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Original Article

Exploring UK undergraduate healthcare students' perspectives on how to effectively design IPE: A qualitative study

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الملخص

أهداف البحث: الكشف عن وجهات وأراء طلبة مرحلة البكالوريوس في البرامج الصحية عن مقترحاتهم لجعل التعليم المتداخل الطبي ناجح. الوعي لضرورة تطبيق التعليم المتداخل الطبي في البرامج الصحية لمرحلة البكالوريوس أصبح متزايدا في كل أنحاء العالم. آراء الطلبة عن تجاربهم في التعليم توفر معلومات مفيدة قد تساهم في تطوير مناهج التعليم، ومع ذلك لم تدرس أرائهم بشكل كاف في علم أبحاث التعليم المتداخل الطبي.

طرق البحث: تم إجراء مجموعات النقاش المركزة مع الطلاب الذين قد حضروا أنشطة التعليم المتداخل الطبي، وكانوا من عدة برامج صحية من ثلاث جامعات بريطانية. نسخ مجموعات النقاش تم تحليلها بحسب طريقة تحليل الموضوعات.

النتائج: خمسة وعشرون طالبا شاركوا في مجموعات النقاش. الطلبة المشاركين يرون بأن التعليم المتداخل الطبي يجب أن يقدم بشكل مستمر خلال سنوات الدراسة لضمان الإستمرار في التعلم. اعتقد الطلبة أن تعريف التعليم المتداخل الطبي لمن يحضرون النشاط لأول مرة مهم لزيادة وعيهم بهذا النوع من التعليم وتحفيزهم. ذكر الطلبة أن عدم معرفة/ فهم التعليم المتداخل الطبي قد يؤثر سلبا على رغبتهم في حضور الأنشطة، والأهم على تفاعلهم مع هذا التعليم. خلال أنشطة التعليم المتداخل الطبي، اعتقد الطلاب بأن التوجيه ووجود التعليمات المساعدة مهم لتحسين تجربة التعلم. الطلبة يفضلون تمارين المراجعة، بينما الاختبارات الرسمية التقليدية تم وصفها بأنها عائق يمنع من التفاعل خلال الأنشطة.

الخاتمة: اعتبر الطلبة التعليم المتداخل الطبي وسيلة مهمة لتأهيلهم للعمل الطبي مستقبلا، لكن الطلاب يشعرون بأن تجارب التعليم المتداخل الطبي يمكن لها أن تتحسن أكثر بالتخطيط المناسب لضمان تقديمها بشكل إلزامي ومستمر خلال سنوات الدراسة. لتجارب تعليم متداخل طبي أفضل، تصميم وتقديم هذه الأنشطة يجب أن يكون على توافق مع متطلبات التعليم والتدريب الخاصة بكل برنامج صحي.

الكلمات المفتاحية: التعليم المتداخل بين التخصصات؛ تصميم التعليم المتداخل؛ فعالية التعليم المتداخل؛ طلاب البكالوريوس؛ العمل التعاوني

Abstract

Objectives: To explore healthcare undergraduates' views on how to design effective IPE. The need for interprofessional education implementation in undergraduate healthcare education is gaining wide recognition globally. Students' views about their learning experiences can offer useful insights to advance teaching and learning courses. Thus, in the IPE literature, students' views on how to effectively design IPE can help shape future IPE plans.

Methods: Purposeful sampling was used to recruit healthcare students who attended IPE events across three UK institutions. Virtual focus groups were conducted, and audio recorded. Transcripts were thematically analysed and relevant themes were presented under three subheadings, pre, during and post IPE session.

Results: Twenty-five students from medicine, nursing, pharmacy, midwifery and other disciplines participated in six focus groups. Students thought IPE should be offered consistently across the programme's years of study to ensure learning continuity. Students from programmes

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with higher placement hours (nursing and midwifery), suggested more IPE in placement. Pre-IPE sessions, introducing IPE to students attending for the first time was perceived to be important as the lack of awareness/understanding of IPE could adversely impact their willingness to attend and their engagement. During IPE, interaction with other students was perceived as the core of an effective IPE session. Students reported difficulties in communication with other students via online IPE sessions and thought they were less engaged compared to face-to-face sessions. Post-IPE, students valued reflective exercises, whereas traditional formal assessment was seen as a barrier to engagement with the learning.

Conclusion: Students considered IPE valuable to prepare for future practice. However, students felt that IPE experiences could be enhanced with proper planning to ensure regular compulsory IPE exposure. For better IPE experiences, IPE design and delivery should be in line with each healthcare programme's unique learning and training curriculum.

Keywords: Interprofessional education; IPE delivery; IPE design; IPE effectiveness; Undergraduate

Introduction

The capacity to collaborate with others in the healthcare team has been recognised as a basic competency for healthcare professionals working in different healthcare settings.[1,2] A lack of knowledge regarding other healthcare team members' roles and unrealistic expectations of them have been identified as barriers to effective teamwork in healthcare settings.[3,4] The World Health Organisation (WHO) has been actively promoting interprofessional education (IPE) as an innovative teaching strategy to lay the foundation for setting up a "collaborative practice-ready" workforce.[5] IPE activities can facilitate effective teamwork as learners can learn about the professional responsibilities and boundaries of each profession, how different professionals work together, and how to communicate effectively.[6–8]

Over the past three decades, support for IPE has come from the professional regulatory bodies requiring IPE to be incorporated into healthcare undergraduate programmes.[9] There is a growth in research that illustrates IPE is well received by learners and can support improvements in learners' attitudes towards collaborative practice.[10] However, on some occasions, IPE events can result in unwanted outcomes such as a decline in attitudes towards IPE and teamwork, and reinforcement of stereotypical views. Negative outcomes were reported in some IPE studies without specifically clarifying which aspects of the curriculum led to such negative experiences.[11–13] Thus, it was recommended that IPE teaching and learning mechanisms need to be explored in-depth to provide robust evidence to guide IPE planning.[14]

Several barriers to IPE implementation have been identified by educators including lack of understanding of IPE concept, lack of consistent funding, differences in assessment requirements between programmes, and logistical barriers.[15] Furthermore, educators lack adequate evidence to show how IPE can be designed in the most effective way to achieve the sought outcomes.[14,16] IPE reviewers commented on the lack of complete reporting of design components of IPE curricula in IPE studies.[10,14,17] Hence, there was limited data available to inform educators involved in IPE design and delivery.

Student opinions about teaching and learning can provide valuable insights to advance courses and teaching pedagogies since they are the recipients of the learning.[18,19] Furthermore, it has been advocated to actively engage students in the design of the curriculum and to consider them as equal partners rather than mere consumers of education.[20,21] In IPE literature, few studies have explored students' views regarding IPE design, as they mainly reported students' experiences about a single IPE event.[12,22] Thus, to help address this gap, exploring healthcare students' views about how to effectively design IPE can guide educators' plans for future IPE implementation. This research study aimed to identify healthcare undergraduate students' perspectives on how to design effective IPE.

Materials and Methods

A qualitative approach was used for this study. Focus groups which are group discussions about the topic of interest[23] were conducted to gather the views of students from different professions about IPE. Rich and deep insights can be produced through participants' interaction in focus groups, thus a wide range of views and ideas about the topic of interest can be captured.[24] Purposeful sampling was adopted to sample five higher education institutions within a single region in the UK as part of a large study.[25] Then, undergraduate students from healthcare programmes, such as medicine, nursing, pharmacy, midwifery, physiotherapy, and occupational therapy, were purposefully recruited if they have attended IPE events. Students in their advanced years were chosen as they could give feedback by drawing upon their overall learning experiences in IPE sessions to the point of data collection.

The contact information of administration staff was sought to help distribute invitation letters to the students via internal networks. In addition, social media account coordinators were asked to post invitations on the programmes' accounts. All participants received shopping vouchers (£25 for each) for taking part. The focus group topic guide was constructed in relation to the research objectives and informed by relevant literature[26,27] (Supplement 1). Due to the COVID-19 pandemic, video calls were used to conduct the focus groups. In line with recommendations for virtual focus groups,[28,29] we aimed for a maximum of seven participants per group. Focus groups were conducted with students from the same professional group to ensure more candid answer.[12,23] Data collection continued until data saturation was reached.[30]

All focus groups were audio recorded after obtaining written consents and were transcribed verbatim. Aided by NVivo12 software, transcripts were analysed following the six phases of thematic analysis by Braun and Clarke; familiarisation with data, generating codes, identifying themes, reviewing themes, categorising the themes and writing the report.[31] The first author familiarised herself with the data and then inductively coded the data. Initial codes were compared across transcripts then all codes were subjected to peer scrutiny by the research team to ensure consistency. Then codes were categorised into major themes in relation to the research questions and were finalised with discussions with the research team.

Results

Five institutions were approached, and students from six programmes across three institutions responded (Table 1). Data were collected from September 2021-Februray 2022. In total, twenty-five students participated in six focus groups, with a maximum of seven participants per group. Due to unexpected dropout and low response rate, two groups included two students, however, these two groups were referred to as focus groups for consistency. Most of the participants were female (20 out of 25), and most were in their final year (19 out of 25). The average time for focus groups was 105 min.

According to the students responses, IPE curricula were different across the three sites, with high exposure to IPE in site A, and the least in site B. Students from site A, shared ideas for IPE design from IPE events they attended, which were described by them as positive events. While students from site B and C, reflected on some events they described as negative and shared suggestions that would help better design IPE in the future. For enhanced presentation of the results, it was decided to present the themes across the three stages of designing any IPE event; pre, during and post. This was done as students' views and suggestions fit into those stages (Figure 1).

Pre-IPE

The main themes for pre-IPE were curriculum planning, IPE content, and preparing for IPE.

Curriculum planning

Concerning the overall planning of IPE, students suggested having IPE events regularly, i.e., several events per each year, so they become familiar with the IPE concept. Students felt that IPE needed to be integrated each year in accordance with taught modules to incorporate a wide variety of health care programmes.

> *"To have IPE sessions for each year of study and depending on what you've learned. So having a breadth of different experiences with different healthcare teams, just at different points, depending on what we've learned."* F13, Pharmacy, FG4

Considering their demanding academic schedules of lectures, exams and placements, students reported that optional IPE sessions did not encourage attendance. Students from site C, recommended making IPE events compulsory to improve their confidence in approaching other healthcare professionals in future practice.

> *"People like me who … I don't do extra beyond my already really busy, hectic, draining schedule. Actually, if that [IPE] was compulsory for me, I would really put a lot of energy into it but if it was just an optional thing, I don't really tend to engage."* F25, Midwifery, FG6

> *"I think it* [The lack of IPE] *will just make it harder for me, I think if I had these IPE sessions, I would have so much more confidence approaching other professionals,"* F24, Medicine, FG6.

IPE content

The overall consensus amongst students was that IPE content should be tailored from a professional development point of view preparing them for multi-disciplinary team (MDT) working. Specific practical aspects were suggested including the roles of the other professions, transitions of care or referral, and the nature of information needed to be communicated/documented upon patient handover or counselling.

> *"Mainly, knowing exactly their scope of practice, and how that integrates with our role as future physicians. Like, at what point are we getting them involved, say if you were a GP referring this patient off, at what point should you be handing over care."* F7, Medicine, FG1

> *"In a case study you could explicitly phrase it in terms of practice. So it could be like, this kind of situation has happened, what would you need to communicate to each other, what would this type of profession need to communicate to that profession?"* F23, Nursing, FG5

Complex cases involving transitioning between different healthcare sectors and contact with different healthcare professionals enabled students to get a comprehensive view of how their roles might cross over. Students also suggested real life scenarios that show breakdowns in patient care, because they were perceived as impactful in delivering the message of the value of teamwork.

> *"I feel like you can learn so much from other people's mistakes, I feel like it makes you realise why it's so important that you work together as a team, otherwise you will harm the patient at some point."* F16, Pharmacy, FG4

> *"So in our course, we may only be taught about the occasion when the patient comes into the pharmacy, but with IPEs, we could see the interaction of a patient at home, with a paramedic, and then a phone call with the doctor and then possibly the admissions through hospital. So it brings it all together makes it more coherent."* F10, Pharmacy, FG2.

Students from programmes with higher placement hours like nursing and midwifery programmes suggested planning more IPE activities in placement. IPE activities in placement were seen as helpful to break down barriers and strengthen their confidence when approaching or interacting with other professions.

Table 1: Participant demographics and information of IPE curricula across the sites.

Focus group (FG)	Programme/ Year of study	Institution	Participant number	Gender	Mode and Number of IPE	Nature of IPE activities	Range of professions in IPE
FG1	Medicine/5th	A	1	M	Mandatory 12-18	Problem-based learning, case-studies, ward simulation and virtual reality simulation	Medicine Pharmacy Nursing Occupational Therapy Physiotherapy Midwifery Social work Paramedics Physician associates
	5th		2	F			
	5th		3	M			
	4th		4	F			
	4th		5	M			
	3rd		6	M			
	3rd		7	F			
FG 2	Pharmacy/4th		8	F			
	4th		9	F			
	4th		10	F			
FG 3	Occupational Therapy (OT)/3rd	B	11	F	Non-mandatory 2	Problem-based learning.	Not clear
	Biomedical sciences/ 2nd		12	F			
FG 4	Pharmacy/4th	C	13	F	Mandatory for some disciplines 1–3	Problem-based learning, case-studies.	Medicine Midwifery Optometry Pharmacy
	4th		14	F			
	4th		15	F			
	4th		16	F			
	4th		17	F			
	4th		18	F			
	3rd		19	F			
FG 5	Child nursing/3rd		20	F			
	Mental health nursing		21	M			
	Adult nursing		22	F			
	Adult nursing		23	F			
FG 6	Medicine/5th		24	F			
	Midwifery/3rd		25	F			

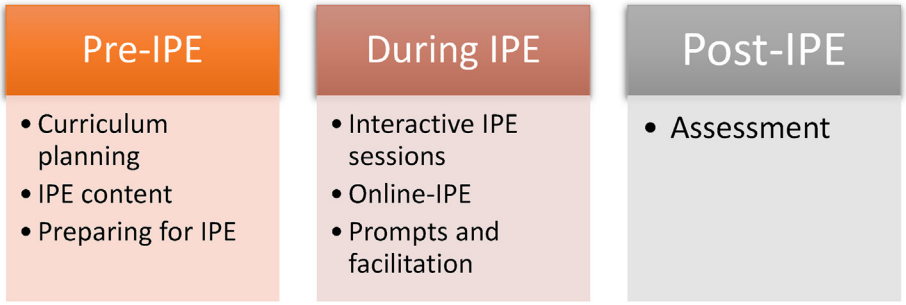

Figure 1: Main themes per the relevant stage.

> *"I think IPE in the clinical locations would be fantastic. It would really take down a few barriers that a lot of people feel about talking to each other. For example midwives speaking to doctors, always feeling intimidated."* F25, Midwifery, FG6

> *"I wish we'd had more [IPE] with medics. I still feel when I'm out on placement that I don't have that same sort of connection with medics, and maybe at student level it would be better if I did."* M21, Nursing, FG5

Preparing for IPE

Students suggested offering a brief introductory lecture to define IPE and its main objectives so the students can be aware of the nature of IPE and its potential value.

> *"If there was just one lecturer from the person who runs IPE that sort of breaks it down, how this is going to help us in the future. Whilst we do know it, having people tell us why it is important somehow makes it more important."* F12, Biomedical sciences, FG3

Additionally, students acknowledged the value of offering pre-reading materials before each IPE session. Students viewed coming to IPE session with a brief background around the topic would help them to actively engage, participate and gain the most out of the sessions.

> *"Because some people would come into those sessions without really reading up on that. And you set yourself up for already not being able to learn that much and get as much as you can out of it because you don't know the context."* F16, Pharmacy, FG4

> *"These IPE sessions, they're kind of almost what you make it. So, if you know that there's a gap in your knowledge, and you have this opportunity to ask questions, then you're going to help fill in those gaps in your knowledge. "F7*, Medicine, FG1

During IPE

The main themes were interactive IPE sessions, online-IPE, and prompts and facilitation.

Interactive IPE sessions

Interaction with other students was perceived as the core of an effective IPE session, and hence events lacking any interaction between the students were thought to have limited benefits. Interactions and discussions with students from other professions via problem-based learning or case discussions were regarded as valuable to break any future communication barriers in MDT.

> *"I really like case studies and problem based learning just because it opens up the discussion side of things. Because the whole point of IPE is to gauge that direction from everybody else and I find other styles of teaching is a barrier to that."* F20, Nursing, FG5

Students believed that problem solving or case studies that involved input of various healthcare professionals were most suitable to stimulate meaningful discussions and group work. The ability to contribute to the discussions was seen as a key to ensuring students' engagement, thus, it was suggested that cases need to highlight the strengths of each profession involved.

> *"I think it's about making sure that everybody feels empowered and that their expertise is valued, they're the experts in their field in your group."* F11, Occupational Therapy, FG3

> *"I think there was one particular session that was on mental health and it felt quite good to have my understanding of mental health, as a mental health nursing student, I find that valuable, you know, to provide maybe a bit of knowledge."* M21, Nursing, FG5

Online-IPE

Students appreciated that online platforms offered feasible alternatives to face-to-face during COVID-19 pandemic. Nevertheless, students expressed difficulties when communicating online as it requires further skills and patience to read cues through digital platforms compared to in-person. Furthermore, students felt that over Zoom® or Teams®, students were less engaged as most did not want to have their cameras or microphones on; hence there was no possibility for starting any discussions.

> *"It's difficult to assess communication online, because in real life you have cues when someone wants to talk, it's a bit more difficult when you're on Teams."* F9, Pharmacy, FG2

> *"I'm one of the shyer persons, so when it's over Zoom, I wait until someone starts the conversation, because I feel awkward to start by myself. But when it's face to face, there*

are always lecturers around, so you want to be interacting and you don't get randomly assigned to random people." F18, Pharmacy, FG4

Prompts and facilitation

Students suggested having some prompts to guide the discussions during the session for a better learning experience. Students explained that during IPE sessions, they may lack knowledge about the other profession's scope of practice, thus, having some prompts was suggested to guide the discussions.

*"There were prompts that allowed one group to lead and there was a bit more structure to it, it's like, midwives now explain what a booking appointment is to these students and vice versa, maybe explain the drug."*F25, Midwifery, FG6

There was a shared agreement across all focus groups that IPE facilitators have a critical role in IPE sessions, mainly in keeping the flow of discussions and ensuring an open safe space to encourage everyone to contribute. Additionally, students explained that facilitators can help them to integrate information shared by students from other professions within a bigger picture (i.e., MDT work). This can lead to a better understanding of the session content.

"They can link whatever they've discussed about. Because obviously if we're talking about two different students from two different healthcare courses, we might not be able to make that link ourselves, in terms of our understanding of the patient case." F15, Pharmacy, FG4

Post-IPE

The general consensus across the focus groups was that assessing IPE is challenging given that IPE learning outcomes (LOs) are likely to be different from one programme to another. In addition, it was thought that IPE discussions vary from one group to another within the same session, making it challenging to structure a standardized assessment.

"It would be difficult to assess IPE sessions, because for any assessment, you should have like a learning objective set. But in this case, it's quite different, like learning objectives of nursing, pharmacy, and medicine, it's a bit difficult to adjust it." M3, Medicine, FG1

"If you think about it, you might only have one representative of each profession within that group. So if they are lacking their expertise of their area, you might get marked down. So it might be quite unfair." F16, Pharmacy, FG4

Formal assessment for IPE was seen as a pressure that might override their interest in being present and engaged with discussions. However, students recognised assessments can help encourage student engagement and suggested personal reflective exercises could be used to assess IPE fairly.

"If you have this expectation that you have to listen to a session because you're going to be tested on it later, I'm just going to be thinking about what am I going to be asked on the exam, Rather than, being present, and having those discussions." F7, Medicine, FG1

"I think it should be some kind of reflection piece, an individual thing, what have you taken away? What are you going to put into your practice? That will tell you what kind of level of interest and investment they had." F11, Occupational Therapy, FG3

Discussion

This study aimed to explore healthcare undergraduate students' views on how to design effective IPE. Six focus groups with a total of twenty-five students were conducted involving students from various programmes across three institutions within the UK. Students offered insights on key aspects that can create meaningful IPE experiences. Furthermore, there were specific suggestions by the students to tailor IPE curricula based on the programmes' nature, such as the suggestion for IPE in placement by students from programmes with high placement hours.

Regarding overall IPE curriculum planning, students suggested that compulsory IPE events should be offered regularly over the programme's study years rather than on an ad hoc basis. This particular suggestion was by students from sites B and C where they had very few IPE events. This suggestion is concurrent with the recommendations in the literature for an iterative approach to IPE provision progressing from early years to advanced years.[32] Such an approach can reinforce understanding of IPE and allows the development of the collaborative competencies. Previous studies suggest that IPE as a concept may not be well understood by some educators and this can hinder educators from creating effective IPE experiences.[15,25,33] This study showed that lack of awareness of IPE concept by the students can adversely impact thier willingness to attend and, more importantly, their engagement with the learning. Thus, for students attending IPE for the first time, IPE providers are encouraged to offer a pre-brief session about IPE, its purpose and the professions involved. Insufficient knowledge about the other professions participating in IPE was identified in the literature as a barrier to learning with, from and about each other.[26]

Among the key findings of this study was that students perceived IPE more beneficial if it was relevant to the teaching and training of their respective healthcare programmes. For instance, based on our findings, IPE in placement was perceived as beneficial particularly by nursing and midwifery students. The number of clinical placement hours varies considerably between programmes.[34,35] Nursing and midwifery students have a larger number of placements, compared to MPharm students, thus, structuring formal IPE placement opportunities was viewed as efficient to offer meaningful IPE experiences. Previous studies suggest that embedding IPE in placements can ensure relevance to the training and learning of some healthcare programmes, especially if it was structured well and guided with clear objectives.[36,37]

Regarding the teaching methods in IPE sessions, a wide range of interactive teaching methods has been recommended

in the literature, including problem-based learning, case discussion, role plays and simulation.[38,39] The value of interactive approaches was highlighted in pre-qualification IPE review by Abu-Rish et al., as more effective than didactic approaches.[40] Moreover, in a qualitative study involving healthcare graduates across different Australian universities, IPE experiences that involved genuine engagement and opportunities for interaction with students from other professions were valued the most by the graduates.[36] Our study corroborates these findings showing that various mechanisms can be used to facilitate effective IPE on the caveat that they facilitate interaction/engagement between students from other professions.

Students across the sites were not very supportive of online IPE as they felt online platforms hindered effective interactions. However, it is worth highlighting that the students' views might be biased as all courses were delivered online during the data collection period per restrictions of COVID-19 pandemic. There are studies published post COVID-19 showing that online IPE was received well and resulted in positive outcomes.[41,42] Thus, the blended approach of online-IPE and face-to-face might be a reasonable alternative, but ongoing evaluation is still needed.

Regarding IPE assessment, it is widely accepted that assessment drives learning, and so it was presumed by educators that students would value IPE if it were assessed on a summative basis.[43,44] However, students in this study had a contrasting point of view regarding IPE assessment due to the difficulty of creating a standardised assessment. Reflective assessment was regarded as the fairest form to ensure students' attendance and engagement. Almoghirah et al., argue that the decision on the appropriate assessment format should be aligned with the intended IPE outcomes, whether it is a change in attitudes, knowledge or skills, and encourage educators to use various assessment forms.[45] Nevertheless, IPE assessment is still a challenging issue and needs further research. Thus, to help inform IPE assessment, further research is required to explore effective means for assessing how students across different professions learn and acquire IPE competencies.

The strength of this study is that views and suggestions were not specific to a single programme or institution. Therefore, they can be useful beyond this study's context. Collecting the views of students with positive and negative IPE experiences helped better illustrate which aspects can make IPE a meaningful experience for students. The main limitation of this study was that all students were self-selected, thus the views reported here could be biased as participants might be IPE supporters. Due to unexpected dropout, two groups had only two students, however, these two groups were referred to as focus groups for consistency.

Conclusion

Findings from this study suggest that effective IPE for undergraduate healthcare programmes requires regular mandatory IPE activities throughout the programme's year of study, introducing the IPE concept to students prior to implementation, and a variety of IPE activities in terms of teaching methods underpinned by interaction between students from different professions. It is also important to ensure IPE activities are relevant to teaching and training of respective healthcare programmes. Findings from this study can inform educators and policymakers involved in IPE design and delivery.

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Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

This study received the University of Manchester Ethics Committee approval at 30/03/2021 (Ref: 2021-11128-18402).

Author contributions

MA conceived and designed the study, overseen by JH, AW, SW and AH. MA collected and analysed the data, overseen by JH, AW and AH, with input from SW. MA drafted the manuscript, which JH, AH, AW and SW commented on and edited. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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Appendix 1. Topic guide for focus groups of the students

A- Opening question

1. Would you please introduce yourself, your name and year of study? (helps for the tape)

B- General questions about interprofessional education (15 min)

2. What are the words that come to your mind when you hear the term "interprofessional education" IPE?
3. What knowledge can be acquired in IPE activities that you would not in uni-professional learning?

C- Questions to explore IPE curriculum (20 min)

4. Can you describe the IPE activities you have attended so far? Number and nature? (Reflect from data forms).
5. How do you describe these activities? Are you satisfied with the activities? Why? Prompts; if not, how can they be improved?
6. How is IPE via online during COVID pandemic? Is it the same/different as face-to-face IPE? In what perspectives?

D- Questions on how to make IPE effective (30 min)

7. Which topic are the best for IPE events and why?
8. Which groups of professions and why?
9. Which teaching strategy and why? *Prompts: lecture from experts from professional groups (other than yours), case discussions, simulation*
10. How it should be assessed?

Closing questions

Is there anything else you would like to say/add?
Did you have any questions regarding today/the research?

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