**Research Article**

**Student Perspectives on COVID-19 Related Virtual Simulation Interprofessional Education (IPE): A Pilot Exploration**

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**Abstract**

**Background:** Given the confines of a global pandemic, social distancing had been required while the educational augmentation of students learning experiences required innovation and creative critical thinking utilizing Simulated Interprofessional Education (Sim-IPE).

**Methods:** This pilot explored pre-licensure and graduate nursing student perceptions on IPE COVID-19 inspired case scenarios using in-patient, community-based and public health cases.

**Results:** Overwhelming positive feedback demonstrated Sim-IPE effectiveness with the foremost themes being confidence in team work, learning about other disciplines and their roles and appreciation of learning from and about the various healthcare disciplines.

**Conclusion:** Sim-IPE is a pragmatic creative pedagogy instilling aspects of communicative principles while promoting professional behaviors coalescing into improved and enhanced patient care and outcomes.

Implications: Educators need to consider the use of Sim-IPE as a pedagogical strategy to ensure students continued success as a medical professional.

**Keywords:** COVID-19 case scenarios; Education; Nursing; Pilot Study; Professional Behavior; Sim-IPE

**Introduction**

The continued evolution of simulation pedagogy is Interprofessional Education (Sim-IPE), when two or more health care professionals engage in a shared experience, exploring, discussing and attaining collective objectives and outcomes while “Learning about, from and with each other to enable effective collaboration and improve health outcomes” [1,2]. Enhancing and improving the knowledge, skills, attitudes and behaviors of health care teamwork fosters safe, quality patient care leading to improved patient outcomes [3]. Respectful and informative communication between and amongst healthcare professionals from various disciplines sets the stage for collective dialogue to identify and effectively manage patient care further exemplifies solution-driven patient health outcomes. Utilizing this experiential opportunity during COVID-19 has led to a deeper understanding and appreciation of the importance of a collaborative healthcare team approach. Given the confines of a global pandemic, social distancing has been required while the educational augmentation of students learning experiences has required innovation and creative critical thinking. Virtual IPE-Sim has provided a safe environment to foster collaborative discourse while instilling a sense of professional behavior and collegiality.

**Introduction**

Within the last few decades, IPE and Sim-IPE has been introduced into health and human service disciplines to promote cooperative team work and professional dialogue. Sim-IPE has been shown to positively raise interprofessional role awareness and improve patient care planning [4] and promote professional identity while enhancing attitudes towards interprofessional learning [5]. Sim-IPE is a pragmatic creative pedagogy instilling aspects of communicative principles while promoting professional behaviors coalescing into improved and enhanced patient care and outcomes. The overall principle of Sim-IPE is to promote the professional transition of health care providers to function effectively and efficiently as teammates, working jointly for the betterment of others, while developing and improving ones’ own professionalism and collegiality.

In response to COVID-19, Health & Human Services of the City University of New York (HHS/CUNY) implemented virtual simulated IPE COVID-19 inspired scenarios using in-patient, community-based and public health cases [6]. These Sim-IPE learning experiences addressed skills training in the virtual world, preparing students for the evolving practice of healthcare in response to the impact of COVID-19 [6]. The City University of New York (CUNY) has diverse health professions education programs, including but not limited to nursing, physical therapy, occupational therapy, recreational therapy, nutrition, dental hygiene, social work, speech and language therapy and medical school. With its joint operation with New York University (NYU) of the New York Simulation Center (NYSIM), telesimulation has provided accessibility fostering an inclusive teaching pedagogy [6].

**Virtual Sim-IPE Day**

In Spring 2021, four pre-licensure undergraduate and four Community/Public Health Nursing graduate students at CUNY Hunter School of Nursing School of Nursing (SON) volunteered to participate in 24 Sim-IPE sessions. All materials were designed in advance by a multidisciplinary group of 25 faculty members representing 10 disciplines across 14 campuses [6]. Participants received all materials in advance, which included the Student Instructions handout, providing essential information for a successful experience (such as Sim-IPE session roles, discipline roles for interprofessional discussion and SIM-IPE core competencies). Patient summaries of each case scenario, COVID-19 case related resources, patient care resources and Zoom links were provided. Evaluation/self-assessment tools were based on participant role with links provided for completion (active participant or student observer (non-active role), and a designated student serving in the role of evaluation observer to assess team performance and demonstration of the four IPE competencies: 1) values and ethics; 2) roles and responsibilities for collaborative practiced; 3) interprofessional communication; and 4) teamwork and team-based care.

For continuity, faculty-trained IPE facilitator(s) provided guidance and structure via scripted material, beginning with introductions, session orientation and prebriefing which concluded with a 5-minute patient and husband video (15-minutes). Then the 30-minute simulation case discussion began, with faculty host (muted/camera off) observing the simulated interprofessional meeting and functioning as a ‘coach-on-the-side’ permitting students to work through the problems and manage group dynamics. The 35-minute debriefing was facilitated by the faculty host, focusing on experience reflections and the interprofessional collaboration behaviors and concepts while addressing the IP competencies [6]. Post-survey links were provided after debriefing. Pre and post huddles for faculty observers, CUNY and NYSIM staff provided additional direction and connection for faculty involved.

**CUNY Hunter SON Nursing Students Reflections of their Virtual Sim-IPE**

As the Sim-IPE Coordinator for CUNY Hunter SON, I was responsible for providing students with all materials and assisting with any issues that may arise. At the completion of each session, I sent a Certificate of Completion and asked each student to ‘share their thoughts and feedback on their experience’. Institutional Review Board permission was received with exemption as analysis of participants written word did not occur. As data is from a singular facility with a small sample size, generalization is considered a limitation.

The overwhelming feedback was extremely positive, with the foremost reflective concepts being confidence in team work and learning about other disciplines and their roles.

The pre-licensure nursing students shared: “…made me realize that…different professions involved in caring for the patients may be unaware of exactly what the other profession does”. One participant stated “rarely see the other profession face to face…just read…notes to see what care was…that more communication with each other would be important in providing the best patient care. Really important to learn more about their roles. Overall, I am glad to have had the opportunity to have been a part of this experience.”

Another participant stated “I was able to follow along with what the participants were discussing and learned a few things as well.” And “I think observing before participating allowed me to plan myself out better…really add to the team. It was really great to interact with these different disciplines…hear their perspectives and individual expertise. And…certainly…a confidence booster for me to know that I did well in planning care with the team 😁. Thank you for encouraging me to consider being a participant!”

The graduate students’ feedback was more in-depth in their appreciation of learning from and about the various healthcare disciplines involved: “An interesting and new learning experience. One of the things I really liked…was seeing and learning from students in other fields (i.e., speech language pathology). We are used to working with others in the nursing profession…we don’t really communicate with other professions or have a sit-down chat. Not only were the students able to learn from each other…they were also able to point out some aspects of the patient’s chart that some students may not have noticed.”

“I have genuinely enjoyed the inpatient and discharge simulations. It has offered a more concrete view of what planning care for a client looks like, outside of the nursing care we provide day-to-day and the orders that we are meant to implement. I…really enjoyed this opportunity to experience interprofessional care outside of what the textbook says or what we learn in lecture or even the brief glances we may get in clinical. There are so many disciplines involved and I think…IPE-SIM does a great job of showcasing that!”

A student shared: “Listening to different perspectives from different fields, getting to listen to the different scenarios and the thought of the experienced facilitator is beneficial to my practice. Working in the nursing field and being involved with an interdisciplinary team helps…it opens your train of thought to other insights that may not usually be mentioned in meetings. It is great to be given the opportunity to learn and grasp new ideas that I can bring into my own practice and future endeavors.”

Another student shared “…gives more insight from the outside perspective on how the team collaborates and the different views to manage clients discharge planning. The sessions have been enjoyable to be a part of.” A different student stated “Overall, it was a great learning experience. It was nice to speak with different disciplines and learn from their perspectives. I was also very impressed with the innovation and creativity that many of the participants had when suggesting ideas for discharge planning. If you're looking for any suggestions on how to make the scenarios even more interesting, I would ask that cultural competency and ethical issues be incorporated into the scenarios for the future.”

“I truly think this was such a great experience! It was very educational and very streamlined. It felt great to sit and share thoughts and ideas. I learned so much! Not only about myself and our patient, but about the other specialties involved in a multidisciplinary team. Truly had a positive experience and would recommend it to others.” Finally, one student simply stated “I now feel more confident in participating in real life team meetings.”

**Discussion**

Integrating Sim-IPE as part of the pedagogical educational foundation, the fundamental principles of communication and teamwork assist in a students’ evolution from novice to an effective interprofessional team member. Cultivating a collaborative team approach exemplifies the goal of patient-centered healthcare whereby the interprofessional team works cohesively. This process lends itself to enhanced patient care in the clinical setting. Teamwork skills were found to be enhanced with Sim-IPE experiences [3,4,7] and confidence in team work were also expressed by the participants in this pilot. Learning about other disciplines and their roles, as identified by this study’s participants, encourages interprofessional identity [5] and collaborative respect. The overall intent of Sim-IPE is collaborative practice, learning from and with each other for the betterment of patient outcomes. “The core competencies for interprofessional collaborative practice have been identified under the singular domain of interprofessional collaboration, encompassing the topics of values and ethics, roles, and responsibilities, interprofessional communication, and teams and teamwork” [8].

**Implications for Practice**

The aim of this Sim-IPE inquiry was to explore students’ perspective on their experience. As educators gain more confidence integrating Sim-IPE as a collaborative approach to healthcare education, students will be able to gain an invaluable experience that fosters their professional growth and development. Establishing the dynamics of confidence and respect amongst healthcare members can lead to improved clinical care and patient outcomes.

**Conclusion**

The overarching outcome for participants was to gain experience as interprofessional healthcare team members, enhancing their readiness to successfully engage in professional practice through collaborative training [6]. Continued educational progression and advancement of interprofessional thinking and professional behavior, acquirement of shared knowledge and promotion of reciprocated understanding and respect of healthcare roles amalgamates into improved patient care and outcomes [9]. Sim-IPE builds on the foundational aspects of teamwork and communicative principles, assisting health care professionals to evolve into effective interprofessional team members. Future research exploring interprofessional simulation education and patient outcomes should be considered.

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