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# KNOWLEDGE AND ATTITUDES OF BACCALAUREATE SOCIAL WORK STUDENTS ABOUT INTERPROFESSIONAL COLLABORATION IN CANADA

Anna Azulai and Celina Vipond

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See table of contents

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Article abstract

Although interprofessional collaboration is a common expectation in social work employment, interprofessional education has not been a robust feature of baccalaureate social work preparation in Canada. There is also a dearth of research on the topic. These gaps are problematic because social workers with baccalaureate degrees are often employed in interprofessional teams in various health care settings in Canada. To address this gap in knowledge, this mixed methods study explores attitudes toward interprofessional collaboration of social work students in a Canadian undergraduate university. Also, the study evaluates the students' knowledge acquisition of interprofessional competencies after a single interprofessional education event. Findings indicate a positive change in students' attitudes and enhanced knowledge of the interprofessional care competencies. The study contributes to the limited body of research on interprofessional education of baccalaureate-level social work students in Canada. It also shows the power of a single interprofessional experiential event in benefiting professional education of future social work professionals.

# KNOWLEDGE AND ATTITUDES OF BACCALAUREATE SOCIAL WORK STUDENTS ABOUT INTERPROFESSIONAL COLLABORATION IN CANADA

*Anna Azulai*
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**Abstract:** Although interprofessional collaboration is a common expectation in social work employment, interprofessional education has not been a robust feature of baccalaureate social work preparation in Canada. There is also a dearth of research on the topic. These gaps are problematic because social workers with baccalaureate degrees are often employed in interprofessional teams in various health care settings in Canada. To address this gap in knowledge, this mixed methods study explores attitudes toward interprofessional collaboration of social work students in a Canadian undergraduate university. Also, the study evaluates the students' knowledge acquisition of interprofessional competencies after a single interprofessional education event. Findings indicate a positive change in students' attitudes and enhanced knowledge of the interprofessional care competencies. The study contributes to the limited body of research on interprofessional education of baccalaureate-level

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*Dr. Anna Azulai is an Associate Professor in the School of Social Work, MacEwan University. She is a clinical social worker with a direct practice experience in home health care, geriatric residential care, geriatric mental health, and addictions. Her research, teaching, and practice interests include psychosocial care of older adults and inter-professional collaboration. Celina M. Vipond is a Métis Addictions Counsellor and community researcher working with Indigenous populations in Northern Alberta in culturally-based addictions treatment and permanent supportive housing. She graduated from MacEwan University in 2023 with a Bachelor of Science degree in molecular biology honors and psychology. Her previous work has explored Indigenous worldviews of home and family in the Plains Cree perspective for considerations in housing policy, and she has a particular interest in Indigenous resurgence and health.*

**Canadian Social Work Review, Volume 40, Number 2 (2023) / Revue canadienne de service social, volume 40, numéro 2 (2023)**

social work students in Canada. It also shows the power of a single interprofessional experiential event in benefiting professional education of future social work professionals.

**Keywords:** interprofessional education, interdisciplinary, simulation, health care, BSW, undergraduate

**Abrégé :** Bien que la collaboration interprofessionnelle soit une attente courante dans l'emploi des travailleurs sociaux, la formation interprofessionnelle n'a pas été une caractéristique importante de la préparation au baccalauréat en travail social au Canada. Il y a également peu de recherches sur le sujet. Ces lacunes sont problématiques car les travailleurs sociaux titulaires d'un baccalauréat sont souvent employés au sein d'équipes interprofessionnelles dans divers établissements de soins de santé au Canada. Pour combler cette lacune, cette étude à méthodes mixtes explore les attitudes des étudiants en travail social d'une université canadienne de premier cycle à l'égard de la collaboration interprofessionnelle. De plus, l'étude évalue l'acquisition des connaissances des étudiants en matière de compétences interprofessionnelles après un seul événement de formation interprofessionnelle. Les résultats indiquent un changement positif dans les attitudes des étudiants et une meilleure connaissance des compétences en matière de soins interprofessionnels. L'étude contribue au corpus limité de recherches sur la formation interprofessionnelle des étudiants en travail social au niveau du baccalauréat au Canada. Elle montre également le rôle important d'un seul événement expérientiel interprofessionnel sur la formation professionnelle des futurs professionnels du travail social.

**Mots-clés:** formation interprofessionnelle, interdisciplinaire, simulation, soins de santé, baccalauréat, premier cycle universitaire

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THE GOAL OF THIS STUDY WAS to explore attitudes toward and knowledge of interprofessional collaboration competencies among baccalaureate (BSW) social work students in Canada after participating in a single interprofessional education (IPE) event.

## Literature review

Research shows that 70% of adverse outcomes in health care are attributable to a lack in interprofessional collaboration (Cavanaugh & Konrad, 2012; Fewster-Thuente & Velsor-Fredrich, 2008). Thus, interprofessional collaboration is a central pillar of health professionals' effectiveness (Smith & Anderson, 2008; Winfield et al., 2017).

In Canada, social work is a regulated health profession (Canadian Institute for Health Information, 2022; Health Professions Act, 1996; Health Professions Act, 2000). In Ontario, social workers are the third largest group of regulated health professionals after physicians and nurses in primary care settings (Ashcroft et al. 2018). Social workers are also the most prevalent mental health providers in North America (Whitaker et al., 2006).

Two main accreditation bodies of the social work profession in North America, the Canadian Association of Social Work Education (CASWE-ACFTS) and the Council of Social Work Education (CSWE), identify social workers as vital in health care (CASWE-ACFTS, 2014; CSWE, 2014). Historically, social workers practiced collaboratively with nurse professionals, physicians, and other providers (Adamson et al., 2020; Ashcroft et al., 2018) because complex wholistic care cannot be provided by any one health profession alone (Beltran & Miller, 2019). Social workers' emphasis on social determinants of health, social justice, relational practice, and person-centred care complement interprofessional teams in meeting the wholistic needs of clients (Jones & Philips, 2016; Nelson, 2015). Research shows that social workers positively contribute to the improvement of patient health outcomes, including reductions in the length of hospital stays, the amount of functional decline, and the rates of hospital readmission and mortality (Cootes et al., 2021; de Saxe Zerden et al., 2018; Downey et al., 2019; O'Connor, 2018). Petruzzi et al. (2023) indicate a wide array of social work duties in health care including case management, care coordination, transitional care between health services, and behavioural health, to name a few.

However, social workers experience many challenges in working within interprofessional teams (Glaser & Suter, 2016). Glaser and Suter (2016) state that maintaining social work professional identity in Canadian interprofessional environments is a major barrier to effective interprofessional collaboration because other health professionals often misunderstand social work roles and the scope of practice. Traditional approaches to educating doctors, nurses, social workers, and other health professionals have been in isolation from each other, leading to a lack of mutual awareness of the respective roles in health care (O'Connor, 2018). Rubin et al. (2018) comment on popular public erroneous beliefs about social workers, also common in health care settings, as those who "take babies away" and who "are unfairly stereotyped as uncompromising and

cold" (p. 22). Further, Ambrose-Miller and Ashcroft (2016) identify other barriers to social workers in interprofessional teams in Canada, including ineffective decision-making processes, communication gaps, hierarchical power dynamics between different health professions, and organizational cultures that are unsupportive of interprofessional collaboration.

To enhance interprofessional collaboration among different health professionals, early introduction of interprofessional education (IPE) is necessary (Rubin et al., 2018). IPE is defined as a learning process in which "students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes" (WHO, 2010, p. 13). Some examples of IPE include course offerings to more than one discipline, clinical simulations to interprofessional teams, and dual degrees in which two different disciplines are integrated in one program of study (Allen et al., 2014). Research suggests that implementing IPE early in training curricula improves communication, collaboration, and teamwork, thereby developing collaborative capacity in future health care professionals (Downey et al., 2019; Fox et al., 2018; McKinlay et al., 2018). Research shows that both theory-based and clinical simulation IPE have been effective in enhancing interprofessional knowledge, empathy, and professional skills in social work students (Adamson et al., 2020; Cavanaugh & Konrad, 2012; Delavega et al., 2018; Keeney et al., 2019).

However, even though IPE is advancing in medical training, in social work, it is still in developmental stages (Anderson, 2016; Anderson et al., 2019; Rubin et al., 2018). Although social work educators teach collaboration, social work students seldom practice with peers from different disciplines (Adamson et al., 2020; de Saxe Zerden et al., 2018) or learn about the roles and expertise of other health professions (Rubin et al., 2018). Pecukonis (2020) describes as a plausible culprit *profession-centrism*, defined as upholding rigid beliefs, values, ideas, and practices of a specific professional group as superior to others (Cantaert et al., 2022). Although the concept of profession-centrism and its prevalence in the social work profession is intriguing, exploring it further is beyond the scope of this paper.

Adamson et al. (2020) provide two main reasons to strengthen IPE in social work education at all levels. Firstly, due to the surge in demand for interprofessional teamwork in health care, to do their job well, social work students must become well-versed in interprofessional collaborative practice. Secondly, when social work students participate in IPE, their involvement enhances the curriculum of other participating disciplines owing to the unique emphasis of social work on the intersections of social determinants of health — such as race, class, gender, and ability — with access to health care, thereby impacting health outcomes (Adamson et al., 2020.

The Canadian Association of Social Work Education (CASWE) recognizes that social work students must be "prepared for

interprofessional practice, community collaboration, and teamwork" (2014, p. 12). However, research on the perspectives and experiences of social work students in Canadian IPE is scarce (Adamson et al., 2020). Most of the currently available IPE studies in social work in the country have been conducted almost exclusively with masters-level students (Kourgiantakis et al., 2019). To address this gap in knowledge, the current study asks the following question: What are the attitudes of Canadian BSW students toward interprofessional collaboration?

Importantly, IPE in social work and other health professions is hampered by administrative and infrastructure barriers related to costs and tuition, registration processes, scheduling logistics, and faculty workloads (Carney et al., 2018; de Saxe Zerden et al., 2018). With these systemic obstacles, it is uncertain how students in health professions can work together to "learn about, from, and with each other to enable effective collaboration and improve health outcomes" (WHO, 2010, p. 13). This study therefore explores the potency of various IPE solutions, such as a single IPE event, as opposed to full-term IPE courses, programs, or degrees. In support of this exploratory direction, the second research question in this study is: Does participating in a single IPE event improve BSW students' knowledge about interprofessional collaboration competencies?

## Methods

To recap, the goal of this study was to explore attitudes toward and knowledge of interprofessional competencies among BSW students in Canada after participating in a single IPE event. Our two-member research team included the lead researcher (AA), trained in mixed-methods and qualitative research, who was also the instructor in the associated social work course, and an undergraduate student research assistant (CV), trained in quantitative research methods. The team also received professional statistical consultation from the Department of Mathematics at the participating university.

### *Study design*

The study employed a concurrent parallel mixed-methods design, in which both quantitative and qualitative data are collected simultaneously, analyzed separately, and then merged for corroboration (Creswell & Plano Clarke, 2017). The quantitative strand included a pre-test/post-test survey design (Ponto, 2015), while the qualitative strand included document analysis (Bowen, 2009; Rapley et al., 2023).

Using quantitative and qualitative methods in one study helps to produce findings with both breadth and depth, a goal which cannot be achieved by using either method alone (Creswell & Plano Clarke, 2017). In this study, we have drawn on quantitative data to reveal broad trends in students' attitudes and their levels of knowledge of collaborative

competencies. Our qualitative data, on the other hand, provides deep insight into the students' perspectives on interprofessional collaboration. Together, both types of data offer a comprehensive understanding of the study phenomenon within the group of participants. Moreover, combining two methods of data collection in answering the same research questions increases the trustworthiness of the findings. Finally, using the concurrent type of mixed-methods design was suitable because we had access to both qualitative and quantitative data through an academic course led by the PI.

*Ethics statement*

This study was approved by the MacEwan University Research Ethics Board.

*Setting, sample, and consent*

The study was conducted from January to December 2020 in an accredited BSW program at a Canadian university. The convenience sample of students ($n$ = 21) in their fourth and final year of the BSW program represented a whole class enrolled in a winter-term academic course on social work in health care. Only data from students who voluntarily signed informed consent ($n$ = 20) were used. The signed consent forms were stored in the program's administrative office, and the research team did not have access to the forms until the end of the academic term. Due to a procedural mistake, however, demographic data from the students in the course was not collected.

*Description of the IPE event.* On March 2nd, 2020, participants were required to attend a one-day IPE event, titled *Help! Save Stan* (MacEwan University, n.d.), in the Clinical Simulation Centre of MacEwan University, Edmonton, Alberta. As an annual IPE event, *Help! Save Stan* was conceived by a collaborative partnership between the University of Alberta, Alberta Health Services, MacEwan University, North Alberta Institute of Technology, and NorQuest College (*Help! Save Stan*, n.d.). Since its conception, the event has brought together hundreds of students in various health professions. In 2020, the event was held on a small scale at MacEwan University (MacEwan University, n.d.). The event committee was led by the director of the Clinical Simulation Centre and included an inter-professional team of social work, nursing, and occupational therapy, and physical therapy faculty. The committee reviewed potential clinical simulation scenarios and approved them from their respective disciplinary perspectives. This review provided an opportunity for social work faculty to ensure the scenarios were relevant to the field of practice for social work and were meaningful for social work students. The scenarios focused on fall prevention, palliative care, home health care, youth experiencing homelessness, and a busy emergency room.

At the event venue, nurse educators and faculty from the Clinical Simulation Centre arranged medical equipment, beds, vital signs devices,

medical trays, tables, and charts according to the simulation scenarios (e.g., emergency room, primary care clinic, and ICU). Actors played patients or clients, faculty facilitators led structured pre-briefs and debriefs with students, and volunteers helped students to navigate the event smoothly. This IPE event, from its conception to the implementation, was an interprofessional collaborative effort.

Over 80 students participated in the IPE event from nursing, occupational therapy, physical therapy, and social work ($n = 20$). Students were organized into interprofessional teams to mimic an interprofessional health care environment. Students read simulated medical charts prior to meeting the actor-patients and had a choice to play as either a team member or an observer. Faculty facilitators, in their structured debriefs, offered feedback on the students' performance, using the PAAIL conversational strategy — Preview, Advocacy1, Advocacy2, Inquiry, and Listen (Clark & Fey, 2020; Rudolph et al., 2007). Each scenario took about 30 minutes, including pre-briefs and debriefs. Students rotated between scenarios based on a pre-determined schedule, and each student participated in at least four scenarios during the entire event.

### *Data collection*

*Quantitative strand: Survey design.* The survey covered both of our research questions. Students had to complete a paper-based pre-test before the IPE event (during the first week of the academic course) and a post-test after the IPE event (in the last week of the academic course). Students' attitudes were measured by two validated scales from the repository of the National Centre for Interprofessional Practice and Education (National Centre for Interprofessional Practice and Education, n.d.): the Interprofessional Attitudes Scale (IPAS) (Norris et al., 2015) and the Attitudes Toward Health Care Teams (ATHCT) scale (Heinemann et al., 1999). Students' knowledge of interprofessional competencies was measured by a validated Interprofessional Collaborative Competencies Attainment Survey (ICCAS) (MacDonald, Archibald, et al. (2010)).

*Instrumentation.* The Interprofessional Attitudes Scale (IPAS) was developed in 2012 based on the survey of students at the University of Utah ($n = 700$) (Norris et al., 2015). It includes 27 items on interprofessional attitudes within the five domains of the Core Competencies for Interprofessional Collaborative Practice (Interprofessional Education Collaborative [IPEC], 2016): teamwork; roles and responsibilities; patient-centredness; interprofessional biases, diversity, and ethics; and community-centredness. The scale uses a five-point Likert response format (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree), with higher scores indicating more positive attitudes. Item 1.8 was reverse-coded to positively correlate with the other survey items (Norris et al., 2015). Inter-item reliability for the first domain was excellent in

both pre-tests (Cronbach α = .757) and post-tests (α = .804). For domain 2, inter-item reliability was poor in both pre-tests (α = .412) and post-tests. For domain 3, it was good in pre-tests (α = .692) and excellent in post-tests (α = .862). For domain 4, it was poor in pre-tests (α = .591) and excellent in post-tests (α = .817). For domain 5, it was excellent in both pre-tests (α = .885) and post-tests (α = .782).

The Attitudes Toward Health Care Teams (ATHCT) scale, developed by Heinemann et al. (1999), is a 21-item scale with a six-point Likert response format (1 = strongly disagree; 2 = moderately disagree; 3 = somewhat disagree; 4 = somewhat agree; 5 = moderately agree; 6 = strongly agree). It is divided into three subscales: attitudes toward team values, attitudes toward team efficiency, and attitudes about a physician's shared role on the team. The inter-item reliability of the attitudes toward team value subscale was acceptable in the pre-test (α = .679) and excellent in the post-test (α = .837). For the team efficacy subscale, the inter-item reliability was poor in the pre-test (α = .560) and worse in the post-test (α = -.347). Similarly, the attitudes toward physician's shared role on the team subscale had poor inter-item reliability in the pre-test (α = .572), which worsened in the post-test (α = .126).

The Interprofessional Collaborative Competencies Attainment Survey (ICCAS) is a 21-item tool, developed by MacDonald, Archibald, et al. (2010) and further modified by Schmitz et al. (2017). ICAAS measures knowledge of IPEC competencies in a retrospective self-assessment. Thus, the data is collected only once, after the event, but the scale questions enquire about one's perceived knowledge of competences at two time points: before the IPE event (i.e., what could have been a pre-test) and after the event (i.e., what could have been a post-test). The first 20 items are scored on a five-point Likert scale (1 = poor; 2 = fair; 3 = good; 4 = very good; 5 = excellent) and mirror to the IPEC competencies of communication, collaboration, roles and responsibilities, collaborative patient/ family-centred approach, conflict management/resolution, and team functioning. The 21st item enquires about the overall perceived abilities of participants to collaborate interprofessionally; it is scored on a five-point Likert scale (1 = much better now; 2 = somewhat better now; 3 = about the same; 4 = somewhat worse now; 5 = much worse now). This transition item assesses the concurrent validity of the entire scale (Feinstein, 1987, as cited in Schmitz et al., 2017).

*Quantitative data analysis.* Prior to the data analysis, each student was assigned a separate numeric code, and the student names were removed from all questionnaires. The document with student names and their corresponding codes was kept separately in the principal investigator's office.

All data from the three scales (IPAS, ATHCT, and ICCAS) were analyzed using IBM SPSS v.26 software. Missing data were handled using pairwise deletion, allowing for the maximal incorporation of participant

data, even if they had missed a question. For subscales in the IPAS and ATHCT, Cronbach's analysis was used to assess inter-item reliability and consistency, with acceptable reliability above α=.65.

Wilcoxon signed-rank test was used to determine if differences in pre-test and post-test scores were significant for the IPAS, ICCAS and ATHCT to a significance level of α=0.05. Wilcoxon rank-sum test was also performed to characterize the changes in pre-test and post-test scores per each participant. This non-parametric test was chosen due to the small sample size and the abnormal data distribution.

*Qualitative strand: Document analysis of multiple essays.* Qualitative document analysis was conducted of a set of guided written essays ($n$ = 20) that students typed and submitted electronically to an online learning system after their participation in the IPE event. In their essays, students shared their observations of interprofessional competencies and most significant experiences during the event and summarized their main take-aways. Prior to the data analysis, each essay was assigned a separate numeric code, and then the student names were removed from the essays. The document with the students' names and the corresponding codes was kept separately in the principal investigator's office.

The qualitative data were analyzed manually, using confirmatory document analysis, which is used in education research (Bowen, 2009). Confirmatory document analysis refers to "defining … categories (often themes) *prior* to reviewing the data, and then systematically searching the data for instances or expressions of these categories" (Guest et al., 2013, p. 254). Confirmatory document analysis is conceptually similar to a deductive qualitative content analysis (DQICA), which Kibiswa (2019) describes as a "deductive… directed approach" in which a researcher "draws from existing theory to set up the categories/themes that guide [the] research" (p. 2059). In this study, the theoretical analytical framework, described below, was used to establish *a priori* themes (i.e., the six interprofessional competencies). Within those themes, document analysis focused on developing codes and then grouping recurrent codes into categories of participants' expressed attitudes toward the specific interprofessional competencies.

*Theoretical analytical framework.* CASWE does not offer any specialized model for evaluating IPE outcomes in social work (CASWE, 2014). Canadian nursing and other health professions embrace the National Interprofessional Competency Model, developed by the Canadian Interprofessional Health Collaborative (CIHC, 2010). This model is closely aligned with the widely recognized Interprofessional Education Collaborative model (IPEC, 2016), which was adopted by the Council of Social Work Education (CSWE), a corresponding body to CASWE in the USA (Sankar, 2014).

The National Interprofessional Competency Model (CIHC, 2010) identifies six major interprofessional competencies: 1) professional roles'

clarification; 2) team functioning; 3) collaborative leadership; 4) patient-, client-, family- or community-centred focus to care and service provision; 5) interprofessional communication; and 6) conflict management. In this study, the six aforementioned competencies will provide a theoretical analytical framework for the qualitative data analysis as well as for merging and interpreting the quantitative and qualitative findings. Although this theoretical framework may be perceived as not robust from a conceptual stance, it nevertheless is a good fit for the directed qualitative content analysis. As well, it is focused enough to help merge the mixed methods data.

*Merging data.* In mixed-methods research, corroboration of the quantitative and qualitative data is important (Creswell & Plano Clarke, 2017). In this study, the categories and themes from the DQICA were compared with the quantitative survey responses against the six interprofessional competencies. Qualitative and quantitative findings were then compared against the study's two research questions.

To reflect this corroborative effort, we have first organized the findings in the following section within the two research questions. Within each research question domain, findings are then organized according to the six themes of interprofessional collaborative competencies.

## Results

### *Quantitative findings*

As shown in Table 1, our findings indicate a statistically significant increase in students' knowledge acquisition of the interprofessional competencies after participating in the IPE event, when measured by ICAAS (p=0.0001). All questions saw an increase in scores of 1.157 points on average.

**Table 1:** *Descriptive statistics and Wilcoxon signed-rank results for the IPAS, ATHCT, and ICAAS pre- and post-tests (n = 20).*

| Scale | N | Pre-Mean | Std. Dev. | Pre-Median [IQR] | Post Mean | Std. Dev. | Post Median [IQR] | Negative mean rank | Positive mean rank | Z* | 2-tailed p-value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IPAS | 20 | 4.51 | 0.257 | 4.57 [4.27, 4.75] | 4.66 | 0.218 | 4.67 [4.51, 4.84] | 7 | 11.12 | -3.136 | **0.002** |
| ATHCT | 20 | 4.09 | 0.325 | 4.14 [3.77, 4.38] | 3.71 | 0.658 | 3.75 [3.27, 4.19] | 10 | 10 | -1.006 | 0.314 |
| ICAAS | 20 | 2.801 | 0.594 | 2.82 [2.51, 3.19] | 3.96 | 0.499 | 4.1 [3.74, 4.36] | 1 | 11 | -3.883 | **0** |

As to the students' attitudes toward interprofessional collaboration, results diverged between IPAS and ATHCT scales (Table 1). IPAS scores

indicated statistically significant increase in positive attitudes after the IPE event (Wilcoxon signed-rank test: Z = -3.136, df = 19, p = 0.002). Seventeen participants (85%) reported higher post-test scores than the pre-test scores. Looking at the five IPAS domains, the mean post-test scores in domain 1 (teamwork, roles, and responsibilities) were significantly different from the mean pre-test scores (Wilcoxon signed-rank test: Z = -2.340, df = 19, p = 0.019). The mean post-test scores for domain 2 (patient-centredness), domain 3 (interprofessional biases), domain 4 (diversity and ethics), and domain 5 (community-centredness) were not significantly different from the pre-test scores as per the following: Wilcoxon signed-rank test: Z = -1.473, df = 19, p = 0.141; Wilcoxon signed-rank test: Z = -1.692, df = 19, p = 0.091; Wilcoxon signed-rank test: Z = -1.473, df = 19, p = 0.141; and Wilcoxon signed-rank test: Z = -1.409, df = 19, p = 0.159.

In line with the IPAS results, the ATHCT indicated students' positive attitudes toward interprofessional collaboration at the baseline as well as some increase in these attitudes after the IPE event. However, this increase was not statistically significant on ATHCT (p=0.314).

### *Qualitative findings*

*Attitudes toward interprofessional collaboration.* At the baseline, BSW students had positive attitudes toward interprofessional collaboration in health care. Those attitudes further improved after the IPE event. As one student pointed out:

> *Through the interprofessional education process, I was able to see the need and efficiency of interprofessional collaboration, and the difficulty when it is not there… It then became clear to me … how certain professions possess skills that other professions might struggle to recognize and understand.*

Some students recognized their own preconceived ideas about other disciplines that reportedly impacted their behaviour and informed their actions during the IPE event. As one student said,

> *I realized … that I had my own biases towards some health care professionals due to my own experience. … In the past, I have received medical care that I had perceived as deficit-focused, which led me to lose trust in some healthcare professionals… it is important for me to know [about] this bias so that I can address it and work collaboratively and effectively to serve the patient.*

*Knowledge acquisition of interprofessional competencies.* Students reported enhanced knowledge of the six interprofessional competencies after the IPE event. The findings below are organized according to the six domains of the interprofessional competencies, supported by representative quotations from the students' essays.

*Competency 1: Professional role clarification*. Students reported that professional role clarification was the most difficult observed competency. As one student commented,

> *Of the six competencies, I found role clarification to be the biggest obstacle we faced. … I greatly stunted our ability to effectively collaborate as a cohesive unit. Without a clear understanding of each team members' roles and responsibilities, collaboration is jeopardized. … Ensuring that my role is clear to both professionals and clients is a goal I have for myself in my future social work practice.*

Also, students commented on the importance of debriefing as a strategy for the role clarification. As one student shared:

> *Prior to the debriefing session, I assumed that those on my team had a basic understanding of what social workers do, [similarly to how] I felt I had a good grasp on what the roles of the nurse and occupational therapists were. As we talked, though, it became clear by the questions they asked me regarding my approach with the [client] that they, in fact, knew very little about my role as a social worker. … This gave me the chance to explain … the social work role … [which] strengthened mutual respect between us.*

Students commented that clarifying the roles of other disciplines was equally important. As one student summarized:

> *One of the most significant experiences I had during the event was learning about the role of the other professionals in my group… I did not even know what a PTA/OTA [physical therapy assistant/occupational therapy assistant] was, let alone what they did. I also learned how diverse the role of nursing was. … I take great meaning away from this experience as it has helped me realize the necessity of learning first-hand about the roles of those I am working with.*

*Competency 2: Interprofessional conflict*. Most of the students reportedly did not experience disagreements with the team members. However, this was not the case for some other students, who commented on the presence of subtle conflict:

> *I realized that I became quite territorial over my role as a social worker. I felt that the nursing student that was on my team was asking a lot of social questions. … It was clear to me that the psychosocial assessment was my role and I felt that I had to defend my turf, especially as I wanted to build rapport with the client.*

Students commented that mutual education and reflective listening can be a useful strategy in such conflict situations.

*Competency 3: Collaborative leadership*. Students' experiences of leadership during the IPE event were diverse. Some reported a lack of collaborative leadership due to the disciplinary hierarchy in healthcare,

which hindered their opportunity to contribute to the team as a social worker:

> *While acting as a social worker, I struggled with feeling like my knowledge, skills, and opinions did not matter and found myself often refraining from offering my insights. These feelings, however, could be due to the invisible hierarchy that I feel exists when working on interdisciplinary teams wherein the social worker falls towards the bottom of the hierarchy, and their opinions are disregarded.*

Another student elaborates on the disciplinary divide, connecting it to the resultant regress to the siloed work:

> *[c]ollaborative leadership … proves to be very difficult when power differentials [exist] among team members, such as social workers and doctors, as it can create hierarchical relationships. … It can be tempting to fall into an independent role where a professional works within their scope of practice and takes no interest in the other professionals that are part of a patient's care.*

However, other students observed collaborative leadership competency in action. They commented on the shared responsibility for helping a client, personal responsibility and accountability, collective decision-making, and mutual respect, which made collaborative leadership possible. As one student shared,

> *My group was able to work well with each other and engage in effective decision making as a team. In each scenario, all members of the team were able to develop a plan of care for the client collectively, with each member contributing to the design and implementation of service provision. … There was acknowledgment from team members that [,] while each discipline has their own specialty, many of our professional competencies overlap, and this acknowledgment aided in our ability to effectively lead as a group. Additionally, there was collective accountability for the outcome of each scenario, focusing on joint success rather than individual performance.*

*Competency 4: Interprofessional communication*. Students identified communication as a pivotal aspect of interprofessional care. They "recognize[d] that there is reciprocal responsibility to communicate … when working on a team." Others shared activities that had helped them to perform effectively, including connecting with each other "prior to the simulation to discuss how … to approach the situation," "listen[ing] to each other, read[ing] each other's body language, discuss[ing] respectfully with each other," and "communicat[ing] verbally … to ensure all professionals were clear about how they were working together".

*Competency 5: Team functioning*. Students talked about being "better together," "recognising strengths of each other," "identif[ing] personal and team's challenges," and "reach[ing] out for help" when struggling.

Another student commented on the importance of "commitment to the success of the team" as a core aspect of the effective teamwork.

*Competency 6: Client-centred care.* Participating in the IPE event helped students to observe the implementation of client- or patient-centred care. Some commented on the importance of power-sharing, using physical space:

> *When we entered the scene, there were three chairs set up together in a straight line, facing the patient, for the nurse, physical therapist, and myself. To me, that immediately felt like a physical representation of a power dynami[c] of professionals versus the patient. I decided to move my chair away from the rest of the professional team, sitting adjacent to the patient sitting on the bed.*

Another student shared a decision that, although it proved ineffective, offered a learning opportunity in the retrospect:

> *I introduced myself to the patient's husband … and brought a chair into their room. Unfortunately, the chair did not fit beside [the husband] the way I planned, so I opted to stand beside him. This proved to be an incredibly ineffective place to position myself in the room as it created a "power-over" dynamic and limited the opportunity to make … eye contact with [the husband]. If I could re-do the scenario, I would introduce myself to the patient and the husband the same way I initially did, but then I would place the chair on the other side of the patient's bed to allow for … eye contact with [the husband].*

Further, students were able to identify the importance of the patient's voice in care as a critical component of the patient-centred care competency. As one student commented:

> *In the palliative care scenario, the husband was worried about his wife's [the patient's] medications because of the change in [her] energy level, but we did not have a nurse present to check the chart … I then spent some time talking with [the husband] about how he was coping personally. While he was willing to talk to me about his feelings, he always brought the conversation back to the medications. It was when we finally got someone to come in and address the medications with him, then he was able to focus on his own grief. This was a very big moment of interprofessional education for me. I realized patient-centred care means putting what the patient wants first, [and] that I will not always be able to provide that myself [and so] must utilize other disciplines to ensure that the best care is provided.*

## Discussion

To recap, BSW social work students had already positive attitudes toward interprofessional collaboration at the baseline, which further improved significantly after the IPE event when measured by the IPAS scale ($p=0.002$). Positive improvement in attitudes was noted also on the

ATHCT scale, although here the change was not statistically significant (p=0.314). As to the knowledge acquisition of interprofessional competencies, students demonstrated statistically significant increase on the ICCAS scale (p = 0.0001). The qualitative results in this study supported the quantitative findings above, revealing improved knowledge of interprofessional competencies, positive attitudes toward the interprofessional collaboration at the baseline, and their further improvement after the IPE event.

These findings are congruent with the previous research that documents positive effects on the knowledge and attitudes of social work students toward interprofessional competencies in clinical simulation IPE (Adamson et al., 2018; Cavanaugh & Konard, 2012; Delavega et al., 2018; Keeney et al., 2019). Interestingly, Delavega et al. (2018), who examined changes in attitudes and interprofessional skills of master social work students ($n$ = 99) document that social work trainees demonstrated significant interprofessional skills after IPE; however, their change in attitudes toward interprofessional collaboration was less apparent. This less visible change in attitudes can be due to already positive attitudes toward interprofessional collaboration at the baseline because social work education, typically, includes skills development in group facilitation, community building, client- and family-centred care, professional communication, and conflict resolution (Adamson et al., 2020; Glaser & Suter, 2016).

According to the National Interprofessional Competency Framework (CIHC, 2010), successful interprofessional collaboration occurs when teams demonstrate the following six key competencies: role clarification; team functioning; patient-, client-, family-, or community-centred care; collaborative leadership; interprofessional communication; and interprofessional conflict resolution. In congruency with the previous research (MacDonald, Bally, et al., 2010)), participants in the current study identified "professional role clarification" as the most challenging interprofessional competency. The role of each professional on a team needs to be "clearly defined, and each team member knows the role and duties that they are expected to contribute" (Dziegielewski, 2013, p. 123). The confusion of roles and responsibilities is often referred to as "role creep," due to the blurring of roles in which professional responsibilities may change and expand over time (Craig et al., 2015, p. 432).

Students in this study identified that teamwork and interprofessional communication were crucial to their ability to engage in collaborative leadership and minimize interprofessional conflict during the IPE event. Interprofessional communication requires active listening, trust, respect, and an active role to ensure clarity of care decisions (CIHC, 2010; Foronda et al., 2016). Effective communication facilitates team functioning, including developing and understanding of group dynamics,

teamwork, and collaboration (University of British Columbia, 2010), which are all "essential to providing safe and high-quality care" (Hughes, & Albino, 2017, p. 209).

Respectful communication and a collaborative spirit are connected to the client-centred care principles (Alberta College of Social Workers, 2019). Client-centred care can be described as "care that is respectful of and responsive to individual patient preferences, needs, and values" (Greene et al., 2012, p. 49). Client-centred care views patients as partners on the healthcare team and promotes clients' participation in their care plan (Cavanaugh, & Konrad, 2012). The students in this study discussed how quality care can be undermined if it is not client-centred.

However, this study has limitations. First, there is potential bias, as the students were required to attend the IPE event as a part of their coursework. Although completing the study questionnaires was voluntary, the essay assignments were still graded by their course instructor, who was also the primary investigator in this study. Their awareness of being graded could have impacted the ways that students wrote their essays. Opting out of the study offered some risk mitigation. Also, the instructor did not have access to the consent forms until after the end of the course. Yet, the risk of bias remains.

Second, due to a procedural mistake, the students' demographic data were not collected. Thus, no meaningful analysis of the sample characteristics is possible.

Third, the small sample size of the study ($n = 20$) does not enable us to generalize the quantitative findings to a wider population of BSW students in Canada. However, this limitation is off-set by the qualitative part of the mixed-methods design, in which a sample of twenty respondents is, in fact, considerable and offers in-depth insights of the whole group of students in a typical course in an accredited BSW social work program in Canada.

Fourth, we were surprised to find diverging results on the attitudes toward interprofessional collaboration when measured by different scales (IPAS and ATHCT). This divergence could be explained by the different focus domain of the two selected scales. Also, because of a formatting error, the ATHCT self-report questionnaire had missing data, which could have caused some participants to skip one of the questions — thereby impacting the scores. In any case, although the change was statistically significant only on the IPAS scale, both the IPAS and ATHCT indicated positive attitudinal change of some sort.

Finally, the structure of the ICCAS scale, which includes pre- and post- responses collected at one point in time, could introduce a recall bias in the participants' retrospective perception of their own knowledge acquisition of the interprofessional competencies. This limitation was offset by comparing with the qualitative data addressing the same domains.

## Conclusion

Even with these limitations, the findings of this study still address the gap in knowledge on interprofessional education in BSW programs in Canada. The study demonstrates that BSW students can effectively learn interprofessional competencies from a single IPE experience. As IPE has not been a robust feature in BSW programs in Canada, we recommend that BSW programs develop sustainable IPE opportunities for their students, to better prepare them for interprofessional practice. As effective interprofessional practice contributes to improved patient outcomes, IPE presents as a public health imperative (Addy et al., 2015). Social work as a health profession should not fall behind in enhancing public health and ensuring that all students at all levels of programming uphold interprofessional collaborative competencies and skills.

This study also demonstrates the power of a single IPE event (e.g., a workshop, conference, or clinical simulation event), which corroborates previous research findings (Browne et al., 2021; Craig et al., 2017; Delavega et al., 2018). Single events can offer a flexible, feasible and, potentially, cost-effective solution to implementing IPE in restricted fiscal academic environments. It is conceivable to conclude, therefore, that offering a single IPE event is a promising strategy for social work education. To be successful, however, a single IPE event requires time for meticulous planning to ensure that the content of the IPE activities is relevant for social work practice and that it provides meaningful learning experiences for social work students. Planning also allows for effective event organization, with timed activities alternating with structured debriefs by trained faculty facilitators. Event volunteers are important to help students navigate the schedule, ensure an orderly transition between activities and their locations, and support students in processing their interprofessional learning.

Although single IPE events may encounter fewer logistical challenges than full-term interprofessional training courses, their cost-effectiveness is unknown and requires further evaluation. We cannot be certain that single IPE events are cost-effective because they still require resources — including funding, a venue, faculty training, and equipment.

Further research is necessary to cross-compare the cost-effectiveness of various IPE events and their impact on the professional preparation of social work students over time. Also, future research should focus on comparative IPE analysis between BSW and MSW levels to identify the unique features and needs of BSW IPE programming. Finally, future research should focus on understanding the perspectives of other professions of the social work role in healthcare teams. Such research is important because other health professionals having a clear understanding of and respect for social work roles may have profound

positive implications for patient-centred care and the wellbeing of people served by the healthcare system.

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