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Exploring Interprofessional Education Among Nursing and Chemical Dependency/Addiction Studies Through Simulation

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EXPLORING INTERPROFESSIONAL EDUCATION AMONG NURSING AND CHEMICAL DEPENDENCY/ADDICTION STUDIES STUDENTS THROUGH SIMULATION

By

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Abstract

The opioid epidemic has become a public health crisis and as the need for comprehensive prevention, identification, and treatment grows, it is imperative that nurses and other professionals are well equipped to work collaboratively to provide high quality care. Interprofessional education (IPE), which involves joint learning by practitioners or students of more than one profession, was the conceptual framework used for this project. Available evidence suggests that structured IPE could equip learners with the tools and skills necessary to participate in collaborative practice (Hallin, Kiessling, Waldner, & Henriksson, 2009, Mcpherson, Headrick, & Moss, 2001). Students participated in a socialization exercise, in which they explored their perceptions and understanding of each other's roles. Students then participated in a simulation where groups of Nursing and Chemical Dependency/Addiction Studies (CDAS) students interviewed standardized clients with an opioid addiction after which students generated a collaborative treatment plan. The open-source Interprofessional Socialization and Valuing Scale-21 (ISVS-21) was used to collect data pre and post simulation. Mean increase in scores following the simulation ranged from 0.62-1.88 indicating students found the simulation increased their interprofessional collaboration. Financial support for this project was provided by the Anne and Bob De Stefano research program.

Exploring Interprofessional Education Among Nursing and Chemical Dependency/Addiction Studies Students Through Simulation

According to the 2017 National Survey on Drug Use and Health, 12 million Americans over the age of 12 misused opioids and over 49,000 people died because of an overdose. Substance use disorders (SUD) and related deaths have increased since 2000 and current trends suggest that these figures will continue to rise in the coming years without immediate intervention (Center for Behavioral Health Statistics and Quality, 2018, National Institute on Drug Abuse, 2018). Due to the multitude of factors that lead to substance use and the myriad of approaches and strategies needed for comprehensive prevention, identification, and treatment, there is a great need for a workforce that is prepared to work collaboratively to achieve client goals (Broyles, Conley, Harding, & Gordon, 2013). Interprofessional collaboration, therefore, is essential to ensure safe, effective, and client-centered health services and it is imperative that nurses and other mental health professionals are well equipped with the knowledge and skills to work collaboratively to provide high quality care (Baker, Pulling, McGraw, Dagnone, Hopkins-Rosseel, & Medves, 2008).

Despite the importance of interprofessional collaboration among healthcare professionals, students are primarily educated in 'silos' or within the confines of their respective disciplines (Chan et al., 2017). Throughout their academic programs, students have limited exposure to other disciplines, are unable to learn about the roles and responsibilities of diverse team members and are afforded very few opportunities for communication with those outside their discipline. Rhode Island College (RIC) undergraduate nursing students receive lessons regarding the importance of the importance of teamwork and collaboration, however, there are very few opportunities in the current curriculum to learn about and work with other professionals.

With the goal of preparing future practitioners to work cohesively and collaboratively with members of other healthcare professions, there is an increased need to provide structured IPE to students (Baker et al., 2008). IPE involves joint learning by practitioners or students of more than one profession to equip learners with the tools and skills necessary to participate in collaborative practice. Hall & Weaver (2001) suggest that learning to work in an interprofessional environment should occur early in the education of the healthcare professional regardless of the specialty or field of study, however, efforts to integrate interdisciplinary education into current curricula have been inadequate.

Providing interprofessional education can be achieved through a number of approaches. Experiential learning, which can be achieved through simulation, has proven to be extremely valuable in a variety of team learning settings. Baker et al. (2008) have indicated that integrating interprofessional simulation into program curricula offers groups of learners the opportunity to interact with one another through learning situations and provides them with invaluable experience. In addition to providing an ideal environment for two professionals to work with one another, simulation creates a safe platform for students to practice new skills without the potential for adverse outcomes in the clinical environment (Alexander, Sheen, Rinehart, Hay, & Boyd, 2018).

Literature Review

A literature review was conducted using CINAHL Plus, MEDLINE and PubMed databases for articles before the simulation was designed. Key search terms included: interprofessional education, interprofessional learning, interdisciplinary education, and mental health simulation. This literature review found no available articles discussing the creation of an IPE simulation for healthcare students on the topic of addiction. The database and search terms,

however, yielded a multitude of articles regarding the importance of IPE and the various methods in which IPE can be delivered to students.

Background

Typically, psychiatric/mental health nursing, including treatment of drug addiction and dependency, is taught through traditional lecture in combination with clinical experiences, either within the hospital or within the community. Simulation is often used to teach physical skills and competencies, and as a result, there are significantly fewer standardized client care scenarios for psychiatric/mental health nursing (Brown, 2008). In addition, there have been very few simulations designed to address the assessment and treatment of a client with a substance use disorder, as substance abuse education in the United States is generally of limited breadth and depth among healthcare programs (Broyles et al., 2013, Norman, 2001). While there is an ever-increasing need for practitioners who are prepared to work with clients suffering from addiction, there is an apparent disconnect between the demand and the number of nursing and other academic programs that provide this type of training.

Despite the lack of research currently available regarding the integration of simulation into psychiatric/mental health nursing, pilot studies have shown significant promise. For example, simulation has proven to be successful in teaching skills necessary for communication-based competency, including establishing therapeutic rapport and conducting comprehensive assessments (Alexander et al., 2018). Due to the complexity of the identification and treatment of opioid use disorders, these skills are not utilized in isolation and must be coupled with effective collaborative practice. Meeting the various physical, psychological, and psychosocial needs of the client is of utmost importance, and as a result, ensuring that nurses and other mental health

professionals are able to collaborate is an important aspect to consider in curriculum development.

Importance of IPE

Developing a workforce of highly collaborative, multidisciplinary healthcare professionals is of vital importance (Broyles et al., 2013). Regardless of the setting, effective teamwork and collaboration yields many benefits and has a direct impact on improving client outcomes. Specifically, in community mental health settings, these benefits are observed and translate to increased client and caregiver satisfaction, greater acceptance of treatment, reduced duration of treatment, reduced cost of care, reduced incidence of suicide, and increased treatment for psychiatric disorders, and reduced outpatient visits (World Health Organization (WHO), 2010). Conversely, lack of teamwork among healthcare professionals is not without consequence, as lack of collaboration can lead to errors in patient management and negative health outcomes since collaboration and highly integrated teamwork are essential to patient safety and quality of care (Olenick, Allen, & Smego, 2010).

Interprofessional health-care teams understand how to optimize the skills of their members, share case management, and provide better health-services to clients and the community. As discussed, however, there has been little effort to develop initiatives to ensure that students are prepared to work as effective team members (WHO, 2010) and there is an apparent deficit in new healthcare graduates' communication skills and ability to work well in teams (Bandali, Parker, Mummery, & Preece, 2008). In the same way students develop any other skill or competency, the ability to work collaboratively as part of a team is learned through proper education and adequate experience. IPE, which is defined as, "when two or more professionals learn about, from, and with each other to enable effective collaboration and

improve health outcomes" (WHO, 2010) helps to provide this necessary training. In doing so, IPE serves to address the problems of fragmentation in health care delivery and separation among healthcare professionals and creates a "collaborative practice-ready" health workforce ready to meet the health needs of various populations (Olenick et al., 2010, WHO, 2010).

A study conducted in 2017 reviewing students' understanding of teamwork and professional roles after interprofessional simulation involving nursing students and medical students suggested that interprofessional simulation, and other IPE modalities, can have a significant impact on attitudes toward interprofessional collaboration, and lead to an enhanced understanding in students' understanding of teamwork and professional roles (Oxelmark, Amorøe, Carlzon, & Rystedt, 2017). Another study conducted in 2016 which reviewed interprofessional communication in a simulation-based team training session, identified that communication between disciplines was inhibited by lack of cross-disciplinary knowledge, professional, and hierarchical differences, all of which can be alleviated through adequate socialization and training (Aase, Aase, Dieckmann, Bjørshol, & Hansen, 2016).

Continued research dedicated to understanding how IPE affects health care professionals' perceptions and ability to work together effectively can have tremendous influence in encouraging healthcare programs to incorporate these programs into current curricula. Teamwork training inherent in a shared curriculum can increase interprofessional competence - defined as knowledge and understanding of their own and the other team members' professional roles, and teamwork and collaboration in caring for clients (Hallin et al., 2009). Overall, IPE works to improve attitudes toward teamwork, emphasizes each profession's contribution to client care, deconstructs preconceived ideas, and works to develop the knowledge and skills necessary for healthcare professionals to work collaboratively (Olenick et al., 2010).

Interprofessional Education Collaborative Competencies

In 2009, six national education associations of schools of the health professions formed the Interprofessional Education Collaborative (IPEC) releasing the first set of competencies for interprofessional education in 2011. The following are the most recent (2016) IPEC competencies for collaborative practice (sub competencies not listed):

- Values/ethics: work with individuals of other professions to maintain a climate of mutual respect and shared values
- Roles/responsibilities: use the knowledge of one's own role and those of other professionals to appropriately assess and address the health care needs of patients and to promote and advance the health of populations
- Interprofessional communication: communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease
- Teams & teamwork: apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable (Interprofessional Education Collaborative (IPEC), 2016).

The aim of forming the collaborative was to help prepare future health professionals for enhanced team-based care of clients and to improve population health outcomes. To accomplish this goal, the IPEC promotes and encourages efforts to advance interprofessional learning experiences across disciplines. These competencies were developed to guide curriculum design

and development across health professions (IPEC, 2016). The IPEC core competencies were utilized to ensure that the development of the project presented in this paper met current recommendations for IPE programs.

Simulations based around communication are most effective when a live actor is utilized, as it allows the simulation to more closely mirror actual practice (Bell et al., 2014). Live simulation has also been proven to be an effective training tool for all levels of training of psychiatric education (McNaughton, Ravitz, Wadell, & Hodges, 2008). In addition, when having undergraduate health professionals engage with a client suffering from a Substance Use Disorder, a degree of humanism is required that no mannequin can provide. As a result, a live actor was a vital element in this project to replicate a real client interaction (Alexander & Dearsley, 2013). Generous financial support from the Anne and Bob De Stefano Fund for Undergraduate Research made it possible to hire professional improvisational actors to be used for the simulation.

Method

The purpose of this project was to examine whether the implementation of IPE affects students' perceptions and abilities to work effectively as part of a team. Convenience sampling was used in this pilot study, and six first semester junior level undergraduate nursing students and nine CDAS students at Rhode Island College participated in the pilot simulation in October 2018. Prior to the simulation, the students participated in a socialization exercise, in which they explored their perceptions and understanding of each other's roles. Students then took part in a simulation; where groups of nursing and CDAS students interviewed standardized clients with an opioid addiction, which were portrayed by live actors, after which students generated a collaborative treatment plan. Using a pretest and posttest, student perceptions were evaluated

prior to the IPE experience, and following the socialization exercise, simulation, and the treatment planning process. The students completed the pretest within one week of the simulation and the posttest was completed within a week following the simulation. All 14 students completed the pretest and 13 students completed the posttest.

Socialization Exercise

The students participated in a socialization exercise prior to the simulation. The purpose of the exercise was to evaluate the perceptions and beliefs that each student held about their own profession and about members of the opposite profession. At the beginning of the exercise, each Nursing student and Chemical Dependency/Addiction Studies student was given two cards. On the front of the first card, the students were asked to write down their professional role; on the back of the card, the students were asked to write down what they believed the role of the other professional was. On the front of the second card, students were asked to write down what values they held as a professional, and on the back of the card, they were asked to write down what values they believed were held by members of the opposite profession. Following the exercise, the students were asked to share their responses to the socialization exercise as they were guided through a series of debriefing questions (see Appendix A).

Socialization Debriefing

During the exercise, all of the students were able to accurately explain their own role, but as the students shared their responses, it became apparent that many of the students had misconceptions about the other profession's roles and responsibilities. When the CDAS students spoke of the Nursing students, there was a strong focus on the medical aspect of caring for a client with a Substance Use Disorder. Responses to questions included that nurses, "assist in the medical stabilization of the patient," "manage medical complaints of the patient," "maintain

patient's vitals," "provide medical intervention of withdrawal symptoms and other physiologic symptoms," and "help with physical health." There were no responses that stated that nurses address the mental or emotional needs of the client, despite the holistic care that nurses provide. In comparison, when the nursing students spoke of the CDAS students, there were fewer misconceptions. The nursing students, however, were completely unaware of the role of the CDAS students, and therefore, had no preconceived ideas about their profession.

Despite the many misconceptions that were held by the students regarding roles and responsibilities, there were many similarities when it came to the values that each student held as a professional. Values such as compassion, empathy, and advocacy were repeated often by the students when speaking of their own values and the values of the other professional. During the debriefing, it was apparent that this surprised many of the students, as they had been previously unaware of the other professional's roles. During this portion of the exercise, however, they were made aware of the similarities in values held as members of the healthcare team, regardless of the differences between disciplines.

After sharing their responses, the students were guided through a series of questions to initiate a conversation about the activity, and the impact of the misconceptions and preconceived notions on future practice (see Appendix A). During the reflection, many students remarked that they were unaware of the role of the other professional and that the two professions share many similar responsibilities and values. One student commented that, "we did have some misconceptions about each other, when in reality we all have one common goal which is helping the client." Another student stated that, "misconceptions could inhibit collaboration." These observations made by the students showcase the direct benefits of IPE. By clarifying roles and misconceptions, and reflecting upon the values held by the students, students gained a greater

understanding of their team members. With these misconceptions mitigated and gaining a greater understanding of another's discipline, the students felt that they were more likely to utilize the knowledge and skills of the other professional as they enter practice.

Pre-simulation

Prior to the simulation, students were given a brief synopsis of the client scenario. The synopsis was a modified version of the background information given to the actors (see Appendix B), which left out information that was to be revealed during the assessment. No preparation was required prior to attending and no further materials were provided to the students. Students were allowed to bring in any written assessment or screening tools they deemed necessary to be used during the client interview.

Developing the Simulation

After a review of literature, the socialization exercise and simulation were designed using the core competencies for interprofessional collaborative practice. The developer created a scenario that involved the assessment of a client with an opioid addiction, as there is a growing need for healthcare professionals to be prepared to manage these complex cases. Healthcare providers can encounter clients with opioid addictions in any setting, however, this scenario revolved around a client who presented to a community mental health center for treatment as this is a common environment for nurses and chemical dependency/addiction professionals to encounter one another.

The actors recruited for the simulation were professional improvisational actors who were given background information and general guidelines on how to portray the Standardized Patient, rather than a traditional script. This was necessary, as the conversation between the actor and the students would vary from group to group based on student questions and responses. The

same document was provided to all four of the actors to ensure consistency, however, there is some variation to be expected with the use of improvisational actors. Sample phrases and examples of non-verbal cues (see Appendix C) were provided within the script, however, there were no specific requirements for the actor.

During the simulation, the students were broken up into small groups, each containing a combination of nursing students and CDAS students. As a group, students were allotted 50 minutes to interview the client who was presenting to the clinic for the first time. The students were expected to work together to perform an initial assessment, ensuring they had enough information to develop a treatment plan. Although 50 minutes was allotted for each group, run times for the actual simulation were much shorter. All groups finished within 20 minutes, and this issue should be discussed before future applications of the simulation. This simulation could be changed by altering the expected completion time or altering the script to prompt further interaction between the students and the actor.

After completing the simulation piece, the groups were give 45 minutes to work in their groups to develop a collaborative problem list and an initial plan of care for the client. Students were not expected to complete a full treatment plan during this time, however, they were asked to focus on priority issues and what initial steps they would take to treat the client. This treatment planning process helped satisfy the IPEC competency of teams & teamwork. In order to develop the plan, the students had to perform effectively as part of a team in order to create a safe, effective, and client-centered care program. In addition, this portion of the IPE experience also helped to satisfy the competency of interprofessional communication, as the students not only had to communicate with the client, they also had to communicate with fellow healthcare

professionals, and use this communication to facilitate a team approach to create a disease specific, client-centered treatment plan.

Debriefing

Following the simulation and treatment planning process, the students participated in a debriefing, where they were guided through a series of questions (see Appendix D). Students were asked to reflect on their experience and provide any feedback or recommendations for future runs of the simulation. In addition, the actors who portrayed the client with the opioid addiction attended the debriefing and were able to provide feedback to the students. The actors were able to reflect on the communication techniques utilized by the students and were able to comment on how the groups worked together. During the debriefing, one student stated that following the experience they felt more comfortable working as a team member and talking with someone of another profession. Another student commented, "it is important to collaborate in a professional role," and "I gained a greater respect for the other profession."

Instrument

Evaluation of interprofessional learning is evidenced by a change in knowledge, attitudes, behaviors, beliefs, or skills. Furthermore, there is a focus on evaluating the interaction between disciplines rather than on specific content (Olenek, et al., 2010). Additionally, experiential learning, which can be achieved through simulation, suggests that a pre-test/post-test model is most accurate for measuring student learning (Kaakinen & Arwood, 2009). Taking these points into consideration, King, Orchard, Khalili, & Avery's (2016) open-source Interprofessional Socialization and Valuing Scale-21 (ISVS-21) was used to collect data pre and post simulation. This 21-question tool (see Table 1 below) used a seven item, Likert-scale with answers ranging from N/A (0) to a very great extent (7). The tool was designed to measure aspects of the

interprofessional socialization process among students and their readiness to function in interprofessional teams. The ISVS-21 provides insight into the abilities, values, and beliefs underlying socio-cultural aspects of collaborative and authentic interprofessional care in the workplace, and can be used to evaluate the impact of interprofessional education efforts. The tool has a high degree of reliability (Cronbach alpha of 0.988) and validity in measuring socialization among both practioners and students (In 2015, Oates and Davidson critically evaluated nine instruments to measure outcomes of IPE and collaborative practice and established that this tool meets all of the standards for IPE instrument development).

Table 1
Interprofessional Socialization and Valuing Scale-21

Item	Scale Anchors	
1. I am aware of my preconceived ideas when entering into team discussions.	to a very great extent	N/A
2. I have a better appreciation for using a common language across the health professionals in a team.	to a very great extent	N/A
3. I have gained an enhanced awareness of my own role on a team.	to a very great extent	N/A
4. I am able to share and exchange ideas in a team discussion	to a very great extent	N/A
5. I have gained an enhanced perception of myself as someone who engages in interprofessional practice.	to a very great extent	N/A
6. I feel comfortable being the leader in a team situation.	to a very great extent	N/A
7. I feel comfortable in speaking out within the team when others are not keeping the best interests of the client in mind.	to a very great extent	N/A
8. I feel comfortable in describing my professional role to another team member.	to a very great extent	N/A
9. I have a better appreciation for the value in sharing research evidence across different health professional disciplines in a team.	to a very great extent	N/A
10. I am able to negotiate more openly with others within a team.	to a very great extent	N/A
11. I have gained an enhanced awareness of roles of other professionals on a team.	to a very great extent	N/A
12. I am comfortable engaging in shared decision making with clients.	to a very great extent	N/A
13. I feel comfortable in accepting responsibility delegated to me within a team.	to a very great extent	N/A
14. I have gained a better understanding of the client's involvement in decision making around their care.	to a very great extent	N/A
15. I feel comfortable clarifying misconceptions with other members of	to a very	N/A

the team about the role of someone in my profession.	great extent	
16. I have gained greater appreciation of the importance of a team approach.	to a very great extent	N/A
17. I feel able to act as a fully collaborative member of the team.	to a very great extent	N/A
18. I feel comfortable initiating discussions about sharing responsibility for client care.	to a very great extent	N/A
19. I am comfortable in sharing decision making with other professionals on a team.	to a very great extent	N/A
20. I have gained more realistic expectations of other professionals on a team.	to a very great extent	N/A
21. I have gained an appreciation for the benefits in interprofessional team work.	to a very great extent	N/A

Data Analysis

Due to confidentiality issues in data collection, responses from individual participants pre and post simulation could not be compared and scores could not be calculated based on the developer's recommendations. As a result, average scores for each question from all participants were used for data analysis. The small sample size should be considered when attempting to draw conclusions for larger populations, but despite these limitations, the increase in scores following the experience provides evidence that IPE improves some students' perceptions and abilities to work collaboratively with other professionals.

Pre-test Post-test Results

The mean scores in all 21 items of the ISVS-21 improved after completion of the socialization exercise and simulation, as shown in Table 2. Despite improvements in all items (see Figure 1 below), analysis of each item is essential in order to identify specific areas of weakness and make modifications to the program in order to improve scores in the future.

Table 2
Interprofessional Socialization and Valuing Scale-21Pre vs. Post-Test Results

Item		Total	Mean	Net Change
1. I am aware of my preconceived ideas when entering into team discussions.	Pre Post	70 73	5.00 5.62	0.62
2. I have a better appreciation for using a common language across the health professionals in a team.	Pre Post	73 80	5.21 6.15	0.94
3. I have gained an enhanced awareness of my own role on a team.	Pre Post	63 83	4.50 6.38	1.88
4. I am able to share and exchange ideas in a team discussion	Pre Post	71 85	5.07 6.54	1.47
5. I have gained an enhanced perception of myself as someone who engages in interprofessional practice.	Pre Post	62 78	4.43 6.00	1.57
6. I feel comfortable being the leader in a team situation.	Pre Post	60 70	4.29 5.38	1.09
7. I feel comfortable in speaking out within the team when others are not keeping the best interests of the client in mind.	Pre Post	71 75	5.07 5.77	0.70
8. I feel comfortable in describing my professional role to another team member.	Pre Post	69 79	4.93 6.08	1.15
9. I have a better appreciation for the value in sharing research evidence across different health professional disciplines in a team.	Pre Post	64 83	4.57 6.38	1.81
10. I am able to negotiate more openly with others within a team.	Pre Post	66 79	4.71 6.08	1.37
11. I have gained an enhanced awareness of roles of other professionals on a team.	Pre Post	65 82	4.64 6.31	1.67
12. I am comfortable engaging in shared decision making with clients.	Pre Post	69 83	4.93 6.38	1.45
13. I feel comfortable in accepting responsibility delegated to me within a team.	Pre Post	73 82	5.21 6.31	1.10
14. I have gained a better understanding of the client's involvement in decision making around their care.	Pre Post	73 81	5.21 6.23	1.02
15. I feel comfortable clarifying misconceptions with other members of the team about the role of someone in my profession.	Pre Post	68 82	4.86 6.31	1.45
16. I have gained greater appreciation of the importance of a team approach.	Pre Post	71 86	5.07 6.62	1.55
17. I feel able to act as a fully collaborative member of the team.	Pre Post	72 83	5.14 6.38	1.24
18. I feel comfortable initiating discussions about sharing responsibility for client care.	Pre Post	68 83	4.86 6.38	1.52
19. I am comfortable in sharing decision making with other professionals on a team.	Pre Post	72 84	5.14 6.46	1.32
20. I have gained more realistic expectations of other professionals on a team.	Pre Post	69 77	4.93 5.92	0.99
21. I have gained an appreciation for the benefits in interprofessional team work.	Pre Post	70 85	5.00 6.54	1.54

The greatest improvement was in item 3, “I have gained an enhanced awareness of my own role on a team.” The goal of IPEC competency roles/responsibilities is for professionals to use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of clients and to promote and advance the health of populations (IPEC, 2016). As mentioned, the IPEC competencies were used as the basis for the development of this IPE program, and the socialization exercise was specifically designed to initiate a conversation about the roles and responsibilities of each profession. The exercise and subsequent debriefing afforded the students the opportunity to explore any misconceptions or preconceived notions about the opposite profession, and in the process gain an enhanced awareness of their own roles and the roles of others.

The second greatest improvement in score was in item 9, “I have a better appreciation for the value in sharing research evidence across different health professional disciplines in a team,” with an increase of 1.81. During the simulation, the students were asked to interview the client as a group, and to establish a collaborative treatment plan based on the assessment findings. The increase in score for this item may have been attributed to the sharing of information between students following the interview, however, there was no discussion regarding the sharing of research evidence across various disciplines.

Following the two greatest increases in score, the next greatest improvement was in item 11, “I have gained an enhanced awareness of roles of other professionals on a team,” with an increase of 1.67. During the socialization exercise, students explored their own roles and the roles of others. They were also asked to clarify any misconceptions they may have held prior to entering into the discussion. Following this exercise, the students felt that as a result, they had a gained an enhanced awareness of the roles of their team members.

Following item 11, item 5 had the next greatest improvement, “I have gained an enhanced perception of myself as someone who engages in interprofessional practice”. This was a particularly important increase, as the purpose of IPE is to help prepare students to participate in collaborative practice. During the debriefing, there was significant discussion about the possible issues in client care that can arise if healthcare members do not work collaboratively. After completing the socialization exercise and simulation, the students felt a greater sense of themselves as those who participate in collaborative practice.

Item 16, “I have gained greater appreciation of the importance of a team approach,” had the next greatest increase in score at 1.55. Prior to this experience, many of the students had not had the opportunity to work with professionals or students from another discipline. Participating in the socialization exercise and the simulation gave them the opportunity to engage in a team activity, and the debriefing session helped the students explore the benefits of collaboration on client outcomes.

Following item 16, the next greatest improvement was in item 21, “I have gained an appreciation for the benefits in interprofessional team work,” with an increase of 1.54. Once again, having the opportunity to work with members of another profession had direct benefits for the students. During the treatment planning process, the students were able to communicate with a member of a different profession and identify what each discipline contributes to client care. Overall, by participating in the IPE experience, the students were able to gain an appreciation for interprofessional teamwork.

Following item 21, item 18, “I feel comfortable initiating discussions about sharing responsibility for client care,” had an increase of 1.52. During the treatment planning process, the students were asked to work together to establish goals for the client. This led to an increase in

the level of trust and comfort in sharing responsibility for client care. Despite the increase in score, whether or not the students would feel comfortable initiating discussion, especially in a larger group, should be examined. As part of the IPE experience, communication techniques could be discussed in order to improve skills and confidence in entering team discussion.

Item 4, "I am able to share and exchange ideas in a team discussion," had an increase of 1.47. During the treatment planning process, students were asked to work together to develop a plan for the client. Allowing the students time for open discussion helped to facilitate the exchange of ideas between students.

Item 12, "I am comfortable engaging in shared decision making with clients," and item 15, "I feel comfortable clarifying misconceptions with other members of the team about the role of someone in my profession" both shared an increase of 1.45. In regards to item 12, students were asked to develop a treatment plan with their fellow students and not with the client. The idea of delivering client-centered care is integrated into all of the IPEC competencies; however, its importance was not addressed during the simulation, as both the socialization exercise and the simulation focused on the two professions rather than the client (IPEC, 2016). Focusing on the client's involvement in care in future simulations, by returning to the client to discuss and collaborate with the client following the creation of the treatment plan, could potentially result in an increase in score for this item. For question 15,

Item 10, "I am able to negotiate more openly with others within a team," had an increase of 1.37 and following item 10 was item 19, "I am comfortable in sharing decision making with other professionals on a team," with an increase of 1.32. Students were asked during the treatment planning process to work with one another to develop client goals. In doing so, the students had to work together and openly discuss client issues, and identify what took priority,

incorporating their individual perspectives. Following this process, the students felt more comfortable in negotiating and making decisions with other professionals on the team.

Item 17, "I feel able to act as a fully collaborative member of the team" had the next greatest increase of 1.24. Although the IPE experience had a positive impact on student perceptions and abilities to work as part of a team, a single IPE program or workshop, such as the one designed for this project, will not adequately prepare students for effective collaborative practice. IPE should be integrated early and often into academic programs; however, the results of the project speak to the benefits it provides. Further training and experiences that allow for collaboration are necessary to provide more comprehensive training to students.

Item 8, "I feel comfortable in describing my professional role to another team member," increased by 1.15. During the socialization exercise, the students were asked to write down their role and share their responses with the group during the debriefing. In doing so, following the socialization exercise, students gained an enhanced sense of comfort in describing their roles.

Item 13, "I feel comfortable in accepting responsibility delegated to me within a team," increased in score by 1.10. Prior to the simulation, student groups did not have time to meet with one another and discuss tasks or responsibilities to be taken on during the client interview. By not having the opportunity to delegate tasks or be delegated to, the students may not have gained an increased sense of comfort and acceptance of their designated responsibility. In future runs of the simulation, students can be given a brief period to meet with their assigned groups prior to the simulation. Students can utilize this time to distribute responsibilities amongst the group members, and as a result, gain an increased sense of comfort in accepting responsibilities delegated to them within the group.

Item 6, "I feel comfortable being the leader in a team situation," increased in score by

1.09. The basis of the program was to enforce the shared responsibilities for client care. All students were equal partners during the assessment and treatment planning process, and no team leaders were elected among the groups. In general, undergraduate students are not given leadership positions during their clinical rotations, and due to this lack of experience, students may not feel comfortable taking on this role. In the future, a team leader could be elected among the groups, however, whether or not this would affect the team dynamics would have to be considered before this change is made.

Item 14, "I have gained a better understanding of the client's involvement in decision making around their care" had an increase in score of 1.02. As mentioned previously, integrating the client into the treatment planning process could potentially benefit the IPE experience. Putting the client at the center of the treatment planning process and ensuring their involvement could potentially lead to an increase in score for this item.

Item 20, "I have gained more realistic expectations of other professionals on a team," had an increase of 0.99. Gaining a greater sense of the roles and responsibilities of other professionals led to an increase in score for this question. As the students learned about what various disciplines contribute to client care, students were able to gain more realistic expectations of the other professionals.

Item 2, "I have a better appreciation for using a common language across the health professionals in a team," had an increase in score of 0.94. During the experience, effective interprofessional communication techniques were not discussed. Ensuring that students are able to communicate with not only clients and families, but other professionals, is a vital component to effective collaboration, therefore, a component could be added to the IPE experience to

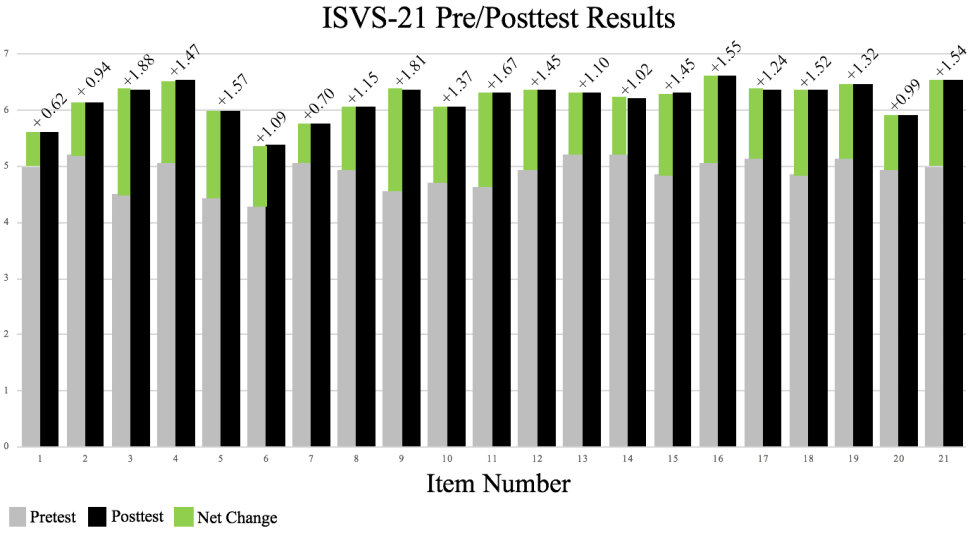
facilitate this communication, such as a patient handoff or use of a standardized communication tool (IPEC, 2016).

Item 7, "I feel comfortable in speaking out within the team when others are not keeping the best interests of the client in mind," had an increase of 0.70. As mentioned previously, incorporating an element of the project that involves reviewing communication techniques and assertiveness skills could lead to an improvement in not only this item, but also other items.

The smallest increase in score was seen in item 1, "I am aware of my preconceived ideas when entering into team discussions". During the socialization exercise debriefing, the students were asked to explore preconceived ideas about the roles and responsibilities of the other professional, and how this has the potential to influence future practice. Students were not specifically asked about the direct impact of preconceived ideas when entering into team discussions. In the future, students could be asked a question that could help them explore other preconceived ideas (besides those related to roles and responsibilities) prior to meeting with students of the opposite profession(s).

Figure 1

Interprofessional Socialization and Valuing Scale-21 Net Change Results



Student Feedback

After completion of the post test, the students were given the opportunity to provide additional feedback. Overall, feedback from the students was extremely positive, with over half of the free text responses noting that it was a, "great experience." Other responses included, "it gave me an idea of how working with other professionals would be like in the real world…" and "it has better prepared me for my career…" and "I have a better appreciation for all disciplines." Another student commented, "I'm very appreciative of the experience and feel that it has better prepared me for my career in more ways than some classes have."

Discussion

Incorporating Feedback

Feedback from the students should be used to make modifications to the socialization exercise and simulation scenario. One student suggested that time be provided for each of the students to introduce themselves to the students of the other profession prior to the start of the training. This could be incorporated into the beginning of the socialization exercise and allow the students to become better acquainted with their teammates without affecting the outcomes of the IPE experience. Another student commented that, "a little background about the scenario would help in the future." This should be taken into consideration, however, there are conflicting viewpoints regarding how much information should be provided to students prior to a simulation. Comprehensive preparatory materials can be viewed as providing a high level of cueing and inhibit the simulations ability to mirror actual practice. On the other hand, lack of preparation can initiate a stress response from students and this increase in anxiety could potentially inhibit learning and the ability for students to perform effectively (Tyerman, Luctkar-Flude, Graham, Coffey, & Olsen-Lynch, 2016). Advantages and disadvantages of providing additional

background information, and the potential impact on learning outcomes should be evaluated before a decision is made to adjust presimulation materials. Future runs of the simulation could be expanded to incorporate graduate psychology students, graduate nursing students, or medical students. By utilizing and incorporating feedback from students following each subsequent run of the socialization exercise and simulation, continuous improvements can be made to ensure a better learning experience for future use.

Limitations

The small sample size was a limitation of the study, and a larger sample size and multiple runs of the scenario would be necessary before drawing conclusions for larger populations. Another limitation was the inability to evaluate the group process among the various groups of students, as students were not recorded due to confidentiality issues; teamwork and interactions between the students were measured through the results of the survey and could not be directly examined. Finally, due to the fact that there were four different actors used for the simulation, scenarios may have varied between groups as scripts were used only as a guide. Despite these limitations, the results support the benefits of IPE in improving this group of students' perceptions and abilities to work collaboratively with other professionals.

Perceptions/Implications for Future Study

Feedback from the students and faculty involved indicated that the shared learning experience was beneficial and provided the students with a unique opportunity to work with other professionals. All students who took part in the simulation suggested the IPE experience become part of both programs' curricula. Written qualitative feedback provided by the students was extremely positive, and unanimously supported further development and implementation of the simulation. In regards to future study, the IPE program could be utilized in future semesters

after modifications are made. The socialization exercise and simulation could also be used to create an IPE workshop for students that includes classroom time and the opportunity to work directly with other students.

Conclusion

Developing effective IPE programs is one strategy to address the growing need for a highly collaborative workforce to care for clients with opioid use and other substance use disorders. The reviewed literature illustrates that IPE programs work to prepare students to work collaboratively, and the written feedback and the results of this project indicate that this program yielded similar results. Following the IPE experience, students gained a greater sense of the roles, responsibilities, and values of the other professionals. In addition, students gained a greater understanding of the similarities and differences between the two professions. Experiential learning, achieved through simulation, is an effective way to provide students with a shared learning experience. Overall, the feedback and endorsement from students and faculty involved in the project suggest that this pilot IPE program was successful. Despite the project's success, further training is necessary to fully prepare undergraduate nursing and other healthcare students. IPE programs, including those involving simulation, can help prepare students to work collaboratively as they enter professional practice.

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Appendix A

Socialization Exercise Debriefing Questions:

- What are the similarities and differences between the roles?
- What did you learn about your professional role and the role of others?
- What are the values that you hold as a professional?
- Are there any similarities between your values and the values of the other professional?
- What did you learn about your professional values and the values of others?
- What misconceptions or preconceived ideas, if any, did you have regarding the role of the other professional?
- Where did these ideas come from?
- How could misconceptions or misinformation inhibit collaborative practice?

Appendix B

Actor Background Information:

The client presents to the community mental health center seeking treatment for substance use. The client began taking opioid pain medication five years ago after sustaining a debilitating back injury while working at a construction site. Since the injury, the client has suffered from chronic pain and has exclusively used this medication to provide relief. A few months ago, the client's primary care physician retired and the new physician refused to refill the medication. The client soon ran out of pills and with nowhere to turn purchased suboxone from a neighbor. Since then, it has been increasing difficult to get this medication regularly and the client spends a significant amount of time and energy trying to find the next dose. He reports that when he does not take the medication his pain increases and he experiences other symptoms such as restlessness, sweating, insomnia, and nausea that are simply unbearable. Along with being a financial burden, his substance use has had a negative impact on his interpersonal relationships. Last week, the client's spouse verbalized frustration and anger about the substance use and moved out of the house. The client currently denies thoughts of suicide; however, the client is notably depressed.

Appendix C

Actor Cues / Script:

1. You just arrived to the CMHC for your first appointment. You are depressed and anxious, and this is evident through your facial expression and body language.
2. The nursing/CDAS students will enter, introduce themselves, and begin the interview. Your anxiety continues and you are making poor eye contact with the interviewer.
3. The students will begin asking about your history with substance use and the events that brought you here. You are hesitant at first, but you are cooperative.
    a. If students utilize effective communication techniques (e.g. active listening, asking open-ended questions) provide background information and information regarding your substance use.
    b. If the students utilize screening or assessment tools, provide appropriate written or verbal responses.
4. As the interview progresses and the students utilize therapeutic communication, your anxiety lessens and you continue to answer questions.
5. You verbalize frustration towards your addiction. You explain that your addiction has exhausted all of your energy and resources, and you spend almost all of your time thinking about, obtaining, and using substances.
6. You understand that you need help, but you feel that your life is, “falling apart” and you, “don’t know what to do.” You state that sometimes you, “feel like giving up,” but there is part of you that is hopeful that you can turn your life around.
7. You continue to answer questions until the students terminate the interview or the simulation is complete.

Appendix D

Simulation Debriefing Questions:

- How would you describe your experience?
- What did the team do well?
- What could be done differently?
- What did you learn?
- What was the value in learning with other professionals?
- What were the benefits and challenges of this learning experience?
- What did you learn that that you can apply to your own practice?
- What learning will you take as a team member in the future?
- How will this experience influence your role as a professional and team member?