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Participation in an Interprofessional Simulation Event:

Impact on Student Learning

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### **Abstract**

Interprofessional education (IPE) is growing tremendously within numerous health care programs and continues to impact both healthcare professionals and patients. The significance of having IPE simulation events is to provide students with the ability to gain knowledge, awareness, and understanding of other disciplines. Focus groups following an IPE simulation event will allow for a better understanding of how these events potentially impact student learning, future learning outcomes, and knowledge of other professions. The purpose of this study was to determine the impact of participation in an IPE simulation event on students' perceptions. To examine this impact, a student focus group and a faculty focus group were conducted to examine the impact this event has on perceptions of learning, influences on teaching, and potential future experiences. At the conclusion of the student focus group, students demonstrated shared and gained knowledge, respect for other disciplines, the desire to advocate for multidisciplinary rounds, and collaborated while problem-solving. The faculty focus group reported observing students better understanding their roles, awareness and appreciation of other disciplines, and the importance of interprofessional collaboration. Altogether, these common themes found within both focus groups provide evidence that an IPE simulation event enhances successful improvement in student perceptions of IPE, future learning outcomes, and knowledge of other professions.

## **Participation in an Interprofessional Simulation Event: Impact on Student Learning**

### **Introduction**

Interprofessional education (IPE) is defined as an experience that “occurs when students from two or more professions learn about, from, and with each other” (WHO, 2010). Previous research has shown the impacts interprofessional teamwork have on students’ attitudes, knowledge, and communication skills (Wong et al., 2016). This interprofessional simulation event consists of a variety of disciplines reading a case study, discussing their roles and possible solutions in the scenario, and using jargon alerts when a term needs to be explained. The attendees include students from healthcare professions including speech-language pathology, occupational therapy, physical therapy, nursing, respiratory therapy, health information management, health administration, dietetics, and social work.

The purpose of this research study is to determine the impact that an interprofessional simulation event has on perceptions of learning, influences on professions, and potential future experiences. Virtual focus groups were conducted following a virtual interprofessional simulation event for both students and faculty members. Following the two focus groups, common themes were examined based on the research question data. Focus groups were ideal for attendees to discuss learning outcomes while analyzing for common themes, ideas, and findings. The research questions are (1) “What is the impact of an interprofessional simulation event on student perceptions of student learning outcomes?” and (2) “What is the impact of an interprofessional simulation event on faculty perceptions of student learning outcomes?”

### **Literature Review**

Previous research has shown the impacts interprofessional teamwork and collaboration have on a person. Both interprofessional practice, in addition to IPE, has been able to promote broad levels of expertise. One study examined various academic staff members’ perceptions towards IPE in which they found common themes of faculty barriers, industry challenges, and future opportunities (Bennett et al., 2011). Specifically, faculty recommended educating interprofessional teamwork within nursing departments. They believe it can play a key role due to nursing being a dominant health professional group, continuously working hands-on with other professionals to deliver patient-centered care. Another research study found that an IPE course can affect team perceptions of students in which the researchers believe IPE courses are an appropriate approach for institutions with many health professions programs, large number of students, and long-distance learners (Potthoff, Doll, Maio, & Packard, 2019).

A 6-year cohort study was issued to determine the impact of team composition on student perceptions in regard to interprofessional teamwork. The study concluded that a large forum with many health professional students participating and discussing together moderately affected students while increasing their knowledge of a variety of scope of practices (Lairamore et al., 2018). On the other hand, a small forum of professions with targeted cases effectively influenced student perceptions more for the need for interprofessional teamwork. A recommendation for

future events acknowledged faculty to focus on strategizing groups of health professional students to reflect the realistic scenarios of healthcare teams (Lairamore et al., 2018). In addition, a research study agreed with case-based IPE scenario simulations impacting and enhancing shared learning with registered nursing and occupational therapy students (Spencer, Taff, & Chen, 2019). Evidence demonstrated that students can fully participate and undergo shared learning with hopes to prepare for potential future experiences in their desired field.

As IPE has been slowly increasing throughout various universities, the Accreditation Council for Occupational Therapy Education (ACOTE) has added standards regarding IPE and made an effort to require educators within occupational therapy programs to teach interprofessional situations. A research article described the instructional insights of ACOTE's efforts to increase student awareness and participation in IPE learning with hopes that other programs implement these standards as well (Schreiber & Goreczny, 2013). Likewise, a curricular resource explains many health care students possessing limited knowledge of IPE collaborative practice and limited exposure to geriatric populations. Thus, a university IPE program of diverse students and senior volunteer mentors work in teams in a blended learning environment, while researchers study the impacts of IPE. Results found that the majority of students agreed to changes in attitude toward the geriatric population, increased IPE knowledge, and stronger teamwork skills (Jacomino et al., 2015).

In regard to improving attitudes toward teamwork and communication, a simulation-enhanced IPE strategy was developed with an attempt to make an "attitude adjustment" within its participants (Wong et al., 2016). Previous research found that there is a correlation of a health professional's attitudes toward teamwork directly linked to the quality of patient care. After the study was conducted on emergency department nurses and resident physicians, they discovered that a simulation-enhanced IPE curriculum aids in helping participant attitudes and cultures of patient safety (Wong et al., 2016). Likewise, another study emphasized the change of student attitudes based on interprofessional collaboration in which researchers concluded that more than half of the participants' attitudes improved when working in health care teams (Wilcox et al., 2017).

Many students perform differently in terms of their engagement in the classroom and their overall academic performance and achievements. A study's results suggested that most measures of student engagement positively correlated with desirable learning outcomes such as increased critical thinking and grades (Carini, Kuh, & Klein, 2006). A case study found that internal and external factors (time constraints, assignments, insufficient professional identity formation) of an IPE program's structure affects students' thoughts of IPE and their ability to engage in interdisciplinary teamwork (Michalec et al., 2017). This case study strongly advocates for future research to determine and acknowledge effective communication and collective decision-making approaches which will better prepare high-functioning health teams to properly and effectively solve patient care issues.

Typically, health care providers effectively work in a team of highly skilled health professionals in a collaborative manner. However, there are few interprofessional training

strategies in place to teach health professionals and students about the importance of IPE. Many research studies believe that case-based IPE scenarios that incorporate clinical evidence on professional roles could enhance knowledge and understanding of other professions. A gap in literature includes differentiating between what is expected in practice and what is taught in universities (Cox et al., 2016). As of today, challenges arise for higher education institutions regarding how to successfully portray interprofessional education opportunities for their students.

## **Methods**

### **Participants**

Participants were recruited through email, asking to voluntarily partake in a virtual focus group after attending a virtual IPE case study simulation event. The determined subjects were faculty members and students who attended this event in order to discover their impacts on perceptions of learning. The faculty focus group consisted of five faculty members in the field of allied health sciences, health information management, health administration, speech-language pathology, physical therapy, and clinical dietetics; these faculty members are educators at Grand Valley State University. The student focus group consisted of five graduate students in the field of physical therapy, occupational therapy, or speech-language pathology; these students are graduate students that attend Grand Valley State University. This variety of health care fields were necessary in order to diversify the professional code of ethics and roles in the situation.

### **Procedure**

For the student focus group, graduate students who participated in the IPE case study simulation event were asked to voluntarily participate in a focus group. A recruitment email was sent to students by the GVSU Office of Institutional Analysis. Students met in a focus group for 20 minutes after the afternoon session of the event. They heard the purpose of the study, meeting norms, introduced themselves with an icebreaker (3 minutes), answered questions (15 minutes), and were debriefed at the end (2 minutes).

The questions asked during the student focus group are listed below:

- 1) Given your experience in this interprofessional simulation event, how is your knowledge of other health care professions impacted?
- 2) How will you apply this knowledge in your future professional settings?
- 3) What examples can you give of applying knowledge of scope of practice of other health care professions to your future work?
- 4) What do you value most from this interprofessional collaboration?

For the faculty focus group, faculty members who facilitated the IPE case study simulation event were asked to voluntarily participate in a focus group. Faculty met in a focus group for 30 minutes after the event. They heard the purpose of the study, meeting norms, and introduced themselves with an icebreaker (3 minutes), answered questions (25 minutes), and were debriefed at the end (2 minutes).

The questions asked during the faculty focus group are listed below:

- 1) What do you perceive as the impact of the interprofessional simulation event on student learning outcomes?
- 2) How do you perceive students applying this knowledge in their future professional settings?
- 3) Can you give an example of your observations on student learning that indicated growth for the student?
- 4) Given this event, do you have ideas for expanding student learning experiences within an interprofessional simulation event?

Consent forms were given to participants in which they consented to being asked questions about their experience during the simulation and approval to being audio recorded. A recording of the voices of participants in the subject groups was used for data transcription purposes. The research question data was analyzed in order to find essential information, identify common themes, and summarize individual perspectives. Data were analyzed utilizing multi-step coding processes to identify patterns of students' perceptions and attitudes, and important recommendations and findings. Based on a qualitative analysis of the transcribed data, eight primary themes emerged between the student and faculty focus groups.

### **Results**

Qualitative data displayed four themes among the student focus group and four themes among the faculty focus group. The goal of these focus groups was to evaluate shared understanding among participants and analyze for common values acquired from the IPE simulation event. Theme topics ranged from knowledge and understanding to awareness, appreciation, and respect. The themes of each focus group are listed and briefly described below:

#### **Student Focus Group**

Theme #1: Shared and Gained Knowledge: Graduate students reported gaining more knowledge of other professions and the importance of understanding each other's disciplines. During the simulation event, they learned that many disciplines overlap. For instance, speech-language pathologists and dietitians have to collaborate together to ensure that the patient meets nutritional needs while maintaining safe swallows. Others shared knowledge on how they communicate with patients that may have difficulty with verbal communication based on their scope of practice and professional ethics. This led them to quickly realize the importance of sharing knowledge while working together to develop one communication system in order to get mutual information to the patient. Overall, students agreed how much knowledge others have in areas they lack in and how an interprofessional team brings together the ability to share and gain knowledge to ultimately enhance their patient's quality of life.

Theme #2: Respect for Other Disciplines: Based on student focus group responses, it appeared that students gained respect for other professions. Before the simulation event, many students were unaware of other disciplines' roles and responsibilities. For example, a student was surprised when they realized radiologists and technicians are also advocates for patients undergoing abuse

reporting. After the simulation event, they gained more respect for other disciplines and their roles in patient care in which they have more knowledge of who to refer to during various situations. This respect for other disciplines allows for more efficient and effective teamwork and interprofessional communication.

Theme #3: Advocate for Multidisciplinary Rounds: While applying their knowledge in addition to the scope of practice of other health care professionals, students reported being elevated by working with other disciplines in order to help patients in a more holistic way. This led to a desire to advocate for multidisciplinary rounds in their future career. Students believe a multidisciplinary team conveys value during patient-centered care as it assures that no aspects of care are being misunderstood by the team as a whole. As the students encountered the large amount of medical jargon, it was helpful for them to communicate with others to gain a better understanding of their patient's medical records, diagnosis, and treatment. Ultimately, multidisciplinary rounds will give them the opportunity to hear recommendations, contributions, and individual expertise while developing patient plans.

Theme #4: Collaboratively Problem-Solving: When students were asked what they valued most from interprofessional collaboration, they strongly expressed having the ability to problem-solve as a collaborative team. Given the simulated situation, students realized it is a practical and realistic scenario that they may undergo in their future health professions. Respondents were pleased to hear about other aspects of health they are not aware of while working together to find a solution to potential problems. Attendees also emphasized that the simulation event gave them numerous opportunities to work in an environment where they can collaborate with other professionals, practice patient-centered language, and develop treatment plans as a team. Collaboratively problem-solving allowed them to aim towards successfully giving the best care to patients.

### **Faculty Focus Group**

Theme #1: Better Understanding of their Role: Faculty members received feedback from students having a better understanding of their roles and responsibilities after this simulation event. Many disciplines went into this case study panicked because they believed they had no part. For instance, a faculty member explained that the biggest impact for health information management (HIM) students was understanding they are important to the team. Even though they are not clinical, and they are behind the scenes, it does not mean they are not part of the care team. Another faculty member saw many students realize how important social workers are to the team as well. Overall, faculty noted that students began to feel more comfortable while participating, looking for where they fit in the case study, and adding value.

Theme #2: Awareness of Other Health Professions: After debriefing the simulation event, several faculty attendees expressed how students gained awareness of other professions, their roles and responsibilities, and how to cotreat in future clinical settings. One faculty member reported that most health care students said they did not know speech-language pathologists (SLP) work with swallowing. In the same way, SLP students were unaware that they collaborate with physical therapists to work with posture and occupational therapists for what devices to use when feeding.



Another faculty member observed students responding directly to other students about their role, asking questions, and commenting about what they learned. For some students, asking others to define terminology is growth. These examples of awareness of other professions allowed students to feel more confident in referring patients to other disciplines and applying knowledge they have learned in their future health professions. Likewise, this created a comfort level for students for when they go into a clinical environment, networking, and going to other disciplines for input and assistance when necessary.

Theme #3: Appreciation for Each Discipline: Faculty members reported students having a better appreciation of each profession's roles, the importance of each discipline, and how to integrate with others in a team environment. In addition, faculty emphasized students benefiting from better appreciating each individual that they may need to rely on and what they bring to the table in terms of the situation. This appreciation allows for a more meaningful understanding of interprofessional collaboration and the impact it brings to the environment and patient care. Faculty reported that it was not only important for students to learn the roles and responsibilities of each profession, but also have patience and empathy towards other professionals in order to let them learn. Students emphasized appreciation of the process they underwent and the significance each discipline plays in patient care.

Theme #4: Importance of Collaborative Teamwork: Overall, faculty members observed students gaining a better understanding of interprofessional collaboration. Students ultimately recognized that they do not work alone within their profession as they need to work as a team to process information of social determinants and apply comprehensive treatment plans together. A faculty member explained that the impact of the event will be recognized later on for some students as IPE experiences are cumulative over time. This simulation event leads students to interactively participate while recognizing the importance of other health care professionals during the process. Faculty reported that this was an awareness event and for many students, it resulted in new learning of other disciplines, the importance of collaborative teamwork, and the impacts of IPE on their patient's quality of life.

Recommendations/Suggestions: At the end of the faculty focus group, attendees were asked if they had any ideas or suggestions for expanding student learning experiences within an IPE simulation event. Attendees offered suggestions on more hands-on experiences and hyperactive work for future simulation events. However, others expressed the increasing use of telehealth in which additional virtual simulation events will give students more practice for potential future experiences with online health care. Another faculty member believes it would be helpful to close the loop within individual disciplines. Overall, faculty members reported that IPE simulation events are successful in having students gain meaningful perspectives, knowledge, and appreciation for interprofessional collaboration as a whole.

### **Discussion**

The purpose of this research study was to determine the impact that an interprofessional simulation event has on perceptions of learning, influences on professions, and potential future

experiences. The objective of IPE regarding health care is to enhance collaborative, evidence-based care. Many students felt safer undergoing this simulation event before actually experiencing and treating future patients in a real-life scenario. For many students, this simulation event has led them to want to participate in interprofessional care conferences in the future. Faculty members observed that students gained a better understanding of their roles and the roles of others in addition to appreciating other disciplines and interprofessional collaboration as a whole.

Furthermore, faculty have provided numerous ideas for expanding learning experiences within future interprofessional simulation events. This includes recommendations for more hands-on and hyperactive experiences, closing the loop within individual disciplines, and more practice for future telehealth situations. Interprofessional education is growing within numerous health care programs and continues to impact both healthcare professionals and patients. It is important to conduct an interprofessional simulation to show how it can impact their way of treating a patient and focus groups to discuss the impact it may have in future learning outcomes and knowledge of other healthcare professions.

### **Conclusion**

These focus groups highlight the importance of interprofessional education on both students and faculty. Having an understanding of this area will assist faculty in educating their students and assist students as they communicate with other disciplines and patients in their future health profession. In addition, acknowledging others' scope of practice and duties with a different perspective will significantly benefit the involvement of interprofessional collaboration in future experiences. Based on this IPE simulation event, students demonstrated shared and gained knowledge, respect for other disciplines, the desire to advocate for multidisciplinary rounds, and collaborated while problem-solving. As for faculty members, they reported observing students better understanding their roles, awareness and appreciation of other disciplines, and the importance of interprofessional collaboration. Overall, interprofessional education has allowed for students to learn from one another and work together as a team while providing the best care to their patients.

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