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Evaluation of Undergraduate Internship Interprofessional Experiences Using the Jefferson Teamwork Observation Guide (JTOG)

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Abstract

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ABSTRACT

Purpose: The purpose of this study was to evaluate and describe the healthy behaviors of teamwork at internship sites of undergraduate health and exercise science students. Data from the Jefferson Teamwork Observation Guide (JTOG) tool, in conjunction with five open-ended debrief questions were used as an innovative means of assessment to evaluate the quality of interprofessional experiences at various internship sites, as reviewed by the internship coordinator. **Methods:** Students observed an interprofessional team at their internship site and completed the JTOG, for the observed team. The JTOG is a two-part assessment (Likert Scale questions; qualitative questions) of identifiable characteristics of well-functioning teams drawn from the literature about teamwork, team-based care, and client-centered care. Mean Likert scores (SD) were calculated for each of the 14 Likert Scale responses and themes from the five open-ended questions were identified. **Results:** Students responded that their internship interprofessional teams engaged in friendly interactions and understood the roles and responsibilities of other team members, as well as valued the opinions of others and by demonstrating respect, confidence, and trust in one another. In contrast, areas of improvement were noted in the ability to openly disagree with other team members, as well as the frequency in which team members sought out opportunities to work with others. Comments captured from the JTOG open-ended debrief questions indicate the following six themes from their observations: 1) observable behaviors of effective teamwork (trust, collaboration, unity, common goal; termed shared leadership), 2) modeling collaborative care, 3) practicing client-focused care, 4) communication, 5) understanding roles, and 6) displaying importance of creating a professional environment. **Conclusions:** The JTOG proved to be a valuable tool: 1) to assess internship site teams within the healthcare field in order to justify the continued partnership between the university and the internship site; 2) to demonstrate that accreditation competencies are met by student learning experiences; and 3) as part of intentional interprofessional education curriculum at the foundational education level within the learning continuum.

Keywords: health professions, undergraduate curriculum, internship experiences, learning continuum

INTRODUCTION

Experiential learning is key for undergraduate students to gain perspective about their career aspirations, develop their professional identity, and increase professional competence.¹ Learning in the workplace of future employment has been shown to be critical to professional development.¹ One type of experiential learning that takes place in the workplace of future employment is academic internships. Academic internships play an important role in undergraduate curriculum as they are partnerships between a university and the surrounding community with the shared interest of mentorship of students with an emphasis on professional development. Currently, the majority of Bachelor of Science in health and exercise science (and similarly named) programs in the United States require an internship as part of the curriculum. Many accrediting bodies, such as the Commission on Accreditation of Allied Health Education Programs (CAAHEP), strongly encourage academic internships in order to meet curricular competencies and emphasize the importance of preparing students for the workplace environment. The Committee on Accreditation for the Exercise Sciences (one branch of CAAHEP) has determined the competencies listed in Table 1 must be met by the curriculum in bachelors level health and exercise science programs in order to maintain accreditation. Many of these competencies are met during internship experiences, especially when interprofessional approaches to healthcare are taken in order to achieve these skills in practice.

Table 1. Committee on Accreditation for the Exercise Sciences Competencies*

Competencies*
Skill in recognizing the need for progression and communicating updates to exercise prescriptions.
Skill in applying active listening techniques.
Skill in using feedback to optimize a client's training sessions.
Skill in communicating the need for medical, nutritional, or mental health intervention.
Skill in effective use of a variety of communication modes.
Skill in maintaining a safe exercise environment .
Knowledge of conflict resolution techniques that facilitate communication among exercise cohorts.
Knowledge of the components for ethical standards and scope of practice in the health/fitness industry.

*This is not a comprehensive list of all competencies – select items were chosen to illustrate the importance of communication and experiential learning in interprofessional settings.

Accreditation commissions not only highlight the importance of communication, active listening, conflict resolution, and scope of practice, but recent reports also highlight the need for healthcare educators to produce healthcare professionals who value multilevel leadership, who are truly collaborative and community-oriented.^{2,3} This evolution requires leadership in education and a culture change toward sustainable healthcare education from undergraduate through graduate level into the workplace.^{2,3} For the future of health professions education, emerging trends include: intentional interprofessional education, emphasis on the continuum of health professions education, and longitudinally integrated clinical education that is patient-oriented.² With the ever-changing healthcare field requiring: exemplary leaders in healthcare, increased need for interprofessional education, and changes in learning styles for the next learner, it is imperative to continually assess the quality of internship experiences.³⁻⁷ Currently, there is no agreed-upon method for assessment of undergraduate internships. Each program and/or university assesses various aspects of the experience, specific to their programmatic needs. Previously published research on internship assessments show students agree their internship site provided a valuable learning experience both interpersonally and professionally and would recommend this type of experience.⁸ Reports also show students who rated their internship experiences with satisfaction, were more likely to enter the field after graduation as compared to students who rated their internship experience with dissatisfaction. This result further argues for continued assessment and standardization therein of internship sites.^{8,9}

Continued assessment is a strategic component of enrollment management tactics at all institutions. Undergraduate enrollment has decreased by 9.4% from Spring 2020 to Spring 2022 due to multifaceted economic and financial factors.¹⁰ With the rising tuition costs for undergraduate education nationwide making up for enrollment revenue deficit and lost revenue due to COVID-19

effects on higher education, it is imperative that academic programs partner with quality internship sites in order to facilitate meaningful learning experiences for the students in the workplace of their future. Career opportunity, individual aspirations, and self-efficacy have all been linked to the decision to enroll in an allied health education program and these factors predict program enrollment status.^{11,12} These factors are influenced and developed by meaningful experiential learning opportunities.

Alongside the importance of continued assessment of internship experiences and the impact of student experiences on enrollment, there is also an increasing importance for interprofessional education (IPE) in health professions at large. The World Health Organization published a framework on IPE highlighting the importance of communication and collaboration and the Institute of Medicine (IOM) has endorsed IPE as an important step in advancing health professional education for many years.^{5,6} The Jefferson Teamwork Observation Guide (JTOG) is a multi-score tool that was created to assess interprofessional collaborative practice competencies. This tool was created from a need to teach learners about high functioning teams.¹³ There are four versions of this tool: Team, Individual, Patient, and Support Person.¹³ While initially developed as a teaching tool for prelicensure students, it is becoming clear that this observation-based survey can also assess the behavior of clinicians in practice.¹⁴ The JTOG can serve as a guide for students when observing interprofessional teams in action and it elicits student understanding of the interprofessional education collaborative core competencies.¹⁵ The Team version of this tool has been used in various educational settings by students to observe and rate characteristics of a team as part of an IPE initiative.¹⁵⁻¹⁸

A 2016 study determined there is a need for a competency-based assessment tool to assist educators and providers in team functioning, and the feedback reports from the JTOG are highly useful for practice transformation and educational redesign.¹³ Use of the JTOG tool to rate internship experiences specific to IPE and teamwork is one assessment that can be completed in order to assess interprofessional teamwork during internship experiences. The use of the tool fills the need for both continued assessment of internship sites and intentional implementation of IPE experiences in undergraduate experiences specific to healthcare.

The purpose of this study was to evaluate and describe the healthy behaviors of teamwork at internship sites of undergraduate health and exercise science students. The JTOG tool followed by five open-ended debrief questions was used to assess the interprofessional teams which students belonged to as an intern, allowing the internship coordinator to gain a better understanding of the student experience specific to IPE. Using a constructivist framework, this article examines feedback from students regarding behaviors of teamwork.¹⁹ The Master Adaptive Learner model was used to guide this research due to this learner-centered metacognitive framework's emphasis on how the learning environment impacts the ability of those involved to learn effectively.²⁰

METHODS

Subjects

Participants were undergraduate students in a Bachelor of Science in Health and Exercise Science program. Participants were juniors or seniors based on the number of credit hours completed (60 or more), and were currently enrolled in the program's internship course. All participants were 18 years or older. These students observed teams at various internships sites including, but not limited to, outpatient physical therapy clinics, sport performance/physical therapy facilities partnered with hospitals, and respite care centers with occupational, physical, and speech therapies. Responses from 34 students were collected. All procedures and analyses were approved by the institution's review board (#1765581-2).

Procedures

The students were instructed to observe an interprofessional team at their internship site and then complete the JTOG (team version) via an online link. The JTOG is a user-friendly, 14-item Likert-scaled (1 = strongly agree, 4 = strongly disagree) evaluation instrument based on learner and clinician feedback for interprofessional education.¹⁴ Content validity evidence exists to support the use of the JTOG in interprofessional collaborative practice settings, and this instrument has sufficient reliability and validity to assess the behavior of clinicians in practice and is primarily designed to assess teamwork.^{14,21} Instructions read "Please rate your level of agreement with each of the following statements" followed by 14 Likert Scale questions. Then five open-ended discussion questions were asked per the outline provided by Jefferson University titled "JTOG: A Teaching Tool for IPE".²² The debrief questions are a dedicated reflection about the JTOG activity itself and the experience of observing a team, and emphasize reflection about shared leadership, open communication, respect, teamwork, trust.²² The debrief questions were provided by the experts who have helped continued development of the JTOG tool. Questions are presented in Table 3.

A mixed methods approach was used for data analysis. First, data were downloaded from the online form into an Excel Spreadsheet (Microsoft, Redmond, WA). Then quantitative and qualitative analyses were conducted. Mean Likert scores (SD) were found for each of the Likert Scale responses. Results are presented in Table 2. Open-ended response data was then analyzed using an

inductive coding process yielding a lexicon of themes that help explain the phenomenon of interest to identify themes. A two-person team was assigned to code responses from each qualitative question. The researchers first read over the data in its entirety, then collaboratively reviewed 17 of the 34 responses for each of the 5 questions to reach a reliable initial coding scheme consensus, using a content analysis approach. The remaining 17 responses for each of the 5 questions were coded individually using the agreed-upon coding scheme. This deductive approach ensured interrater agreement in code application.²³ The themes in the data became the labels for codes (e.g. indexing). Final data reduction and analysis occurred through the use of the four cognitive processes of comprehending, synthesizing, theorizing, and contextualizing.²⁴ A summary describing prevalent perspectives, illustrated by selected student quotations, was discussed with all study investigators and consensus was reached. Results are presented in Table 3.

RESULTS

Quantitative

Student evaluations of internship interprofessional teams reported they agreed strongly (Mean Likert Score: 1.56) that team members engaged in friendly interactions and understood the roles and responsibilities of other team members, as well as agreed strongly (Mean Likert Score: 1.59) that the team valued the opinions of others and had respect, confidence, and trust in one another. In contrast, areas of improvement were noted by the Mean Likert score trending away from "strongly agree" in the team's ability to openly disagree with other team members (Mean Likert Score: 1.90) and well as the frequency in which team members sought out opportunities to work with others (Mean Likert Score: 1.86).

Table 2: Jefferson Teamwork Observation Guide (JTOG) Assessment Likert Scale Responses

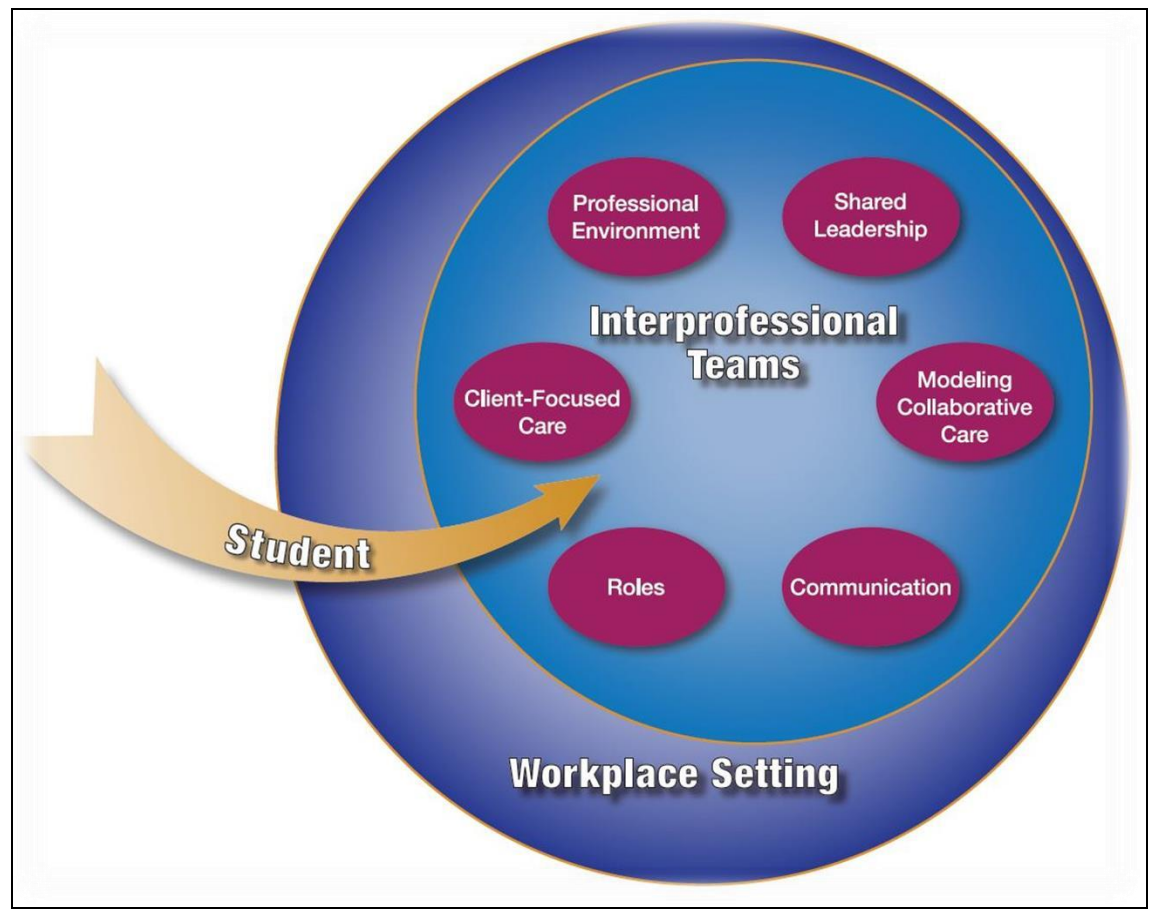
	JTOG Assessment Likert Scale Responses	Mean Likert Score	SD
1	There appeared to be a team leader that coordinated the discussion	1.79	0.84
2	The team leader facilitated the discussion rather than dominating it	1.64	0.88
3	Members of the team who came prepared to discuss the case/situation contributed to the discussion	1.65	0.94
4	Members of the team who were involved in the case/situation contributed to the discussion	1.77	0.87
5	Discussion points were distributed among all team members	1.79	0.84
6	Member of the team appeared to understand the roles and responsibilities of other members of the team	1.56	0.97
7	Team members appeared to have respect, confidence, and trust in one another	1.59	1.00
8	Team members listened and paid attention to each other	1.65	0.94
9	Team members listened to and considered the input of others before pressing their own ideas	1.67	0.91
10	Team members added other supporting pieces of information from their profession specific perspective regarding the case/situation	1.73	0.90
11	The opinions of team members were valued by other members	1.59	0.88

12	Team members appeared to feel free to disagree openly with each other's idea	1.90	0.86
13	Team members sought out opportunities to work with others on specific tasks	1.86	1.01
14	Team members engaged in friendly interaction with one another	1.56	0.91
1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree			

Qualitative

Comments captured from the JTOG open-ended questions indicate the following six themes from their observations: 1) various aspects of effective teamwork (trust, collaboration, unity, common goal; termed shared leadership), 2) modeling collaborative care, 3) client-focused care, 4) communication, 5) roles, and 6) displaying importance of creating a professional environment. Results are presented in Figure 1 and Table 3.

Figure 1. Themes from Data



This figure visually represents the qualitative findings for what the students described in their responses to the open-ended questions about the boundaries they were able to move through while in the workplace setting, as well as show the various themes students spoke to once they were able to get into the workplace environment of their internships.

Table 3. Jefferson Teamwork Observation Guide (JTOG) Assessment Open-Ended Responses

Question	Themes	Percentage of Responses with Representative Comment	Example Student Quotations
1) How did this experience make you feel about interprofessional practice?	Team Roles (Difficulty Within, Confidence, Function)	32%	“The overall goal at [] is to make sure each child is getting the best care possible. For this to happen the occupational therapists, physical therapists, and the respite care workers need to all communicate and work together as a team. If one person of the team isn’t contributing or doing their part the overall care provided to the children will decline.” (Participant 8)
	Shared Leadership	30%	“This experience made me realize the great importance of interprofessional practice, and how different professionals with various experience and knowledge can impact a situation/event.” (Participant 14)
	Client-Focused Care	25%	“This experience gave me insight about inter professional practice and how difficult it can be, but also how putting the patient first is the most important aspect.” (Participant 1)
	Communication	25%	“For example, at [], communication between the head strength coach and head PT is essential in making sure that the athletes and clients at [] receive the best possible care.” (Participant 26)
2) Describe one thing that you observed about teamwork	Shared Leadership	56%	“Many people working together can be more beneficial and provide higher quality care, rather than working individually.” (Participant 31)
	Communication	17%	“Communication is essential and without it teamwork is not possible. Delegation is also important when it comes to teamwork. Right away [] (the leader in this situation) explained what was going on and what ways the staff could help out.” (Participant 6)
	Confidence	15%	“I think providing adequate and appropriate feedback is important when working with a team. When I was given feedback that was positive and then something I could work on, I felt motivated and confident going forward.” (Participant 33)
	Importance of Creating a Professional Environment	15%	“One thing that I am taking away from this activity that changes the way I look at teamwork is making sure everyone on the team feels like they have a role, knows their role, and feels valued and like they are able to contribute in their role.” (Participant 3)

Question	Themes	Percentage of Responses with Representative Comment	Example Student Quotations
3) What would you have done differently? <i>*9 out of 34 indicated they would not have done anything differently</i>	Communication	47%	"In the future I would continue to increase communication from management to providers, so that the PT, OT, and Caretaker are all on the same page for the next day." (Participant 5)
	Ask More Questions	47%	"I think there should have been more conversation regarding concerns or questions (if there were any) regarding the care plan. It seems like there was a lot of talk of what the actual plan was, and once that was established the conversation was over. Especially for interns, sometimes it is hard to know what questions to ask if there is no prior knowledge or exposure of this type of care or patient. Looking back now, there are probably more questions that I feel like I could've asked, but didn't want to interrupt the ongoing conversation" (Participant 14)
	Prioritize Being Prepared and Creating a	18%	"It probably would have been helpful if the team had started planning earlier, rather than about 15 minutes before the session began." (Participant 30)
	Professional Environment		
	Improve Client-Focused Care	15%	"One thing that I would do differently would be to have a better line of communication with the providers at [] Hospital and [] Performance to ensure that the patient is receiving the best care, generate ideas of how to improve a patient's care or treatment plan, or to discuss outcomes." (Participant 17)
	Improve Growth Mindset	15%	"I think that it would have been nice to have a few more people on the call to help see a lot of different sides of the client. The purpose of the meeting was to assess how much care she needs and how much funding she may need as well. I think that having two people was great but I think 3 or 4 people on the call might have been more helpful. I also think it might have been easier for the mom and employee to have had the questions before the meeting so they could have had time to really think about the questions" (Participant 31)

Question	Themes	Percentage of Responses with Representative Comment	Example Student Quotations
4) What was the most positive (or interesting) finding from your observation?	Modeling Collaborative Care	41%	“It seems like the team was a team and not a group of individuals working together. They all had a similar goal in mind and worked together to achieve the goal, rather than working independently to achieve a collective goal. This surprised me, because at a previous job it felt like the employees were in a ‘food chain’ type of management and if you were higher on the list, then you were more important and, if you were lower on the management level, you were less important. It was nice to see many different types of people (with different levels of certifications/education) work together and seem like one team on one level.” (Participant 15)
	Shared Leadership	27%	“I think the most interesting thing I found from my observation was when [] was talking about how she wants us to all come together and brainstorm some ideas and activities that the clients can do.” (Participant 23)
	Client-Focused Care	18%	“I think the most interesting thing I observed was how each team member described how they can help the client reach the goal in each of the different settings.” (Participant 28)
	Importance of Creating a Professional Environment	17%	“The most interesting finding from the observation is listening to some of the conversations other therapists have in the clinic amongst one another. Some of the conversations tend to challenge the professional appearance depending on the topic of choice such as what a coworker did over the weekend that may not be as appropriate to discuss in front of the clientele rather than an after-hours discussion. The PT that I specifically shadowed was taught to portray professionalism through his practice that he focuses on the patient and what they need rather than discussion around the office, which is very appealing.” (Participant 20)
5) Did the observation help or deter how you will approach collaborative practice in the future? <i>*100% of participants indicated that this observation helped them.</i>	Modeling Collaborative Care	47%	I believe that the time that I have spent interning at [] will help how I approach collaborative practice in the future because I was able to see and understand the things that worked well and contributed to a more effective and high functioning team, and I also was able to recognize the different strengths of each individual team member to begin to think about what I could do as an individual to play my part as a member on a team to embody the core values and principles that make a team effective.” (Participant 27) “The observation helped how to approach a collaborative practice because of the “welcoming” atmosphere that was created for both of the student [learners]. There were two students with two different levels of education which helped keep the setting professional and open to feedback.” (Participant 20)

Question	Themes	Percentage of Responses with Representative Comment	Example Student Quotations
	Shared Leadership	21%	"I liked how [] facilitated the conversation of what the strength coaches care plan is/should be and how it differed from the physical therapist's, but they were all still able to compromise or agree with the plan in place and explain why each part of the plan was included or changed." (Participant 15)
	Communication	15%	"This observation helped me understand how to approach collaborative practice because I learned how to use more effective and clear communication as well as be willing to ask questions. This learning helped me because one of my goals that I had after last semester's internship course was to be more willing to speak up and ask questions and to communicate my ideas clearer." (Participant 21)
	Create a Professional Environment	15%	"One thing I noticed is that when anyone had something to say everyone first listened to the other person and then they gave their opinion whether they agreed or not. To be efficient, the whole team has to be on the same page. Having trust and feeling safe to speak out is important and helps the team be on the same page. Also it is necessary that everyone listens to what the other person is saying." (Participant 22)
	Client-Focused Care	15%	"It helped because I saw that three professionals could come together and work towards a positive outcome for the client. Healthcare requires many different doctors, therapists, etc. to work together in order to optimize the patient's care, so it was very interesting to be able to watch this process firsthand." (Participant 18)

DISCUSSION

Environment

The environment of being in the workplace where these graduates will soon be working benefitted the students greatly. The professional workplace environment was a theme from the students for 4 out of 5 of the open-ended questions, shown in Table 3. One student responded "the observation helped me understand how to approach a collaborative practice because of the welcoming atmosphere that was created for both of the students. There were two students with two different levels of education which helped keep the setting professional and open to feedback". The JTOG assessment tool and the open-ended debrief questions provided the educator/internship coordinator with this formative feedback which helped confirm that the internship site environment was conducive for learning, as guided by the Master Adaptive Learner model's emphasis on, and identification of, characteristics within a supportive learning environment that foster effective learning.

Research indicates that the learning environment impacts the ability to learn effectively for both the individual and the teams involved.²⁰ Learning activities that do not take place in the workplace, like reading, rereading, highlighting, underlining, and cramming, are all typical components of traditional didactic education, and have repeatedly been shown to be ineffective in leading to long-term understanding or application.²⁰ A workplace environment is very different from a controlled classroom environment,

thus leading to more adaptive learning in a workplace environment that is applicable to professional success.²⁰ According to the Master Adaptive Learner model, active and effortful learning is a key phase in which learners are encouraged to use active learning strategies.²⁰ Academic institutions prepare students to know, apply, and think through didactic curriculum, however judgement is the bridge between knowledge and application. Judgement is necessary to manage the uncertainty of the workplace.²⁵ Professional jobs are not direct lines for taking knowledge from the classroom and applying to a multifaceted workplace setting; judgement creates bridges and must be learned through experiential learning opportunities.²⁵ Healthcare changes rapidly, so training students to change with it, while providing them with the skills necessary to learn and adapt is critical. Without placing students in the ever-changing work environment, the students will not be able to learn necessary skills to be successful in this type of environment.²⁶ Internship experiences can foster the development of a master adaptive learner by allowing students to learn in a workplace environment that supports learning experiences that encourage active learning for groups and individuals.²⁰

Environment is crucial for the novice learner to begin learning about judgement as the connection between learning and applying in a dynamic setting. For example, a study similar to this research using the JTOG tool was conducted with first-year medical students as part of their orientation prior to their medical internship.²⁷ This study included a student-only team activity on Zoom and the use of the JTOG tool as part of the post-activity assessment.²⁷ Results highlighted the aspects of teamwork necessary among the medical students to succeed as “collaborative and supportive future physicians”.²⁷ These results indicated their team activity strongly encouraged friendly interactions (Likert score: 1.2) and mutual respect, confidence, and trust (Likert score: 1.4) which were similar to the findings in this current study. In contrast, understanding the roles and responsibilities of each member was noted as an area of improvement for the medical students (Likert score: 1.9) whereas this was determined as an area of strength for the internship site teams (Likert Score 1.56). One very important distinction is that this Zoom activity with medical students was completed virtually including only students, while the current research included experiences with interprofessional teams physically working in a workplace environment. This comparison supports the inclusion of this teamwork activity in undergraduate internship curricula to assess if students are placed in environments that allow them to learn the skills required for application and confirms the applicability of this tool in this type of interprofessional workplace setting, rather than a student-only learning setting. This information is valuable to university programs because the existence of measurement tools for use in workplace assessment is a current gap, and the JTOG can provide formative feedback to educators with regard to whether the students were placed in an appropriate internship/ clinical environment for the novice learner to learn how to be a healthcare professional.^{21,28}

Shared Leadership

It is evident in the current study that students were placed in an environment conducive to learning by experiencing shared leadership. The leveling of power and inclusion into the team's decision was qualified as shared leadership and developed as a theme from the responses of students for all 5 of the open-ended questions as seen in Table 3. Students provided examples in comments such as, “one thing that I am taking away from this activity that changes the way I look at teamwork is making sure everyone on the team feels like they have a role, know their role, feels valued, and that they are able to contribute.” Another student responded, “many people working together can be more beneficial and provide higher quality care, rather than working individually.” Shared decision-making is a key component of shared leadership. Shared decision-making reduces the asymmetrical power between the clinician and the patient/client and therefore not surprisingly, healthcare guidelines recommend a shared decision making process between the clinician and the patient/client.^{29,30} When measuring the outcomes of high quality, team based medical care, shared decision-making improves patient satisfaction, adherence, and health outcomes substantially.²⁹ Three components are required for shared decision-making: accurate and impartial information be relayed to a patient and support team; a practitioner who is proficient in communication and can individualize data given a particular scenario; and an individual's values, goals, preferences and concerns are incorporated into the communications.³¹ Critical to optimizing safe and effective patient/client care is consistently effective communication/collaboration among several healthcare disciplines.⁴ However, it has been shown that interprofessional training incorporating such collaboration has been lacking.³²

The concept of communication was also described in student answers in many different contexts, as seen in Table 3. Effective shared leadership requires frequent and open communication while coordinating with multiple people in a changing environment. Regular, open communication fosters trust within a team which invites ideas and opens the door for feedback and active listening.²⁰ Ultimately, the ability to effectively share information is driven by confidence in self, and without experiences to build confidence, the ability to share information and work on a team that values shared leadership is impaired.³³

Confidence

Students benefited from the experience in the final theme of bolstering confidence as seen in Table 3. One student responded “I think providing adequate and appropriate feedback is important when working with a team. When I was given feedback that was

positive and then something I could work on, I felt motivated and confident going forward.” Additionally, the importance of asking questions (and the psychological safety and appropriate environment for this), was a theme from a different question. One student responded with “sometimes it is hard to know what questions to ask if there is no prior knowledge or exposure of this type of care or patient. Looking back now, there are probably more questions that I feel like I could’ve asked.”

Students typically enter the professional arena as a blank slate with educators and supervisors who must demonstrate professional behavior development through modeling, mentoring, and feedback.³⁴ This first stage of learning in the workplace allows students to have affirmation that this profession is a good fit. Once students develop a sense of validation in their professional endeavors, they develop a sense of trust, and then are ready to give up dependence in order to declare a sense of independence and confidence in their role.³⁴ Developing skills as a student initiates the development of professional self-concept and self-esteem.³⁴ Inserting the student into these interprofessional workplace environments can help improve their confidence by first increasing their number of experiences in the workplace, as seen in Figure 1. Environments that allow people to feel comfortable asking questions can result in an improved feeling of psychological safety and confidence. Confidence in professional identity can help with confidence in an interprofessional identity. This dual identity is the first step toward interprofessional collaborative person-centered practice.³⁵ Additionally, early opportunities to learn and build confidence in the workplace can add value to educational experiences, which can positively impact enrollment in healthcare programs.^{11,12}

Academic internships include evaluations of competence of the novice learner. Competence is how good you are at something, while confidence is how good you think you are at something. The imposter phenomenon can be conceptualized as perceived fraudulence. Individuals experiencing imposter phenomenon are apprehensive in situations in which their competence is implicitly or explicitly evaluated.³⁶ As people gain experience, confidence often climbs faster than competence, and confidence could remain higher than competence, which can be dangerous for patients/ clients.^{36,37} Embarking on an internship experience includes knowing that performance will be evaluated, and can decrease the imposter phenomenon experienced when entering the workplace and increase both competence and confidence simultaneously. Purposeful implementation of learning experiences in the workplace can allow a novice to work towards improved skill without falling into the trap of overestimation of skill.³⁸

Relevance for Use in Undergraduate Internship Settings in the Future

Previous research conducted at Saint Louis University demonstrated that IPE programs should include assessment of collaboration behaviors, should be intentionally structured and embedded in academic programs, and need to engage both the students and the stakeholders to provide feedback that can be utilized for program improvement.³⁹ Intentional IPE curricular design allows for more organic and authentic interprofessional learning, and IPE curriculum should demonstrate clinical relevance.³⁹ The use of the JTOG tool and debrief questions within the undergraduate internship course was an intentional component within the IPE curriculum. This tool coupled with additional questions allowed both the student and the stakeholder to gain valuable feedback about the overall internship experience with regard to behaviors of teamwork. This information was then mapped to accreditation competencies to assess whether or not the internship site placement provided a valuable and meaningful learning experience for the student. The inclusion of the JTOG assignment in the 400-level internship course, was preceded by IPE education as part of a 200-level introductory course which focused on changes in knowledge, skills, attitudes, and belief.⁴⁰ It is recommended that students begin learning foundational IPE principles early within the learning continuum, guided by the education system, and then apply foundational skills to more advanced healthcare content over time as they gain more experience.^{3,39} Learning experiences across the learning continuum facilitates insights into the understanding competency-based assessment and professional development.⁴ With this longitudinally integrated work, education systems need to continue to work to break down barriers that separate professions, sequester professionals from patients/clients and convoluted access to health in communities.^{3,4}

Limitations

It is important to acknowledge several limitations to this study. First, this was a feasibility study within a single undergraduate program. Second, very few studies currently support the use of the JTOG tool in this type of undergraduate internship setting. Lastly, the interprofessional teams at internships within this study were not uniform and varied from site to site.

CONCLUSION

It is evident from the current study that environments optimal for effective learning possess important aspects such as shared decision making, communal leadership, and a mentor proficient in communication to model collaborative care for undergraduate health and exercise science interns. For undergraduate students, internships may be the first time they have been evident to these professional skills and the expectations of health and wellness professionals. In order for these students to transition from student to professional, they need role models in the work environment to model how to collaborate in order to practice and build confidence

in collaborative skills, prior to attempting it on their own. To this end, academic internships will need to be evaluated for important aspects of collaborative skills. The JTOG in combination with the debrief questions, may be an effective way to not only evaluate the students, but also the internship sites in these collaborative skills necessary for practice. In accordance with CAAHEP, this teamwork assessment allowed students to be exposed to specific components of the performance domains and competencies including, but not limited to: importance of communication, application of active listening techniques, exposure to the professional work environment, conflict resolution, and realization of scope of practice. This is important information for internship coordinators and program directors to gather for accreditation purposes and to ensure the university is partnering with quality internship sites that foster rich educational experiences for students.

Undergraduate students in healthcare programs are the future. A health-care system shift will only happen if educators produce graduates who are collaborative and community-oriented. Longitudinally integrated clinical education that is patient-oriented with an emphasis on shared leadership across the continuum of health professionals is necessary to prepare health professionals for future collaborative practice. Inserting the student into a highly functioning workplace environment allows the student to model shared leadership and improve their confidence. Implementation of interprofessional education within internship experiences at the undergraduate level, with intentional and reliable assessment of outcomes, is imperative in order for universities to produce the health professionals needed for an improved health care system and a healthier society.

In summary, the JTOG proved to be a valuable tool: 1) to assess internship site teams within the healthcare field in order to justify the continued partnership between the university and the internship site; 2) to demonstrate that accreditation competencies are met by student learning experiences; and 3) as part of intentional interprofessional education curriculum at the foundational education level within the learning continuum.

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