PTAs Graduates' Perceptions of Clinical Competence in Clinical Practice (Adapted from Law et al., 1996)



Person: Employing Effective Communication.

The first theme is ***employing effective communication***. Within the PEO Model, effective communication is incorporated within the concept of *person*. Communication has an impact on the person in relation to their knowledge (when and how to communicate) while they engage in meaningful and purposeful employment. The participants in both the individual interviews and focus group highlighted the importance of communication with patients, colleagues, and members of the interprofessional team as a foundational element in clinical practice. The participants all stated that effective

communication was an essential competency for the OTA and PTA. When asked to define communication, all participants noted aspects of verbal, non-verbal, and written interactions with patients, colleagues, and other interprofessional team members.

The theme of effective communication emerged from codes related to verbal and non-verbal interactions with peers and patients, the strategies that the individual participants used to address challenging issues at work, interprofessional team interactions, and key OTA and PTA clinical competencies. The individual participants shared their perceptions of ensuring that effective communication is maintained with all stakeholders; thereby facilitating open and active partnerships.

One participant discussed the importance of communication within her role as an OTA and PTA,

> *"Communication is definitely a big thing to have… written, vocal, and body language. We learned about how important communication is every day in the [OTA and PTA] program".* (IIP1)

This participant recognized the necessity to communicate with a variety of individuals including patients, caregivers, colleagues and members of the interprofessional team. Her inclusion of methods of communication aligned with the definition from other individual participants and focus group members. Reflectively, IIP5 attributed her confidence with communicating with therapists with her positive experiences as a student in the OTA and PTA program.

> *"The ability to approach the professors has really helped me in approaching the therapists and asking them questions".*

Focus group participant one (FG1) expressed that since the Ontario hospital implemented uniforms (each colour represents a different job classification) in an

attempt to assist patients and visitors to distinguish between the staff members, OTAs and PTAs are approached by family members and physicians more often as all rehabilitation staff wear the same colour uniform.

FG1 shared that,

> *"A doctor came up and asked an OTA and PTA how a patient was doing. The OTA and PTA was confident in communicating the patient's level of participation with them, but also directed the physician to the therapist".*

FG4 concurred by noting,

> *"OTAs and PTAs need to: develop an understanding of the proper kind of chain of communication, and when to refer to the therapist to avoid any issues and appreciate their scope of practice".*

The individual participants discussed how they communicate with patients, the OT and/or PT, and other team members. The focus group participants shared their method of communication related to OTA and PTA interactions.

FG2 noted that,

> *"I try to check in with the assistant in the morning face-to-face and then the day starts and it is so busy. We use written communication as well, with notes either at our desk or on the treatment plan".*

From an OTA and PTA perspective, IIP6 agreed,

> *"There is a lot of dialogue between the therapist and the assistant of what we want the day to look like regarding patient care".*

The importance of liaising with the therapist was explained by the individual participants. The participants who were employed in long term care facilities shared that they did not see the PT on a daily basis and because of this they had implemented

various strategies to ensure effective communication. The individual participants recognized the potential safety risks of not adhering to the established treatment plan, if they chose to proceed without liaising with the regulated therapist.

IIP2 advised that,

> *"If I am by myself and I am unsure of what to do, I have access to the therapist at all times. I will call him or email him and not proceed until we have had a discussion".*

The concept of patient-centred care emerged during the individual interviews. The participants described their use of communication as a method to build rapport, enhance the therapeutic relationship, and provide optimal patient care.

> *"I'm breaking down what we are going to do with patients. I think it is encouraging for them to see people who are confident about their profession coming into their room".* (IIP6)

Throughout the study the individual participants reaffirmed that they were members of the interprofessional team. One individual participant described her experience on the team from both positive and adverse perspectives,

> *"You are not functioning as an individual entity. You're functioning as a team together and there's no reason why you should feel that you're any less competent than your team members. It is all about the communication and how someone interacts and speaks with you. Asking questions and communicating with your team members helps you understand why certain things happen".* (IIP4)

In addition, IIP3 noted that,

> *"I work on an interprofessional team so there are a lot of learning opportunities to learn how to communicate and what to communicate with people [patients and other team members]".*

Communication with peers was a strategy used by the individual participants to address knowledge or task deficits and conflict management.

> *"I talk with the PT and having open communication about any troubles that I am having. As well as having the support from other assistants who graduated from the program has helped me transition into work"*. (IIP7)

Summary.

From the perspectives of the individual and focus group participants, effective communication was identified as a key factor during patient, peer, and team interactions. Within the person concept of the PEO Model, the individual participants' cognition and problem solving skills are contributing factors to effective communication. The focus group participants highlighted the importance of ensuring that the OTAs and PTAs could determine when the therapist should be contacted related to the chain of communication and accountability.

The individual participants described how effective communication was necessary with patients to build rapport and initiate the therapeutic relationship. These participants explored their communication methods and styles with the therapists when they are not on site or when they are experiencing a challenge either related to a knowledge deficit or conflict. Optimal communication within the context of clinical

practice facilitates the development of confidence which is the next theme, developing confidence, as an OTA and PTA.

Person: Developing Confidence as an OTA and PTA

The second theme is ***developing confidence as an OTA and PTA***. This theme was also categorized under the *person* concept of the PEO Model. As confidence is a combination of self-efficacy and self-esteem (Bandura, 1986), this theme addresses the spirituality component of the person and the impact of this factor on their meaningful engagement in their profession. The individual participants noted that confidence in the execution of their work, in addition to their abilities to handle challenging situations, have developed since graduation. During the administration of the individual interviews, the participants discussed their perceived confidence. The individual participants disclosed that confidence varied based on their mindsets, the environment (physical, social and institutional), and the context of the encounter.

Subtheme: Application of self-awareness through self-reflection.

The focus group participants perceived that the development of self-awareness by the individual participants would enhance their confidence in clinical practice.

> *"Self-awareness is really important because you learn to recognize what you know and what you don't know. As you find the appropriate resources to figure out what you don't know and problem-solve the issues, you will feel more confident with what you need to do".* (FG8)

The individual participants utilized self-reflection, a process taught in the OTA and PTA program to assist in the identification of their strengths and areas for development. They noted that self-reflection from their perspective did not occur until more than six months after working. During the first six months, the individual

participants were focused on ensuring that they were competently completing their assigned tasks. The individual participants noticed that after they received feedback from their colleagues and/or supervisors on their areas of improvement, they could then redirect their energy and focus on what they did not do well and develop a plan to remediate.

> *"It's important to take a step back and say…. What has worked and what needs to be corrected?"* (IIP1)

The principal investigator observed the individual participants' verbal and non-verbal body language during conversations related to confidence. The field notes revealed that the individual participants were smiling, maintaining eye contact with the principal investigator, leaning back in their chair with open body posture, and spoke with an enthusiastic tone while discussing confidence. The individual participants exuded pride and a sense of accomplishment now that they were confident in their roles as OTAs and PTAs.

> *""I have that confidence to know that I am capable to do my job. I'm competent and I need to make sure that I communicate and demonstrate that consistently".* (IIP8)

Summary

In this study, confidence developed based on the comfort levels, self-reflections, and increased opportunities to demonstrate clinical competencies as OTAs and PTAs. As time progressed, the individual participants gained confidence in their abilities to complete their jobs in a safe and patient-centred manner. The individual participants' verbal and non-verbal communication were in synchrony when describing their confidence with respect to clinical practice. The individual participants identified their

acquisition of confidence as a continuum over the transition from their roles as students to clinicians. This progression from one role to another is the next theme, transitioning into clinical practice.

Environment: Transitioning into Clinical Practice

The third theme is ***transitioning into clinical practice***. In the context of this research study, this theme is related to the shift in roles from student OTAs and PTAs to OTAs and PTAs, following graduation from an Ontario college program. Transitioning into clinical practice is a theme within the *environment* concept of the PEO Model and emphasizes the social, physical, and institutional environments. The social environment considers the teaching attributes, attitudes, and program organization at the college level. The support provided by peers during the individual participants' transitions to work is also included in this concept of social environment. Moving from the Ontario college to the workplace incorporates the physical environment. The educational regulations and guidelines associated with the Ontario college's OTA and PTA program and workplace organizations encompass the institutional environment. This theme was derived from the codes of emotions related to entry into clinical practice and educational preparation for clinical practice.

Subtheme: Emotions Related to Entry into Clinical Practice.

During the administration of the individual interviews, the principal investigator observed a change in body positioning when the participants were asked the question, *"What do you remember as your overriding emotions?"* This question was asked in the context of transitioning into clinical practice. The principal investigator recognized that the individual participants sat back in their chairs, IIP1 was wringing her hands, and both IIP5 and IIP8 sighed when contemplating an answer to the question. These

behavioural changes were confirmed by the field notes. When the introductory questions were discussed, the individual participants were observed to sit upright, smile, and laugh. This change in affect was hypothesized to be associated with the individual participants' feelings at that stage of their lives. IIP1 noted that although she felt comfortable with her transition (as she had a student fieldwork placement at her workplace), she was still nervous. The memories of those initial days caused her to become anxious.

"I was nervous and oh my gosh, what if I do not do well!"

When discussing their feelings about transitioning into clinical practice, the concepts of fear, anxiety, and nervousness were prevalent among the individual participants. These emotions were related to their perceptions that they might be unsuccessful in their roles. The participants shared their initial emotions when they started work as OTAs and PTAs.

"Anxiety and fear about not only do I know what I'm doing, but do other people think I do". (IIP4)

Although the individual participants were apprehensive when transitioning into the workforce environment, they also conveyed positive emotional responses. The individual participants shared that they were proud to have achieved their goals of employment within their chosen profession. After two years of acquiring and applying knowledge, they were rewarded with engaging employment.

"The joy of knowing that what I learned is actually what happens in real practice". (IIP4)

"Super excited to find a job in my field". (IIP8)

The individual participants introduced the perception of confidence when discussing transition into practice. Within this theme, confidence is related to the positive emotions that the individual participants expressed about their profession.

"I was feeling confident that I was going to get a good job". (IIP2)

The principal investigator realized that as the individual participants transitioned into the clinical practice environment, their emotions played an integral role in their shift from graduate to employee. Thus, the individual participants perceived two factors that contributed to their successful transitions into clinical practice: one was emotional readiness and the other was educational preparation.

Subtheme: Educational Preparation for Clinical Practice.

The transition into clinical practice is embedded in the *environment* concept of the PEO Model, as the physical environment references the transition from an Ontario college to a workplace environment. Within the concept of environment, educational preparation for clinical practice also incorporates the institutional environment by understanding the educational regulations and guidelines of Ontario colleges' OTA and PTA programs.

It was recognized that participants may be reluctant to identify critical comments about their educational program experiences. The individual participants were all graduates from one OTA and PTA program in Ontario and were taught by the principal investigator. Five of the eight focus group participants had worked with the principal investigator eight years previously when she was an employee at an Ontario hospital. The focus group participants also liaise with the principal investigator in her role as a professor in the OTA and PTA program at an Ontario college.

The principal investigator assured that individual participants and focus group participants had full opportunity to discuss both the strengths and needs for improvement of the OTA and PTA program. This was ensured by the principal investigator reminding the individual participants and focus group participants of her role in this context, as a researcher. The principal investigator encouraged all participants to share positive and constructive comments.

Focus Group Responses.

Five of the eight members had been involved with the OTA and PTA program since its inception as either clinical preceptors or guest speakers and therefore were able to provide a unique perspective to the study. The focus group participants discussed the program improvements that they perceived strengthened the quality of the applicants to the OTA and PTA program and subsequently led to graduates who were ready for employment.

> *"The difference in the last two years has been wonderful with the addition of the new fieldwork coordinator and just the caliber of students that we have seen come through has been very impressive". (FG3)*

The focus group participants recognized that the students' fieldwork placements were beneficial to both the student and the employer. These placements took place over three of the four terms of study. The first fieldwork placement was observational and the following three placements involved experiential learning. The placement expectations within the OTA and PTA program required the students to integrate theory and clinical skills in a variety of practice settings including hospitals, rehabilitation centres, long term care facilities, private clinics, community health centres, and childrens' treatment centres (MTCU, 2008). Within the academic program, the

individual participants completed four experiential fieldwork placements that were organized by the academic program in a variety of practice settings. The field placements were coordinated to expose the students to the diverse roles, skills, and competencies carried out by OTAs and PTAs in clinical practice.

The focus group participants noted that the type of clinical exposure and length of clinical placement were factors that contributed to optimal preparation for clinical practice.

> *"It helps if the employee had been a student at this facility as they know the expectations for their roles as an OTA and PTA here at the site. I think that the college program has prepared them well for their job duties"*. (FG3)
>
> *"If a student has completed a six or eight week placement here, how we would orient that person would be different than how we would orient somebody who hasn't had exposure. Orientation is easier if they have already been here". (FG4)*

The focus group participants provided comments about the quality of the Ontario college's OTA and PTA program. There was consensus among the focus group participants regarding the OTA and PTA program issues. These concerns were related to fieldwork placement scheduling and level of exposure to the profession of occupational therapy. The focus group participants, especially the OTs, envisioned that all OTA and PTA graduates should have experienced 50% of their fieldwork placements in occupational therapy and 50% in physiotherapy, as they are dually trained. There was a realization from FG2 and FG6 that the demand for occupational therapy content-based placements far surpasses the current supply.

> *"I would like to see them have an equal amount of time in OT and PT, so that they are coming out with a good understanding of both professions. I know that's*

hard depending on the number of OT placements that the college program is offered". (FG2)

The focus group participants inquired if the placement schedule could be modified from mornings only to full days during the third term of the program. It was felt that the student OTAs and PTAs would benefit from the opportunity to participate in the full daily functions of OTAs and PTAs if the placements were arranged differently.

"I know that there are so many things that go into deciding when and how the placements are structured; however, it would be nice if they were doing full days to appreciate their full scope". (FG2)

The focus group participants stated that the integration of theory and clinical skills were evident during their interactions with both student OTAs and PTAs and graduate OTAs and PTAs.

Individual Participant Responses.

After entering a work environment, the individual participants identified that the OTA and PTA college program had provided a foundational base of knowledge and skills to prepare them for entry level clinical practice. In addition to the program's strengths, the individual participants identified that there were areas of additional exposure that would have enhanced their levels of preparedness.

"I really enjoyed the neuro side of rehab and would have liked more information". (IIP5)

The individual participants identified the following influences as positive contributing factors that lead to their optimal transitions to the practice environment:

- the curriculum design of the OTA and PTA program with the opportunity to build on their knowledge;

- evaluations including hands-on practical testing; and
- access to the program staff (faculty and support staff).

The individual participants felt that the program's curricular content contributed to learning the required OTA and PTA knowledge, skills and competencies.

"The layout of the program was good because you build upon the next thing and at the end you combine everything and it made sense". (IIP3)

All of the individual participants noted that the OTA and PTA program curriculum was organized in a way that regardless of their places of employment, their education would be utilized. The individual participants agreed that their fieldwork placements reinforced that the knowledge, skills and behaviours taught in the classroom were necessary in a realistic environment.

The individual participants perceived that their fieldwork placements provided them with the best preparatory experiences for clinical practice. While fulfilling the competencies related to each fieldwork placement, the individual participants were required to link theory and clinical skills while interacting with patients. These fieldwork placements solidified their understanding of the roles of the OTAs and PTAs in various practice settings.

"We had the chance to go to different settings on placement and that helped to explore the settings to know what suits you best". (IIP1)

"The field placements were great and a good balance between theory in class and clinical skills". (IIP6)

The individual participants reviewed the requisite courses in the program including anatomy and physiology and its application to functional movement, understanding typical lifespan development, introduction to the professions of

occupational therapy and physiotherapy, clinical documentation, clinical pathology, ethics, interprofessional education and practice, and clinical laboratory courses integrating both theory and clinical skills. The individual participants discussed the rigour of the program, although required, as being challenging.

Within the learning environment during the first term of the educational program, the individual participants had not approved of the degree of unpredictability with respect to patient care. However, once the individual participants completed their initial fieldwork placement, they appreciated the necessity that the curriculum was developed to simulate reality. This bridge between simulation and reality was beneficial for their transition into clinical practice.

> *"Practical tests where you have the standardized patient that you had to work on were really good because you never knew what to expect. So it kind of applied to real life because you never know what patients are going to be like".* (IIP2)

The individual participants stated that the learning environment was supportive, where their learning needs were met by the OTA and PTA educational program staff. The open-door policy and role modelling of professional behaviour were demonstrated by the program staff which encouraged individual participants to emulate that behaviour both in the classroom and during fieldwork placement. The individual participants noted that the program staff invested the time to determine students' preferred learning styles. To accommodate preferred learning styles, the program staff supplemented in-class learning with guest speakers and community site visits.

> *"Having different people come in and talk and travelling to the community agencies was a change of scenery. You got out there to appreciate what is available for patients".* (IIP2)

"I feel that my education… was beyond my expectations. What I learned… and having the support from the teachers really helped in making that transition". (IIP8)

Summary

The individual participants identified that their transitions to clinical practice were assisted by emotional readiness and educational preparation. Fieldwork placements were heralded by both the individual participants and focus group participants as opportunities to connect theoretical knowledge and apply clinical skills. As OTAs and PTAs, the individual participants discussed how their education (knowledge, clinical skills, and mentorship) prepared them to engage in their productive occupations and recognize individual readiness for the workplace. The next theme applies the academic preparation with respect to graduate OTAs and PTAs' emerging knowledge, skills and competencies.

Occupation: Emerging Knowledge, Skills and Competencies in Clinical Practice

The fourth theme is ***emerging knowledge, skills and competencies*** in clinical practice, a theme that is anchored in the *occupation* concept of the PEO Model. One aspect of occupation in the PEO Model is productivity which, for the individual participants, is employment. In this study, occupation includes the roles and tasks completed by the OTAs and PTAs. This theme arose from the codes related to the identification and demonstration of the knowledge, skills and competencies for OTAs and PTAs in clinical practice.

Initially, the focus group participants listed courses that the OTAs and PTAs were required to complete in the academic program such as, "a*natomy and physiology with a certain number of hours in PT and OT placements"* (FG4), *"handling skills and exercise*

groups" (FG3), and *"ethical type courses"* (FG1) when asked the question, "*What is your current understanding of the competencies for OTAs and PTAs within your clinical setting?"*

Based on the focus group participants' responses, the principal investigator concluded that the participants were unsure of the intent of the question, and corroborated this through the field notes. The principal investigator clarified the purpose of the question by referring to the competency-based profile of occupational therapy competencies from the Practice Profile for Support Personnel in Occupational Therapy (CAOT, 2009) as a guide, as the profile was accessible. Following the explanation, the focus group participants expanded their responses to align with the competencies of both the Practice Profile for Support Personnel in Occupational Therapy (CAOT, 2009) and the Essential Competency Profile for Physiotherapist Assistants in Canada (NPAG, 2012).

> *"I feel that the key skill would be to carry out the treatment plan and relay information back to the supervising therapist of current patient observations and prioritizing or working out a schedule, as they [OTAs and PTAs] will have been assigned tasks by various therapists"* (FG2), and *"They should be aware of their scope of practice and not do things they are not assigned to do by the therapist"* (FG3)

Both the Practice Profile for Support Personnel in Occupational Therapy (CAOT, 2009) and the Essential Competency Profile for Physiotherapist Assistants in Canada (NPAG, 2012) incorporate OTA and PTA knowledge, skills, tasks, and attitudes, in addition to the core competencies.

The focus group participants identified the competencies of patient and therapist communication, team collaboration, carrying out the treatment plan safely, and professionalism. These OTA and PTA competencies were reinforced through other documents and literature (ACOT, 2005; CAOT, 2007; Ellis et al., 1998; Lizarondo et al., 2010; Pullenayegum et al., 2005); however, the focus group participants noted that their generated list of competencies was not exhaustive.

In addition to recognizing with whom to communicate during clinical interactions, the focus group participants revealed that it was imperative for the individual participants to identify and maintain an awareness of their scope of practice. They believed that this level of recognition on the part of OTAs and PTAs would contribute to the development of collaborative team relationships and promote effective communication.

> *"What they should be able to do, is be aware of their scope of practice and not do things that are not delegated".* (FG3)

The focus group participants noted that OTAs and PTAs are required to demonstrate problem solving around multi-tasking when the work environment is busy. On the other hand, the focus group participants felt that OTAs and PTAs should also exhibit initiative with decreased work volumes by completing tasks without seeking out direction from the therapists. The focus group participants appreciated that expectations will vary depending on the OTAs and PTAs' levels of familiarity with the work environment, in addition to the length of time working as an OTA and PTA in clinical practice.

> *"An example would be Meditech [health care information system software program]… we expect them [OTAs and PTAs] to know how to use it [however]*

we have not completed formal training with them on how we use it in the department. We kind of expect them to be doing something and they've never seen it before". (FG4)

The individual participants acknowledged that the competencies demonstrated in clinical practice were dependent on work environments and roles. For example, the skills and competencies carried out in a hospital or rehabilitation centre would differ from those performed at a private clinic or long term care facility. One OTA and PTA noted that the therapists with whom she works permitted her to prescribe and progress exercise programs with patients. This individual participant stated that she had additional credentialing in exercise physiology, in addition to her OTA and PTA diploma.

"At our clinic, the physiotherapists do the initial assessments and provide me with the treatment plan and my job is to carry out the treatment plan. My job includes going over exercises, prescribing and progressing the exercises if I feel that they are safe to do so, as well as using modalities". (IIP3)

All of the individual participants expressed an understanding of the core competencies within the profession of OTA and PTA.

"I am sure to carry out the treatment plan as prescribed by the OT and/or PT safely. Some therapists will permit me to change the treatment plan, but it really depends on our relationship and their trust that I am competent to perform my job" (IIP1)

Despite the fact that all of the individual participants described the core competencies, only two individual participants referenced the national documents for OTAs and PTAs related to competency.

Individual Interview Participant three (IIP3) voiced that she loved her job as an OTA and PTA as she was implementing everything that she learned in the academic program. She felt that she could work competently as an OTA and PTA in any clinical setting stating,

> *"Because we learned in class [what to do] when you have a challenge, you can go back and think about what you learned, what you did, and how you can do it better. The hands-on labs helped where we demonstrated skills that we would do and use in the workplace… Practical exams put you under pressure and being under pressure, you'll get that at work, too".*

In agreement was IIP8,

> *"I worked so hard during the two years of the program, so to use all of those skills and knowledge that I acquired is great".*

The individual participants commented that their knowledge and skills were integrated on a daily basis.

> *"It is so important to understand the theory behind what you're doing. Not just learning the task, but knowing why you are doing it".* (IIP3)

Although the individual participants perceived that they performed core skills and competencies adequately, one participant took the opportunity to discuss her areas of development. She determined that a previous lack of exposure to particular tasks was sound rationale to contact her previous clinical preceptors and peers to schedule opportunities to practice the skills that she is not using currently in clinical practice.

> *"Because I am employed at a smaller hospital, there are some skills that I do perform regularly such as using a bicycle and treadmill for conditioning and using*

therapeutic ultrasound. Most of the patients that I work with are older, so my interaction with someone younger would need to be different". (IIP1)

Summary

Occupational Therapist Assistants and Physiotherapist Assistants are required to possess the core knowledge, skills and attitudes to implement assigned tasks. The individual participants articulated fulfillment with their chosen profession. Within this research study, OTAs and PTAs' core knowledge, skills and competencies were identified by both the individual participants and focus group participants. There are many skills and competencies that are demonstrated within the workplace, some are unique and others are common to both occupational therapy and physiotherapy professions.

The participants reported that carrying out the treatment plan was not the only essential role for OTAs and PTAs. The participants collectively stated that OTAs and PTAs should exhibit an awareness of their scope of practice to ensure patient safety. The individual participants discussed the pivotal role their education played in enabling them to function optimally as OTAs and PTAs.

Chapter Summary

In this chapter, the four themes of employing effective communication, developing confidence as an OTA and PTA, transitioning into clinical practice and emerging knowledge, skills and competencies in clinical practice were examined. The Person, Environment, Occupation Model (Law et al., 1996) was implemented as a framework to organize and conceptualize the themes. Chapter five will elaborate on the results through discussion and interpretation. The literature will be applied to the results from this research study to answer the research question, "How do OTA and PTA

graduates from one Ontario college perceive competence with clinical skills following one year of clinical practice?”

CHAPTER 5: Discussion

Overview

In this chapter, the principal investigator discusses the interpretations of the study results and the implications of the findings using the PEO Model as a conceptual framework. The PEO Model illustrates the degree of overlap between the concepts, thereby demonstrating the fit of graduate OTAs and PTAs' perceptions of competence with clinical skills in clinical practice. The discussion integrates the study results with existing literature to formulate a response to the research question. The strengths and limitations of the research study are also considered.

The Context of the Research Study

The purpose of this study was to investigate the question "How do OTA and PTA graduates from one Ontario college perceive competence with clinical skills following one year of clinical practice?" The principal investigator was inspired to research the perspectives of graduate OTAs and PTAs, and an essential group of clinicians with whom she has interacted in both educational and clinical environments. Through a review of literature, the principal investigator deduced that there was a paucity in examinations of the perceptions of OTAs and PTAs related to competence with clinical skills in practice.

Conceptual Framework

As the data were collected and analyzed, the PEO Model (Law et al., 1996) was implemented as a useful framework to conceptualize the information. Based on iterative analysis of the data, the results revealed four themes employing effective communication, developing confidence as an OTA and PTA, transitioning into clinical

practice, and emerging knowledge, skills, and competencies in clinical practice. The idea of optimal fit with respect to occupational performance is applicable at both the individual and systems levels (Broome, McKenna, Fleming & Worrall, 2009).

The PEO framework and concept of optimal fit were valuable tools that fostered the principal investigator's understanding of the participants' experiences during their engagement with the phenomena under study.

Person: Use of Title and Role.

All participants articulated an understanding of the knowledge, roles, skills and competencies of OTAs and PTAs. An awareness of these factors assists in the determination of the OTAs and PTAs' perceptions of competence with clinical skills in practice. Issues such as inconsistencies with educational credentialing, use of title, and a lack of understanding of the OTAs and PTAs' roles were raised by the participants. These concerns have been well documented in Canadian based literature (CAOT, 2011; NPAG, 2012; White Paper, n.d.).

Use of Title

The principal investigator advocates for the utilization of one title, OTA and PTA within the profession. This title represents the two health care professions in which OTAs and PTAs practice clinically. There exist inconsistencies in the use of title. In Ontario, Canada, the title for health care professionals (HCPs) who support OTs and PTs in clinical practice is OTA and PTA (COTO, 2000; CPO, 2010; MTCU, 2008). A two-year diploma is conferred upon the colleges' graduates by an OTA and PTA program (MTCU, 2008). However, the title is contingent on the place of employment.

The focus group participants confirmed that the title used within the Ontario hospital was Rehabilitation Assistant (RA). Regardless of the title, this one particular Ontario hospital required in its hiring process that the HCPs who support the OTs and PTs in clinical practice are graduates from an OTA and PTA program. There are additional HCPs who fall under the rehabilitation umbrella including speech language pathology, audiology, and recreation therapy. At this Ontario hospital, the title of RA does not include the previously mentioned HCPs.

Although the Ontario hospital uses the title of RA, both the individual participants (who worked at the Ontario hospital) and the focus group participants recognized that this title was synonymous with the title of OTA and PTA in relation to education, roles, and tasks assigned by OTs and/or PTs. This Ontario hospital has acknowledged the importance of a higher level of education and skill set of OTAs and PTAs educated in both disciplines in contrast to those educated in single discipline educational programs (i.e., PTA only).

Reasons for this inconsistency in the use of title may be due to the educational credentialing and the fact that there is no protection of title. As the profession is not regulated, the title can and will be used by individuals who have not successfully completed education from an OTA and PTA program. The principal investigator advocates that the title should be restricted to graduates of dually trained OTA and PTA programs, as opposed to those from other HCP educational programs (i.e., kinesiology) who are employed in the roles as OTAs and PTAs. This potential misrepresentation of title by other HCPs can lead to confusion for stakeholders as the title infers that the individuals have received education from an OTA and PTA program. Pursuant to the

completion of this education, the stakeholders would expect that the HCPs have the competencies to carry out all associated OTA and PTA roles.

In Canada, the Canadian Physiotherapy Association (CPA), the national association for physiotherapists, and the CAOT adopted the titles of physiotherapist assistant and occupational therapist assistant in 2011 and 2015 respectively to replace the term support personnel (OTA and PTA EAP, 2015). This formal adoption of title reflects and recognizes the valuable contributions that OTAs and PTAs bring to clinical practice. The titles OTA and PTA imply that the individuals who utilize the title have earned their academic credentialing from a recognized OTA and PTA program.

Role of the OTA and PTA.

Given the inconsistencies with use of title, it is not surprising there is lack of role clarity. Within the literature, role blurring and rescindment of task assignment were acknowledged as sources of potential conflict between HCPs including OTs, PTs, and OTAs and PTAs (Knight et al., 2004). Workman (1996) noted that the roles between registered nurses and health care assistants (HCAs) appeared to be prescriptive whereby the registered nurse determined the role for the HCA in the clinical setting.

Although Workman (1996) did not explore the roles of OTs, PTs, and OTAs and PTAs specifically, she found that the relationship between registered nurses and HCAs was hierarchical in part because there was confusion around the role of the HCA. This parallels the perspectives of the roles individuals who support HCPs outside the field of rehabilitation. Knight et al. (2004) discussed role confusion between OTs, PTs and RAs. To alleviate this uncertainty and promote optimal functioning of the role, the RAs' responsibilities need to be clearly defined.

Contrary to literature, the issue of role confusion was not evident in the research findings from this study. The individual participants identified a keen awareness of their roles at work. With increased exposure and experience, their comfort and proficiency with these roles evolved over time. The OTAs and PTAs' roles were instituted by the workplace. As discussed previously, these roles vary and are based on educational credentialing and scope of practice in the employment context. Individual participants noted that, as OTAs and PTAs, their roles were not stipulated by the OTs and/or PTs. The professional relationship with OTs, PTs, and other OTAs and PTAs was viewed as collaborative. All participants agreed that the primary roles of OTAs and PTAs were to carry out the treatment plans established by the registered OT and/or PT ensuring the utmost safety. It is possible that the lack of role confusion is due to the high degree of collaboration between the Ontario hospital staff and this OTA and PTA educational program which may not be typical of most organizations.

Munn et al. (2013) discussed OTs' and PTs' challenges around the specific roles of OTAs and PTAs, rescindment of tasks, and limited awareness of the OTAs and PTAs' knowledge and skills. The focus group participants worked closely with the OTAs and PTAs at the onset of their employment to establish trust and rapport. These therapists revealed that it was necessary to have utmost confidence in the OTAs and PTAs, as they would be completing the assigned tasks established by the therapist.

Although there was no task rescindment, focus group participants were reluctant to assign the progression of exercise programs and grading and adapting of tasks to OTAs and PTAs if the individuals were either new graduates, new to the Ontario hospital, or had not worked at that specific site of the Ontario hospital in over one year. In these situations, although the focus group participants would not assign these tasks,

they worked with OTAs and PTAs to promote success and competence with task completion in the areas of exercise advancement and adaptation and grading of tasks.

The development of OTAs and PTAs' self-awareness is essential within clinical practice. Occupational Therapist Assistants and Physiotherapist Assistants (OTAs and PTAs) are employed in diverse work environments, each with its own supervisory model (face-to-face, telephone, and/or email). The individual participants contacted their respective therapists about concerns with any aspect of the patient interaction. They reiterated the importance of not implementing any aspect of the treatment plans if there was uncertainty.

Focus group participants discussed the necessity for individual participants to understand when to contact the registered therapist. Through demonstration of self-awareness and accountability, OTAs and PTAs must recognize what they do not know. In addition to the recognition of knowledge and skill gaps, OTAs and PTAs must consider taking action to remediate the area(s) requiring further development.

The principal investigator became aware of a tacit knowledge gap among focus group participants pertaining to the collaborative role of OTAs and PTAs and OTs and PTs within specific practice settings. As such, there is a definite need to enhance the education and clinical placement exposure to OTs and PTs to promote optimal working relationships. Jelley et al. (2010) concurred that although PTs and PTAs are required to work collaboratively, they have limited contact and opportunities to work with one another as students prior to transitioning into clinical practice.

Focus group participants identified that the roles of OTAs and PTAs were not restricted to task completion. Essential competencies ensure that OTAs and PTAs

have versatility and adherence to scope of practice when interacting with patients and team members. The focus group identified that OTAs and PTAs demonstrate their competence by integrating their knowledge, skills, and behaviours (actions) consistently in clinical practice.

Confidence was described by individual participants as increasing exponentially with clinical competence. The more confidence they perceived to have with the completion of their designated competencies, the more successful they felt within their roles. This admission is supported by Bandura's and Locke's (2003) concept that the perception of high self-efficacy is based on past performance. When an individual has experienced positive work outcomes, they have high self-efficacy and are confident in their ability to be successful with subsequent identical and similar tasks (Bandura and Locke, 2003). Workman (1996) determined that following the opportunity to apply knowledge, health care assistants (HCAs) had enhanced confidence that precipitated increased patient care contributions. Despite the confidence displayed by the OTAs and PTAs within their roles, some HCPs have articulated that they do not feel prepared to work with HCAs.

Nancarrow and Mackey (2005) noted that not all OTs felt that they had acquired the essential knowledge about OTAs and PTAs' roles to supervise and assign tasks. Their point was highlighted by the focus group participant who had the least amount of clinical experience. This focus group participant perceived that her exposure and OT education were limited and subsequently, she was ill prepared to assign tasks to OTAs. The opportunity to obtain the required knowledge about competencies, roles, and task assignments to OTAs occurred during her orientation to the Ontario hospital. This focus group participant also integrated her learning through conversations and interactions

with OTs, PTs, and OTAs and PTAs. Ultimately her confidence and comfort with task assignment to OTAs progressed over the course of her employment. Health care programs in academic institutions are charged to prepare their students for clinical practice and meet the health care demands in the 21st century (Ferns, Campbell, & Zegwaard, 2014). The individual participants within this study noted that their academic program provided them with the required knowledge, skills and competencies to practice clinically.

Individual participants agreed that their educational preparation, especially in field placement experiences, facilitated their role development as OTAs and PTAs. Their academic training contributed to their preparation for transitions into clinical practice. In this study, the ***person*** concept of the PEO Model influences enhanced occupational performance positively and optimizes fit while interacting with environment and occupation dynamically over time. In the next section, the aspects of the environment are addressed in relation to transitioning from the college to workplace.

Environment: The Transition.

Individual participants used words such as “seamless” in reference to their transition from education to employment. Factors that facilitated the shift were categorized in the concept of ***environment*** within the PEO Model, specifically the institutional and social environments (Law et al., 1996). The institutional environment includes the structure of the academic program, fieldwork placements, workplace orientation, and the OTAs and PTAs’ job descriptions. The social environment consists of the support from the Ontario college’s OTA and PTA educational program staff, as well as OTs, PTs, and OTAs and PTAs at the place of employment.

Hodgetts et al. (2007) discussed the incompatibility between the educational institution and the employer with respect to the essential competencies for clinical practice. However in this study, the focus group participants were active within the Ontario college's educational OTA and PTA program. Their level of familiarity reinforced the focus group participants' awareness of the OTA and PTA program's curriculum. Based on this awareness, there were minimal issues with the identification of the OTA and PTA competencies. This familiarity with the program curriculum led to a fluid transition for the individual participants who were employed by the Ontario hospital engaged in this study. The unique relationship and level of involvement between the Ontario college and the focus group participants is an important strategy to consider in the future. The affiliation between the two organizations has proved advantageous in the promotion of a smooth transition between environments for the graduate OTAs and PTAs.

Work integrated learning (WIL) is a term utilized internationally to describe authentic student learning experiences that provide opportunities to apply theoretical knowledge and skills with the goal to facilitate employability of graduates (Ferns et al., 2014). These learning experiences "aim to blend the study undertaken by students within the classroom with the experience of practices in the workplace" (Ferns et al., 2014, p. 2). Fieldwork placements completed by the individual participants in this study would fall within this category.

Self-efficacy is heightened with successful experiences (Bandura & Locke, 2003). Within fieldwork placements, students learn from other individuals by observing, imitating, and modeling behaviours in preparation for entrance into the workplace (Bandura, 1986). Brown et al. (2011) emphasized that clinical fieldwork is an integral

part of education for health sciences. In addition, the authors noted that currently, clinical fieldwork has become a requirement for program accreditations by professional accrediting bodies (Brown et al., 2011).

The benefits of clinical fieldwork include students' abilities to apply theory to clinical practice, develop clinical competence, and enhance interpersonal skills and self-confidence in a real world setting (Rodger et al., 2008). Rodger et al. (2007) discussed that upon successful completion of a fieldwork placement, students are motivated to apply for employment based on their awareness of the organization and "a high sense of self-efficacy, leading to higher retention once employed" (p. S95). For employers, the benefits include recruitment of potential employers who are familiar with the organization, the completion of assigned workload at no cost, and job satisfaction on the part of the clinical preceptors as they share their knowledge and expertise (Ferns et al., 2014; Rodger et al., 2008).

Individual participants discussed their fieldwork placements as a fundamental component of learning. All of the individual participants were employed in a work environment in which they completed a fieldwork placement during their second year of study in the OTA and PTA program. Positive exposure to a specific practice area influenced OTAs and PTAs' decision making about where to apply for a job.

Crowe and Mackenzie (2002) identified that the principal factor in student OTs' choices to practice in specific areas are related to fieldwork experiences. They also identify that the timing of the fieldwork placement might be a determining factor, as OT students perceived increased confidence in their roles through the demonstration of autonomy over time. The student OTs in the study by Crowe and Mackenzie (2002)

attributed their abilities to reach a decision about future areas of clinical practice to the exposure to a variety of fieldwork placements and practice areas. The fact that most of the individual participants in the present study who chose to apply to a site in which they had had a fieldwork placement during the last year of study is supported by trends identified in the rehabilitation literature (Barnitt & Salmond, 2000; Clare & van Loon, 2003; Crowe & Mackenzie, 2002).

When individual participants completed fieldwork placements at their future employment site, their transitions were viewed as an extension of the placement when it occurred during one of the two placements that preceded graduation. In these situations, individual participants and focus group participants both appreciated the existing knowledge regarding employers' expectations. Focus group participants alluded to providing those employees with variations of the department's orientation, as some of the content had been addressed during the fieldwork placement. This orientation would be easier for both the employer and the OTAs and PTAs. Rodger et al. (2007) stated that a benefit of employing previous students was that they "know the system" and can "therefore hit the boards running" (p. S95).

Despite smooth transitions into clinical practice, individual participants articulated their range of feelings during that time. Their feelings included fear, nervousness, and anxiety around the unknown variables within the workplace including acceptance from peers, meeting the employer's performance expectations, and knowledge and clinical skill integration. These emotions eased over time with the development of competence in their roles. The research study's findings are consistent with literature that studies transitions for health care professions such as nursing and social work (Clare & van Loon, 2003; Hay et al., 2012).

On the other hand, positive reactions to their transitions included happiness, excitement, pride, and fulfilment with their accomplishments. The opportunity to apply knowledge, skills and behaviours (actions) was an engaging and meaningful process for the individual participants. Institutional and social environments provided structure and support. These environments facilitated the individual participants' favourable transition from educational program to workplace. The institutional and social environments have an enabling effect on occupational performance and provide meaningful engagement for OTAs and PTAs.

Occupation: Clinical Competence.

Competence is the act of doing, in addition to the act of knowing (Mackey & Nancarrow, 2005). The participants in the pilot comprehended and answered all of the questions related to competency. Individual participants and focus group participants identified the term competence; however, engaged in questioning to ensure its intended meaning, as the terms competence and competency were confusing for them. The principal investigator referenced definitions of competence as found in literature (Kumar et al., 2006) and discussed the Practice Profile for Support Personnel in Occupational Therapy (CAOT, 2009) and the Essential Competency Profile for Physiotherapist Assistants in Canada (NPAG, 2012) to illustrate the differences. This misunderstanding of terminology among both sets of participants substantiated the misperception identified in the literature regarding the absence of a concrete definition for the term "competence" (Epstein & Hundert, 2002; Kumar et al., 2006)

Regardless of the definition, focus group participants noted that it was imperative to confirm OTAs and PTAs' competence prior to the assignment of tasks. This

validation of the level of competence is another factor that facilitated the trusting relationship between OTs, PTs, and OTAs and PTAs. Once competence was confirmed through consistent successful demonstration of the assigned tasks, focus group participants were confident that the assigned tasks would be completed according to the treatment plan. As the OTAs and PTAs continued to demonstrate competence with their assigned tasks, the focus group participants assigned more complex tasks.

Throughout the literature, there was a lack of conclusive definition for the term clinical competence (Kumar et al., 2006; Tilley, 2008). Regardless of this gap, there are documents that outline the specific competencies for OTAs and PTAs in clinical practice in Canada (CAOT, 2009; NPAG, 2012). These documents prove beneficial in understanding the core competencies for OTAs and PTAs; however, there are unique competency documents for each of the professions. This lack of integration leads to uncertainty on how to access and implement the information.

There is congruence between the individual participants' perceptions of competence and those of the focus group participants. The participants agreed that the communication between OTs, PTs, and OTAs and PTAs was instrumental in fostering conducive working relationships. All of the individual participants shared that after one year of working, they felt competent in their roles and spent time self-reflecting to address their areas for development.

Although the individual participants perceived that they were unable to self-reflect until after six months of clinical practice, the principal investigator proposes that self-reflection occurs even when not labelled. The individual participants identified that they

acknowledged and put forth a plan of remediation based on the feedback received from colleagues and supervisors. Throughout the academic program, the individual participants completed evaluated self-reflective activities, such as journal writing to think about their learning experiences. The principal investigator hypothesized that the individual participants did not consider their remediation as self-reflection, as these plans varied from what they were taught. In order to create a remediation plan, the individual participants contemplated the feedback which required them to assess their strengths and areas of development or self-reflect.

Cannon, Feinstein, and Friesen (2014) evaluated student learning and the importance of accurate feedback in a study related to simulation. The concepts are similar to this study from the perspective that competence requires students to learn from their mistakes, in addition to drawing on the experiences stored in their memories to address the issues if and when they arise again. The authors note that students are also motivated by how they can improve based on previous experiences leading them to a stage of conscious competence (Cannon et al., 2014).

The focus group participants agreed with the individual participants' perceptions with regard to preparation for their roles as OTAs and PTAs. In Ontario, Canada, OTAs and PTAs are dually trained by mastering competencies in both professions. The principal investigator recognized that OTAs and PTAs have dual competencies in the professions of OT and PT. In addition, there are some competencies that are common to both professions as outlined in Table 4.

Table 4 – Discipline specific and common OTA and PTA competencies

Common Competencies	• Carrying out the treatment plan as assigned by the registered therapist • Communication with the therapist, patient – including obtaining informed consent, and interprofessional team members • Team collaboration by providing the relevant team member with a patient update • Written and electronic documentation; workload measurement • Safe operation and maintenance of equipment • Performing optimal body mechanics when completing patient intervention • Patient positioning and transfers
OTA Competencies	• Wheelchair measurement and assignment of wheelchair seating components • Activity of daily living education, including bathing, dressing, grooming, eating, and toileting • Splint modification and usage education • Cognitive and perceptual activities • Education on energy conservation and work simplification • Instrumental activities of daily living education including community mobility, meal preparation, and laundry • Education on the use of adaptive and assistive equipment
PTA Competencies	• Safe use of electro physical agents/modalities (including ultrasound, cryotherapy, thermal therapy, transcutaneous electrical nerve stimulation, interferential current, neuromuscular nerve stimulation) • Therapeutic exercise – range of motion, stretching, endurance, strengthening, resistance, and balance • Ambulation and gait education • Modification of orthotics (i.e., ankle foot orthoses) • Measuring for ambulation devices, i.e., crutches, canes, and walkers • Manual muscle testing as part of the treatment plan, following the PT's assessment • Group exercise education

The clinical competencies of OTAs and PTAs vary according to their roles and work environments. Within health care, work settings are dynamic and unpredictable. The OTAs and PTAs are required to demonstrate knowledge and skills in problem solving, prioritizing, and taking initiative when working with patients and managing workloads. Miller's pyramid of assessment of clinical competence (1990) is a valuable framework to assess clinical competence in health science education. The integration of knowledge, skills, and attitudes correlates with the competency profiles for OTAs and PTAs with respect to clinical practice (CAOT, 2009; NPAG, 2012). The introduction of the pyramid with students may facilitate their understanding of the linkage between the assigned evaluation and their expected level of competency. Within OTA and PTA programs, educators could consider integrating this framework with other pedagogical tools to provide a solid foundation for students to evolve from novice to expert (Miller, 1990).

The focus group participants remarked that their expectations around competence depends on the OTAs and PTAs' level of familiarity in specific work environments, as well as the duration of time in clinical practice. The importance of communication and clear expectations is apparent, to ensure positive outcomes within OTs', PTs', and OTAs and PTAs' working relationships.

This engagement in productivity will change as OTAs and PTAs evolve within their roles and have more exposure and opportunities to demonstrate competence. Throughout the study, the individual participants discussed overall contentment with their education and employment, as these were identified as pathways to their successes as OTAs and PTAs. The ***occupation*** component of the PEO Model focused on clinical competence as OTAs and PTAs. Individual participants spoke of their

confidence with clinical competence. Their perceptions of confidence with clinical competence were confirmed by the focus group participants who had observed clinical competence in action. This demonstrated evidence of OTAs and PTAs' clinical competence with clinical skills in clinical practice lends to congruence between person, environment and occupation. The overall occupational performance is produced through good fit between person, environment, and occupation.

Summary

Phenomenology's emphasis on the meaning associated with lived experiences (Beck, 1994; Giorgi, 2012) informed the approaches and methods used to describe the perceptions of graduate OTAs and PTAs' competence with clinical skills in practice. The principal investigator employed bracketing and acquired a deeper understanding of participants' encounters within their profession. In addition, through self-reflection, active listening, and journaling, the principal investigator recognized consistently and mitigated preconceived responses during the interviews.

The conceptualization of the PEO Model in this study demonstrated a "transactional relationship between person, environment, and occupation" (Law et al., 1996, p. 9). The individual participants represented as the ***person*** concept appreciate the issues around the use of their title and understand their roles as OTAs and PTAs. The purpose and meaning of their profession and the perceptions of competence instilled a sense of pride in their work. Using effective communication, the individual participants and focus group participants were willing to integrate their roles in a collaborative partnership.

The transitions from educational institution to workplace by the individual participants were represented by the ***environment*** component of the PEO Model. The supportive social and institutional environments fostered a fluid transition from one environment to the other. Familiarity with roles of OTAs and PTAs, as well as OTs and PTs workplace expectations, self-awareness, and proficient task completion guided individual participants in the direction of competence in clinical practice. These factors precipitated successful transitions from the educational environment to the workplace environment.

Self-recognition of competence assisted individual participants in meeting work expectations. Individual participants and focus group participants articulated the core competencies within the profession. The competencies are not represented simply by task completion but include knowledge and attitudes. As dually trained clinicians, OTAs and PTAs are responsible for differentiating between the scope of practice of each profession.

The outcome of interactions of person, environment, and occupation is occupational performance. Based on the transactions of the PEO Model in this study, individual participants have optimal fit when there are alignments between the three components. Elements of person, environment, and occupation contributed to graduate OTAs and PTAs' perceptions of competence in clinical practice. Table 5 presents a comparison of findings related to competencies, role clarity and academic credentialing in the research study to the results uncovered in literature.

Table 5: Category of comparison between the research study and literature

Categories of Comparison	Research Study	Literature
Competencies	OTs, PTs, and OTAs and PTAs understood competencies within the profession and identified the competencies	Lack of definition and understanding by OTs and PTs as there are two competency documents (CAOT, 2009; NPAG, 2012;); incompatibility between educational institutions and employers (Hodgetts et al., 2007)
Role clarity	OTs, PTs, and OTAs and PTAs summarized roles of OTAs and PTAs to include competencies, knowledge, and skills	Uncertainty of roles leading to decreased trust in skill set and rescindment of tasks (Knight et al., 2004; Munn et al., 2013)
Academic credentialing	OTAs and PTAs are dually educated and the receive a diploma in both disciplines	Dependent on the country, credential varies from on the job training to associate degrees in a single discipline (Salvatori, 2001; White Paper, n.d.)

Limitations of the Study

While the study provided insights into the perceptions of graduate OTAs and PTAs with respect to competence in clinical practice, it is essential to consider the study limitations.

As the participants were recruited from one Ontario college's OTA and PTA program, the results are specific to one setting. The opportunity to examine the information with other colleges' OTA and PTA graduates would have enriched the results from the study. However, many of the results from this study are reflective of the information documented in the literature.

Another limitation of the study would be the principal investigator's role as a researcher. Despite the explicit discussions around the current research role and the potential for perceived conflict of interest, there may have been study bias related to each participants' interpretations of the principal investigator's role. In addition there may be perceived pressure by participants to answer the questions in a specific way in an attempt to seek approval from the principal investigator.

The principal investigator piloted the interview guide for the individual participants; however, the guide for the focus group was not piloted. As there was confusion around the wording of the question related to the identification of the competencies of OTAs and PTAs, the completion by the principal investigator of a pilot for the focus group would have been consistent. The pilot of the focus group interview guide could have alleviated misunderstandings about the intent of the questions.

A final limitation relates to one inclusion criterion of individual participants. The inclusion criteria required that graduates could participate if they had worked in the profession clinically for one year of practice. The perspectives of other potential informants such as students who were not academically successful and did not graduate from the program and graduates who were not content with the educational program were not eligible to participate in the study. Graduates who chose not to participate in the study are also lost to the study incomes. Had these informants' perspectives been included, the study may have broadened the understanding about OTAs and PTAs' perceptions of competence in clinical practice.

CHAPTER 6: Implications for Practice and Conclusion

In this chapter, the principal investigator summarizes the implications for clinical practice within rehabilitation, education, employment and the professions of occupational therapy and physiotherapy.

Implications for Practice

Based on increased pressures on the health care system, assistants, including OTAs and PTAs, are employed around the world in health care with the intent to provide optimal patient care (Munn et al., 2013). There is lack of research addressing OTAs and PTAs' roles, competencies, and perceptions of clinical competence. Kumar et al. (2006) documented that while there is a keen interest in the support worker role, there are inconsistencies as to what constitutes competence and how to evaluate this construct in the field of rehabilitation. This study's findings suggest that OTAs and PTAs are important members of the interprofessional team, as they demonstrate their capability to:

- problem solve,
- think critically,
- prioritize tasks, and
- promote safety during patient interactions, in addition to carrying out treatment plan developed by the registered OT and/or PT.

Salvatori (2001) noted that the stakeholders in the profession of occupational therapy need to ensure the following: that the accountability for OT services be assigned to an OTA by the OT, that a competency profile for OTAs be developed, national standards of education established, and credentialing of OTAs implemented. The principal investigator found it enlightening that these recommendations have been

implemented and continue the advancement of OTAs in the profession of occupational therapy.

Need for core collaborative standards.

In Canada, the development of collaborative core competency standards in OTA and PTA would facilitate consistency in the roles of OTAs and PTAs and promote excellence in the professions. The development and initiation of combined OTA and PTA competencies may be beneficial for OTAs and PTAs as a reference document to promote reflective practice. This combined document may be a useful educational tool for employers, as well as OTs and PTs regarding job expectations and performance management. The competency document may guide clinical preceptorship/mentorship in fieldwork placements and assignment of tasks to OTAs and PTAs, both in educational and workplace settings.

The initiation of the OTA and PTA Education Accreditation Program (EAP) is a step in the right direction for the implementation of standards in educational programs. The establishment of this accreditation program decreases the uncertainty about the qualifications, roles, and scope of practice of OTAs and PTAs. The fact that this accreditation program is voluntary may deter OTA and PTA programs from participating in the process and potentially inhibit program standardization across Canada.

Curriculum development.

From an educational perspective, the Ontario college's OTA and PTA program had its inaugural student admission onset in 2009. As a relatively new program, the positive and constructive comments from stakeholders ensure continuous quality improvement and the delivery of a curriculum that addresses the needs of the profession and consumers. Through this study, the current curriculum delivery in this

Ontario college's OTA and PTA program is identified as positively preparing OTAs and PTAs for clinical practice. The graduates are perceived to have acquired the requisite knowledge, skills, and core competencies to succeed in their roles as OTAs and PTAs. In an effort to ensure a high caliber of education, college OTA and PTA programs will need to continue to collaborate with graduates and employers.

Enhanced collaboration of stakeholder groups

This study revealed the positive relationship between the graduates, educational program and Ontario hospital based on the level of engagement of the OTs and PTs with the student and graduate OTAs and PTAs. Haas, Deardorff, Baker, Coleman, and DeWitt (2002) discussed that health care is changing and requires HCPs to address complex patient needs with competence, confidence and enthusiasm. These authors devised collaborative nursing placement opportunities based on recommendations from graduate, faculty and employers. The benefits for all stakeholders included the deepening of an existing mutual respect and networking leading to the completion of joint research projects.

Enhanced collaboration within this study was the tripartite involvement between graduates, the Ontario hospital, and one Ontario college. The student placement opportunities at the Ontario hospital led to recruitment of graduates. The graduates develop their interprofessional team skills and professional identities. The employer built relationships with the academic institution to enhance their currency within health care based on the exposure to new ideas. The increase in academic integrity, immersion of student placements in the workplace, and connections with industry are benefits for the educational institution (Haas et al., 2002). The goal of ensuring graduates have the transferable skills to meet the current realities and future

possibilities in health care may be achieved with the collaboration of stakeholder groups.

Future Research

Internationally, Canada is the only country with dually trained OTAs and PTAs. There is an abundance of literature written about the health care worker or health care support staff. This general title includes a variety of HCPs from nursing to allied health (Kumar et al., 2006) and prompts further investigation of the use of title, starting with a common definition. Scope of practice and established competencies cannot be explored until there is consistent terminology between HCPs. Future research initiatives can entail:

- exploration in Ontario and across Canada about use of title terminology (consensus and agreement),
- examination of the educational and professional relationships between OTAs and PTAs with OTs and PTs,
- facilitation of health care organizations' knowledge about credentialing and roles of OTAs and PTAs.

Conclusion

The implementation of phenomenology enabled the principal investigator to explore OTA and PTA graduates' perceptions of competence after one year of clinical practice. This phenomenon has not been previously documented in the literature. In this study the key perspectives of individual participants and focus group participants were obtained in a natural everyday context.

Through the completion of in depth individual interviews with graduates from one Ontario college's OTA and PTA program and the completion of a focus group with

OTs, PTs, and administration personnel from an Ontario hospital, the principal investigator gathered and analyzed data using phenomenological methodology to comprehend participants' lived experiences. The themes that emerged from the iterative process of data collection and data analysis were: employing effective communication, emerging knowledge, skills and competencies in clinical practice, transitioning into clinical practice, and developing confidence as an OTA and PTA. Individual participants discussed factors such as understanding their roles, required skills, and competencies, education and work environments which provided transitional support, and positive correlations between amount of time worked and level of confidence. The aforementioned variables all helped to influence the individual participants' perceived levels of competence positively as OTAs and PTAs.

When determining an area of research, the principal investigator chose a topic of importance to her and the professions of occupational therapy and physiotherapy. This research study was developed based on the scarcity of documented research. Despite the size of the study and the study limitations, the triangulation of the data, bracketing by the principal investigator, member checking, and inter-coder agreement enhanced the trustworthiness of the study. The results obtained are important to the professions of OT and PT and could be utilized as a foundation to further study of OTAs and PTAs' roles, competencies, and relationships with members of the interprofessional team, as well as other unregulated health care professions.

Within this research study, the collaborative working relationships between the OTAs and PTAs and OTs and PTs were recognized by both the individual participants and the focus group participants as promoting a positive work environment. As there are ongoing challenges in health care to meet the needs of patients, this study proposes

a starting point with unregulated and regulated HCPs to promote collaboration to enhance patient outcomes. The awareness and understanding of each professions' scope of practice, roles, and academic credentialing may inhibit the potential for role blurring, role rescindment, and hierarchal perspectives.

The current trends in health care require the development of innovative ways to deliver rehabilitation services with patients. In education, this understanding of OTA and PTA graduates' perceptions of competence in clinical practice can assist in curricular enhancement to meet the required level of employment preparedness in a changing health care system. The study findings support OTAs and PTAs' perceived high levels of competence in clinical practice. The individual participants perceive that their education prepared them well to deliver collaborative occupational therapy and physiotherapy patient care services in all clinical environments.

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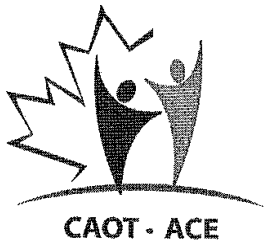
Appendix A



Canadian Association of Occupational Therapists
Association canadienne des ergothérapeutes

CAOT Publications ACE
Copyright Request

May 6 2015

Deborah Francis
106 Glenmeadow Crescent
Stoney Creek, ON
L8E 6C1

Dear Deborah,

According to your request, you would like permission to use the figure "Occupational Therapy and Occupational Therapy Support Personnel Practice Profile" to be used in your thesis titled "Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perception of competence in Clinical Practice.

Practice Profile for Support Personnel in Occupational Therapy (2009).Retrieved from http://www.caot.ca/default.asp?pageid=1013. Published by CAOT Publications ACE.

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Yours sincerely,

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Appendix B

Hamilton Health Sciences | McMaster University Health Sciences | St. Joseph's Healthcare Hamilton

HiREB Student Research Committee

Final Approval

Date:	09 May 2014
REB Number:	14-352-S
Title of Study:	Occupational Therapist Assistant and Physiotherapist Assistant (OTA and PTA) Graduates' Perceptions of Competence in Clinical Practice
Student PI:	Debi Francis
LPI:	Bonny Jung
Version date:	**Document:**
14 Apr 2014	Application
02 May 2014	Protocol
02 May 2014	Consent for Graduates Version 1
02 May 2014	Consent for Focus Group Version 1
02 May 2014	Email Recruitment Script for Graduates
02 May 2014	Email Recruitment Script for Focus Group
02 May 2014	Interview Guide: Indepth Interview
23 Mar 2014	Interview Guide: Focus Group

Dear Debi:

We have completed our review of your study and are pleased to issue our final approval. You may now begin your study.

All recruitment and consent material must bear an REB stamp. You may pick up the stamped forms from our office.

Any changes to this study must be submitted with an Amendment Request form before they can be implemented.

This approval is effective for 12 months from the date of this letter. Upon completion of your study, please submit a **Study Completion form**.

If you require more time to complete your study, you must request an extension in writing before this approval expires. Please submit an **Annual Review form** with your request.

The Study Completion form and the Annual Review form can be found on our website: **http://fhs.mcmaster.ca/healthresearch/hireb/forms.html** and should be sent to Tina Arnosti at arnoschr@HHSC.CA.

Please cite your REB number in any correspondence.

Good luck with your research,

Kristina Trim, PhD, RSW

Page 1 of 2

Hamilton Health Sciences | McMaster University Health Sciences | St. Joseph's Healthcare Hamilton

HiREB Student Research Committee

Chair, HiREB Student Research Committee
Health Research Services, HSC 3H9, McMaster University

The HiREB SRC complies with the guidelines set by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans and with ICH Good Clinical Practice.

Research Ethics Board (REB)

researchethics@niagaracollege.ca

Niagara College Canada
APPLIED DREAMS.

Appendix C

CERTIFICATE OF ETHICAL CLEARANCE (APPROVED)

APPLICATION FOR RESEARCH INVOLVING HUMAN PARTICIPANTS

Date:	June 3, 2014					
Principal Investigator :	Bonny Jung					
School/Department/Division and/or Institution (if not	McMaster University					
REB File Number:	NC2014-08					
Clearance Certificate Number:	CEC-NC2014-08					
Review Date:	May 29, 2014					
Title of Research Study:	Occupational Therapist Assistant and Physiotherapist Assistant (OTA & PTA) Graduates' Perceptions of Competence in Clinical Practice					
Type of Clearance:	New	X	Request for Changes		Annual Renewal	
Expiry Date:	6/1/2015					

Final/Interim Report	7/1/2015

The Niagara College Research Ethics Board (REB) has reviewed the above-named research study and considers the procedures, as described in the application, to conform to the College's ethical standards and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Participants (TCPS 2). Clearance has been granted from ***6/1/2014*** to ***6/1/2015***.

During the course of your research, all substantive changes (e.g., changes that may increase the level of risk to participants) and significant changes to the final approved documentation as described in the application; unanticipated issues or events that have/may increase the risks to participants; and research study time extension requests, must be reported as soon as possible to the REB by submitting the *Request for Changes to a Previously Approved Research Ethics Application – Form.* The proposed changes shall not be implemented without REB clearance, except when necessary to eliminate any immediate risks to the participants. If you anticipate for your research study and/or involvement with research participants to extend beyond the expiry date, you are required to submit your request before ***5/1/2015***.

A *Research Study Status Report and End-of-Study Report – Form,* shall be submitted to ensure the continuing research ethics review of approved research projects and to report the completion of a research study. The form shall be submitted as follows; at minimum, an annual status report (for multi-year research projects), and an end-of-study report (for projects lasting less than one year). Continued approval of multi-year projects is contingent on timely submission of report.

Research Ethics Board (REB)

researchethics@niagaracollege.ca

CERTIFICATE OF ETHICAL CLEARANCE (APPROVED)

APPLICATION FOR RESEARCH INVOLVING HUMAN PARTICIPANTS

The REB has the mandate to review and monitor the ethical conduct of research, which includes approving, rejecting, terminating, and suggesting modifications to any approved or ongoing research study. Refer to the attached *Appendix A - Level of Research Ethics Review and Monitoring,* for information on your research study's level of monitoring. As the principal investigator, you hold the responsibility and are required to monitor your research to ensure that it is conducted in an ethical manner; supervise all team members in the application of the research procedures; ensure that all researchers are qualified and versed in the conduct of ethical research; and protect the welfare of all research participants. The REB requires that you adhere to the protocol as last approved by the Board. Any unreported/unauthorized changes to the research study and its final documentation, as well as failure to comply with the information outlined in this certificate may lead for the REB to rescind the Certificate of Ethical Clearance.

In addition, all research involving research participants in the care of a health facility, at a school, or other institution or community organization, shall receive approval from those entities prior to the initiation of any research protocols. In all cases, please ensure that your research complies with the TCPS 2 and Niagara College standards.

We wish you success with your research. Approved:

Andrea Bodnar, Co-Chair Tatiana Young, Co-Chair

Best Regards,

Niagara College Research Ethics Board

Board Members: Andrea Bodnar (co-chair), Tatiana Young (co-chair), Francine DeMarchi, Walter Greczko, John McTavish

Research Ethics Board (REB)

researchethics@niagaracollege.ca

Niagara College Canada
APPLIED DREAMS.

APPENDIX A – LEVEL OF RESEARCH ETHICS REVIEW AND MONITORING

APPLICATION FOR RESEARCH INVOLVING HUMAN PARTICIPANTS

The following information provides the level of research ethics review and monitoring by the REB for approved research studies.

LEVEL 1
The research has no or minimal risks to participants. 1) A *Research Study Status Report and End-of-Study Report Form* shall be submitted upon completion of all research studies and as an annual status report for multi-year research studies. The form shall be submitted at a minimum of 30 days before the clearance certificate expiry date in order to avoid project delays/suspension. 2) The *Request for Changes to a Previously Approved Research Ethics Application – Form* shall
LEVEL 2
The research has mid and high-risks to participants. 1) All research is subject to Level 1 review and monitoring.
LEVEL 3

The research has high risks to participants.

1. All research is subject to Level 1 and Level 2 review and monitoring.
2. A chance of receiving a routine site visit, including review of:
    a. researcher's data files documenting adherence to or deviation from protocol, reporting of adverse/unanticipated events, and data quality, this may include audio or video recordings,

This form was adapted from a form from the University of Toronto

Niagara College Research Ethics *Appendix A - Level of*

Research Ethics Review and Monitoring *Revised 3-12-2013*

Appendix D

Niagara Health System
Système De Santé De Niagara

RESEARCH ETHICS BOARD
66 Third St. Welland, ON L3B 4W6
Tel: 905-378-4647 Ext 32202 Fax: 905-732-4401
E-mail: nhsresearchethicsboard@niagarahealth.on.ca
www.niagarahealth.on.ca

July 15, 2014

Ms. Debi Francis
Niagara College
OTA and PTA Program
300 Woodlawn Road
Welland, ON L3C 7L3

Dear Ms. Francis:

Re: Occupational Therapist Assistant and Physiotherapist Assistant (OTA and PTA) Graduates' Perspectives of Competence in Clinical Practice

REB Project # 2014-06-005 **Expiry Date: June 18, 2015**

On behalf of the Niagara Health System Research Ethics Board, I would like to thank you for your response to our letter dated June 18, 2014.

This letter will confirm that the Executive Committee of the Board, at an Expedited meeting on Tuesday July 15, 2014, has received and reviewed your response, and granted **unconditional** approval for your study to proceed.

The Niagara Health System Research Ethics Board is in compliance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Human (TCPS2), and the International Conference on Harmonization: Good Clinical Practice guidelines for IRBs, as well as the Food and Drug Administration (U.S. FDA) and the Therapeutic Products Directorate (Health Canada TPD). As the Primary Investigator, you are required to notify the REB of any amendments or changes in the protocol; significant protocol deviations, or termination of this project.

The Niagara Health System Research Ethics Board expected that all researchers/research coordinators will maintain compliance with NHS policies and procedures.

Should you require anything further, please do not hesitate to contact me through the REB office at 905-378-4647, Ext. 32202, or via e-mail at nhsresearchethicsboard@niagarahealth.on.ca

Yours sincerely,

Dr. Melanie Stansfield, Chair
Niagara Health System Research Ethics Board

MS.km
cc: Dr. Bonny Jung
Joanna Matava

Appendix E

LETTER OF INFORMATION / CONSENT

Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Investigators:

Local Principal Investigator:
Dr. Bonny Jung
Faculty of Health Sciences
McMaster University
Hamilton, Ontario, Canada
(905) 525-9140 ext. 27807
E-mail: jungb@mcmaster.ca

Student Investigator:
Debi Francis
Faculty of Health Sciences
McMaster University
Hamilton, Ontario, Canada
(905) 517-0665
E-mail: francida@mcmaster.ca

Purpose of the Study

I am completing this research as a requirement for the completion of my thesis, as a graduate student enrolled in the Master of Science in Health Science Education program. You are invited to participate in this study which will assist in discovering the perspectives of occupational therapist assistant and physiotherapist assistant (OTA & PTA) graduates' in relation to competence in clinical practice after one (1) year of working. The study will also seek out the perspectives of employers and administrators who work with OTAs & PTAs and their viewpoints related to the clinical competence of OTA & PTAs. The principal student investigator is employed as a Professor and Coordinator of the OTA & PTA program at Niagara College.

Procedures involved in the Research

If you agree to participate in this study, you will be asked to meet with the student investigator of the study in an individual interview to answer questions related to the OTA & PTA graduates' perceptions of clinical competence. This study will take place on one (1) occasion for approximately 60 to 90 minutes between June 2014 and November 2014 at Niagara College or at a location that is convenient for you.

The interview will be audio recorded and transcribed. The data will be interpreted and analyzed by the student investigator *The audiotapes will be erased by the student investigator kept for two (2) years following the completion of the study.*

Potential Harms, Risks or Discomforts:

The risks involved in participating in the research study are minimal and it is not likely that there will be any harm associated with answering the questions and participating in the discussions within the individual interview.

Some of the questions may be personal, but the information will not be shared with anyone else. You may refuse to answer any questions.

Potential Benefits

You will receive no direct benefit from participating in this study; however, through your participation may facilitate changes in curriculum design and modify the current graduates' perspectives with respect to clinical competence.

Payment or Reimbursement

You will not receive any type of payment for participating in this study.

Confidentiality

Your privacy and the confidentiality of your data will be protected by ensuring anonymity with your responses and the data will be kept in a secure and locked location during the study with access to the student investigator. Anonymity will be accomplished by assigning you a code and will be maintained by referring to any of your responses using your participant code and no other potential identifiers.

If it becomes necessary for Hamilton Integrated Research Ethics Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with you, or with your participation in any study.

If you choose to participate in this study, you will be audio recorded. Any audio recordings will be stored securely and only the student investigator and principal investigator will have access to the recordings. Recordings will be kept for two (2) years and then erased.

Participation and Withdrawal

Your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with the student investigator or Niagara College in anyway.

Information about the Study Results

The study will be completed by approximately November 2014 and a brief summary of the results can be sent to you. Please confirm your preference on how you would like the information sent to you.

Questions about the Study

Prior, during or after your participation you can contact me, Debi Francis at 905-735-2211 ext. 7251 or send an email to dfrancis@niagaracollege.ca for any questions.

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HIREB), the Niagara College Research Ethics Board, and the Niagara Health System Research Ethics Board. The HIREB, Niagara College Research Ethics Board, and Niagara Health System Research Ethics Board are responsible for ensuring that participants are informed of the risks associated with the research, and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, HIREB at 905-521-2100 ext. 42013, Administrator of the Niagara College Research Ethics Board at 905-735-2211 ext. 7180, and Chair of the Research Ethics Board, Niagara Health System at 905-378-4647 ext. 32202.

CONSENT

You have been informed about this study's purpose, procedures, possible benefits and risks, and you will receive a signed copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study.

1. I agree that the interview can be audio/video recorded. Yes No

2. I would like to receive a summary of the study's results. Yes No

If yes, where would you like the results sent:

Email: _____

Mailing address: _____

_____

_____

_____	_____	_____
Name of Participant (Printed)	Signature	Date

Consent form explained in person by:

_____	_____	_____
Name and Role (Printed)	Signature	Date

Appendix F

LETTER OF INFORMATION / CONSENT

Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Investigators:

Local Principal Investigator:
Dr. Bonny Jung
Faculty of Health Sciences
McMaster University
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(905) 525-9140 ext. 27807
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Student Investigator:
Debi Francis
Faculty of Health Sciences
McMaster University
Hamilton, Ontario, Canada
(905) 517-0665
E-mail: francida@mcmaster.ca

Purpose of the Study

I am completing this research as a requirement for the completion of my thesis, as a graduate student enrolled in the Master of Science in Health Science Education program. You are invited to participate in this study which will assist in discovering the perspectives of occupational therapist assistant and physiotherapist assistant (OTA & PTA) graduates' in relation to competence in clinical practice after one (1) year of working. The study will also seek out the perspectives of employers and administrators who work with OTAs & PTAs and their viewpoints related to the clinical competence of OTA & PTAs. This consent form is for employers from the Niagara Health System. The principal student investigator is employed as a Professor and Coordinator of the OTA & PTA program at Niagara College.

Procedures involved in the Research

If you agree to participate in this study, you will be asked to meet with the student investigator of the study in a focus group to answer questions related to the OTA & PTA employers' and administrators' perceptions of clinical competence. This study will take place on one (1) occasion for approximately 60 to 90 minutes between June 2014 and November 2014 at Niagara College.

The focus group will be audio recorded and transcribed. The data will be interpreted and analyzed by the student investigator. The audiotapes will be erased by the student investigator kept for two (2) years following the completion of the study.

Potential Harms, Risks or Discomforts:

The risks involved in participating in the research study are minimal and it is not likely that there will be any harm associated with answering the questions and participating in the discussions within the individual interview.

Some of the questions may be personal, but the information will not be shared with anyone else. You may refuse to answer any questions.

Potential Benefits

You will receive no direct benefit from participating in this study; however, through your participation may facilitate changes in curriculum design and modify the current graduates' perspectives with respect to clinical competence.

Payment or Reimbursement

You will not receive any type of payment for participating in this study.

Confidentiality

Your privacy and the confidentiality of your data will be protected by ensuring anonymity with your responses and the data will be kept in a secure and locked location during the study with access to the student investigator. Anonymity will be accomplished by assigning you a code and will be maintained by referring to any of your responses using your participant code and no other potential identifiers.

I will undertake to safeguard the confidentiality of the discussion. I will ask the other members of the focus group to keep what you say confidential, but we cannot guarantee that they will do so.

If it becomes necessary for Hamilton Integrated Research Ethics Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with you, or with your participation in any study.

If you choose to participate in this study, you will be audio recorded. Any audio recordings will be stored securely and only the student investigator and principal investigator will have access to the recordings. Recordings will be kept for two (2) years and then erased.

Participation and Withdrawal

Your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with the student investigator or Niagara College in anyway.

Information about the Study Results

The study will be completed by approximately November 2014 and a brief summary of the results can be sent to you. Please confirm your preference on how you would like the information sent to you.

Questions about the Study

Prior, during or after your participation you can contact me, Debi Francis at 905-735-2211 ext. 7251 or send an email to dfrancis@niagaracollege.ca for any questions.

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HIREB), the Niagara College Research Ethics Board, and the Niagara Health System Research Ethics Board. The HIREB, Niagara College Research Ethics Board, and Niagara Health System Research Ethics Board are responsible for ensuring that participants are informed of the risks associated with the research, and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, HIREB at 905-521-2100 ext. 42013, Administrator of the Niagara College Research Ethics Board at 905-735-2211 ext. 7180, and Chair of the Research Ethics Board, Niagara Health System at 905-378-4647 ext. 32202.

CONSENT

You have been informed about this study's purpose, procedures, possible benefits and risks, and you will receive a signed copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study.

1. I agree that the interview can be audio/video recorded. Yes No

2. I would like to receive a summary of the study's results. Yes No

If yes, where would you like the results sent:

Email: _____

Mailing address: _____

_____

_____

_____	_____	_____
Name of Participant (Printed)	Signature	Date

Consent form explained in person by:

_____	_____	_____
Name and Role (Printed)	Signature	Date

Appendix G

Email Recruitment Script

Debi Francis, OTReg.(Ont.)
Masters Candidate in Health Science Education

A Study of Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Email Subject line: McMaster Study – Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

I am writing you to participate in an individual interview that will take approximately 60 to 90 minutes. As a graduate student enrolled in the Master of Science in Health Science Education at McMaster University, I am carrying out a study to learn about the perceptions of OTA & PTA graduates with respect to competence in clinical practice. This requirement is independent of my role as the Professor and Coordinator of the OTA & PTA Program at Niagara College.

It is expected that there will be not risks to you in taking part in the interview. You can stop at any time. I have attached a copy of a letter of information about the study that gives you full details. The study has been reviewed and cleared by the Hamilton Integrated Research Ethics Board (HIREB). If you have any concerns about your rights as a participant or about the way the study is being conducted, you can contact:

Office of the Chair, HIREB at 905-521-2100 ext. 42013.

I would like to thank you in advance for your time and consideration. After one (1) week, I will send you a one-time follow up reminder.

Debi Francis, OTReg.(Ont.)
Masters Candidate in Health Science Education
Faculty of Health Science
McMaster University, Hamilton, ON
905-517-0665
francida@mcmaster.ca

Appendix H

Email Recruitment Script

Debi Francis, OTReg.(Ont.)
Masters Candidate in Health Science Education

A Study of Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Email Subject line: McMaster Study – Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

I am writing you to participate in a focus group that will take approximately 60 to 90 minutes. As a graduate student enrolled in the Master of Science in Health Science Education at McMaster University, I am carrying out a study to learn about the perceptions of OTA & PTA graduates' employers and administrators with respect to the competence of OTAs & PTAs in clinical practice. This requirement is independent of my role as the Professor and Coordinator of the OTA & PTA Program at Niagara College.

It is expected that there will be not risks to you in taking part in the interview. You can stop at any time. I have attached a copy of a letter of information about the study that gives you full details. The study has been reviewed and cleared by the Hamilton Integrated Research Ethics Board (HIREB). If you have any concerns about your rights as a participant or about the way the study is being conducted, you can contact:

Office of the Chair, HIREB at 905-521-2100 ext. 42013.

I would like to thank you in advance for your time and consideration. After one (1) week, I will send you a one-time follow up reminder.

Debi Francis, OTReg.(Ont.)
Masters Candidate in Health Science Education
Faculty of Health Science
McMaster University, Hamilton, ON
905-517-0665
francida@mcmaster.ca

Appendix I

Individual Interview Discussion Questions for OTA & PTA Graduates

Title of Study: Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Investigator:
Debi Francis (MSc HSc Education, Candidate)
Faculty of Health Sciences
McMaster University
Hamilton, ON
905-517-0665
francida@mcmaster.ca

Semi-structured interview guide for individual in depth interviews

Opening (get participant engaged and initiate rapport building)

How are you today? – closed ended question

Please state your name and where you are working? - open ended question

How do you feel returning to Niagara College? – open ended question

Introductory (introduce the topic and get participant to start thinking about their connection with the topic)

What has assisted in your transition into practice? – open ended question

What strategies did you use to solve your biggest challenges during your first weeks of clinical practice? – open ended question

What do you remember as your overriding emotions? – open ended question
How do you feel that things are different now? – open ended question

Transition questions (moves conversation into the key questions that drive the study)

- When you first started working at your job, what were your impressions as a new graduate? – open ended question

- Describe your role as an OTA & PTA.

Key questions (main questions to the study)

Was your education at Niagara College satisfactory in preparing you from entry level clinical practice? - open ended

What are the challenges that you encounter in your role as an OTA & PTA? – open ended question

How do you address the challenges? – probing question

Which competencies do you feel are your strengths? – open ended question

Which competencies do you feel are your areas of development? – open ended question

What were the strengths of the Niagara College OTA & PTA program? – probing question

What do you feel that you should have learned to prepare you for entry level clinical practice? – open ended question

Identify three (3) competencies that you feel it is important for a student OTA & PTA to learn. – probing statement

What is the most important thing you have learned about yourself in the last year or years since graduation? – probing question

Appendix J

Focus Group Discussion Questions for OTA & PTA Employers and Administrators

Title of Study: Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Investigator:
Debi Francis (MSc HSc Education, Candidate)
Faculty of Health Sciences
McMaster University
Hamilton, ON
905-517-0665
francida@mcmaster.ca

Semi-structured interview guide for focus groups

Opening (ice breaker type question)

Please tell us your name, where you work, and what is your relationship with OTA & PTA graduates?

Introductory (introduce the topic and get people to start thinking about their connection with the topic)

Have you interviewed an OTA & PTA graduate for a position with your organization? – closed ended question

Describe your knowledge of the required educational requirements for OTA & PTAs. – open ended question

What is your current understanding of the competencies for OTA & PTAs within your clinical setting? – open ended question

Transition questions (moves conversation into the key questions that drive the study)

Based on the education of the OTA & PTAs, how satisfied are you with their education in preparing the graduates for entry level clinical practice within your facility? – open ended question

What supports does your organization have in place for entry level graduates to ensure professional success? – probing question

Key questions (main questions to the study)

Have you observed similarities or differences between OTA & PTA graduates from different community college programs, in terms of performance? – closed ended question

What were these differences? – probing question

Can you describe the difference in term of clinical skills between a new OTA & PTA graduate and an OTA & PTA who has been working for one (1) year? – open ended question

What are your recommendations to the program faculty at Niagara College regarding the education for current and future student OTAs & PTAs? - open ended question

Appendix K

PARTICIPANT SUMMARY

Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Thank you for participating in the research study, "Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice". The individual interviews have been completed and I am writing you to request your review of the summary of the interviews, as well as provide me with any feedback.

The completion of this step, identified as member checking is completed to audit the accuracy of the synthesized information that was discussed. Please feel free to correct any errors or provide any additional information that you perceive has been omitted. Please respond regardless if you do not have any feedback so that I can ensure that the statements resonate with you. **Please provide me with your feedback to this email: francida@mcmaster.ca or by telephone at 905-517-0665 by Friday January 23rd, 2015.** Please feel free to contact me with any questions.

Summary

1. Emotions changed in a positive manner as confidence with skills was gained.

2. Various daily skills and competencies include: carrying out the treatment plan which has been provided by the occupational therapist and/or physiotherapist; documentation; workload measurement; equipment maintenance; and ongoing communication with clients/patients/peers and other members of the interprofessional team.

3. The transition into clinical practice has been enhanced by support from staff at work, Niagara College OTA & PTA curriculum, and through self-reflection. Initially upon the commencement of employment, there were feelings of nervousness, worry about making a mistake, excitement, and pride with obtaining employment.

4. Generally, the education at Niagara College (NC) prepared graduates for the role as an entry level OTA & PTA and some of the strengths of the program include: practical testing; clinical field placements; the dedication of the faculty; and the organization of the curriculum.

5. Strengths of the NC OTA & PTA Program include: competency with the expectations within the workplace; communication with staff and clients/patients; rapport building with clients/patients; organization skills; recognizing when you are unsure and obtain clarification; and documentation.

6. Areas of professional development depend on current practice area and were related to skills/competencies that have not been completed recently including: use of modalities; the completion of ADLs; PROM in various positions; familiarization with certain pieces of equipment; and effective conflict management skills.

7. In terms of self-awareness, confidence has developed since graduation with respect to the role of an OTA & PTA, knowledge base is more than expected, and stressful or challenging situations are handled optimally.

Thank you again for your participation in my research study,
Debi Francis, Candidate MSc HS Education

Appendix L

PARTICIPANT SUMMARY

Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice

Thank you for participating in the research study, "Occupational Therapist Assistant and Physiotherapist Assistant Graduates' Perceptions of Competence in Clinical Practice". The focus group has been completed and I am writing you to request your review of the summary of the focus group, as well as provide me with any feedback.

The completion of this step, identified as member checking is completed to audit the accuracy of the synthesized information that was discussed. Please feel free to correct any errors or provide any additional information that you perceive has been omitted. Please respond regardless if you do not have any feedback so that I can ensure that the statements resonate with you. **Please provide me with your feedback to this email: francida@mcmaster.ca or by telephone at 905-517-0665 by Friday January 23rd, 2015.** Please feel free to contact me with any questions.

Summary

1. The educational credentialing of the graduates include courses in:
   - anatomy and physiology;
   - ethics;
   - handling skills;
   - electrotherapy modalities;
   - exercise groups;
   - documentation;
   - biomechanics;
   - and the completion of clinical placements in both occupational therapy and physiotherapy

2. Current clinical competencies of OTAs & PTAs include:
   - following through on the treatment plan established by the occupational therapist and physiotherapist;
   - documentation;
   - range of motion;
   - ADLs;
   - modalities;
   - relaying information back to the supervising therapist;
   - prioritizing and working out a schedule;
   - self-awareness/self-management with respect to scope of practice and working within the scope;
   - building rapport with therapists and clients/patients;
   - and ensuring that the correct chain of communication is implemented

3. There is a high rate of satisfaction with the education when preparing OTAs & PTAs based on: their performance while on clinical placement and whether the graduate has had a hospital based placement; and the initiative to recognize and complete duties without cueing

4. It was confirmed that the organization provides both organizational and program related orientation for new staff; however, if the staff member is casual and has not been assigned to a certain site for some time, the orientation may need to be reiterated

5. The concept of self-management was discussed in relation to learning to appreciate and recognize what a new graduate does not know and accessing the resources to enhance their knowledge base

6. A graduate who has been working for one (1) year would perform differently than a new graduate as they have:
- more self-direction related to the general flow of the day and skills;
- effective communication with the rehabilitation staff and nursing staff;
- overall confidence;
- comfort with either answering questions within their scope or deferring the question to the respective member of the interprofessional team;
- an enhanced appreciation of the roles of the OTA & PTA, as well as the expectations of each therapist depending on if they have a direct partnership with the therapist, as the assistants rotate floors.

7. Overall comments for the Niagara College OTA & PTA program are:
- the recognition of the competency level of the students over the past two (2) years;
- the heightened awareness for clinical preceptors with respect to the organization of clinical placements;
- the appreciation for the opportunity to provide feedback in both verbal and written formats;
- the initiation of pre-admission testing to ensure that the “right” students are admitted to the program;
- impressed with the calibre of students;
- lengthening the morning placements to full day placements for greater exposure to the scope of practice of OT and PT;
- various models of clinical placement supervision;
- and more OT based placements.

Thank you again for your participation in my research study,
Debi Francis, Candidate MSc HS Education