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Strategies to Facilitate Professional Student Collaboration Focused on an Interprofessional Understanding

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Abstract

Purpose: Newer studies have suggested that interprofessional education (IPE) initiatives led by students can be successful in engaging their peers in IPE. Despite this, few studies exist that examine the student response to student-led IPE activities. The objective of this paper is to describe a student-led IPE program where health professional students learn from each other or from practicing health professionals through a seminar series. **Method:** Three seminars were arranged with presenters representing dentistry, dietetics, and occupational therapy. Student attendees completed a pre- and post-survey to analyze their interest, knowledge, and likelihood to collaborate with the profession featured in each seminar. **Results:** The average agreement levels were increased for interest, knowledge, and likelihood to collaborate from the pre- to post-seminar for all three health professions represented in the seminar series. **Conclusions:** Student-led initiatives may be helpful for engaging peers in IPE, while also suggesting that peer teaching within IPE may provide additional benefit. When students learn from one another and develop an understanding as to how they can work together as future practitioners has the potential to lead to improved interprofessional collaboration, and ultimately, better patient and population health outcomes.

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ABSTRACT

Purpose: Newer studies have suggested that interprofessional education (IPE) initiatives led by students can be successful in engaging their peers in IPE. Despite this, few studies exist that examine the student response to student-led IPE activities. The objective of this paper is to describe a student-led IPE program where health professional students learn from each other or from practicing health professionals through a seminar series. **Method:** Three seminars were arranged with presenters representing dentistry, dietetics, and occupational therapy. Student attendees completed a pre- and post-survey to analyze their interest, knowledge, and likelihood to collaborate with the profession featured in each seminar. **Results:** The average agreement levels were increased for interest, knowledge, and likelihood to collaborate from the pre- to post-seminar for all three health professions represented in the seminar series. **Conclusions:** Student-led initiatives may be helpful for engaging peers in IPE, while also suggesting that peer teaching within IPE may provide additional benefit. When students learn from one another and develop an understanding as to how they can work together as future practitioners has the potential to lead to improved interprofessional collaboration, and ultimately, better patient and population health outcomes.

Keywords: curriculum design, interprofessional education, peer education, student-led learning

INTRODUCTION

Research indicates that interprofessional education (IPE) improves patient-centered care and outcomes.¹⁻³ Newer research has identified that student leadership in IPE leads to improved participation and is at the center of enabling a culture change in which interprofessional collaboration is a norm amongst the newest trainees.⁴⁻⁶ Student involvement in leading IPE initiatives has been important in reinforcing communication skills across health professionals and strategies to overcome challenges in interprofessional practice.⁷

When early health professional students learn about IPE hypothetically rather than with practice applications, there can be a disconnect in the learning for these students. A previous study showed an increase in interest, motivation, and understanding when students from distinct health professional schools were taught by practicing health professionals.^{8,9} Furthermore, studies have shown that peer teaching has a positive impact on learning given the dynamic of students with their peers compared to students with a faculty member.^{7,9} However, very few studies have analyzed this directly within IPE. Some studies have concluded that peer teaching within medicine and nursing had positive effects for both the learner and the teacher, but these studies have been uni-professional and did not examine this within an interprofessional context.¹⁰⁻¹² Therefore, there was a demonstrated need for more research in the effectiveness of IPE peer teaching.

The purpose of this pilot study was to understand how a peer-to-peer IPE experience designed by health professional students has the potential to improve engagement in interprofessional collaboration, as well as the potential benefits of peer teaching amongst different professions. The objective of this paper is to describe a student-developed peer to peer IPE curriculum where health professional students learn from each other, about each other, and with each other from practicing health professionals through a seminar series. We evaluated participant attitudes and knowledge regarding IPE as well as likelihood to participate in further IPE opportunities following engagement in the seminars.

METHODS

Student Advisory Committee Overview

The University of Michigan Center for Interprofessional Education (“the Center”) was formed in 2015 to ensure health professional students gain the necessary knowledge and skills to become effective members of collaborative healthcare teams. In the first years of the Center’s existence, student involvement was minimal and facilitated by ad hoc student-faculty relationships. In Winter 2018, the Assistant Director of the Center convened a retreat for student-leaders from extracurricular IPE organizations. A key outcome of this retreat was the strategic involvement of students in the Center’s activities. Specifically, two student leaders were tasked to build future efforts of student-involvement as co-chairs of an IPE Student Advisory Committee (SAC). The committee now exists as a student-run committee that serves as a collaborative community for all the health professional schools and as an officially-recognized IPE organization at the University of Michigan – Ann Arbor.

The SAC reports to and is overseen by the Center’s Executive Committee. In addition to leading SAC, the co-chairs serve as members of the Executive Committee and as pivotal members of each of the Center’s workgroups. SAC continues to grow and with three co-chairs, five IPE organizations (Sling Health, Blueprints for Pangaea, Health Policy Student Association, Interprofessional Health Student Organization, University of Michigan Student Run Free Clinic), and nine participating health professional schools (dentistry, kinesiology, medicine, nursing, occupational therapy, pharmacy, physical therapy, public health, and social work) with at least one representative from each school serving on SAC (Figure 1).

Why a Seminar Series

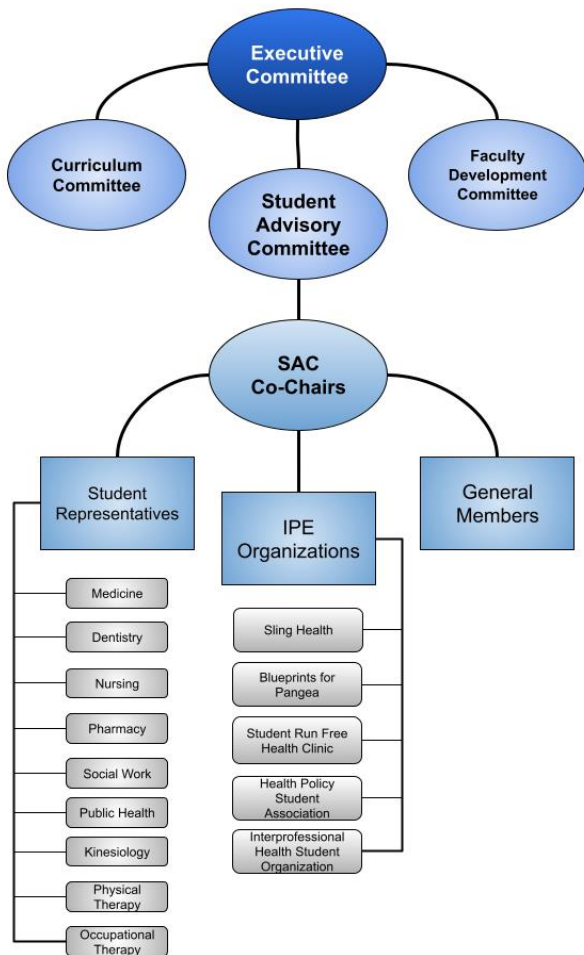
To engage health profession students in IPE, the student leaders of SAC developed a lecture series featuring students and practicing professionals from various health professions. The overall objective of this lecture series was for students to be able to recognize the various ways that interprofessional collaboration is implemented throughout healthcare by hearing about authentic experiences from those who have worked in the field and to empower the students to continue to engage in IPE. Each invited speaker gave students insight into an unfamiliar profession with the goal that by better understanding this area of healthcare, they can envision where collaboration may be useful in the future. The invited speakers engaged the students in a seminar highlighting the collaborations across health professionals that they encounter while in practice.

Before the Seminar Series

Before the seminar series the following professions were selected by SAC representatives based on student interest: dentistry, nutrition, and occupational therapy. The student leaders of SAC reached out to experienced students and health professionals in these professions who had demonstrated an interest in teaching and collaboration. Once connected, the SAC student leaders worked with the invited speaker to review the goals of their presentation.

Attendees included student members of SAC. Given the small sample size and in order to respect their anonymity, no descriptive statistics were identified. As part of their membership in the organization, they were encouraged to attend the seminars and informed of them via regularly scheduled communications. Some students attended all three seminars, while others only attended one or two of the seminars.

Figure 1. Committee Organization



During the Seminar Series

The seminars were hosted virtually via Zoom and were one hour in length. To start each session, student attendees completed a survey via Google Forms (Figure 2). The survey items were meant to gauge their interest and attitudes towards the subject of the presentation in relation to their profession. The close-ended questions on the survey were based on a 5-point Likert scale and asked several questions regarding their interest in the overall profession (1 = no interest, 5 = very interested), knowledge about the profession (1 = none, 5 = I know everything), and likelihood to collaborate with a certain field (1 = not likely at all, 5 = very likely).

Figure 2. Pre-Survey Questions

1. What is your profession?
2. What was your interest in the topic BEFORE the meeting?
3. What is your previous knowledge of the profession?
4. How likely are you to collaborate with this profession?
5. What other health profession would you like to learn about?

The first seminar was led by 3rd year dental students who actively see patients, from both University of Michigan – Ann Arbor and University of Michigan’s program, during which they presented on the connections between oral health and systemic health, including diabetes, pregnancy, eating disorders, and sleep apnea. They elaborated on specific considerations about how other healthcare professionals can work with dental professions to improve care. Health professional student attendees discussed specific cases in breakout rooms, such as managing a 76-year-old, elderly patient with atherosclerosis and without teeth through an interprofessional team approach. The speakers provided a short interactive quiz for student attendees to complete with the purpose of reviewing their new knowledge following the cases.

The second seminar featured a registered dietitian (RD) from the School of Public Health who serves as their Dietetic Internship Clinical Coordinator, and previously worked as an RD in a VA hospital setting. There was not a student available in this field to lead this seminar, but the other students had expressed a strong desire to learn more about nutrition. This RD was recommended as someone who worked closely with students and could provide a seminar appropriate for students. The RD discussed the educational requirements, licensure, and different career pathways, such as different subspecialties within dietetics and sectors (i.e., clinical, community, food service management). She discussed current nutrition recommendations and the overall nutrition care process, as well as specific conditions that a dietitian could treat within a hospital and the professions RDs collaborate with while working with patients on these specific conditions.

The third seminar was led by a first-year doctorate occupational therapy (OT) student from one of the XXX satellite campuses. Her seminar included information on the educational requirements, licensure, and different career pathways within OT. She discussed what occupational therapy is, what an “occupation” means to her profession, different healthcare settings that OTs can work in, and which types of patients OTs could effectively treat. She discussed the different types of interventions in OT: Create/Promote, Establish/Restore, Maintain, Modify, Prevent. She specifically had a section discussing examples of her own prior patient cases to highlight these interventions. She provided examples of when an OT can collaborate with other health professionals: feeding therapy with speech language pathologists, transfers and functional mobility with physical therapists, bed mobility, vitals communication, toileting with nursing, vision interventions and subsequent referral to ophthalmology, talking with physicians about precautions, such as spinal precautions, weight-bearing precautions, food precautions, etc., and discharge planning with social work.

After the Seminar Series

Immediately after each seminar, the student attendees completed a survey via Google Forms (Figure 2) that gathered similar information to the pre-survey after gaining insight from each health profession.

Figure 2. Post-Survey Questions

1. What is your profession?
2. What was your interest in the topic AFTER the meeting?
3. How much do you feel this meeting helped your understanding of this profession?
4. How likely are you to collaborate with this profession?
5. What other health Profession would you like to learn about?

Data Analysis

The pre- and post-survey results were gathered and analyzed from the same students. Each category had one question. Descriptive statistics including the averages for the Likert-scale questions as well as the differences pre- to post-seminar were calculated.

Ethics

This study was considered exempt by the IRB (HUM00215717).

RESULTS

Oral Health Seminar

The survey respondents included health professional students from nursing, pharmacy, medicine, public health, dentistry, occupational therapy, and social work. In the pre-survey, all the respondents (N = 18, 100%) reported their interest and likelihood to collaborate as at least 3 or higher (on a 5-point scale) (Table 1). After the session, there was an increase in the average score for all three categories of interest, knowledge of the topic, and likelihood to collaborate (Table 1). Specifically, all respondents reported their interest in dentistry as 4 or higher.

Table 1. Pre- and post-survey responses for the dentistry seminar (N = 18)

Survey Item	Pre-average	Post-average	Difference
Interest	4.28	4.63	+0.38
Knowledge	2.89	4.13	+1.24
Likelihood to Collaborate	4.34	4.50	+0.16

Note: Survey items were rated on a 5-pt Likert-type scale.

Nutrition Seminar

The survey respondents (N = 8, response rate 100%) included health professional students from public health, occupational therapy, medicine, and dentistry. Overall, the average increased for interest, knowledge, and likelihood to collaborate from pre- to post-seminar (Table 2). Specifically, the greatest increase came in the knowledge category.

Table 2. Pre- and post-survey responses for the nutrition seminar (N = 8)

Survey Item	Pre-average	Post-average	Difference
Interest	3.25	4.38	+1.13
Knowledge	2.38	4.38	+2.0
Likelihood to Collaborate	3.75	4.38	+0.63

Note: Survey items were rated on a 5-pt Likert-type scale

Occupational Therapy Seminar

The survey respondents (N = 8, response rate 100%) included health professional students from pharmacy, medicine, kinesiology, public health, dentistry, and medicine. Overall, the average increased for interest, knowledge, and likelihood to collaborate from the pre- to post-seminar (Table 3). At the end of the session, all students rated their interest and knowledge as 4 or higher.

Table 3. Pre- and post-survey responses for the OT seminar (N = 8)

Survey Item	Pre-average	Post-average	Difference
Interest	3.70	4.50	+0.80
Knowledge	2.80	4.38	+1.58
Likelihood to Collaborate	3.90	4.63	+0.73

Note: Survey items were rated on a 5-pt Likert-type scale

DISCUSSION

The University of Michigan – Ann Arbor SAC members are a representative of the total health professionals' student population. The SAC student leaders were fully engaged in developing IPE curriculum that supported their peers in gaining a better understanding for health professions outside their area of study. When health professional students can engage in and implement IPE initiatives, they are able to collaborate with their peers and relate to their needs, interests, and curiosity. The seminar series had a positive impact on the overall knowledge, interest, and likelihood to collaborate with other health professionals. Attendance at the oral health seminar was higher than at the nutrition and occupational therapy seminars given that the oral health seminar involved students from two universities. The various presenters allowed for early health professional students to learn about a diverse array of experiences, roles, and perspectives from more seasoned peers. Such an impactful opportunity to learn about interprofessional collaboration through a seminar series is feasible for health professional students to develop and implement with minimal resources. This was a low-stakes experience with minimal time commitment for the student leaders, attendees, and presenters that served as the basis for awareness of IPE and practice.

Implications for Practice

Specifically, this student-created seminar series with peers or professionals that have clinical experience proved to be successful in helping students visualize when and how they could collaborate with various professionals when they are a practicing provider. When health professional students better understand how they can utilize other professions to supplement their own limitations early on in their training, they are more likely to be committed to interprofessional collaboration and practice leading to the provision of better healthcare, and thus, patient and population health outcomes.¹³ In other words, interprofessional collaboration will be a “norm” for the students. Students who engage and are exposed to IPE early on in their health professional training will have a better understanding that they must develop not only uni-professionally (i.e., within their own profession) but also interprofessionally as well to be able to function most effectively in a professional environment.^{13,14}

Limitations

This pilot work has limitations that the authors would like to point out. The analysis of students was only from one academic institution, and it may be beneficial to investigate this intervention at other universities. Furthermore, those students who participated in the seminar series are likely more interested in IPE at baseline and may not be representative of the average student at the university. There was a broad variety of training levels among the participants, which may have biased the initial knowledge ratings. The optional component of the seminar led to a smaller sample size which limited our ability to run statistical analyses. The investigators developed their own evaluation tools given the pilot nature of the seminar series. In the future validated IPE tools should be used.

CONCLUSIONS

The seminar series showed increases in the overall knowledge, interest, and likelihood to collaborate with other health professionals from before to after the seminar series. This study confirmed the benefit of having students design and implement IPE curricula, as well as having peers engage each other in teaching of their own professions.

As a fairly new organization that serves as a role model of IPE excellence for health profession students, the SAC has the opportunity to inform how interprofessional organizations function, develop IPE programming, and achieve goals to improve the interprofessional experience for all students at the University of Michigan – Ann Arbor. This pilot study of an informative didactic activity was an example of a student-led learning opportunity for early health profession students to come together and learn about interprofessional collaboration from the voices of health professionals who have worked in the field. It has the potential to lead to future IPE centered activities. The co-chairs aim to share their implementation of other student-led initiatives in hopes that other clinical training programs can follow.

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