



Research Article

Interprofessional Education: Collaborative Activities in Nursing and Therapy Programs

Debra Penrod^{1*}, Kimberly Parr², Valerie Boyer³, Erica Blumenstock⁴, Julie Davis⁵

¹School of Health Sciences-Nursing, Southern Illinois University Carbondale, Carbondale, IL, USA

²School of Health Sciences-Occupational Therapy, Southern Illinois University Carbondale, Carbondale, IL, USA

³School of Health Sciences-Communication Disorders & Sciences, Southern Illinois University Carbondale, Carbondale, IL, USA

⁴School of Health Sciences-Nursing, Southern Illinois University Carbondale, Carbondale, IL, USA

⁵School of Health Sciences-Physical Therapy Assistant Program, Southern Illinois University Carbondale, Carbondale, IL, USA

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*Correspondence to: Debra Penrod, DNP, RN, CRRN, School of Health Sciences-Nursing, Southern Illinois University Carbondale, 1365 Douglas Drive, Carbondale, IL 62901, USA; Email: debra.penrod@siu.edu

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Abstract

Objective:

To measure the impact of interprofessional educational activities on baccalaureate nursing students' perceptions of their ability to collaborate as a team and effectively communicate with therapy professionals to deliver patient care. Interprofessional Education (IPE) aims to address risks to patient safety and meet the Interprofessional Education Collaborative (IPEC) Core Competencies for Interprofessional Collaborative Practice: Version 3 2023 endorsed in 2024 by the American Association of Colleges of Nursing, which include four domains: values/ethics, understanding of roles/responsibilities, interprofessional communication, and a sense of teamwork across professions. Notably, research over the past several years has focused on nursing students learning alongside students in the medical field, physician assistant, and social work, but little research has been done on IPE activities involving various therapies.

Methods: Therapy students and nursing students participated in an Interprofessional Education Day in Spring 2023 and 2024, utilizing simulation strategies to measure the IPEC Core Competencies. The Interprofessional Collaborative Competency Attainment Scale (Revised) (ICCAS) was used to quantify students' perceptions in a retrospective pre-/post-test design.

Results: Findings indicated that both nursing students and therapy students found significant value in the IPE activities in reinforcing three of the four IPEC Core Competencies following the Interprofessional Education Day.

Conclusion: The research findings indicate the value of interprofessional education among nursing and therapy disciplines, which may encourage other schools of nursing to develop similar activities within their coursework.

Keywords: interprofessional education (IPE), baccalaureate nursing (BSN), occupational therapy, physical therapy, speech language pathology

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1 INTRODUCTION

With the complexities of healthcare in the 21st century, it is more important now than ever to collaborate with other professionals in delivering care. Whether the environment is acute care, tertiary or preventative care, healthcare providers need to understand the unique roles other disciplines play in promoting optimal health for our population. A clearer understanding of each discipline as part of the healthcare team leads to a workforce who values everyone's contribution. When healthcare providers value each discipline's contribution to giving care, better communication results across these lines that help promote better health outcomes.

Interprofessional Education (IPE) has been utilized as a teaching strategy in pre-and post-licensure educational programs for many years to students in a multidisciplinary approach. IPE was defined in 2010 as an experience that “occurs when students from two or more professions learn about, from, and with each other”^[1]. Baccalaureate nursing (BSN) programs began offering IPE activities, especially since the World Health Organization issued their Framework for Action on Interprofessional Education and Collaborative Practice in 2010 and followed up with Transforming and Scaling Up Health Professionals' Education and Training^[1-2]. In 2015, the Institute of Medicine published Measuring the Impact of Interprofessional Education on Collaborate Practice and Patient Outcomes which further emphasized the importance of educating healthcare professionals to improve patient care^[3].

From these national and international reports, the Interprofessional Education Collaborative was formed to offer a roadmap to accomplishing multidisciplinary education^[4]. IPEC developed four competencies for IPE which include Values and Ethics; Roles and Responsibilities; Communication, and Teams and Teamwork which promote an environment of shared respect where each discipline understands roles and responsibilities as a healthcare team and communicates effectively. Currently, there are 22 associations of health professions schools who are members of IPEC which include medical schools, and schools of physical therapy, occupational therapy, speech-language and social work.

Accrediting bodies for nursing and therapies also include interprofessional education as a benchmark for educational excellence. The Commission on Collegiate Nursing Education (CCNE) the accrediting body of the American Association of Colleges of Nursing (AACN) is a member

organization of IPEC and included IPE has a requirement for BSN through doctoral nursing programs^[5]. In Domain 6 of AACN's *The Essentials: Core Competencies for Professional Nursing Education* interprofessional partnerships further emphasized the need for IPE. The Accreditation Commission for Education in Nursing (ACEN), the accrediting body for associate degrees of nursing programs through doctoral degrees also emphasized the importance of IPE in nursing education programs^[6]. The National League for Nursing is a member of IPEC as well^[4]. IPEC is recognized by the American Council of Academic Physical Therapy (ACAPT), American Occupational Therapy Association (AOTA) and American Speech Language Hearing Association (ASHA) which have similar guidelines embedded within their accrediting bodies that emphasize IPE^[7-9].

1.1 Background

Nursing education has been structured to involve comprehensive overviews of subject matter, practice skills in labs and venturing into the clinical setting to hone nursing skills and develop clinical judgment. Exposure that nursing students attained with other healthcare professionals involved in acute care took place while learning their nursing role at the bedside. These experiences have largely been incidental while nursing students were also learning their own role and responsibilities in patient care.

According to systematic reviews if IPE, activities involving nursing students and other disciplines have largely involved activities with medical schools and social work programs or do not specify therapy student involvement^[10-13]. Little research has been done related to nursing students participating in IPE activities with other disciplines which collaborate at the bedside: the therapies. Nursing staff routinely coordinate care with different therapies in the acute and outpatient setting given the multicomplexity of patient care. Various disorders require a multidisciplinary approach that not only involves medical care but also objectives for optimum patient health that involve movement, function and expression. To care for patients holistically, nurses should work collaboratively with the therapies to ensure optimal health.

1.2 Study Objectives

The objectives for studying the student responses from IPE Day in 2023 and 2024 were the following: (1) Measure the impact of IPE activities on prelicensure nursing students' perceptions of IPEC Core Competency attainment. (2) Discern if nursing students differed significantly in

IPEC Core Competencies compared to Physical Therapy Assistant (PTA), Occupational Therapy (OT), and Speech Language Pathology (SLP) students.

2 METHODS

2.1 Participants & Setting

Interprofessional educational (IPE) activities took place at a public Midwestern university within the School of Health Sciences comprised of nursing, physical therapy assistant, occupational therapy and speech language pathology programs. A total of 44 baccalaureate (BSN), 18 occupational therapy doctoral, 40 physical therapy assistant and 49 speech language pathology master's degree students attended IPE Day in 2023 and 2024 totaling 151 participants.

The Midwestern public university which implemented IPE Day had launched the BSN program in Fall 2020^[14]. The nursing program was designed with a sophomore entry (Level 1) that involved learning in the classroom and the simulation lab with the junior year (Level 2) including a combination of clinical and classroom and the senior year (Level 3) being comprised of precepted clinical activities aimed toward transitioning to clinical practice and leadership. The 44 BSN students who participated in the IPE Day in 2023 and 2024 were senior-level undergraduate nursing students who were scheduled to graduate in May 2023 and May 2024. IPE Day was assigned as a means for the senior BSN students to share what they had learned in the clinical setting with other disciplines and stretch their abilities as leaders. By their senior year, students had attended clinicals on various inpatient nursing floors including emergency room and intensive care. At this point, they had been exposed to PT, OT, and Speech therapy while primarily focusing on learning their own role in patient care, so IPE Day was also developed to educate the BSN students about other healthcare professionals' roles and responsibilities with patient care as they transition within a few months to clinical practice.

The PTA students who participated in IPE Day were in their 2nd year in the physical therapist assistant program. The students varied in educational experiences from college sophomores to some holding bachelor's degrees in other areas. They were in the middle of their 2nd integrated clinical experience, having completed 4 hours per week in the spring of their first year and were completing 7 hours per week the spring of the IPE Day. Following the IPE experience, the PTA students completed 2, 6-week full-time internships in the summer with graduation occurring in August.

The OT students who participated in IPE Day were in their second semester of the doctoral program, their minimal required level for licensure. All students had at least a bachelor's degree while one student had a master's degree in a related field (not OT). As an occupational

therapy doctorate class, all their clinical exposure had been simulated at this point in the program. Two students were therapy assistants (1 Certified Occupational Therapist Assistant or COTA, 1 PTA) and several of them with certified nurse assistant experience. Some students had been shadowing for clinical hours prior to IPE Day but had not been in the acute care setting at that point in their curriculum.

The SLP students who participated in IPE Day were enrolled in a master's program, the minimum requirement for licensure in Illinois. The SLP students are admitted into the program to attain a degree in communication disorders and sciences. These students were all second-semester students enrolled in their first medical speech-language pathology class having achieved 25 contact hours either at the Center for Autism Spectrum Disorders or the Clinical Center on campus. Prior to IPE Day, SLP students had not experienced clinical in an acute care setting.

In considering the background of all students involved in IPE Day 2023 & 2024, the nursing students took on an active leadership role as they were the group with the most experience in acute care. The PTA, OT and SLP students had not been to the acute care setting for clinicals so any information that the nursing students shared would be valuable in their navigating this new setting and future interactions with other disciplines. The SLP students had limited exposure to nursing/PTA/OT prior to the time of IPE Day since there was not a program component that covers other healthcare disciplines within their program. For nursing students, IPE Day provided more knowledge about other disciplines who intersect in providing care, their role in coordinating patient care and transitioning into the leadership role with graduation the following May.

2.2 IPE Content

Interprofessional education among nursing and therapy students had traditionally occurred in the classroom and through interactions in clinical settings with the main focus on their own discipline, but very little intentional IPE instruction had been developed pre-licensure as of Spring 2023. Meeting accreditation standards was a catalyst for developing IPE Day as well since, not only nursing, but all the therapy programs required IPE within their curriculum^[5-9]. The creation of IPE Day in which disciplines could intersect and learn together fulfilled these standards.

Since much of IPE Day consisted of simulated learning, the Nursing Simulation Lab was utilized. Faculty in each program collaborated to design the day in which the students could learn from each other consistent with the core competencies of interprofessional practice. Learning objectives were developed from each discipline based on gaps in learning and observed inconsistencies in clinical practice. The therapy faculty asked for nursing students to

review included various nursing roles in the clinical setting, medical conditions that may interfere with therapy, how to give a status report and an introduction to the intensive care environment. Two patient simulations to the rotating stations to simulate conversations with patients, family members and nursing staff at the bedside. The nursing faculty requested the following:

- Each group of therapy students reviews their respective roles and responsibilities for acute care patients to educate the nursing students.
- Occupational therapy students review the adaptive equipment that may be introduced in therapy that nursing students may encounter at the bedside.
- Physical therapy assistant students review correct transfer techniques when nursing students need to modify patient transfers at the bedside.
- Speech language pathology students (Department of Communication Disorders & Sciences) explain modified barium swallow films so nursing students understand musculoskeletal/neurological changes impact a patient's ability to swallow.
- Speech therapy students explain the various consistencies of liquid recommended for various patients so nursing students understand why recommendations are posted for different patients.

2.3 Design & Sample

A total of 151 students participated in the 2023 & 2024 IPE Day events as part of a course within their discipline. Participation in completing the survey was voluntary for this convenience sampling of multidisciplinary students. For IPE Day 2023 (the inaugural event), students were placed in groups to present the information assigned in a lecture hall setting for a morning session with interactive lab simulations in the afternoon. Feedback from this event necessitated that the morning session be more interactive. For IPE 2024, students were divided into interdisciplinary groups to discuss a case study for 20 minutes and rotated from group to group sharing insights. This encouraged more interaction among the groups. A faculty member was assigned to each group to facilitate discussion as well.

The afternoon sessions for 2023 and 2024 stayed the same in structure. The multidisciplinary student groups rotated among ten stations run by fellow students in the Nursing Simulation Lab. The student-led stations included the following: Orientation to the ICU Environment (Nursing), Augmented Communication (SLP), two Patient Simulations (Nursing), What to Expect with Lines & Tubes (Nursing), Interpreting a Swallow Study (SLP), Food & Liquid Consistencies (SLP), ADL & Adaptive Equipment (OT), Mobility and Transfers (PTA). The stations included video presentations and hands-on simulation.

2.4 Research Instrument

A retrospective pre-/post-test design was implemented

to measure the impact of IPE activities on the IPEC Core Competencies with a focus on Interprofessional Communication, Teamwork, and Roles/Relationships. The Interprofessional Collaborative Competency Attainment Scale (Revised) (ICCAS) (Figure 1) was used to measure perceptions before and after IPE Day^[15]. The ICCAS questions were reformatted into Survey Monkey separating the “before activity” questions ($n=20$) from “after activity” questions ($n=20$) totaling 40 questions with one question reflecting Question 21 on the ICCAS scale (Figure 1). Data was transferred from Survey Monkey and analyzed using IBM Statistical Package for the Social Sciences (SPSS), V.27^[16]. Four additional questions were open-ended asking about program identification and contact information post-graduation if the students wished to be included in further studies related to IPE. The original ICCAS tool was assessed for validity and reliability by Archibald, Trumpower and MacDonald with a Cronbach's alpha coefficient above 0.90^[17]. The validity of ICCAS was reinforced through the replication study by Schmitz CC et al^[15].

2.5 Data Collection & Analysis

As per Institutional Review Board approval, the SurveyMonkey was distributed via a posted QR code at the conclusion of IPE Day in 2023 and 2024. The students were allowed to skip any question during the survey. Of the 151 students who participated in both years, 132 completed the survey (87% completion rate). SurveyMonkey responses were stored online until analysis via IBM SPSS V.27^[16].

3 RESULTS

General characteristics of the study population: Of the 132 students who participated in the survey, 30.3% were BSN students ($n=40$), 13.6% were OT students ($n=18$), 26.5% were PTA students ($n=35$), and 29.5% were SLP students ($n=39$) (Table 1).

The therapy students were enrolled in the level of program required of their discipline in the State of Illinois with 40 students enrolled in an associate degree (PTA), 44 students in a BSN, and 67 students in a doctoral (OT or SLP) program with the nursing students enrolled in a prelicensure BSN program.

Relationship among the variables: Four questions from the ICCAS survey were studied more closely with a pre-IPE activity response and a post-IPE activity response to total 8 questions in SurveyMonkey. To investigate the degree to which nursing students' perceptions changed retrospectively related to the IPEC Core Competencies, the four pairs of questions were used. These four pairs of questions represent three of the four IPEC Core Competencies:

- Questions 3 & 4: Promote effective communication among members of an interprofessional (IP) team, Before participating in IPE Day/After participating in IPE Day (IPE Competency: Interprofessional Communication)

Using the following scale, please rate your ability for each of the following statements:		1 = "Poor"; 2 = "Fair"; 3 = "Good"; 4 = "Very good"; 5 = "Excellent"									
		Before participating in the learning activities, I was able to:					After participating in the learning activities, I was able to:				
		P	F	G	VG	E	P	F	G	VG	E
1.	Promote effective communication among members of an interprofessional (IP) team	1	2	3	4	5	1	2	3	4	5
2.	Actively listen to IP team members' ideas and concerns	1	2	3	4	5	1	2	3	4	5
3.	Express my ideas and concerns without being judgmental	1	2	3	4	5	1	2	3	4	5
4.	Provide constructive feedback to IP team members	1	2	3	4	5	1	2	3	4	5
5.	Express my ideas and concerns in a clear, concise manner	1	2	3	4	5	1	2	3	4	5
6.	Seek out IP team members to address issues	1	2	3	4	5	1	2	3	4	5
7.	Work effectively with IP team members to enhance care	1	2	3	4	5	1	2	3	4	5
8.	Learn with, from and about IP team members to enhance care	1	2	3	4	5	1	2	3	4	5
9.	Identify and describe my abilities and contributions to the IP team	1	2	3	4	5	1	2	3	4	5
10.	Be accountable for my contributions to the IP team	1	2	3	4	5	1	2	3	4	5
11.	Understand the abilities and contributions of IP team members	1	2	3	4	5	1	2	3	4	5
12.	Recognize how others' skills and knowledge complement and overlap with my own	1	2	3	4	5	1	2	3	4	5
13.	Use an IP team approach with the patient to assess the health situation	1	2	3	4	5	1	2	3	4	5
14.	Use an IP team approach with the patient to provide whole person care	1	2	3	4	5	1	2	3	4	5
15.	Include the patient/family in decision-making	1	2	3	4	5	1	2	3	4	5
16.	Actively listen to the perspectives of IP team members	1	2	3	4	5	1	2	3	4	5
17.	Take into account the ideas of IP team members	1	2	3	4	5	1	2	3	4	5
18.	Address team conflict in a respectful manner	1	2	3	4	5	1	2	3	4	5
19.	Develop an effective care plan with IP team members	1	2	3	4	5	1	2	3	4	5
20.	Negotiate responsibilities within overlapping scopes of practice	1	2	3	4	5	1	2	3	4	5
21.	Compared to the time before the learning activities, would you say your ability to collaborate interprofessionally is... (circle one) 1 = Much better now; 2 = Somewhat better now; 3 = About the same; 4 = Somewhat worse now; 5 = Much worse now										

Figure 1. The Interprofessional Collaborative Competency Attainment Scale (Revised). The ICCAS was developed by: MacDonald, C., Archibald, D., Trumpower, D., Casimiro, L., Cragg, B., & Jelly, W. (2010). Designing and operationalizing a toolkit of bilingual interprofessional education assessment instruments. *Journal of Research in Interprofessional Practice and Education*, 1(3). Revised item scales and the addition of item #21 were made during a replication validation study by Schmitz, C.C., Radosevich, D.M., Jardine, P.J., MacDonald, C.J., Trumpower, D. & Archibald, D. (2017, *Journal of Interprofessional Care*).

Table 1. Participation and Survey Completion Numbers & Rates 2023-2024

	BSN	OT	PTA	SLP	Total	Completion Rate %
2023						
Participated	17	7	20	24	68	
Completed Survey	16	7	15	19	57	84%
2024						
Participated	27	11	20	25	83	
Completed Survey	24	11	20	20	75	90%
2023 & 2024 combined						
Total Participated	44 (29.1%)	18 (11.9)	40 (26.5%)	49 (32.5%)	151 (100%)	
Total Completed Survey	40 (30.3%)	18 (13.6%)	35 (26.5%)	39 (29.5%)	132 (100%)	87%

Notes: Overall ICCAS survey completion rate via SurveyMonkey =87%.

● Questions 13 & 14: Seek out IP team members to address issues, Before participating in IPE Day/After participating in IPE Day (IPE Competency: Teamwork)

● Questions 27 & 28: Use an IP team approach with patients to assess health situations, Before participating in IPE Day/After participating in IPE Day (IPE Competency: Teamwork)

Table 2. T Test Results for Nursing Only

Item	Mean	SD	t/p value
Promote effective communication	Pre 3.29 Post 3.90	Pre 1.15 Post 0.89	$t=-7.616$ $p<0.001$
Seek out IP team members	Pre 3.16 Post 3.75	Pre 1.10 Post 0.89	$t=-7.827$ $p<0.001$
Use an IP Approach with patient	Pre 3.18 Post 3.82	Pre 0.99 Post 0.82	$t=-8.55$ $p<0.001$
Understand abilities/contributions	Pre 3.18 Post 3.95	Pre 1.10 Post 0.79	$t=-9.370$ $p<0.001$

Notes: Significant change pre/post for nursing students for IPE Days ($p<0.001$).

● Question 23 & 24: Understand the abilities and contributions of IP team members, Before participating in IPE Day/ After participating in IPE Day (IPE Competency: Roles/ Relationships).

Paired samples t Tests were conducted for each question pair with significant results (Table 2).

In all four paired questions, there was a significant change in pretest and posttest comparisons. The nursing students self-reported that their perceptions changed significantly because of the IPE activity, more specifically their relationship to other disciplines as part of their healthcare team, ability to communicate effectively and seek out assistance when needed. Analysis of Variance (ANOVA) was performed as well to determine if there were any differences between pre- and post-test rankings among the four disciplines. One pretest question related to the use of IP with patients yielded significant results ($F(3, 122) = 3.225, p = .025$). Using Tukey Honesty Significant Difference (HSD), the difference in this pretest question was between SLP and nursing students. Otherwise, there were no significant differences between the disciplines in reported perceptions pretest or post-test: all groups showed a significant increase in their perceptions of interprofessional learning because of IPE Day.

4 DISCUSSION

When reviewing the study objectives, results showed significant changes in perceptions directly related to three of the four IPE Core Competencies for Interprofessional Collaborative Practice. The nursing students as well as therapy students were impacted by IPE Day activities. There was no statistical difference among the groups to the level of impact of IPE on student perceptions. When considering the fourth IPEC Core Competency (Values/Ethics), a researcher could surmise that this competency was impacted as well by these results. The idea that the ICCAS scale questions are all inter-related in terms of core competencies identified with interprofessional collaboration was discussed in the replication validation study (Schmitz, et al., 2017).

Offering an IPE Day in 2023 and again in 2024 gave

faculty insight into the value of providing a day in which students about other healthcare providers intersect at the bedside. The data collected from all students involved indicated that attitudes toward ease in communication among the healthcare disciplines changed as well as perceived value of other disciplines as team members who together coordinate and enhance patient care. The overarching goal of IPE in the prelicensure setting is to encourage positive perceptions as these students enter the clinical setting.

These impactful results from developing IPE Days echo methods identified by other nurse educators in promoting student engagement. Team-based strategies that include team-based learning (TBL) and interdisciplinary partnerships have proven to be effective ways to engage students in critical thinking^[18]. Anytime educators present information in real-world simulations involving the healthcare team at the bedside, they promote active problem solving and engagement^[19].

For nursing students, IPE was valuable in several ways. The timing of IPE Day was optimal for BSN students to demonstrate leadership skills. With the BSN program housed in the School of Health Sciences along with therapy programs, opportunities were available for faculty to collaborate on IPE Day. Senior nursing students who were completing their program within months were paired with therapy students who were just beginning their clinical experiences. This unique opportunity allowed BSN students to be the “clinical experts” by explaining and simulating real world experiences to prepare the therapy students for the clinical setting. Reviewing skills before practice and instructing others about necessary care and safety concerns further solidified the skills for future national board licensure exam review as well as clinical practice. Topics such as how to navigate patient tubes and lines as well as what to expect in the intensive care setting were explained by senior BSN students as well as two simulated patient scenarios in which therapy students were asked to interact as if they had orders to consult, evaluate and treat the patients. These scenarios provided real dialogue and helped everyone learn how to communicate effectively at the bedside collaboratively.

4.1 Strengths and limitations

The ability to coordinate IPE activities within the same school (School of Health Sciences) among faculty was a strength to implementing the activity and subsequently researching survey results. Identified barriers to implement this level of collaborative activities include lack or indifferent leadership, siloed curricula and calendars, inability for faculty to appreciate other professions, a lack of knowledge about IPE collaboration or discomfort with teaching across the professions^[20]. Since 2011, IPEC has made great strides in educating healthcare professions in the importance of IPE to reduce communication errors, promote patient safety and improve patient outcomes but scheduling opportunities to bring various disciplines together can be difficult^[21]. Since two of the four disciplines participating in IPE were new programs (nursing and occupational therapy) within the School of Health Sciences, creating new ways to educate healthcare students collaboratively came much easier to faculty leaders. For this university, Fridays provided the perfect opportunity since this weekday has been reserved for clinicals across multiple programs. Scheduling IPE Day on a Friday eased these barriers with which to plan and execute IPE Day.

The timing of IPE Day within each program's curriculum aided the BSN students in practicing leadership skills since they had experienced various clinical sites by their senior year and could draw from these experiences knowledge that could be shared with therapy students who had been limited in experiences or no clinical experience at all. The nursing students addressed topics such as common patient tubes and drains and the intensive care environment as an introduction to the acute care environment. The results from the survey indicated that nursing students valued IPE as much as therapy students in terms of understanding more fully roles/relationships, teamwork opportunities and effective communication.

There may be some limitations to the study by which perceptions of pre-/post were attained retrospectively via the ICCAS survey^[15]. There was some discussion about the survey design prior to initiation of the study because this design did not fit the traditional pre-/post-test design. In researching retrospective pre-/post-test design, studies have shown that this design is especially useful in studies involving perceived changes about knowledge, skills, or attitudes because of an intervention. A replication validation study was performed on the ICCAS scale which echoed other researchers' findings that retrospective pre-/post-test designs minimize response shift bias^[15,22-23]. In anecdotal comments following IPE Day, some nursing students stated that they thought they knew about the roles/responsibilities of physical, occupational and speech therapists but realized upon reflection following IPE Day that these professions overlap with nursing in multiple areas of patient care. In the spirit by which the ICCAS tool was created, the tool was

used for IPE Days 2023 and 2024.

4.2 Future Directions

IPE has become a permanent component of this university's curriculum. While OT, PTA and SLP began reaching out for interdisciplinary activities, the School of Medicine and Social Work have also collaborated on projects with Nursing. The nursing faculty have broadened their scope by collaborating with the university's Dental Hygiene and Radiology programs so students can see how their roles/responsibilities overlap and complement each other. Other IPE events have occurred in which nursing students are teaching other disciplines in different facets of their profession and learning how their role functions in partnership with these other disciplines. Students are not only learning about IPE in acute care but also the community health setting. With several activities interwoven into the BSN program, new nurses are sent into the field with a teamwork mindset, understanding more fully how the healthcare team members contribute to optimal patient care. The IPE research team are also looking into ways in which students could obtain an IPE prelicensure certification due to these collaborative efforts that are spanning their programs.

Following IPE Day 2023, faculty added another question to the ICCAS survey asking for students' consent to future study following their entry into the workforce. This will be the next step to evaluate the effectiveness of IPE: any influence on clinical practice. The overarching goal of IPE has been to improve collaboration at the bedside, improve patient safety with better communication, and improve patient outcomes. With graduates from nursing and therapy programs working across the country, drawing conclusions to impact prelicensure IPE initiatives on patient outcomes may not be feasible. However, a survey that measures perceptions of pre-licensure IPE activities on clinical practice may be possible. The faculty will come together and discern what timetable post-graduation surveys would be initiated. BSN graduates from 2024 could be surveyed as early as Summer 2025, but the entire group may not be surveyed until 2026 or 2027 since their programs complete at a later date.

5 CONCLUSION

When considering the results of IPE Day for 2023 and 2024, value has been ascertained to continue offering a day in which disciplines learn about each other. Creating a simulated, interprofessional education day enabled students to practice communication skills, appreciate other disciplines' roles in patient care, and recognize how each member of the healthcare team intersects to provide optimum care. Promoting the best care for patients is the ultimate goal and IPE initiatives of prelicensure provide those opportunities to learn before practice.

Research for IPE Day 2023 and 2024 gave statistically

significant results that encouraged the School of Health Sciences faculty to provide future events. The IPEC Core Competencies for interprofessional practice (understanding of roles/responsibilities, teamwork, effective communication and values/ethics) were met by providing IPE for pre-licensure nursing and therapy students.

Acknowledgements

Not applicable.

Conflicts of Interest

The authors declared no conflict of interest.

Data Availability

The data generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Ethical Statement

This study was reviewed and approved by the Southern Illinois University Carbondale Institutional Review Board with approval number 23015 on February 6, 2023 and February 9, 2024. All participants gave their informed consent for inclusion before they participated in the study.

Author Contribution

Penrod D served as the lead and corresponding author, focusing on the nursing-related aspects of the IPE Day and leading the manuscript development. Parr K, as Occupational Therapy faculty, made significant contributions to the development and execution of IPE Day in 2023 and 2024, including coordinating student schedules, event timing and locations, and supervising OT students. Boyer V, from the Department of Communication Disorders and Sciences, supervised Speech/Language Pathology (SLP) students, conducted SPSS data analysis, and reported the results to the research team. Blumenstock E developed and distributed the SurveyMonkey questionnaire to participants, and performed the initial transfer of survey results to SPSS for analysis. Davis J, Physical Therapy Assistant (PTA) faculty, assisted in the development and execution of IPE Day and supervised PTA students. All authors collaborated on the School of Health Sciences IPE Committee, which designed and implemented the 2023 and 2024 IPE Day events, and continue to collaborate on this annual activity. All authors have read and approved the final version of the manuscript.

Abbreviation List

AACN, American Colleges of Nursing
ACAPT, American Council of Academic Physical Therapy
ACEN, Accreditation Commission for Education in Nursing
ANOVA, Analysis of Variance
AOTA, American Occupational Therapy Association
ASHA, American Speech Language Hearing Association
BSN, Bachelor of Science in Nursing
CCNE, Commission of Collegiate Nursing Education
HSD, Tukey's Honest significant difference
ICCAS, Interprofessional Collaborative Competency Attainment Scale
IPEC, Interprofessional Education Collaborative
IPE, Interprofessional education
OT, Occupational Therapy
PTA, Physical Therapy Assistant
SLP, Speech Language Pathology

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