Transformative Teams in Health Care: Enhancing Social Work Student Identity, Voice, and Leadership in a Longitudinal Interprofessional Education (IPE) Course

Barbara Jones
Jen Currin-McCulloch
Liana Petruzzi
Farya Phillips
Shivani Kaushik
Blake Smith

Abstract: This paper describes social work pedagogy and outcomes in a multi-year longitudinal interprofessional education (IPE) course incorporating B.S.W, and M.S.S.W. students. Social work students participated in an IRB-approved mixed-method study designed to evaluate individual growth and identity transformation throughout the two-semester course. Students' semi-structured reflection papers (n=113) were analyzed qualitatively to identify core themes. Students voluntarily completed Interprofessional Assessment Scale (IPAS) surveys, a measure of core competencies in interprofessional care, before and after the class (n=48). Social work students reported that they developed increased personal and interprofessional confidence, awareness of social work role in health care, increased social work skills and leadership to use their voice in interprofessional health care teams. All levels of social work students can and should be incorporated into IPE education. Social work educators and practitioners should continue to take leadership in IPE education at all levels of curriculum design and implementation.

Keywords: Interprofessional education; social work leadership; collaborative practice

The National Academies of Sciences, Education, and Medicine (NASEM) recently released a report stating that social care needs must be integrated into health care and that there is a need for more social workers in health care (2019). Further, the report stated that interprofessional health care teams must include experts in social care and build an adequately trained interprofessional work force (NASEM, 2019). Similarly, The Institute of Medicine (IOM, 2001, 2013) and the World Health Organization (WHO, 1998, 2010) have recommended interprofessional education to create "collaborative ready" graduates capable of joining and promoting team-based models of health care delivery. The IOM's (2013) report concluded that patient care was enhanced when health care teams communicated well and understood each other's roles. There has recently been a tremendous amount of activity and enthusiasm for Interprofessional Education (IPE) and Interprofessional Collaborative Practice (IPCP) in the changing health care environment (Bridges et al., 2011; Greiner, 2003; Guraya & Barr, 2018; IOM, 2013; Interprofessional

_____

Barbara L. Jones, PhD, MSW, FNAP, Associate Dean for Health Affairs and Professor, Steve Hicks School of Social Work, University of Texas at Austin, Austin, TX. Jennifer Currin-McCulloch, PhD, LSW, Assistant Professor, Colorado State University School of Social Work, Colorado State University, Fort Collins, CO. Liana Petruzzi, LCSW, Doctoral Student, ; Farya Phillips, PhD, CCLS, Research Assistant Professor, Steve Hicks School of Social Work, University of Texas at Austin, Austin, TX. Shivani Kaushik, MSSW, RSW, Graduate Research Assistant, School of Social Work, Colorado State University, Fort Collins, CO. Blake A. Smith, LMSW, Development & Communications Specialist, Family Eldercare, Austin, TX.

Education Collaborative Expert Panel, 2011, 2016; Marcussen et al., 2019; Riskiyana et al., 2018). The IOM (2001, 2013) and WHO (1998, 2010), both highly endorse the concept of interprofessional education and practice. The 2003 IOM report, *Health Professions Education: A Bridge to Quality*, cited "working as part of interdisciplinary teams" as a core proficiency area for health professionals (p. 45).

Interprofessional education is a critical pedagogy for training professionals practicing in interdisciplinary and transdisciplinary health care settings. Interprofessional Education can occur at any level and involves intentionally engaging two or more health professions to learn with, from and about each other (WHO, 2010). Interprofessional collaborative practice occurs when different disciplines are working collaboratively together to enhance patient and community outcomes (IPEC, 2016). Perceptions of the value of interprofessional practice are best shaped at a time in the educational process when students have developed a professional identity but have limited experience in clinical settings that may have already fixed their perceptions of health care delivery (IPEC, 2011, 2016). The IOM's 2001 report concluded that when health care teams communicated well and understood each other's roles, patient care was enhanced. Interprofessionalism can improve teams, increase social capital and trust, and positively impact patient health outcomes (Herbert, 2005; Jadotte et al., 2019; WHO, 2010) The IOM (2013), NASEM (2019), and WHO (2010) all advocate for creating "collaborative ready" graduates capable of joining and promoting team-based models of health care delivery. Systematic reviews conducted between 2007 and 2019 (Guraya & Barr, 2018; Hammick, 2017; Marcussen et al., 2019; Reeves et al., 2016; Reeves et al., 2013; Riskiyana et al., 2018) found 97 studies evaluating the effectiveness of IPE on professional practice and health care outcomes. The summary of the data showed that all of these IPE interventions were feasible and positively received by students and professionals. The majority of IPE programs had positive outcomes in particular with regard to learners' reaction to IPE and changes in students' knowledge and skills. Results suggest that most participants of IPE responded well to the curriculum and obtained the knowledge and skills needed for interprofessional practice.

The Interprofessional Education Collaborative Expert Panel (IPEC 2011, 2016) outlined the core competencies necessary for collaborative practice: Values/Ethics for Interprofessional Practice, Interprofessional Communication, Roles and Responsibilities, and Teams and Teamwork. These competencies match well with the core values and code of ethics of the social work profession, the 2015 Council on Social Work Education (CSWE Educational Policy and Accreditation Standards (EPAS, CSWE, 2015), and the National Association of Social Workers (NASW; 2016) Standards of Practice in Health Care Settings, which all highlight the need for collaborative practice in social work. IPE is now mandated as part of the accreditation process for many health care professions including medicine, nursing, and pharmacy (Accreditation Council for Pharmacy Education, 2015; Commission on Collegiate Nursing Education [CCNE], 2018; IPEC, 2011, 2016; Liaison Committee on Medical Education, 2019). And the recent CSWE EPAS states, "Social workers value the importance of interprofessional teamwork and communication in interventions, recognizing that beneficial outcomes may require interdisciplinary interprofessional and inter-organizational collaboration" (CSWE, 2015).

As a licensed health profession, social work's education, values, and educational accreditation standards are consistent with the IPEC core competencies, and academic programs must find ways to provide practice knowledge, skills, and learning experiences necessary to prepare the next generation of health care social workers. For social work, it is essential to secure our position as a core member of the interprofessional team by ensuring our students are actively involved in IPE. Social work educators must be involved in creating and offering IPE opportunities for social work students which will serve as an important step in social workers successfully integrating into health care teams in practice. Indeed, social work has a critical leadership role to play in IPE based upon our unique competencies and skills in collaboration, communication, and cultural humility (Jones & Phillips, 2016). Therefore, it is important to train the next generation of social work educators in IPE pedagogy.

While IPE is considered an essential element of training for health professional students, academic institutions are encountering obstacles to its development and implementation (Reeves et al., 2016; Rubin et al., 2018). Some of these obstacles include different academic calendars, difficulty recruiting and rewarding faculty, and challenges to placement in overarching degree programs. This article aims to describe social work pedagogy and student outcomes in a fully integrated multi-year longitudinal interprofessional education course incorporating B.S.W., and M.S.S.W. social work students.

The social work course described here, Transformative Teams in Health Care, is currently embedded in the larger interprofessional course, Foundations for Interprofessional Collaborative Practice, which is a two-semester, three-credit, in person, longitudinal, interprofessional flipped classroom design that teaches the core competencies of IPE and specific skills in IPCP as defined by the Interprofessional Education Collaborative Expert Panel (Timmerman et al., unpublished manuscript; IPEC 2011, 2016). The Foundations course evolved from a twelve person, one-semester course with only medical and social work students to a two-semester course with over 250 students and 45 faculty facilitators per year from four health professions (social work, nursing, pharmacy and medicine). The class is typically comprised of 40% pharmacy, 20% medicine, 25% nursing and 15% social work students. The course is organized in three cohorts of 36 teams of interprofessional students and facilitators. Each cohort meets six times in the fall and six times in the spring to cover the class material. The course is led by four course directors from each of the representative schools who serve as the instructors of record for their students. Faculty facilitators from the four health professions receive extensive training and ongoing just-in-time preparation and debriefing for each class. Each interprofessional team of 10-12 students has 1-2 faculty facilitators who stay with them for the entire year. In addition to the IPEC core competencies, students work together in ten-person interprofessional teams to learn specific skills in motivational interviewing, implicit bias reduction, conflict resolution, TeamSTEPPS™ communication, palliative care collaboration and error reduction. On average, there are 40-45 social work students per year. Social work student interest in the Foundations course grew exponentially from the first course design and expanded from 2nd year M.S.S.W students to include Senior B.S.W. and Ph.D. students. Social work students receive a specific, tailored orientation to the

course and check in at the beginning of each semester. This is offered by the social work course director and co-course director, the social work faculty facilitators, and PhD students.

This course not only offered unrivaled learning opportunities for B.S.W. and M.S.S.W. students; it also enabled doctoral students to participate through a specially designed independent study to serve as teaching assistants and learn first-hand the pedagogy of interprofessional education. Six Ph.D. students participated in the course over the same three-year period. They worked alongside course directors to develop and participate in every aspect of the course, including as teaching assistants. They were engaged in leadership roles in the development of course modules in areas such as communication, culturally inclusive practice, and palliative care. Doctoral students also served integral roles in the administration and facilitation of the course through evaluating student team's community health proposal projects; coordinating student peer reviews; co-facilitating student teams; and managing classroom logistics.

Methods

Social work students (n=113) participated in a two-semester course entitled, Foundations for Interprofessional Collaborative Practice (FICP), at the University of Texas at Austin. The majority of social work students participated in the course during their master's program (n=91, 81%). Social work students took the course alongside first year PharmD and Medicine students, and final year Nursing students. Participation in the FICP course was voluntary for social work students but mandatory for all other disciplines. The one exception was for social work students that were completing the healthcare certificate program, as they were required to enroll in this course. All disciplines enrolled in the class for two semesters, except the nursing students who only completed one semester of the course.

This study utilized a mixed methods approach. Quantitative data for this study includes scores of the Interprofessional Attitudes Scale (IPAS, Norris et al., 2015) taken pre- and post-completion of the FICP course. Qualitative data included student's responses to a semi-structured reflection essay. Prior to initiating the study, the research team received approval from The University of Texas at Austin's Institutional Review Board (IRB) to analyze and report findings from the student IPAS surveys and reflections. While the reflection essay was a required component of the class, the quantitative survey was voluntary; therefore, there are different sample sizes for each component of the study. In total, 113 students completed the qualitative reflections, 85 students completed at least one quantitative survey and 48 students completed both the pre and post quantitative surveys.

Quantitative

The IPAS is a self-assessment measure of interprofessional skills as they relate to the four core competencies of interprofessional practice: collaboration, communication, values/ethics, and teamwork (IPEC, 2011). It includes 27, Likert-scale questions with rating responses from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample survey questions include: "Learning with other students will help me become a more effective member of a

health care team." and "It is not necessary for health sciences students to learn together." In addition to a total score, there are five subscale scores based on 1) Teamwork, Roles and Responsibilities (TRR); Patient Centeredness; Interprofessional Biases; Diversity and Ethics; and Community Centeredness. Social work students (n=85) accessed and completed the survey online through a confidential link.

Data were collected over two academic years between the fall of 2017 and the spring of 2019. Data were collected at two time points, before the semester began and at the end of the semester to conduct pre and post comparisons. However, since survey completion was optional, only 42% of the sample (n=48) completed both pre and post assessments. A paired sample t-test was conducted for the 48 students that completed an assessment at both time points. Finally, the research team tested the internal consistency of the scale with Cronbach's alpha with the full sample of data (n=85) since this is a relatively new scale and this the first study to use it with social work students to our knowledge.

Qualitative

Social work students from the 2017, 2018, and 2019 cohorts submitted end-of-course reflections after completion of the course. The reflections (n=113) explored social work students' personal and professional development in the context of the interprofessional educational arena. The written assignment invited students to reflect on how and why their perspectives (or viewpoints) on the following three areas have evolved as a result of course participation: interprofessional practice, your own professional role, and the roles of the other three professions. The grading rubric for the reflection instructed students to (a) describe an event (or series of events) that impacted you or spurred your learning and development; (b) reflect on what you learned; and (c) discuss how you believe this will be relevant to your ongoing studies and/or future practice? Students had 500-1000 words to craft their responses.

Analysis of the reflection data incorporated template analysis methodology, a form of thematic analysis. This type of analysis employs a constructivist framework that enables multiple interpretations of data based on researchers' expertise and the social context of the research (Brooks & King, 2014). As researchers analyze data, themes begin to resonate between participants' responses and answer particular aspects of the research questions. Within template analysis, themes may center on a set of a priori themes that the research team brings into the study, whether to answer specific research questions or through the design of the data collection (Brooks & King, 2014). For example, this study incorporated a priori themes as prescribed in the grading rubric for their reflection assignment. Template analysis enables flexibility in evolution of themes as compelling data emerges. Through data analysis, themes begin to cluster, and pervasive themes emerge as integrative themes (Brooks et al., 2015) and serve as the thematic backbones of the coding template.

The analysis of data for this study follows template analysis guidelines as proposed by Brooks and King (2014). Two social work researchers with extensive histories in interprofessional health practice performed the qualitative analysis of students' reflections. One coder initially read through ten student reflections to discern emerging themes within the reflections. Based on a priori themes derived from the reflection assignment, the same

person coded the first ten reflections into thematic clusters utilizing MAXQDA (VERBI, 2018) to assist with management of data analysis. These thematic clusters served as the initial coding template. Additional modifications to the template were made to reflect nuances in students' experiences. Code saturation occurred at reflection number 15 when no new integrative themes emerged (Hennick et al., 2017). At this time, the main structure for the coding template solidified. Variances in students' experiences within each integrative theme occurred until reflection number 32, meaning saturation occurred (Hennick et al., 2017). The second researcher assessed the accuracy of the codebook in capturing relevant codes within the same set of initial reflections. Both researchers then met to compare coding strategies. Through the assistance of MAXQDA software (VERBI, 2018), the team performed inter-rater coding reliability and determined that they had 82.7% agreement in code occurrence within a sample of 36 coded student reflections. Then, both researchers completed coding all 113 reflections utilizing the revised coding template.

Results

Quantitative Findings

Eighty-five social work students submitted at least one IPAS assessment (single submission), and 48 students submitted both pre and post IPAS assessments. Additional demographic data were not collected from students who completed the quantitative survey. A paired-sample t-test was completed with the sample of matched data (n=48) and there was no significant difference in IPAS subscale or total scores before and after the class (Table 1). In terms of internal consistency, Cronbach's alpha scores ranged from .412 to .808 for each subscale score and the total score (Table 2). The number of questions per subscale and the highest subscale and total scores are also listed in Table 2. The full sample of quantitative data (n=85) was only used for the Cronbach's alpha assessment.

Table 1. *Social Work Scores Before and After IPE Class (n=48)*

	M (*SD*)				
IPAS Subscale	Pre-Test	Post test	Diff.	*t*	*p*
Teamwork, Roles, & Responsibilities	58.8 (3.6)	59.2 (4.5)	0.4	-0.511	0.612
Patient Centeredness	34.2 (1.2)	34.3 (1.3)	0.1	-0.164	0.871
Interprofessional Biases	12.9 (3.1)	12.2 (2.2)	-0.7	1.41	0.165
Diversity and Ethics	27.4 (1.3)	27.5 (0.9)	0.1	-0.73	0.469
Community Centeredness	39.7 (2.3)	40.2 (2.2)	0.5	-1.141	0.260
IPAS Total	172.9 (8.2)	173.3 (7.4)	0.4	-0.251	0.803

Table 2. *Internal Consistency of IPAS (n=85)*

IPAS Subscale	Cronbach's Alpha	# of Items	Highest Score
Teamwork, Roles, & Responsibilities	0.794	9	63
Patient Centeredness	0.646	5	35
Interprofessional Biases	0.412	3	21
Diversity and Ethics	0.426	4	28
Community Centeredness	0.790	6	42
IPAS Total	0.808	27	189

Qualitative Findings

Student Reflections

Of the 113 students that completed reflection essays, 22 students were B.S.W. students and 91 students were M.S.S.W. students. Social work students embedded within the interprofessional collaborative course unanimously gained insight into the value of collaborative practice and their role as social workers and of collaborative practice. The main themes that emerged were: the whole is greater than the sum of its parts; taking leadership; finding their voice, and future practice.

The Whole Is Greater Than the Sum of Its Parts. Social work students entered the course with mixed feelings. They shared excitement about their desire to gather collaborative practice skills for their future, and also some trepidation about the role within the team. A few students had personal experience working on interprofessional teams in their internships or volunteer work. Understanding of interprofessional teams in medical settings was limited to their personal experiences receiving care or visiting family in hospitals. Thus, students commonly expressed hesitation in joining teams and fears of looking naïve, uninformed, or ill-prepared. One student reflected:

I was a little fearful going into this course because I was not sure how the other teams viewed my profession and what biases already existed directed at me, however, my goal going into this course was not only to learn more about interprofessional collaboration, but as well to teach the others on my personal team about social work and all it entails. (P98, The letter "P" and numbers in parenthesis following students' quotes refer to their deidentified participant number)

For many social work students, the course offered the first time for them to explore their own roles on teams and talk with others across campus. Social workers shared that their limited health literacy entering the course created some trepidation; however, through support from the other health professions, their health literacy and confidence improved. They displayed a steep learning curve in attaining health care literacy and were grateful for opportunities to learn from their team. By the end of the second semester, social work students became more confident in their role on the team and within a health care setting.

They also gained increased awareness of other's roles and admitted some biases they carried about other professions. Previous experiences provided familiarity with the roles of nurses and physicians; yet, the activities in the course enabled social work students to acquire new knowledge of how they can partner with MDs and RNs to enhance their role and improve patient care. Many students shared the following sentiment,

> *With this insight, I have a different understanding of the other three professions I worked with. Rather than further differentiating the nuances of each discipline, I learned the commonality between us all—the goals we share.* (P07)

Social workers described how nurses provide a greater extent of psychosocial care than they previously assumed and how nurses hold a vital role in promoting safety. Social workers expressed greater appreciation for the medical students and honored the weight they carry in managing patients' outcomes and the care provided by the entire team. Echoing throughout social worker's narratives was empathy for PharmD students as they also struggled to find their voice on the team. They also reflected greater understanding of the vital role pharmacists play in counseling the physician, the team, patient and family. Lastly, social workers also conveyed assumptions they carried about the role of social work in health settings and how they learned social workers' roles extend far beyond discharge planning and transportation resources. The year-long course and interactive activities enabled students to see the person behind the role and the internal motivations that drive individuals to choose their profession.

Taking leadership. Several pivotal events throughout the course empowered social work students to embrace their role as a leader. They described the simulations as the most powerful moments during the course as these opportunities tested their comfort; forced them to speak up; and gave them pseudo real world experiences dealing with challenging situations. Students reflected the simulations provided a safe setting to experience professionally overwhelming moments. Case scenarios presented by actors and faculty challenged students to think on their feet and participate in activities at the edge of their comfort level. Students described simulations as,

> *…by far the most powerful in terms of personal reflection and learning what areas we need more professional practice/awareness.* (P18)

Most of their coursework solely engaged social work students; thus, interprofessional teams tested their ability to explain their roles and skill sets. Building rapport within a team of varied professionals appeared challenging and exceptionally fulfilling to the students. Social workers commonly acknowledged that

> *team cohesion displays competence to patients and thereby eases stress and builds trust between patients and their providers.* (P23)

This trust also nurtured social workers' confidence in taking leadership and mentoring roles within the team.

Among the events students found most rewarding were the role plays where the team collaboratively practiced TeamSTEPPS™, error disclosure, palliative care simulations, and motivational interviewing. Students' mentioned the palliative care simulation most

frequently and cherished the space to embody the role of leader and model communication techniques while comforting an actor coping with intense emotions surrounding a life-limiting illness. Error recovery role plays enabled social workers to insert themselves into medical dialogues and step up when other professions became frozen. Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS™), an evidence-based interprofessional training program created by the Department of Defense and the Agency for Healthcare Research and Quality (King et al., 2008), focuses on improving patient safety within a team using four core facets: leadership, situational monitoring, mutual support, and communication. While TeamSTEPPS™ activities empowered social work students by providing concrete language and team planning activities to address safety concerns, despite power differentials. Lastly, the motivational interviewing exercises in the addictions care module permitted social workers to shine by demonstrating the skills they had gathered in social work motivational interviewing coursework. Social work students enjoyed teaching their peers communication skills and often commented on how being a mentor on their team fostered their confidence and earned their team's trust. One student reflected,

> *In those experiences I was able to teach my teammates practical tools to talk to families and patients and in those moments my value was solidified.* (P35)

Lastly, simulated scenarios, such as role plays within their interprofessional team and with community actors, offered students a feedback loop in which to affirm their professional competence and ability to carry out their role upon graduation.

Finding Their Voice. The student narratives highlighted the strengths of the course in acknowledging the value of their own social work skills and the role of social work within health care settings and teams. Flowing throughout students' stories were expressions of expanded confidence, pride, professional growth, and compassion for other team members. Each described increased comfort in explaining their role to patients and families and other health professionals. They acknowledged confidence in leading teams; addressing challenging situations and dialogues; and advocating for their patients' needs and safety. Social workers conveyed excitement that collaborative practice would enable them to highlight the techniques they have gathered throughout their education such as communication skills, therapeutic interventions, and group leadership techniques. One student explained,

> *By helping other roles improve their relationship with patients, a social worker can help the team be more effective in providing care and empathy.* (P44)

Students better conceptualized others' roles and frequently recognized unique strengths that each individual and profession brought to their team.

Stories of interprofessional encounters during their internships solidified social workers' knowledge and value of collaborative practice. Students portrayed examples of challenging moments within their team interactions at their internship in which they felt limited respect personally and professionally. They identified ways in which their knowledge from the course could help them improve the team dynamics and times where they ventured to assert themselves using skills practiced in class. Some students revealed

internship environments that exemplified excellence in collaborative practice and described excelling in carrying their skills garnered in class into their internship teams. As explained by an M.S.S.W. student:

> *I found myself surprised when I realized how much I have come to learn and appreciate the roles and skill sets of the other members of my team. It came together when I implemented my knowledge in my field placement. I felt more comfortable in my role within the interdisciplinary teams, and I navigated my way by using the tools I learned in class.* (P26)

Those not working in health care internships also reaped benefits from the course in navigating difficult team relationships in their practicums. B.S.W. students not in practicums shared examples of how they applied leadership skills acquired from this course into social work classroom settings or expressed enthusiasm about trying their new interprofessional skills in their upcoming practicums.

Future Practice

Participation on their interprofessional teams influenced social work students' visions for future practice. The majority of students became fueled by their collaborative practice experiences and expressed strong desire to continue team-based practice, whether in medical or other fields. A few social workers acknowledged the opportunities garnered through their participation in this course solidified their desires not to work in medical settings due to the associated grief, which extended beyond their professional/personal comfort. Regardless of desired practice setting, students conveyed confidence in their skills and an eagerness to feature their new collaborative competencies. One graduating student proclaimed:

> *This course has planted an excitement to continue to grow working with other professions and learn with and from them. I look forward to utilizing these skills and growth on teams in health care and in schools. The learning from this course is universal and transferable to any inter-professional setting or work on a team.* (P73)

Reflections focused on the ways in which interprofessional practice offers unparalleled opportunities to share their expertise, learn from other professions, and mentor others. Overwhelmingly, social workers recognized their professional expertise and the added value they can bring to interprofessional teams.

Discussion

This study was a mixed-method evaluation of social work students' individual growth and identity transformation throughout a two-semester in-person interprofessional education course. Quantitative surveys were completed before and after the course, while qualitative essays were submitted after the first and second semesters. Quantitative results were inconclusive in their ability to demonstrate change while qualitative findings showed increased awareness of interprofessional roles, discipline-specific strengths, and improvement in leadership and confidence in finding their social work voice in a health

care team. We will discuss the results and their implications for practice, education, and research.

While the quantitative scores did not show improvement, there are a few reasons that might explain this result. First, other colleagues who have used the IPAS have found similar results. Specifically, Marshall et al. (2019) assessed a one -day, interprofessional simulation with medical, pharmacy, nursing and physician assistant students and had mixed quantitative results in terms of IPAS score improvements with positive qualitative results from focus groups. This closely mirrored our own study's findings. Second, even though the IPAS scale has good internal consistency overall, we were not able to replicate Norris et al.'s (2015) findings and only 3 of the 5 subscales had acceptable or good consistency (Nunnally & Bernstein, 1994). Further, the IPAS does not seem to be sensitive to showing growth or improvement over time as other studies have also found that students score on the high end of the scale (Norris et al., 2015).

It is likely that the social work students entered the course with high levels of interprofessional collaborative skills gained from their social work education as the pre-test scores among SW students were quite high (173 out of 189 for the total score). Therefore, this did not leave much room for students to improve over time. This would be consistent with the preparatory social work curriculum approved by the most recent CSWE (2015) EPAS which includes competencies on interprofessional practice and interdisciplinary communication. This would also be consistent with the qualitative results of the social work students who consistently indicated that they felt better prepared for interprofessional practice than their medicine, nursing and pharmacy colleagues but lacked the health care specific knowledge prior to the class. This is the first study to use the IPAS with social work students to assess growth in interprofessional core competencies and it will require further study to know if this measure is sensitive to these students.

The qualitative data suggests that social work students did find the class to be helpful in improving their core competencies, such as improving their understanding of other health care roles and interprofessional communication. Social work students resoundingly walked away from their collaborative practice course with a greater appreciation for their own expertise and the role of interprofessional teams in promoting patient-centered care. Simulated learning activities offered social workers real-world challenges they missed in other social work courses and nurtured their confidence to engage complex client and interprofessional dynamics. Course reflections provided a glimpse into student's identity development and concrete ways in which simulated interprofessional team activities offer students unparalleled opportunities to test and enhance their social work skills. Social workers reflected on the parallel process of finding their own voice while also learning to advocate for their patients. Taking initiative and leadership roles came more easily for students as they explored ways to nurture team cohesion and productivity. Lastly, social work students valued the growth of their interprofessional team identity. They acknowledged the strength of each member of the team and the increased power of their reach when they worked together.

While the Ph.D. students participating in the course were not formally evaluated, there are outcomes of their success that should be mentioned. During the time period studied, six

Ph.D. students participated in the class either as formal teaching assistants or by enrolling in a specially created independent study on IPE pedagogy which was supervised by the lead author of this paper. All six students were required to participate in the class as team facilitators and to complete a manuscript or independent project on interprofessional collaborative practice. Most of the students went well beyond the minimum requirements of the independent study and participated in course development and leadership as their skills and confidence grew. Each student who participated is continuing to be involved in publications and presentations on IPE pedagogy. Another outcome of their participation is the interprofessional respect that they gained from the course directors from the other health profession schools (nursing, pharmacy and medicine). Three of the six students who participated have since graduated and obtained assistant professor positions in prestigious social work schools where they are currently engaged in IPE activities. All of them indicated that the IPE training helped them in their job search and in their current faculty positions.

Limitations

Quantitative findings in this study are limited due to small sample size. Since the survey was voluntary, only 48 of 85 social work students completed both the pre and post course surveys. There was also limited demographic data collected, so other comparisons could not be conducted. Additionally, even though the IPAS scale has acceptable internal consistency overall with five factors that ranged between .62 and .92 in the original validation study, our analysis subscale 3 (.412) and subscale 4 (.426) had poor internal consistency (Nunally & Bernstein, 1994; Norris et al., 2015).

Qualitative findings from this study highlight the significance of collaborative practice in fostering social work students' professional and interprofessional development. These students' levels of confidence and competence in collaborative practice may be influenced by the amount of opportunities available for them to interact with other professions over the course of a two-semester course. The qualitative data being drawn from the class assignment could have produced some response bias as students were graded in the class, although all received a pass/fail for turning in the assignment. Other interprofessional education courses may not have resources to offer a longitudinal learning experience or faculty and the number of students to support as extensive a learning endeavor. The majority of students in the course were in their Masters' program and may represent experiences of students further embedded within their coursework and practicum.

Conclusion

There is a growing awareness of the importance on interprofessional collaborative practice to address the quadruple aim of improving care, costs, population health and provider well- being (Bodenheimer & Sinsky, 2014). Given the recent focus on integrating social care into health care, the need to include social work students in interprofessional education is paramount. However, there are few models of integrated, in-person, longitudinal, interprofessional education that include social work students and faculty. This paper describes the impact of a two-semester interprofessional education course on social work students' professional identity and confidence. It also describes outcomes of

engaging social work doctoral students in IPE pedagogy. Results showed that social work students learned about the role of other professions in health care but perhaps more importantly, they found their voices as valuable members of the interprofessional team. Ph.D. students gained confidence and skills as educators. This type of interprofessional pedagogical approach can and should be replicated in social work education. This has the potential to address the workforce shortage of social workers in health care and improve outcomes for patients, families, and teams.

References

Accreditation Council for Pharmacy Education [ACPE]. (2015). Accreditation standards and key elements for the professional program in pharmacy leading to the Doctor of Pharmacy degree. https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf

Bodenheimer T., & Sinsky C. (2014). From triple to quadruple aim: Care of the patient requires care of the provider. *Annals Family Medicine, 12*(6),573-576. https://doi.org/10.1370/afm.1713

Bridges, D. R., Davidson, R. A., Odegard, P. S., Maki, I. V., & Tomkowiak, J. (2011). Interprofessional collaboration: Three best practice models of interprofessional education. *Medical Education Online, 16*, 1-10. https://doi.org/10.3402/meo.v16i0.6035

Brooks, J., & King, N. (2014). *Doing template analysis: Evaluating an end of life care service*. Sage Research Methods Cases. https://doi.org/10.4135/978144627305013512755

Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology, 12*(2), 202-222. https://doi.org/10.1080/14780887.2014.955224

Commission on Collegiate Nursing Education [CCNE]. (2018). *Standards for accreditation of baccalaureate and graduate nursing programs.* https://www.aacnnursing.org/Portals/42/CCNE/PDF/Standards-Final-2018.pdf

Council of Social Work Education [CSWE]. (2015). *Educational policy and accreditation standards for baccalaureate and master's social work programs.* https://www.cswe.org/getattachment/Accreditation/Accreditation-Process/2015-EPAS/2015EPAS_Web_FINAL.pdf.aspx

Greiner, A. (2003). *Health professions education: A bridge to quality*. National Academy Press. https://www.ncbi.nlm.nih.gov/books/NBK221528/

Guraya, S. Y., & Barr, H. (2018). The effectiveness of interprofessional education in health care: A systematic review and meta-analysis. *Kaohsiung Journal of Medical Sciences, 34*, 160-165. https://doi.org/10.1016/j.kjms.2017.12.009

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME Guide no. 9. *Medical Teacher, 29*(8), 735-751. https://doi.org/10.1080/01421590701682576

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: How many interviews are enough? *Qualitative Health Research, 27*(4), 591-608. https://doi.org/10.1177/1049732316665344

Herbert, C. P. (2005). Changing the culture: Interprofessional education for collaborative patient-centred practice in Canada. *Journal of Interprofessional Care, 19*(s1), 1-4. https://doi.org/10 .1080/13561820500081539

Institute of Medicine, Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century*. National Academy Press. https://www.nap.edu/catalog/10027/crossing-the-quality-chasm-a-new-health-system-for-the

Institute of Medicine. (2013). *Delivering high-quality cancer care: Charting a new course for a system in crisis.* https://www.nap.edu/catalog/18359/delivering-high-quality-cancer-care-charting-a-new-course-for

Interprofessional Education Collaborative Expert Panel [IPEC]. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. https://www.aacom.org/docs/default-source/insideome/ccrpt05-10-11.pdf?sfvrsn=77937f97_2

IPEC. (2016). *Core competencies for interprofessional collaborative practice: 2016 update.* Author. https://hsc.unm.edu/ipe/resources/ipec-2016-core-competencies.pdf

Jadotte, Y. T., Gayen, S., Chase, S. M., Passannante, M., & Holly, C. (2019) Interprofessional collaboration and patient health outcomes in urban disadvantaged settings: A grounded theory study. *Health, Interprofessional Practice & Education, 3*(4), 1-19. https://doi.org/10.7710/1185

Jones, B., & Phillips, F. (2016) Social work leadership in interprofessional education in health care. *Journal of Social Work Education, 52*(1), 18-29. https://doi.org/10.1080/10437797.2016.1112629

King, H. B., Battles, J., Baker, D. P., Alonso, A., Salas, E., Webster, J., Toomey, L., & Salisbury, M. (2008). TeamSTEPPS™: Team strategies and tools to enhance performance and patient safety. In K. Henrickson, J. B. Battles, M. A, Keyes, & M. L. Graddy (Eds.)., *Advances in patient safety: New directions and alternative approaches: Vol. 3: Performance and tools* (pp. 1-16). Agency for Healthcare Research and Quality. https://www.ncbi.nlm.nih.gov/books/NBK43686/

Liaison Committee on Medical Education [LCME]. (2019). *Functions and structure of a medical school. Standards for accreditation of medical education programs leading to the MD degree*. https://lcme.org/publications/#Standards

Marcussen, M., Norgaard, B., & Arnfred, S. (2019). The effects of interprofessional education in mental health practice: Findings from a systematic review. *Academic Psychiatry, 43*, 200-208. https://doi.org/10.1007/s40596-018-0951-1

Marshall, C., Van Der Volgen, J., Lombardo, N., Hamasu, C., Cardell, E., & Blumenthal, D. K. (2019). A mixed methods approach to assess the impact of an interprofessional

education medical error simulation. *American Journal of Pharmaceutical Education, 7133,* 1-28. https://www.ajpe.org/content/ajpe/early/2019/12/10/ajpe7133.full.pdf

National Academies of Science, Engineering and Medicine [NASEM]. (2019). *Integrating social care into the delivery of health care: Moving upstream to improve the nation's health*. https://www.nap.edu/catalog/25467/integrating-social-care-into-the-delivery-of-health-care-moving

National Association of Social Workers [NASW]. (2016). NASW standards of practice in health care settings. https://www.socialworkers.org/LinkClick.aspx?fileticket=fFnsRHX-4HE%3D&portalid=0

Norris, J., Lassche, M., Joan, C., Eaton, J., Guo, J., Pett, M., & Blumenthal, D. (2015). The development and validation of the Interprofessional Attitudes Scale: Assessing the interprofessional attitudes of students in the health professions. *Academic Medicine, 90*, 1394-1400. https://doi.org/10.1097/acm.0000000000000764

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory (3rd ed.). McGraw-Hill.

Reeves, S., Fletcher, S., Barr, H., Birch, I., Boet, S., Davies, N., McFayden, A., Rivera, J., & Kitto, S. (2016). A BEME systematic review of the effects of interprofessional education: BEME Guide No. 39. *Medical Teacher, 38*(7), 656-668. https://doi.org/10.3109/0142159x.2016.1173663

Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: Effects on professional practice and health care outcomes (Review). *Cochrane Database of Systematic Reviews, 3*, 1-41. https://doi.org/10.1002/14651858.cd002213.pub3

Riskiyana, R., Claramita, M., & Rahayu, G. R. (2018). Objectively measured interprofessional education outcome and factors that enhance program effectiveness: A systematic review. *Nurse Education Today, 66*, 73-78. https://doi.org/10.1016/j.nedt.2018.04.014

Rubin, M., Cohen Konrad, S., Nimmagadda, J., Scheyett, A., & Dunn, K. (2018). Social work and interprofessional education: Integration, intersectionality, and institutional leadership. *Social Work Education, 37*(1), 17-33. https://doi.org/10.1080/02615479.2017.1363174

Timmerman, G., Young, V., Luk, J., Phillips, F., & Jones, B. (2019). Foundations of interprofessional collaborative practice: Designing required, team-based coursework for large classes [manuscript submitted for publication]. *Journal of Interprofessional Education and Practice.*

VERBI. (2018). *MAXQDA analytics pro* [Software]. Berlin, Germany: Author.*pro.* https://www.maxqda.com/what-is-maxqda

World Health Organization [WHO]. (1998). *The World Health Report 1998. Life in the 21st century: A vision for health for all.* https://www.who.int/whr/1998/en/

WHO. (2010). *A framework for action on interprofessional education and collaborative practice.* https://www.who.int/hrh/resources/framework_action/en/

Author note: Address correspondence to Barbara Jones, Steve Hicks School of Social Work, University of Texas at Austin, 1925 San Jacinto Rd., D3500, Austin, TX 78712. Email: barbarajones@mail.utexas.edu