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A Thematic Analysis of the Attitudes and Perceptions of Faculty Towards Inclusion of Interprofessional Education in Healthcare Curriculum

Jitendra Singh *Minnesota State University Moorhead*

Tracy Eisenschenk Minnesota State University Moorhead

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Introduction

Healthcare organizations require both clinical and non-clinical professionals to demonstrate increased understanding of each other's role and expertise to ensure the delivery of quality care (Singh & Salisbury, 2019; Steinert, 2005). In response to the increasing recognition that healthcare professionals lack understanding of the roles of other disciplines and the need to improve patient outcomes, interprofessional education (IPE) has been promoted as a method to improve interdisciplinary collaboration, reduce barriers and preconceptions between healthcare disciplines and develop professional competencies (Guraya & Barr, 2018).

The past decade has seen a proliferation of IPE in educational settings across the United States (Addy et al., 2015). Interprofessional learning and education has been deemed necessary to educate and prepare health professionals who need an increased understanding of the roles and responsibilities of colleagues from other healthcare disciplines (Lash et al., 2014; Hinderer et al., 2016). The recent interest in IPE largely developed from the patient-safety movement where failure to work as a team and lack of interprofessional communication and collaboration were identified as causes of harmful medical errors (Dow & Thibault, 2017). Furthermore, IPE has been identified as part of the solution to address other areas of healthcare, including health inequities and rising costs by providing care and expertise equipped to respond to the complexity of patient needs (Guraya & Barr, 2018). Training clinical and non-clinical staff to develop competencies in teamwork and communication is considered essential for preventing and reducing these errors.

Review of research in the field of IPE suggests that there has been an increased focus on student perspectives and attitudes in clinical programs (Singh & Salisbury, 2019; Prentice et al., 2015; Hammond et al., 2015). It is noteworthy that researchers have primarily focused on programs that tend to engage students from a variety of clinical disciplines in team-based IPE learning sessions. While it is important to understand the perceptions of students enrolled in clinical programs where IPE has been implemented, efforts must be made to examine the attitudes towards interprofessional facilitation and implementation by faculty facilitating the education in healthcare education programs. This is particularly important, because the attitudes of faculty towards IPE have been proposed to be both barriers and antecedents to the successful implementation of IPE (Curran et al., 2007; Loversidge & Demb, 2015). Furthermore, it is important to consider faculty from both clinical and non-clinical healthcare education programs, as most of the literature has emphasized faculty from mainly clinical disciplines. Focus on faculty members can inform both academic and non-academic institutions to develop strategies to engage faculty and successfully implement IPE as part of curricula, ongoing training and professional development. The purpose of this qualitative study was to explore attitudes and perceptions of faculty towards inclusion of IPE in healthcare curriculum. More specifically,

researchers aimed to explore faculty perceptions of IPE; importance of IPE in curriculum; resources available to implement IPE; and challenges faced while including IPE in curriculum.

Methodology

This study employed qualitative research methodology to obtain data from faculty members who participated in the study. These methods allowed researchers to gain insights into individuals' thoughts and feelings that could impact their behavior and actions (Sutton & Austin, 2015). Qualitative research methodology has been widely used in academic settings to explore and evaluate attitudes, preferences and perceptions of individuals towards interprofessional learning and education (Holmes et al., 2018; Kersbergen, 2020; Schwarzbeck, 2019). For this project, researchers primarily focused on how faculty in health professions programs define IPE, importance they place on including IPE in curriculum, resources available that could help in IPE implementation and challenges encountered while including IPE in planning and delivery of courses.

Ethical Considerations & Participant Recruitment

Approval for the study was obtained from the Office of Research Ethics at the university. Contact information of all the faculty members who taught classes in health professions programs was obtained from the organization's website; these health professions programs included: nursing, healthcare leadership, project management, operations management, social work, speech language hearing sciences, gerontology, health and physical education and biosciences. Emails describing the purpose of the study, semi-structured interview process, and benefits and problems associated with the study were sent to 28 faculty members at the university. It is important to note that invitation emails were sent to all the faculty members who taught in health professions programs at graduate and undergraduate levels. Information about total time required for the study and voluntary participation was also included in the email. A reminder email regarding the study was sent every 20 days for a period of 2 months.

Researcher – Instrument in Research

Morrow (2005) suggested that a qualitative study report should describe a researcher's experience with the topic under discussion and experiences with the research topic. The team consisted of two researchers. One of the researchers who had a significant role in designing the study was doctorally prepared and had experience in implementing IPE in health care and education settings. Other member of the team had preparation in the field of health sciences/administration. All the researchers were trained in research methods and had extensive experience in professional healthcare settings. The team met regularly as they completed the research process. More specifically, several on-campus and Zoom meetings were organized to collect data and work on analysis. Zoom is a web-conferencing tool commonly used to hold online meetings and complete team projects.

Participants

Protection of participants' anonymity is a key consideration while conducting/completing qualitative research projects. Researchers made several efforts to protect identifying information about research participants (described in section data collection). A total of 11 faculty members participated in the study. The average time spent/taught in their current academic position was 7 years. Approximately 91% of the participants were doctorally prepared, and nearly all the participants had at least 8 years of experience in healthcare organizations. The median age of the participants was 45 years and ranged from 30 to 65 years. Ten participants were female, and one was male. The participants represented 5 different disciplines: nursing (undergraduate and graduate), health services administration (undergraduate and graduate), project management, speech, language and hearing sciences and public health. Out of 11 faculty members, 4 faculty members taught in both graduate and undergraduate programs and other participants primarily taught in undergraduate programs. Further, majority of the participants (82%) of participants taught in clinical programs. It is important to note that students, across all the programs, are exposed to interprofessional experiences and work with students from different professional and academic preparation.

Research Site

The study was conducted at a public university located in the mid-west US. The university serves a variety of students including first-generation college students, full-time working adults, and various traditional and nontraditional students. In addition to offering undergraduate degrees, the university also offers 12 masters, 2 specialist, 1 doctorate, and several graduate certificates and licensures. The academic affairs division consists of: (a) College of Arts, Media & Communication; (b) College of Business & Innovation; (c) College of Education & Human Services; (d) College of Humanities & Social Sciences; (e) College of Science, Health, & the Environment; and (f) Division of Graduate Studies.

Data Collection & Major Areas Explored

Semi-structured interviews, using several key questions and open-ended statements, were conducted to collect data from research participants. Each interview lasted for sixty to ninety minutes. Three interviews were conducted in person, and eight interviews were conducted via online Zoom meetings. All the participants provided written consent prior to participation in the study. All the interviews were recorded (audio) and then transcribed verbatim. Verbatim transcription of data is widely considered to be important to the analysis and interpretation of data collected during interviews (Strauss & Corbin, 1998). Written transcripts were sent to all the faculty members who participated in the study for approval. Data was collected until saturation was reached (Pitney, 2002; Forero et al., 2018).

The interview guide explored areas related to faculty perceptions of IPE; importance of IPE in curriculum; resources available to implement IPE; and challenges faced while including IPE in curriculum. Additionally, participants were asked to describe their respective program's approach to IPE and to also share their experiences while working with internship students or students who were completing projects in healthcare organizations. Further, participants were asked to share their thoughts/feedback on inclusion of IPE in online health program.

Rigor of the Study

The "Four Dimension Criteria" was utilized to establish rigor of the study (Forero et al., 2018). These dimensions include credibility, dependability, confirmability, and applicability. It is noteworthy that these criteria were based on trustworthiness procedures suggested by Lincoln and Guba.

Credibility

In order to refine the overall process of interviews such as time management and coordination of in-person/Zoom meetings, the lead researcher conducted 4 pilot interviews. While the first two interviews were conducted via Zoom meeting (video off), arrangements were made to complete in-person interviews with the other two participants. This helped in further refining data collection procedures. Researchers provided background information, study consent forms and relevant information about the study procedures prior to beginning of the interview. This helped participants in understanding information about the research project. Usage of semi-structured interviews provided flexibility and allowed researchers to ask clarifying questions and request more information if needed.

Researchers' background/expertise as noted in section "Researcher-Instrument in Research" also helped in enhancing credibility of the research procedures. Additionally, peer debriefing sessions during different phases of data analysis helped in identification of key research findings (Forero et al., 2018).

Dependability

Extensive literature review was performed, and a comprehensive draft of study procedures was prepared and submitted to subject matter experts prior to seeking approval for the study. These subject matter experts included a team of researchers and practitioners in the field of interprofessional education and learning. Further, the research interview guide was written in consultation with an IPE leader who had more than 15 years of experience in professional healthcare setting and academia. A final draft, after including comments from experts, was submitted to the Office of Research Ethics at the university for approval (Forero et al., 2018).

The research team transcribed data verbatim and reviewed the transcripts against recorded data for accuracy. Transcripts were sent to the participants for approval, and appropriate changes were made to the transcribed interviews once suggestions/feedback was received from the participants. Several steps were undertaken to ensure accuracy of the coding and data analysis process. The researchers coded all the interviews separately and then met to discuss codes, themes, and patterns. This also helped in reaching mutual agreeable themes once researchers had the opportunity to resolve any discrepancy. Regular meetings were held to enhance rigor of the research procedures and findings (Forero et al., 2018).

Confirmability

The team met several times while collecting data and working on analysis. Each researcher brought "different perspectives" to the process of analysis. Efforts were made to address issues or complex topics during these meetings. Further, investigator triangulation was used to further enhance confirmability of research findings. Investigator triangulation was achieved by discussion and adoption of mutually acceptable methods by researchers who participated in the study. Notes and other documentation provided by research participants also helped in validating the data that was collected (Forero et al., 2018).

Applicability

The applicability of the results of this research study to other faculty members who are trying to implement or include IPE in courses or education programs depends on the degree to which there is similarity between academic institutions (work environments) (Lincoln & Guba, 1985; Denzin, 1994; Goodwin & Compton, 2004). Usage of quotes to explain themes also allowed researchers to demonstrate the transferability of research findings. It is important to note that most of the codes were identified in the initial few interviews (7 interviews). Final four interviews did not provide significant new information, and there was repetition of concepts from the first set of interviews. Frequent meetings for coding and discussion of any variations in key categories (and themes) helped in refining codes and themes of the collected data (Forero et al., 2018).

Data Analysis

Thematic analysis was selected for analyzing qualitative data collected in the current study. This methodology offers a flexible form of analysis that can be modified to fit the needs of different studies yet account for complexity in the data; it has been found to be effective at examining the perspectives of different research participants, outlining similarities and differences between groups, and generating insights (Nowell et al., 2017; Luke et al, 2016). Thematic analysis can also be useful for summarizing key components of a large data set as the methodology requires a structured approach to handling and organizing the data to identify patterns and themes.

Data Familiarization

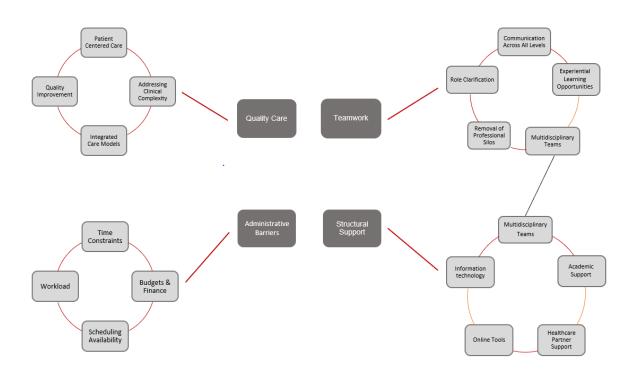
The process of data familiarization requires researchers to be involved in transcribing digitally recorded interviews. For this project, researchers read and re-read written interviews to ensure that data has been correctly transcribed. This also allowed researchers to become familiar with the data (Luke et al., 2016; Braun & Clarke, 2006).

Developing Codes

Each line of the transcripts was reviewed, and labels and codes were developed to encompass the concepts indicated in participants' responses. The developed codes were gathered and categorized into key themes. In the initial round of analysis, the researchers met to discuss the developed themes, determine areas lacking exclusivity, and identify areas where more inquiry was needed.

Identifying Themes and Developing Map

Once codes were generated in the second step, these codes were grouped into themes. It is important to note that creation of thematic map allows researchers to assist in development of themes (Luke et al., 2016; Braun & Clarke, 2006). The figure below illustrates a thematic map produced while conducting the research analysis. This map allowed researchers to link and organize initially identified codes into overarching themes.



Review of Themes

At the fourth step of the analysis, researchers gathered and re-examined all the themes to ensure that these themes reflected the interview data and also answered the research questions. At this step, it was evident that several initial codes were shared or common to more than one theme. This led to refinement/revision of thematic map constructed in the previous phase of the data analysis (Luke et al., 2016; Braun & Clarke, 2006).

Analysis and Naming Themes

Researchers worked towards developing all the themes in depth and carefully reviewed the overall focus of the project. All the themes were further refined, and appropriate names were assigned to each theme. Efforts were made that names of these themes conveyed a sense of collected information during the research interviews (Luke et al., 2016)

Producing Report

Lastly, researchers worked on identifying quotes/comments from the transcribed data that represented the research findings. Usage of this analysis framework allowed researchers to link/examine participants' comments in light of existing research on the topic under consideration (Braun & Clarke, 2006).

Results

Eleven faculty with experience in implementing and including IPE in graduate and undergraduate health profession education participated in the study. Nineteen preliminary codes that required further refinement emerged from the initial data analysis. Four themes emerged upon collation of the codes: teamwork, quality care, structural support and administrative barriers.

Teamwork

Multiple faculty defined IPE within the context of fostering and developing teamwork and collaboration across healthcare disciplines. Participants noted the problem of silos across professions occurring in academic and professional settings and the need to develop a collaborative environment in order to address complexity and acuity of patient care. For example, participant 11 indicated:

I think it's critical for all healthcare professionals, not just healthcare administration or pharmacy, to work interdisciplinary, interprofessional, interprofessional education, you know especially nursing, medicine, pharmacy, dentistry, chiropractic... just to have an idea that their educational program involves is one thing. Many disciplines still operate in silos. So that you are a little more aware, and when you do get out in practice, like I said, you can work together as a

team better realizing each other's strengths. Where everybody works for the patient and not just for the specialty part of the patient, you know what I mean. Especially practice otherwise, they just focus on one area of the body, or one specialty, and not the whole patient.

Participants also reflected on the importance of experiential learning and internship as this will allow students to learn from other disciplines, recognize strengths and weaknesses inherent to each profession, and create opportunities for a transfer of knowledge to occur. To support this claim, participant 5 who has more than 10 years of experience as a nurse practitioner (now working in faculty position) indicated:

Experiential learning opportunities, I feel are very valuable. Whether it comes in the form of a capstone course that the students are taking, or whether it's an internship that the facility is offering or hiring for, which you commonly see with healthcare internships. It's really important because it provides an immersion experience for those students. Depending upon what their internship is on, what facility it's at, what unit it's on, they get a real in depth look at what their role would be should they be working after they graduate in that area. And then allow them to dive deeper into a higher level of healthcare for the patients. Commonly we'll see them working on a project that is meant to improve the experience for patients.

More than half of the participants emphasized the importance of teamwork, professional application of interprofessional education and learning from other disciplines. Participant 2 who had more than 20 years of experience as a healthcare professional and now works in a faculty role mentioned:

We have to provide students that experience because once they get out and are working on their own, they have to be able to work with the other healthcare professions and see the value. I think that's the important part when students see the value of those other professions. Earlier, nurses could do a respiratory therapist job. Well nurses can do a social workers job. Now it's really changed to where nurses can't do it all, and we need to help our students realize that you need to be able to work with all healthcare professionals and not view them as just somebody that's just an add on but an important part of the team in taking care of your patients.

Quality Care

The importance of providing high quality care to patients was evident in all the interviews conducted for the study. The need to address the increasing complexity of patient presentations in addition to complexity of the healthcare delivery system necessitated the need to equip with interprofessional experience. The faculty stated that IPE was important for promoting patient-centered care, driving quality improvement, and utilizing evidence-based practice.

Participant 7, a faculty member in nursing and health programs, indicated:

The patients are much more complex no matter what setting you are in, whether it is in long term care, acute care, home health, the clinic setting, the patients are much more complex, they have a lot more going on. It's not just their health that needs to be addressed. It's their physical health, mental health, what their current living conditions are, what their support systems are, things like that. And no one health care professional can take care of a patient independently. All the different professions need to work together to provide the best healthcare possible to the patients.

Participant 3, a faculty with several years of quality improvement and professional management experience explained the concept of quality care with help of an example of a patient suffering with diabetes:

In professional healthcare settings, let's consider an example of a type 1 diabetic patient who is suffering from multiple problems. High quality care is the end goal. To make that effective, doctors are not working in isolation. There are so many other people, who are involved, and a part of that team. And that starts with people who run the diagnostic tests, people who end up taking that patient to their home and making sure that person is well settled there and has all the care that the person needs, depending on what kind of need we are talking about here. pharmacists, social workers etc. So, if that is not a one-person job, then why are we not training professionals for that team environment, a collaborative environment?

With 37 years of experience as a health professional and now in faculty role, participant 9 mentioned:

IPE is important to support high quality and efficient practices in healthcare settings. Even nursing students do not always understand working with extended other professionals. Students must learn to work with individuals from other health professionals including non-clinical workers when it comes to patient care. Also community healthcare workers should learn to interact with individuals from a variety of disciplines as they will be working with patients/population who may not be admitted to hospital/nursing facility.

Structural Support

Participants consistently discussed the need for support from organization and healthcare industry to support implementation of IPE in curriculum and content. More specifically, participants emphasized that support from academic institutions, surrounding hospitals and other healthcare agencies is important especially when instructors work on implementing IPE and related initiatives in classes. Further, the need for a sound information technology department in academic institutions was expressed as this would allow instructors to implement IPE and engage students in a completely online medium of instruction.

Participant 6 indicated:

I believe the organization really does encourage us not to work in our silos and to really reach out to other programs and those kinds of things. They are really all about service to our community. Also, supporting one another, even if we are not in the same discipline. Or across campus. So, they really do value that a great deal. I feel like sometimes maybe there could be more of that, maybe it's just because we kind of tend, kind of work in our silos a little bit. But I think that there's definitely opportunities for that, just having the time to sit down and have those conversations and have those creative juices, get the creative juices flowing.

Participant 4 indicated:

Well I would say that our organization, or my organization, has been supportive in the development and delivery of the interprofessional approach in the graduate programs of graduate nursing, MHA and MBA. They were very supportive in getting us together, supporting our efforts as we collaborate on developing the curriculum and getting it through our system, on marketing it and marketing it out to healthcare vendors.. is not the right word... stakeholders in the region. We specifically share a lot of faculty and expertise. This makes a richer environment as faculty as we can learn from each other. Also, for the students as they learn. I really don't think that IPE is isolated to improving experience for students; I think it improves the caliber and teaching quality of the faculty because you are getting them exposed to other perspectives even if it's not on the content. Getting outside your own little box and seeing how someone else kind of approaches an online course. I always walk away with an idea of "I should do it that way, that way is a lot more efficient or richer, or students seem to like that better." It helps both the faculty and the students to have IPE.

Approximately all the participants felt that IPE activities should be created in collaboration with support from healthcare organizations. This would allow students to work on projects in a real-world setting.

Participant 1 indicated:

We work in collaboration with healthcare organizations to find opportunities for students. Our community of interest helps us in creating meaningful learning experiences for students so students are able to work in collaboration with the finance department, human resource department, quality improvement and other clinical departments. This allows students to gain real exposure to the field.

Participants expressed that support from instructional technology, use of virtual learning platforms, online simulation, and virtual reality should be used to build health professional skills and confidence that students/emerging health professionals need to function in an ever-changing healthcare environment.

Barriers

Administrative barriers became a common theme across the respondents. Faculty reported on the impact of time constraints and difficulty finding the space to develop IPE learning activities. Multiple interviews reflected on problems with scheduling constraints when attempting to incorporate speakers from other professions and disciplines. A few of the faculty also noted the limitations of online support, availability of specific courses and programs, the impact of budgets, and the difficulty in effectively standardizing internship placements as all components that create administrative barriers. To support this claim, one of the participants mentioned:

I think we need to bring other people on board with this idea of why it is important and we can probably gather some support. Budget is always an issue, right, and time is another big constraint. So, if all of the things align, then, I think we can achieve the IPE competencies in a much better way.

Another participant said:

I'm very supportive of IPE in terms of I think it is the direction we need to go to for students to match the expectations of their workforce. They can't wait until they're in the job to learn about what other professionals do and how they do it. But I think it would be nice to have more support from administrative structures to help with designing those instructional experiences and the time to do it, you know. We need experts from different disciplines and different parts of the country (or even the world) to be able to teach/present in our programs. I mean I would love to have reassigned time to really redesign the curriculum. To have that, but that's not an option in my opinion right now. I think it's essential if we want to move forward being competitive with programs.

Accreditation requirements, an extension of administrative barriers, were also highlighted as a challenge to successfully implementing IPE. Different programs have different accreditation requirements, creating difficulties when attempting to develop curriculum for cross-listed courses that meet the standards required for both nursing programs and business administration programs.

One participant stated:

Well one of the challenges I think, from a program perspective, is that the accreditors' expectations are that students in specific clinical professions will take all of their courses with the profession specific rubric. So we have to involve faculty with training in that discipline for the class. We can't pull in a business class for their leadership class. It has to be nursing. At least that's the way I've been interpreting that. Now that might be changing. And the other thing is too, I think in a university setting, it's so easy to get siloed.

Faculty also reported on the clinical-centric structure of nursing programs and the impact this framework has on course development. They noted the difficulty in developing effective IPE components in the courses due to the need to address not just accreditation standards within nursing, but also the need to focus on clinical skills development for practitioners. This training adds to the time constraints when attempting to incorporate additional IPE content into the standard courses.

Discussion

This research aimed to understand the experiences and perceptions of graduate and undergraduate faculty implementing IPE in health profession programs at a Midwest university in the US. There remains a scarcity of research on interprofessional education and even more so regarding faculty perspectives and attitudes towards IPE in both clinical and non-clinical health programs. A search of the literature yielded limited data on faculty perspectives, attitudes and perceptions towards IPE initiatives and implementation. Furthermore, research on faculty perspectives has primarily been conducted with faculty who work primarily in clinical disciplines (Loversidge & Demb, 2015; Bennett et al., 2011) revealing a gap in the literature with regard to IPE and health administration and management programs.

Interprofessional education and preparation allows health professionals (clinical and nonclinical) to collaborate, build a culture of trust and respect so they are able to provide team-based care in a non-threatening environment (Darlow et al., 2015). Faculty members have a significant role in planning, designing and implementing new curriculum in health profession programs. This research demonstrated that faculty, in both clinical and non-clinical health programs, place an importance on incorporating IPE in education programming, namely as a means to support the delivery of quality care, create opportunities for professional networking, developing competencies and skills relevant to the workplace, and being able to respond to the complexity of community needs of patients being served. While these findings are consistent with other studies (Dallaghan et al., 2016; Anderson & Thorpe, 2010), it is important to note that there is limited evidence or literature where researchers have examined attitudes of faculty from non-clinical health based discipline. It is extremely important to engage faculty members from different health profession programs because there is an increased need for healthcare workers to overcome professional barriers and work as a team. In the midst of COVID-19 pandemic, the need for interprofessional collaboration is more important than ever. To practice effectively in a highly complex healthcare environment, students/health professionals must have a clear understanding of other members' educational background, skill set, expertise and limitations.

With regard to resources, most of the faculty reported positively on the support that the university provided for promoting IPE. Specific to challenges, the most common themes that emerged were administrative barriers, professional silos, namely the constraints of time for developing IPE content and the need to meet the unique accreditation requirements of each

health profession program. The findings align with the results of the IPE project that was completed at a medical science university in Iran (Ahmady et al., 2020). Research findings from the current study showed that inadequate infrastructure, lack of support and discipline specific behavior lead to unnecessary problems when efforts are made to include IPE in curriculum.

Exploring faculty perceptions from both clinical and non-clinical disciplines helped in identifying challenges, barriers, and opportunities to successfully implement IPE in curriculum/content. This is one of the key strengths of the current study as researchers were able to explore diverse perspectives from faculty members across different disciplines. By conducting semi-structured interviews, researchers were able to ask questions and gain in-depth understanding of the process of IPE implementation and barriers in course curriculum and content. Weaknesses of this study include a limited number of participants and focus on a single site/academic institution. There is increased need for studies/research projects, so additional participants from different academic institutions can be included in the study. This will help in gaining insights in the experiences of faculty members in IPE projects.

In conclusion, inclusion of IPE in curriculum allows students to focus on patient-centered care in a team-based setting instead of prolonging the discipline-centered behavior that dominates health care. By including IPE in curriculum, faculty members can emphasize (early on in their classes) that effective teamwork requires a mentality of collaboration and the fresh outlook that all the team members are capable of contributing to patient well-being. Although participation from limited number of faculty, this research study contributes to the body of evidence regarding faculty perceptions of IPE in healthcare curriculum, an area where evidence is scarce. It is important to recognize challenges that faculty members face while implementing/including IPE in their curriculum. Insights into faculty thoughts and perceptions will allow academic leaders and healthcare providers to see issues surrounding inclusion of IPE in education programs. These findings may help administrators and leaders as they plan for implementation of IPE in their respective organizations.

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