Published in final edited form as:

J Soc Work Educ. 2017 ; 53(Suppl 1): S87–S96. doi:10.1080/10437797.2017.1288592.

A Mixed-Methods Evaluation of Social Work Learning Outcomes in Interprofessional Training with Medicine and Pharmacy Students

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Abstract

Social work has moved firmly into a need for partnership training models, as our newest EPAS guidelines explicitly call for interprofessional education (IPE). While IPE is not a new model, we have not been consistently involved in training partnerships. Three professional schools partnered to provide IPE events for social work ($n=42$), medicine ($n=108$), and pharmacy ($n=49$) students. Social work students evidenced positive change on a validated measure of attitudes and beliefs regarding IP practice, and debriefing included rich discussions about challenges of communication and boundaries, and perceptions of hierarchy and skills of other team mates in the context of case based learning, guided by faculty from all three professions.

The World Health Organization (WHO) defines interprofessional education in the following way:

Interprofessional education occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes. Once students understand how to work interprofessionally, they are ready to enter the workplace as a member of the collaborative practice team. This is a key step in moving health systems from fragmentation to a position of strength

(World Health Organization, 2010, p. 10).

The Interprofessional Education Collaborative (IPEC), which originally involved professional organizations from medicine, nursing, pharmacy, public health, and dentistry, further identifies that the goal of interprofessional learning is “to prepare all health professions students for deliberately working together with the common goal of building a safer and better patient-centered and community/ population oriented U.S. health care system” (2011, p. 3). In 2016, the Council on Social Work Education, along with the American Psychological Association and professional organizations from physical therapy, occupational therapy, optometry, veterinary, and podiatry officially joined the IPEC, moving our profession into the leading edge of the movement “to actually deliver on the promise of interprofessional education and practice to improve the health of individuals and populations

as well as reduce health disparities” (The Interprofessional Education Collaborative, 2016). Thus, interprofessional education (IPE) training is designed to expose health professions’ students to opportunities of mutual collaboration and team-based decision making in order to prepare them for effective collaboration in their professional careers with the goal of improving patient care.

Interprofessional education is not a new movement, but we are now experiencing a renewed wave of efforts to develop IPE training models. Medical schools initiated IPE training years ago after the publication of an Institute of Medicine (IOM) report in 2003, which called for restructuring clinical education to be “consistent with the principles of the 21st-century health system” and the need to improve the quality and safety of health care (IOM Committee on the Health Professions Education Summit, 2003, p. 3). Across professional fields, a renewal of attention on the value of interprofessional care for improvement of outcomes in a range of healthcare settings, and for a wide scope of vulnerable populations was prompted by the Recovery and Reinvestment Act of 2009 and the Patient Protection and Affordable Care Act of 2010. With new models such as “medical homes” and incentives for community based care and reduction of hospital recidivism, these pieces of legislation brought into focus the need for providing pre-licensure training that would prepare emerging professionals for this new reality of care.

The Liaison Committee for Medical Education instituted IPE training as an accreditation requirement for medical schools in the 2014–2015 accreditation cycle (Grbic, Caulfield, & Matthew, 2014), and IPE accreditation requirements were similarly established for nursing and pharmacy education (IPEC, 2011). Social work engagement in IPE has been slow to advance despite some early pioneers (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011; Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013; World Health Organization, 2010). However, the new EPAS contain specific language about interprofessional practice, and we now see a growing movement of schools of social work entering into IPE training models alongside other health profession schools.

Competencies

In 2011, an IPEC expert panel issued a report containing critical competencies for IPE training. These were created to build on and expand the disciplinary core competencies, with an explicit focus on development of skill sets that would prepare students to enter the workforce prepared to practice team-based care (IPEC, 2011). Their overall definition of interprofessional competencies in health care is consistent with social work’s person-in-environment orientation, and is worded as follows: “Integrated enactment of knowledge, skills, and values/attitudes that define working together across the professions, with other health care workers, and with patients, along with families and communities, as appropriate to improve health outcomes in specific care contexts” (IPEC, 2011, p.2).

The IPEC working group identified four domains in which competencies could be outlined: (1) Values/Ethics for Interprofessional Practice, (2) Roles/Responsibilities, (3) Interprofessional Communication, and (4) Teams and Teamwork. The first domain identifies common values and ethics across helping professions, as well as the values that undergird

relationships among providers, such as trust, honesty, respect, integrity, and recognition of diversity of culture both in individuals and professional arenas. The second domain recognizes that “variety diversity” (p.20) among team members presents both a strength and a challenge, and highlights the need for both knowing the scope of practice in one’s own profession, but also being open to learning from others, engaging in ongoing learning, and knowing the limits of practice within team roles. The third domain identifies the core need to develop both basic and advanced communication skills in interprofessional team settings. This domain includes competencies related to use of language and jargon, active listening, and sensitive feedback that recognizes the inherent power dynamics and structure of clinical settings and embeds respect into that environment.

The fourth domain, Team and Teamwork, was the primary focus of our IPE event, and although the experience certainly addressed areas of the other three domains, we explicitly identified teams and teamwork competencies *a priori* as the target competencies for our training events. Eleven specific competencies related to Team and Teamwork (see Table 1) include items such as embracing cultural diversity & differences that characterize patients, populations, & health care teams, recognizing one’s place on a team and the limits and contributions of one’s profession to that team, and working to form interdependent relationships with other professionals to improve care and advance learning- all areas that are consistent with practice behaviors and competencies that we instill in our students in social work.

There is considerable variation in how the IPEC competencies are delivered in IPE training. Nimmagadda & Murphy (2014) refer to a number of IPE models; typically, students from different health professions are tasked with working together in a team-based approach in some combination of in-class workshops, case-based discussions, simulated patient encounters, clinical experiences with real patients, or home visits to assigned community-dwelling patients or families (Addy, Browne, Blake, & Bailey, 2015; Author, 2003; Curran & Sharpe, 2008; Author, 2013). Additionally, IPE training programs vary in the combination of disciplines involved and in whether they are graded or ungraded, required or voluntary, annual, bi-annual or one-time experiences for students.

As a licensed health profession, social work education and values are consistent with the IPEC competencies, and in many settings social workers are key members of the interprofessional health care team. Competency 8 in EPAS 2015 specifically states that in order to achieve beneficial outcomes in interventions with individuals, families, groups, organizations and communities social workers need to be prepared to work in “interdisciplinary, inter-professional, and inter-organizational collaboration” (Council of Social Work Education, 2015). It can be argued that social work is critical to IPE training, yet the social work profession has not always been at the table of program development. This is in part due to social work not always being identified by other disciplines as a health profession, and partially due to social work programs often not being co-located with other health professional schools. To some degree there has been a learning curve for IPE steering groups to recognize and embrace the social work profession into their training models, but it appears that the tide is turning, and evidence for the value of social work in IPE training is developing.

Model of training

The data from this study are derived from the first year of an IPE program involving two large southern universities that joined in a partnership across three schools: social work, medicine, and pharmacy. The relatively new university medical school and the long-standing school of social work are located on separate campuses, and proximate to the medical school campus is a college of pharmacy affiliated with a separate university. In 2014, the faculty of the new medical school invited faculty from the nearby college of pharmacy and the second author, from the school of social work, to collaborate on the development of their first IPE training program to be delivered as a required experience to first year medical and PharmD students. Although not part of the original plan, there was an additional agreement to include second year masters of social work students to voluntarily participate in the pilot IPE program.

Most IPE programs follow the theoretical design of training grounded in experiential learning theory (Kolb & Fry, 1974; Nimmagadda & Murphy, 2014) and use some combination of online avatars, mannequins, or written cases as methods of training. As is true with many medical schools, our university medical school has a state-of-the-art clinical simulation suite with a bank of mock examination rooms with one-way mirrors and a cast of well-trained standardized patients (SPs). Nimmagadda and Murphy (2014) describe simulation as providing “a concrete experience that situates learning thus making a connection between theory and practice. Simulation allows students to experience critical events in a safe environment... provides a way to teach and evaluate teamwork and decision-making, and offers a unique opportunity for healthcare workers to experience the consequences of poor performance in a safe environment” (pp. 540–541). The SPs for this training event were trained to present a case written by the first author and one of the pharmacy faculty with input from the full planning team, designed to prompt students to engage in an assessment that combined aspects of ecological systems theory and person-in-environment orientation, wherein they were faced with clinical, cognitive and environmental challenges at the individual, interpersonal (provider-patient), team, and system (medical setting) level (Bronfenbrenner, 1994). Students were instructed to complete a thorough assessment of the SP using an interprofessional team approach, but they were not given any specific instructions about how to conduct the assessment. This was deliberate and designed to challenge the student teams to learn from each other and communicate regarding how to organize themselves to complete the task as a team.

Methodology

Participants (clinical level MSW students, 1st year medical students and pharmacy students) were organized into teams of 4–5 students, and were allowed some time for introductions and discussion about their profession and training. Each team was assigned a standardized patient (SP) and was given a brief “patient complaint” regarding a feeling of wheezing; all SPs presented the same case, but the students were unaware of this. Student teams were instructed to work together on assessment and treatment planning, but were given no further direction regarding hierarchy or role within the team. The SP interviews were conducted in mock clinic rooms with one way mirrors that enabled faculty to observe. SPs were provided

with an extensive back story that included issues of major depression, grief and loss, housing and job insecurity resulting from a natural disaster, and family stress related to single parenting, in addition to medical issues such as uncontrolled asthma and lack of proper use of inhalers. Each student team was given 10 minutes to prepare an assessment plan, then had 20 minutes to interview their SP and were then given 15 minutes to discuss with each other and prepare a white board summarizing the team conceptualization of the patient situation, which they debriefed with faculty and two other team groups after the patient encounter. These debriefing sessions were led by faculty from each of the three schools together and involved each group briefly sharing the “story” that they had assessed from the patient and their suggestions for case planning, followed by discussion of team functioning, perceptions about the various professions and their contributions and roles, issues related to personal and professional bias, power and communication dynamics among team members, and how they could improve their team’s functioning if they were to repeat the exercise.

Forty-two MSW students from the School of Social Work signed up for this event, participating as the social worker for forty-two teams with two medical students and at least one pharmacy student each. Students were given the option of opting in or opting out of research data collection when they completed the assessments. Twenty-two social work students completed both the pre- and post-assessments of learning and opted in for research data collection, although 39 provided some initial data about themselves. Although the total *N* for this study is somewhat lower than the actual number of participating students, there did not appear to be any significant difference in responses between those who agreed to participate in the research and those who did not. The assessment focused on how clinical social workers responded to an interprofessional health care education experience with medical and pharmacy students. We hypothesized that a focused, case-based IPE activity would have a positive effect on students’ attitudes related to interprofessional health care teams, and enhance perceived acquisition of some of the IPEC interprofessional competencies. Pre- and Post- assessments included the following items: demographics; Likert-scale items on beliefs about other health professions & items from the “*Attitudes Toward Interprofessional Healthcare Teams*” scale; and four open-ended questions regarding student learning, perceptions of process, and suggestions for improving the learning activity. In the week prior to the event, participants received an email with a link to the pre-assessment; the day of the event, they received a link to the post-assessment. Reminders were sent to all participants after one and two weeks. Institutional Review Board approval was obtained for these assessments. Paired sample *t*-tests were conducted comparing pre- and post-assessment mean scores, and open ended questions were coded for emergent themes.

Results

The findings from the assessment showed significant changes in social work students’ beliefs about interprofessional healthcare provision ($p=.009$; $n=22$) and attitudes about interprofessional teamwork ($p=.001$; $n=22$) secondary to participation in the IPE event. Social work participants who provided demographic data ($n=39$) were mostly female (92%); neither race/ethnicity or age were collected with the survey data, in order to retain anonymity in this majority white and college-aged student body, although the authors have

documentation of participating students (total $n=42$) and information that, overall, they ranged from college aged to mid-life career changers in this group, and included participants who were Hispanic, African- and Caribbean-American, as well as white, although we have no way of knowing which students completed the surveys. Twenty-two (56%) of the students who completed the pre-post assessments indicated at the beginning of the event that they had worked on an interprofessional healthcare team before in a previous work setting, although any experiences had not been a formal part of their social work training program to this point. There were positive changes from the pre-test to the post-test in 6 of 11 belief domains ($n=22$; Table 2), and 11 of 14 attitude domains (Table 3). Overall, these social work students experienced improved comfort and confidence in participating in interprofessional team work and improved confidence in the value of social work on the interprofessional health team. They gained awareness of and respect for the skills of the other health profession students and increased their appreciation of the complementarity of the three health professions in patient care.

There were also significant differences between the pre- and post-test in students' attitudes about how interprofessional teamwork leads to better quality care, i.e., patients being treated as whole persons, more efficient care delivery, and less errors in care delivery (see Table 3). On the post-test, students were more likely to agree that an interprofessional approach to care increases enthusiasm and interest on the part of health care professionals and leads to more responsiveness to patients' emotional and financial needs. Finally, there was stronger agreement on the post-test that team meetings fosters better communication between and understanding about the different health professions.

In response to the open-ended questions on the post-test survey, social work students identified some challenges that they experienced during the IPE experience, including issues with limited time with the patient, challenges of the logistics of team assessment, and concerns about the social work role on the team. One participant provided an excellent example of the issue of crisis of confidence, stating:

I, as the social worker, could have been a bit more confident in my skills. I was so consumed with the thought that I may not know how to contribute to the patient's care that I missed out on the opportunity to ask more in depth questions about the patient's presenting mental symptoms.

There were a number of comments related to the challenges of being thrown together on a team without having met the others before, primarily affecting the process of the interview and decision-making about who should cover which parts of the patient assessment:

I think the only problem was that the respective disciplines were worried about stepping on each other's toes, so at times there were some awkward silences while we each silently decided who would speak next.

Students reported being exposed to new information, especially about medications and the types of knowledge that various team members from allied health professions contribute to a team. Social work students were also made aware of the different lens the separate health professions have regarding patient assessment:

I was surprised how anxious the medical student felt when they could not complete their own structured way of doing a patient's intake, as I was not aware that they had a structure of asking questions so as to not miss any pertinent medical questions.

This particular SP case also demonstrated to the students how the different disciplines responded to psychosocial issues with patients, such as in this case the SP's problems of housing and income instability. In several groups, the social work student team member asked the particular psychosocial assessment questions that elicited the unstable housing and income information from the SP as well as issues related to depression, and the medical and pharmacy students were made aware of the importance of this information to treatment planning for the patient. One student observed:

While all professionals are interested in patient health, we are focused on very distinct aspects of care. If these differences are not accounted for and planned for then what should otherwise be a more efficient means to address patient needs becomes highly inefficient.

In most groups, once these psychosocial problems were identified, the medical and pharmacy students deferred to the social work student on the team to lead development of plans for addressing the psychosocial problems (housing instability, job security, finances, and depression) and embedding medical follow-up (such as inhaler training, medication access, and f/u care) within those plans. The social work students then found themselves challenged by the inclination to promise more than they could realistically provide - a common situation many clinical social workers must learn to balance in their field practice. In the desire to offer help, students offered the patient "free counseling" for depression, job training, and programs for re-housing the SP. This pressure to "fix" the patient's problems provided an excellent opportunity not only to talk about the problem of making promises you cannot necessarily keep, but also issues of bias and perception, as with further questioning the SP revealed that s/he was a skilled trade worker who did not wish to change careers and had no inclination to move. This led to debriefing discussions between students and faculty about appropriate boundaries, how to avoid the inclination to "fix" a patient's problems, challenging assumptions about patients, and the importance of patient autonomy.

Despite challenges such as these, the students' comments indicated that they valued the IPE experience, particularly in how it helped them to recognize the value that social work adds to patient assessment and how communication across professions and within the healthcare team is critical. As one student noted: *"I learned that communication is key and truly thinking of the team as a team rather than just your part makes a huge difference and helps the flow and approach."*

Discussion

The experience of participating in an IPE event with medical students and pharmacy students was a positive experience for our clinical year social work students. The experience of working together on a team assessment of a standardized patient presenting with asthma symptoms complicated by difficult social circumstances improved social work students'

confidence in the value of social work to team care. It also clarified for them that although the three health professions had different lenses on patient assessment, their assessment skills were actually complementary to one another in many ways.

Issues of power and bias regarding professional roles and skill sets have not been prominent in studies of IPE programs (Baker, Egan-Lee, Martimianakis, & Reeves, 2011). In this IPE experience, the debriefing with students and faculty from all three professions intentionally focused on the issues of power and skill sets, and forced examination of the preconceived notions that may have been present, as well as whether such biases were grounded in fact or culture. Although physicians often have final decision making authority in patient care, our interprofessional faculty chose not to provide the students with direction about who should lead the team, whether they should pick a team leader, or how they should relate to one another. We did not seek to embed a specifically egalitarian view on students, but rather to provide some groundwork from which they could think critically about how they viewed and subsequently sought to work with professionals from other health professions. All students who participated in the IPE event were relative newcomers to their field, and this possibly contributed to the relatively open and egalitarian fashion in which students formulated their team process for conducting their SP assessments. There were only a few teams where the medical student was selected to lead the assessment. In the debriefing, issues related to both perceived hierarchy and perceptions of skills of other team mates were challenged and discussed, leading to rich discussions about what kinds of trainings, topics, and perspectives different professions have. Students were surprised to learn that all three professions receive training in psychosocial assessment, although the styles of interaction are taught differently. For example, our social work students were surprised at the broad training that pharmacists receive and how the presence of a pharmacist could impact on critical patient care, particularly where polypharmacy or chronic care management is concerned.

Related to this idea, we learned that careful selection of participating faculty is important; as faculty in the participating schools were not trained using IPE approaches, it was difficult for some faculty to engage in unbiased facilitation of critical examination of roles, team function, and power dynamics. In order for this kind of training to work, facilitators of the discussion sessions must trust both one another (as equally valuable professionals) and that the experience provided the students with adequate material from which to draw appropriate conclusions for themselves. Providing training or some orientation to the participating faculty helps to ensure that they feel confident in facilitating discussions.

The IPE faculty were convinced that the relevance of the particular case used in IPE training cannot be understated. For example, the region that our three schools serve has one of the highest rates of homeless individuals in the nation, and laws protecting tenants are more lax than in some other states. Cases of patients who face housing instability as a result of poor housing conditions, poor property management or upkeep, or increasing cost of living are not unusual in healthcare or social service settings in this region. While students in each of the professional schools to some degree may be introduced to conceptualizations of homelessness and poverty and how these particular issues impact health and health care outcomes, careful selection of cases can lead students to think critically in context not only

about the practical application of skills in a team format but also the importance of identifying and responding to effects of environment on patient care.

Another lesson learned from this IPE event was the critical importance of having an administrative coordinator for IPE. Events that include multiple faculty and students from more than one program, no matter how contained, well-planned, or orderly, require an administrative coordinator. We faced challenges of organizational priorities, workforce arrangements, cost, and the varying academic calendars across professional schools. The dedicated coordinator for our IPE event bridged the gaps between schools, scheduling meetings and rooms, confirming faculty participation, creating somewhat complicated schedules of student teams for around 200 students 20–30 faculty at a time, and ensuring that participants had what they needed to engage fully in the event. This administrative support was critical to success. Additionally, commitment from faculty and participating departments to support the event, appropriate release time for students to attend, adequate facilities to accommodate both SP encounters and group ice-breaking and introduction activities, and technology to support pre- and post-assessment and student tracking are all important parts of the mosaic in making this kind of training both a reality and a success.

Sustainability of the lessons learned by students in IPE training is an important issue to grapple with. The medical and pharmacy schools have made these events a required and continuing part of the curriculum; at our university they schedule required IPE training events each semester through the first and second year of training. To date, our school of social work has not made IPE a requirement for our students, although we continue to offer students the opportunity to participate at least once a semester in similar team events, and the team approach has recently expanded to include the schools of nursing and physical therapy. As the new EPAS guidelines are implemented, we will determine how the IPE experience can fit into the curriculum as a required component. Sustainability options include providing opportunities for students from the different schools to participate in community-based clinics, and discussions are underway to explore such opportunities in our environment. Sustainability can also be enhanced if IPE experiences for social workers are reinforced with curriculum in behavioral health wherein students learn specific knowledge and skills for social work participation on the integrated patient-centered health care team. It is important to maximize opportunities for masters' level social workers to train in the IPE model since workforce opportunities for behavioral health specialists are expanding rapidly. For this reason, we developed a course in Behavioral Health Skills for Clinical Social Workers and are planning a Behavioral Health Certificate program.

Collaboration among healthcare professionals in real-life clinical practice continues to be less than optimal (Baker et al., 2011; Balogun, Rose, Thomas, Owen, & Brashers, 2015; Curran & Sharpe, 2008; Reeves et al., 2013). While interprofessional collaboration has been definitively linked to improved patient outcomes, poor communication among nurses, doctors, pharmacists, and mental health professionals has been linked to high rates of medical errors and mortality, particularly in hospital settings (Balogun, Rose, Thomas, Owen, & Brashers, 2015; Whiteley, Gillespie, Robinson, Watts, & Carter, 2014). The relevance of such collaboration is bolstered by the growing evidence that team-based care is not only more cost effective, but ultimately results in better service and health outcomes for

patients (Green & Johnson, 2015). The structure of healthcare systems currently supports compartmentalized care with substantial duplication of services, and little communication between professionals who deal with physical aspects of care (e.g. medicine) and those who deal with psychosocial aspects (e.g. social work). Additionally, the history of professional socialization in the helping professions is rife with underpinnings of bias related to culture, particularly in areas of communication styles, sex-role stereotypes, role ambiguity, lack of understanding or education about scope of practice of other professions, and incongruent expectations between professions (Baker et al., 2011; Curran & Sharpe, 2008, p. 147; Lumague et al., 2006). Collaboration across professional boundaries requires a large degree of alignment of the health professions, most importantly, the sharing of a moral imperative to work toward better patient care and better outcomes through a team approach (Institute of Medicine, 2015). Nonetheless, coordinated care has shown to have improved outcomes for patients with chronic mental illness or long-term chronic care needs, and patient satisfaction and compliance with treatment plans is rated higher when providers have been trained to use an interprofessional care approach (Mitchell, Del Mar, & Francis, 2002; Reeves et al., 2013). Evidence suggests that socialization and biases related to professional role and responsibility begin to develop prior to formal education. Given this, IPE approaches early in the development of professional identity may substantially mitigate such biases and reorient students towards the potential gains to be had as a result of professional collaboration and respect (Baker et al., 2011; Curran & Sharpe, 2008; Mitchell et al., 2002). As health care policy continues to incentivize cost-containment, improved quality and efficiency of care, and a patient-centered approach, interprofessional training offers the strongest option for addressing these needs and preparing our students for the evolving team-based reality of the healthcare workforce.

Acknowledgements:

This work was supported by the National Institutes of Health (L30 AG047993–01 to T.W.). The authors wish to recognize and thank the members of the steering team from UCF College of Medicine and University of Florida College of Pharmacy, as well our endlessly patient coordinator, Brenda Perez.

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Table 1:**IPEC Team & Teamwork Specific Competencies**

TT1. Describe the process of team development and the roles and practices of effective teams.
TT2. Develop consensus on ethical principles to guide all aspects of patient care and team work.
TT3. Engage other health professionals—appropriate to the specific care situation—in shared patient-centered problem-solving.
TT4. Integrate the knowledge and experience of other professions— appropriate to the specific care situation—to inform care decisions, while respecting patient and community values and priorities/ preferences for care.
TT5. Apply leadership practices that support collaborative practice and team effectiveness.
TT6. Engage self and others to constructively manage disagreements about values, roles, goals, and actions that arise among healthcare professionals and with patients and families.
TT7. Share accountability with other professions, patients, and communities for outcomes relevant to prevention and health care.
TT8. Reflect on individual and team performance for individual as well as team performance improvement.
TT9. Use process improvement strategies to increase the effectiveness of interprofessional teamwork and team-based care.
TT10. Use available evidence to inform effective teamwork and team-based practices.
TT11. Perform effectively on teams and in different team roles in a variety of settings.

Table 2:**Student Beliefs About Interprofessional Healthcare (*n*=22)**

Question	Mean (T1,T2) (5-pt scale)	<i>t</i> -value	Sig.
1. I am comfortable working with students from other professions.	4.10 4.43	2.32	.031 *
2. I am confident in my ability to contribute meaningfully to an interprofessional team.	4.10 4.57	3.63	.002 *
3. I am confident that my profession is a meaningful member of an interprofessional healthcare team.	4.48 4.76	2.34	.030 *
4. I believe that other health professions who are involved in this event share values related to ethics and quality of care.	4.29 4.57	1.83	.083
5. I believe that other health professions who are involved in this event share values related to respecting patient decision making.	4.14 4.43	1.67	.110
6. I believe that other health professions who are involved in this event share values related to accountability.	4.19 4.52	1.92	.069
7. I believe that other health professions who are involved in this event share values related to respect of the cultural diversity and individual differences that characterize patients and populations.	3.76 4.33	2.34	.030 *
8. The topic of professional communication and teamwork is an important topic for my profession to learn about.	4.67 4.71	-.57	.576
9. It is important to know the patient/client's social, economic and family situation in treatment care planning.	4.86 4.86	..	..
10. I am aware of how other health professionals' skills and knowledge complement my profession.	3.86 4.57	3.63	.002 *
11. I am aware of how my professional knowledge can complement the knowledge and skills of other health professionals.	4.24 4.71	3.63	.002 *

Responses: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree;

* Significant at the .05 level.

Table 3:
Student Attitudes About Interprofessional Teamwork ($n=22$)

Question	Mean (T1,T2) (5-pt scale)	t-value	Sig.
1. Patients/clients receiving interprofessional care are more likely than others to be treated as whole persons.	4.05 4.71	-3.35	.003 *
2. Developing an interprofessional patient/client care plan is excessively time consuming.	2.75 2.25	3.25	.004 *
3. The give and take among team members helps them make better patient/client care decisions.	4.14 4.57	-2.91	.009 *
4. The interprofessional approach makes the delivery of care more efficient.	4.24 4.71	-4.26	.000 **
5. Developing a patient/client care plan with other team members avoids errors in delivering care.	3.90 4.43	-3.53	.002 *
6. Working in an interprofessional manner unnecessarily complicates things most of the time.	1.95 1.71	1.75	.096 *
7. Working in an interprofessional environment keeps most health professionals enthusiastic and interested in their jobs.	3.48 4.29	-4.56	.000 **
8. The interprofessional approach improves the quality of care to patients/clients.	4.38 4.86	-4.26	.000 **
9. In most instances, the time required for interprofessional consultations could be better spent in other ways.	2.00 1.52	2.23	.038 *
10. Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.	3.81 4.52	-3.42	.003 *
11. The interprofessional approach permits health professionals to meet the needs of family caregivers as well as patients.	4.19 4.43	-1.56	.135
12. Having to discuss observations with a team helps team members better understand the work of other health professionals.	4.48 4.71	-2.50	.021 *
13. Hospital patients who receive interprofessional team care are probably better prepared for discharge than other patients.	4.19 4.43	-1.00	.329
14. Team meetings foster communication among team members from different professions or disciplines.	4.33 4.67	-3.16	.005 *

Responses: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree; Items 2, 6, & 9 were reverse coded.

* Significant at the .05 level;

** Significant at the <.01 level.