

Student and Preceptor Experiences at an Inter-Professional Student-Run Clinic: A Physical Therapy Perspective

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ABSTRACT

Purpose: Student-run clinics (SRCs) provide a unique opportunity for inter-professional education; they prepare health care students for a collaborative future by enabling them to interact with other such students in a clinical setting focused on inter-professional learning and collaboration. Physical therapy (PT) students are increasingly being included in SRCs; however, most research on student experiences in SRCs has been carried out with medical students. This qualitative study explores the perceived benefits of the PT experience in an SRC through the lens of PT students and their preceptors. **Method:** A qualitative interpretive–descriptive approach consisting of face-to-face, semi-structured interviews was used. Interviews were audiotaped and transcribed verbatim. Data were analyzed using a constant comparative approach. **Results:** Seven PT students and eight preceptors who volunteered at the SRC between September 2013 and May 2015 participated in the study. Three themes emerged from the interviews: (1) exposure to marginalized patient populations, (2) learning through inter-professional interactions, and (3) experience with different patient care approaches. **Conclusions:** Participating in an SRC enhances PT students' understanding of their and other health care professionals' roles. Students gained an appreciation for the social determinants of health and improved their knowledge of inter-professional collaboration. The knowledge gained from this study has the potential to inform PT professional development, SRCs, and PT education.

Key Words: inter-professional education; qualitative research; students.

RÉSUMÉ

Objectif : les cliniques dirigées par des étudiants offrent une occasion unique de formation interprofessionnelle ; elles préparent les étudiants en soins de santé à la collaboration en leur permettant d'interagir avec d'autres étudiants dans un environnement clinique axé sur la collaboration et l'apprentissage interprofessionnels. Les étudiants en physiothérapie sont de plus en plus inclus dans ces cliniques ; cependant, la plupart des recherches portant sur les expériences étudiantes dans ce type de clinique ont été menées auprès d'étudiants en médecine. Cette étude qualitative examine les bienfaits perçus de l'expérience vécue par les étudiants en physiothérapie et leurs précepteurs en clinique dirigée par des étudiants. **Méthode :** une approche qualitative interprétative-descriptive comprenant des entrevues en personne semi-structurées a été utilisée. Les entrevues ont été enregistrées sur bande sonore et transcrites mot à mot. Les données ont été analysées au moyen d'une approche comparative constante. **Résultats :** sept étudiants en physiothérapie et huit précepteurs qui ont travaillé de manière bénévole dans une clinique dirigée par des étudiants entre septembre 2013 et mai 2015 ont participé à l'étude. Trois thèmes sont ressortis des entrevues : (1) l'exposition à des populations de patients marginalisés, (2) l'apprentissage au moyen d'interactions interprofessionnelles et (3) l'expérience de diverses approches de soins aux patients. **Conclusions :** la participation à une clinique dirigée par des étudiants améliore la compréhension des étudiants en physiothérapie de leur rôle et de celui des autres professionnels de la santé. Les étudiants ont pu observer les déterminants sociaux de la santé et améliorer leurs connaissances en matière de collaboration interprofessionnelle. Les connaissances acquises dans le cadre de cette étude peuvent servir au développement professionnel en physiothérapie, aux cliniques dirigées par des étudiants et à la formation en physiothérapie.

Student-run clinics (SRCs) provide an opportunity for inter-professional education (IPE) in an authentic health care setting and help to prepare health care students for a collaborative future. Physical therapy (PT) is becoming

increasingly common in SRCs; however, most research on student experiences in this setting has focused on medical students. This qualitative study investigated the PT experience at the Interprofessional Medical and Allied

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Groups for Improving Neighbourhood Environments (IMAGINE) clinic in Toronto through the lens of PT students and their clinical supervisors (preceptors). Our aim is to shed light on the perceived benefits to PT students of their participation at the SRC.

Inter-professional collaboration (IPC) occurs when multiple health care professionals (HCPs) work with patients to provide comprehensive, high-quality care.¹⁻³ To prepare students for collaborative health care environments, IPE programs have been integrated into HCP curricula.^{3,4} IPE occurs when students from two or more professions learn with, about, and from each other to improve team functioning and health outcomes.¹ SRCs are an increasingly common setting for an authentic IPE experience.⁵⁻⁸

At SRCs, students oversee clinical operations and provide primary health care services to patients under the guidance of preceptors.^{6,8,9} Many SRCs include an interdisciplinary group of students who work together to serve marginalized patient populations presenting with complex health care needs.⁸⁻¹¹ As a clinic-based, collaborative setting with complex patients, SRCs give students a unique IPE opportunity.

The expansion of PT in primary health care is reflected in SRCs, into which physical therapists are increasingly being incorporated.⁵ One-third (33%) of clinical visits during a trial period at an Australian SRC included PT services,⁹ and approximately one-third of patients at the IMAGINE clinic accessed PT services between December 2012 and June 2013 (unpublished clinical data, A. Cadotte, 2015 Jul 3). These preliminary findings reveal the value of PT services at SRCs and highlight the demand for PT in marginalized patient populations, yet little is known about incorporating physical therapists into this setting, particularly from the perspective of PT students.

Students' attitudes toward IPE can vary depending on their discipline,¹² so it is possible that the experiences and educational outcomes of PT students in SRCs will be different than those of other students. Most research on SRC students' experiences has focused on medical students,¹³⁻¹⁸ who, these studies have found, value the opportunity to serve patients in an interdisciplinary setting.^{17,18} These studies have also shown that volunteering at an SRC improves students' attitudes toward IPC^{4,10,15} and working with marginalized patients;¹⁸ it also improves students' understanding of health disparities^{15,16} and other HCP roles.^{6,15,16,19} Furthermore, volunteering at an SRC is associated with self-reported improvement in inter-professional behaviour²⁰ and clinical reasoning skills.¹⁰ One study investigated the PT student experience in a US pro bono clinic, a clinical setting similar to an SRC.²¹ This volunteer experience provided PT students with a deeper understanding of social responsibility, furthered their clinical decision-making skills, and increased their awareness of their own professional growth, although it did not emphasize IPE.²¹ In this

study, we explored the benefits of volunteering at an interdisciplinary SRC from the perspectives of PT students and their preceptors.

The IMAGINE clinic is an interdisciplinary SRC located in downtown Toronto that emphasizes IPE.⁸ The clinical portion of the SRC was launched in Fall 2010 in partnership with the Central Toronto Community Health Centre and the University of Toronto.²² It operates once a week as a drop-in clinic to provide free primary health care services to under-served clients in the city core. Provincial health insurance is not required. A team of students and their supervising preceptors from medicine, nursing, pharmacy, PT, and social work deliver health care services.²² Students volunteer for 3 consecutive weeks, then attend a 3-hour follow-up session. The initial patient interview is conducted by two students from different professions; afterward, the patient's case is presented to the other team members who, together with the two students who conducted the initial interview, decide which two students will lead the remaining assessment and treatment. The team debriefs each day to discuss the day's cases.⁸

Although PT services were introduced to the IMAGINE clinic in Fall 2011,²² the educational impact on PT student volunteers has not been examined. The clinic provides an ideal setting for examining this impact in an interdisciplinary SRC, thereby filling a gap in the literature. We began our interpretative inquiry with the research question "How do PT students benefit from volunteering at an interdisciplinary SRC from their perspective as well as that of their PT preceptors?"

METHOD

We used a qualitative, interpretive-descriptive approach²³ consisting of semi-structured, face-to-face interviews with PT student and preceptor volunteers at the IMAGINE clinic. Ethics approval was received from the University of Toronto Health Sciences Research Ethics Board.

Sampling

We used purposive sampling of PT students and preceptors who volunteered at the IMAGINE clinic between September 2013 and May 2015. This timeline reduced the likelihood of poor recall among participants. The number of possible PT students and preceptors available for inclusion was 20 and 22, respectively. Both students and preceptors were included in our study to obtain rich insight into the typical PT experience at the clinic.

Recruitment

Potential participants were invited to participate through an email from the executive director of the IMAGINE clinic that provided the researchers' email addresses and telephone numbers. Posters with the researchers'

Table 1 Semi-Structured Interview Guide

Interview questions	
PT students	PT preceptors
1. Why did you become involved with the SR clinic?	1. Tell me a little bit about how you came to be involved with the SR clinic.
2. Tell me about an experience volunteering at the SR clinic that was positive for you.	2. What would you do better, or what would you change?
3. Tell me about an experience that was challenging.	3. Tell me about an experience that was positive.
4. How do you feel you contributed to the SR clinic?	4. What difference do you think you made by being at the SR clinic?
5. What advice would you give to a student who was volunteering at this clinic?	5. What advice would you give to a student who was volunteering at this clinic?

PT = physiotherapy; SR = student-run.

contact information were also displayed at the clinic and the University of Toronto Rehabilitation Sciences Building. Research investigators emailed interested participants to explain the study in more detail. Informed consent was obtained at the beginning of the interview.

Data collection

We used face-to-face, semi-structured interviews to allow participants to elaborate on their responses (see Table 1 for interview guide). Interviews were completed either in person or by Skype, which offered the advantage of interviewing participants from geographically disparate locations while replicating face-to-face interactions. Two members of the research group (also PT students) conducted the interviews. All but one of the student interviewees were known to the interviewers; none of the preceptors were known to the interviewers.

Analytical lens

A qualitative interpretive approach underpins our analysis. A constant comparative analysis was used, whereby the data were analyzed while they were being collected.²⁴ Our team met frequently to analyze the anonymized interview transcripts. We continued inductively from interview to interview, comparing previous transcripts and devising additional prompts to ensure that we captured a thorough narrative. All researchers coded the first two transcripts and collectively agreed on an initial coding scheme; subsequent transcripts were coded independently by two researchers and then compared to ensure reproducibility of codes. Interviews were coded iteratively, whereby elements from prior interviews and analysis informed how new information was coded. A qualitative data management software program, QSR Nvivo, version 10 (QSR International, Boston, MA), was used to manage and index the coding.

RESULTS

Eight preceptors and seven students were interviewed, and more than 550 minutes of dialogue were obtained. Student participants included both current PT students

and recent graduates; only one participant was male. Preceptors had a variety of backgrounds: private practice, acute care, rehabilitation, primary health care, and health administration.

Three major themes emerged, revealing the perceived benefits to PT students of volunteering at the IMAGINE clinic: being exposed to marginalized patient populations, learning through inter-professional interactions, and being introduced to different patient care approaches.

Theme 1: marginalized patient populations—“an eye-opening experience”

All students described the impact of working with under-served and marginalized patient populations at the IMAGINE clinic. Exposure to and insight into new patient populations surfaced as an unintended learning outcome because students stated that their primary reason for volunteering had been to practise their clinical and hands-on skills. Many students had assumed that the primary patient population would be homeless individuals, so they were surprised that other populations, such as recent immigrants, also had barriers to accessing health care. Both students and preceptors thought that exposure to under-served patient populations was a valuable learning experience.

I think it's especially useful for physio[therapy] students. . . . [Social workers and nurses] learn a lot about marginalized communities . . . where we don't have as much of that in our program . . . so I think that [the clinic] is a unique way to go beyond your [manual techniques]. (Student 7)

Encounters with the patient population at the clinic helped students gain insight into social factors affecting health. Many students were affected emotionally by the barriers patients face in accessing PT.

So it was a really eye-opening experience . . . to see how many people actually really need physio[therapy], but literally do not have any other venues to actually receive that service. It hit me really hard. (Student 3)

Most students commented on learning to modify their assessment and treatment to address the needs of this unique population. They described the importance of being sensitive to the population, flexible in their treatment approach, and knowledgeable about community resources for low-income patients. Several preceptors echoed the importance of students learning to inquire about social determinants of health, such as housing and finances, during their subjective interview. As one preceptor said,

If [students] were planning to volunteer, I would have them familiarize themselves with common issues that someone of a lower socio-economic status has to deal with: finance, access, employment. (Preceptor 8)

Theme 2: inter-professional interactions—“valuing the inter-professional team”

The IMAGINE clinic enabled students and preceptors from multiple health care professions to work together in real-life scenarios with patients seeking health care. Most preceptors agreed that the clinic was a successful IPE learning experience because it engaged students from different disciplines in providing authentic health care.

It still is an ongoing struggle to really get true inter-professional learning experiences. Oftentimes those experiences are quite contrived. So I really saw ... [volunteering at the SRC] as a fairly organic, legitimate mode of inter-professional education. (Preceptor 4)

This experiential IPE activity also helped improve PT students' attitudes about inter-professional care, as expressed by one student.

[The SRC] really taught me to value working in an inter-professional team, value the other professions around me, and taught me there is a lot to learn from everybody else. (Student 6)

The IMAGINE clinic also provided ample opportunities for team discussions about patient care. Many students and preceptors described instances in which the student team worked toward a common goal, making decisions as a group. Preceptors described how the lack of hierarchy at the clinic helped foster this collaboration: It enabled each profession to contribute equally to decision making rather than deferring decisions to one practitioner, such as a physician. As one preceptor said,

It isn't necessarily always filtering through what we call in primary health care the “core practitioners,” which are usually the nurse practitioner and the physician. There was none of that hierarchy; it was very much ... true collaborative decision making. (Preceptor 4)

Having two students from different disciplines conduct subjective patient histories also provided an opportunity for collaboration during a patient interaction. One student described it as follows:

It was myself and the medical student who went into the room to conduct the interview ... neither of us tried to dominate the interview ... providing opportunities for each person to cover different aspects of the subjective history. Some of the more discipline-specific questions we saved [for the end] so that everything that was common between us was covered first. (Student 2)

Although the IMAGINE clinic fostered a collaborative approach, participants also described instances during patient interactions in which the students appeared to be working more in parallel. One student describes how she thought that portions of the other HCP's assessment were irrelevant.

When I went in with the pharmacy student, it was kind of challenging to wait out all of her questions... I didn't think they were so relevant, and it was a little bit frustrating when ... I didn't think [her questions] were directly applicable. (Student 5)

Interviewees described other examples of parallel practice, in which students were seeing a patient together but each student was doing his or her own “individual assessment” (Preceptor 1).

PT students and preceptors often described how the IMAGINE clinic enabled students from different backgrounds to improve their understanding of their mutual roles. Almost all PT students discussed learning about other HCP roles, often by observing other HCPs during patient interactions. All PT students and half of the preceptor interviewees described PT students gaining experience advocating for their role to other HCPs, usually during team discussions.

You go out of your way to explain to people what physio[therapist]s can do, to talk about misconceptions there are with physio[therapy] ... and things that we didn't know about each other. So I think that in that way, I contributed to the best of my ability to represent my profession and advocate for it. (Student 7)

Theme 3: approach to patient care—“think big picture”

The drop-in nature of the IMAGINE clinic and the high demand for PT services were identified by participants as factors that influenced their approach to patient care. Confusion about the exact role of the physical therapist at the SRC divided opinion about which treatment approach would be most beneficial: encouraging patients to come back for follow-up care or providing a one-time consultation focusing on education and self-management. Nearly half of the preceptors and the majority of the students believed that follow-up care was preferable so that the clinic could provide ongoing education and a progressive exercise regimen.

It would have been nice to have some follow through as well because [the patient] could have definitely benefited from a progression of exercises or even just a progression of education. (Student 7)

The remaining half of the preceptors thought that the clinic provided a setting more amenable to a one-time consultative approach.

The reality is, we can't provide service hands-on 3 days a week, so it's a matter of teaching someone how to care for their own condition. (Preceptor 8)

Despite the differing preferences regarding treatment approaches, both preceptors and students acknowledged that follow-up at a drop-in clinic is challenging, and, therefore, they conducted their assessment and treatment as though the session would be the patient's only visit. They recognized that the more traditional PT model of care, which includes follow-up, is not well supported in the IMAGINE clinical environment, and therefore they adapted their treatment accordingly.

Both students and preceptors agreed that their treatment approach should emphasize patient education; however, there were differences in the type of education provided. Preceptors tended to focus on developing strategies for self-management and navigating the health system. In contrast, students largely concentrated on educating patients about their impairment and prescribing exercise.

What I would have gone in and given [the patient] for treatment was very different than what my preceptor [thought] we should do. I thought you would do the standard rotator cuff treatment: We're going to do some strengthening, we're going to do range-of-motion exercises. Whereas [my preceptor] thought it would be more beneficial [to] give her relaxation exercises and focus more on her breathing. (Student 6)

In summary, the IMAGINE clinic allowed PT students to experience a different type of service delivery and gave them an opportunity to take a holistic approach to patient care, as described by one participant.

You have to think big picture when you are working out of SRC and give more of a comprehensive approach for things that [patients] can do with self-management, as opposed to manual therapy. (Student 6)

DISCUSSION

Our findings indicate that volunteering at an SRC is perceived to be a valuable IPE activity by PT students and their preceptors. PT students benefited from volunteering at the IMAGINE clinic by being exposed to marginalized patient populations, learning through inter-professional interactions, and experiencing different patient care approaches.

Marginalized patient populations

PT students typically have little exposure to under-served patients in a primary health care setting. In Ontario, PT in the community is two tiered: The majority of people who access community-based PT must have extended health insurance or pay out of pocket. The IMAGINE clinic gave PT students a rare opportunity to experience the unique challenges of working with a marginalized patient population. By being exposed to under-served patient populations, the PT students improved their awareness of the social determinants of health and how they affect patient care. This finding is similar to that of Sheu and colleagues,^{15,16} who found that volunteering at an SRC helped medical and nursing students understand health disparities.

It is important for PT students to be aware of health determinants and their impact on patient care because it is a prerequisite for client-centred care. As the PT profession in Ontario expands into primary health care, there will be more clinical encounters with under-served patients, and understanding health determinants will be especially important when working with this population: It will enable students to better understand their role as advocates, one of the essential competencies of physical therapists in Canada.²⁵

Inter-professional interactions

Our results are similar to those of previous studies, which found that volunteering at an SRC improves student attitudes toward other HCPs and IPC^{7,10,15,16} and their understanding of other HCP roles.^{6,16,26} Learning about collaboration and the roles of other HCPs are important elements of IPE.

The degree of collaboration between PT students and other HCPs found in our study depended on the stage of the patient care process (patient assessment, decision making, or intervention). Team care models range from parallel practice (in which HCPs work independently in the same setting) to integrative practice (in which HCPs work collaboratively in a non-hierarchical model), with other care models situated in between.²⁷ We found that PT students typically practised in a parallel model when conducting patient histories or treatment interventions. During some subjective interviews, it appeared that students were not working together toward a common goal, and true collaboration was not occurring. However, during the decision-making process (analyzing assessment findings and determining treatment interventions), the student teams used a more collaborative, interdisciplinary model, in which practitioners made group decisions during face-to-face meetings.²⁷ The reason for this difference may be that individuals from each profession were usually present during team meetings; in addition, these meetings included preceptors, who could model interdisciplinary care during decision making. Our findings

are similar to those of Guirguis and Sidhu,⁶ who found that the degree of integrative care among pharmacy students in an SRC also varied depending on the stage of patient care.

The fact that students were practising more collaboratively at the decision-making stage shows how this IPE experience was preparing them to practise IPC in their future careers. It also reinforces the notion proposed by McCallin²⁸ that collaboration is a learning process. The SRC provided an environment in which PT students could successfully implement experiential IPE because it enabled them to engage in this multidisciplinary learning process; the goal is collaborative practice, a key competence required of Canadian PT students.²⁵ In addition, the multidisciplinary team approach encouraged the students to develop their competence as both patient and professional advocates²⁵ because it provided a forum for them to share their knowledge and expertise about patient care and outlined the PT scope of practice.

Approach to patient care

Physical therapists continue to be integrated into primary health care teams and SRCs, yet their role in this setting is still evolving.²⁹ Because the IMAGINE clinic did not provide specific direction about how to approach patient care, preceptors and students were left to determine the best course of action by drawing on their own clinical and educational knowledge. Preceptors' differing opinions regarding patient follow-up may be attributed to their varied clinical backgrounds. Those with experience in a similar setting preferred to provide a treatment plan for the patient in one treatment session. In contrast, students preferred following up with patients; this reflects their formal training, which emphasizes the development, re-evaluation, and ongoing progression of a plan of care that provides feedback about the effectiveness of their interventions. However, follow-up in a drop-in SRC may be an unrealistic approach to care. Our study also indicates that the role of physical therapists at SRCs is unclear; for example, the ambiguity surrounding follow-up leads to confusion about the type of care that physical therapists should provide. We suggest that both students and preceptors would benefit from discussing strategies for delivering optimal PT care at an SRC during their volunteer orientation to ensure that patients receive consistent care.

All participants emphasized patient education as a primary aspect of their treatment approach at the IMAGINE clinic; however, the focus of this education differed between preceptors and students. Most students tailored their education and exercise prescription to a patient's impairment, which shows that the students are in the novice stages of clinical reasoning. In contrast, preceptors took a broader, more holistic approach, focusing on teaching patients self-management skills and how to navigate the health system. Likely owing to their clinical expertise, preceptors were able to harness

practitioner-patient collaboration to formulate their treatment goals.³⁰ This requires expert clinical reasoning skills, which enable a practitioner to consider a patient's impairment as well as the social, emotional, economic, political, and personal factors influencing his or her impairment.³⁰

Our study has a few limitations. Of the 15 participants, only 1 man was interviewed; however, gender differences in perceptions of the PT experience at the IMAGINE clinic are unlikely. The interviewers knew most of the students interviewed; however, interviewers were cognizant of the importance of maintaining confidentiality and not discussing the findings outside the research group. It was beyond the scope of this student-led project to interview other HCPs or patients at the clinic. However, other student-led research on these perspectives at the clinic is currently underway, including a client satisfaction study and a study of other students' perceptions of patients' non-medical needs, students' perspectives on inter-professionalism and marginalized patients, and the skills that students gain from volunteering at the SRC. These studies may provide insight into patients' and other HCPs' perspectives that are relevant to PT at the clinic.

Despite these limitations, our study adds knowledge about the benefits of volunteering at an SRC from the PT perspective. By giving participants the opportunity to describe their experiences, we were able to fully explore their perspectives. In addition to highlighting unique considerations for PT at SRCs, our findings support implementing programs such as the IMAGINE clinic's new initiative: a longitudinal programme that aims to increase students' understanding of the health issues experienced by marginalized inner-city populations.

CONCLUSION

This research reveals that PT students in an interdisciplinary SRC benefit from (1) being exposed to marginalized patient populations, (2) participating in an authentic inter-professional activity, and (3) experiencing different approaches to patient care. By being exposed to marginalized populations, students gain an appreciation for the social determinants of health and their impact on patient care. However, the physical therapist's role in this setting needs to be clarified so that preceptors and students can implement the most meaningful plan of care. Future research should explore the perspectives of patients and other students volunteering at SRCs regarding the involvement of PT students; this will help us better understand the impact of PT at SRCs.

KEY MESSAGES

What is already known on this topic

Volunteering at a student-run clinic (SRC) improves students' attitudes toward inter-professional collaboration; working with marginalized patients; and understanding of health disparities and the roles of other health care professionals.

What this study adds

Most research on experiences in SRCs has focused on medical students. This study examines the physical therapy (PT) perspective on volunteering in SRCs. PT students volunteering in an interdisciplinary SRC benefit from (1) being exposed to marginalized patient populations, (2) participating in an authentic inter-professional activity, and (3) experiencing different approaches to patient care.

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