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Improving Understanding of Teaching Strategies Perceived by Interprofessional Learning (IPL) Lecturers to Enhance Students' Formulation of Multidisciplinary Roles: An Exploratory Qualitative Study

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Abstract

Background: Interprofessional Learning (IPL) is an educational process intended to equip health and social care students with appropriate knowledge, skills, and attitudes for effective interprofessional working. By and large, the literature review highlighted in this article has shown that IPL is a worthwhile pursuit, with some studies highlighting conflicts over best teaching methods to use. In response, the aim of this exploratory research was to improve understandings of teaching strategies perceived by IPL lecturers to enhance students' formulation of multidisciplinary roles.

Methods: An exploratory qualitative study was carried out. Semi-structured interviews were conducted, with a purposive sample of 4 consenting IPL lecturers. The objectives of the study were to extend understandings of strategies believed to enhance or inhibit students' accurate assimilation of Allied Health Professional (AHP) roles, to nurture awareness of potential obstacles that may inhibit successful delivery of IPL, to promote insight into what constitutes quality delivery of IPL, and to identify potential topics for further research.

Findings: Five themes emerged from the data: (1) IPL lecturers hold contrasting viewpoints about the need for IPL; (2) improved understanding of roles is directly proportional to time spent with AHPs; (3) perspectives differ about when and where IPL should be taught; (4) stereotyping and negative attitudes inhibit accurate role construction; and (5) positive role modelling by lecturers is important.

Conclusions: This article acts in a conscience-raising manner and highlights five key areas of lecturers' understandings about how to effectively deliver IPL. This nurtured awareness will be used to develop and evaluate new implementations in IPL and education.

Keywords: Education; Interprofessional Learning (IPL); Interdisciplinary; Learning objectives; Phenomenology; Qualitative

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Introduction

The World Health Organization promotes schools of health to deliver Interprofessional Learning (IPL) to Allied Health Professional (AHP) students [1]. The aim of IPL is to create a strategic environment that promotes students to accurately formulate allied health professional roles. IPL includes educators and learners from two or more health professions, joining together to create a collaborative learning environment. The goal is to develop the necessary knowledge, skills, and attitudes

that enhance teamwork and proficiency in clinical practice [2]. In an ideal situation, IPL should be integrated both vertically and horizontally throughout the curriculum. Traditional IPL learning objectives include

1. Demonstrate an understanding of core qualities that promote effective communication and teamwork between various health and social care professionals.
2. Demonstrate an understanding of policy and processes that direct delivery of health and social care in the UK.
3. Explain principles, rationale, and benefits of collaboration within health and social care teams.
4. Define roles of key professionals that comprise health and social care teams.
5. Describe benefits of interprofessional working from the perspective of the recipient.
6. Demonstrate skills that display understanding of interdisciplinary roles through analysis, assimilation of evidence-based care plans, reflection, and dissemination of knowledge. Traditional IPL learning objectives, as adapted from the School of Health's IPL Pre-Registration program.

Given the multifaceted evolving complexities of delivering effective healthcare, IPL is currently considered an indispensible part of health and social care curriculum [3,4,5]. In the UK, the importance of providing healthcare in the community led to a number of collaborative modes of delivering IPL. Through the 1970s, 80s, and 90s, several IPE schemes were developed, which steered an assortment of health issues. Government policies promoted the worth of group effort and hence the need for cooperative training. The Centre for the Advancement of Interprofessional Education (CAIPE) was established in 1987 to supply a crucial resource to help health professional educators discuss and exchange new initiatives. The history of IPE includes a series of separate attempts that have addressed specific needs within specified situations. Increasingly, systems have been instituted within universities and a variety of care settings. Many of these partnerships use approaches that incorporate a variety of disciplines and respond to the specific needs of targeted groups. Within these enterprises, there is a lack of systematic study of processes and outcomes from delivering IPL, which threatens the sustainability of some undertakings, particularly in light of government drivers for cost effectiveness.

In addition, rapid changes in healthcare systems effectively blur interprofessional boundaries. This, in conjunction with the increasing demands from an ageing population, has refocused aspects of healthcare from acute to chronic. In response to such variables, the goal of IPL is to promote cooperative understandings between AHPs, to promote effective interdisciplinary teamwork and enhance the provision of quality, patient-centred care [4].

There are several debates about how to integrate IPL into undergraduate curriculum [5,6]. For example, early introduction of IPL in the first year of a curriculum

has been shown to advance positivity amongst AHP students [5]. In contrast, Nisbet et al. [6] considers that delivery in third and fourth year of degree programme is more effective for achieving educational objectives. Venue of integration is also considered important, with greater success measured in the clinical environment, where teaching is enhanced through patient contact [7].

Currently within universities, IPL modules comprise an organized form of interdisciplinary contact. Outside the delivery of IPL modules, lecturers by and large adhere to their own validated curriculum. Without correctives about particularized AHP responsibilities, students are at risk of constructing incorrect stereotyped roles [5], with student assimilation of accurate perceptions of AHP roles and responsibilities at the heart of IPL. Success herein involves eroding imprecise stereotypes of one another's skills and responsibilities [8]. Hean et al. [8] dispensed questionnaires to a cohort of (n=1200) AHP students and confirmed that freshers arrive at university with an established set of stereotyped perceptions of AHP roles. Midwives, social workers, and nurses rated highest on perceptions of interpersonal skills and team playing, whilst doctors led with regard to academic and decision-making abilities. Doctors, midwives, and social workers ranked highest on leadership qualities. All 10 professions rated high on confidence and professional competence, with the exception of social workers in relation to practical skills. These were in fact invalid perceptions, since the complexities of such skill development is dependent on a myriad of individual aptitudes. In reality, all health and social care professionals are required to develop competence in interpersonal and teamwork skills, academic aptitude, decision-making dexterity, and leadership capacity; thus, merits herein are particularized to individual character.

In comparison to other AHPs, students comparatively view their own profession more positively [7]. Lack of understanding about AHP roles in early student learning can restrict development of constructive, collaborative, and understanding relationships between disciplines [9]. If correctives are not given prior to years three and four of an undergraduate curriculum, negative attitudes and inaccurate stereotypes may become entrenched [5,7,9]. This viewpoint supports initiating IPL at the commencement of an undergraduate curriculum [5], since misunderstandings about AHP roles can reduce respect and elevate fear, which may ultimately promote rivalry between AHPs [5].

Each profession has its own exclusive and inclusive role to play within health and social care provision [10,11]. Social attitudes towards each AHP role proceed in some measure from attitudes and values expressed by educators [12]. With this in mind, the role of the IPL educator is to encourage, direct, and develop collaborative thinking between AHP [12,13], in conjunction with disintegrating mythical representations that rate individual disciplines as superior or inferior on a hierarchy [14]. Expressed attitudes that promote territorialism, isolation, elitism, and competition must be challenged since they threaten to undermine the objectives of IPL education [15].

By and large research emphasizes a need for IPL in undergraduate curricula. The literature review assessed that IPL is a worthwhile pursuit, with some studies highlighting conflicts over best teaching methods to use [9,12,14,15]. Within the body

of IPL literature, there is a dearth of information about educators' understandings of effective and ineffective teaching strategies that are used to deliver IPL. Consequently, the aim of this exploratory study was to improve understandings of teaching strategies perceived by IPL lecturers to enhance students' formulation of multidisciplinary roles. The objectives of the study were to nurture awareness of lecturers' understandings of potential obstacles that may inhibit successful delivery of IPL, to promote insight into what constitutes quality delivery of IPL, and to identify potential topics for further research.

Methods

An exploratory qualitative study was carried out to build understandings of teaching strategies perceived by IPL lecturers to enhance students' formulation of multidisciplinary roles. This research focuses on answering a broadly stated question about individual viewpoints, which, unlike deductive quantitative reasoning, may generate many answers. Developed conceptualizations will arise from the actual narratives of the participants. The exploratory nature of the method permits the researcher to focus more precisely on informants' concerns. The approach utilizes a naturalistic inquiry, with focus on perception rather than experience. The importance of the qualitative method is to give voice to IPL lecturers, without manipulation or forced influence about a matter that directly concerns self, student, and ultimately patient welfare. This approach assumed that the underlying essence of meaning would emerge through the reflective description of the informant's working world [16-18]. Verbal expression of this description could be fixed in text, where the meaning intended by the speaker can be located [19]. The principles of comparative analysis were used to elicit and clarify meaning from the interview transcripts [20]. The strength of comparative analysis relates to the process of comparing and contrasting emerging concepts within the data to guide discussion [20]. This research focuses on a particular group of people who operate in an explicit environment, with the selected approach permitting exploration of issues that otherwise would be difficult to understand through statistical based techniques [21]. In a shift away from the positivist approach to scientific enquiry and toward the interpretive sciences, a number of scholars recommend that the qualitative approach is suitable to acquiring depth of knowledge [16,18].

Ethical approval

Ethical approval was obtained from Glasgow Caledonian University (GCU) School of Health ethics committee.

Participant selection

Within a qualitative method, sample size depends greatly on the testimonies of the individuals involved and the richness of the data. This means the number of research participants can be very low. As such, the approach utilizes small sample sizes and acknowledges the limitation that findings cannot acceptably be generalized to the larger population. The research aim required, however, that an in-depth

approach was adopted that was necessarily qualitative. A decision was therefore taken to limit the number of participants, with a view to undertaking greater depth of enquiry. Non probability random purposive sampling covered assorted subgroups within the homogenous population, which increased the scope of the data obtained and enhanced the possibility of uncovering multiple realities. A purposive sample of 4 IPL lecturers consented to participate. Participants' experiences of IPL lecturing ranged from 3–5 years.

Interviews

Four individual face-to-face semi-structured interviews were conducted within a private office in the School of Health at GCU. Written consent was obtained and audio recordings were made available. Participants were afforded anonymity and confidentiality. The semi-structured interview schedule contained the following questions:

1. What teaching strategies do you think enhance or inhibit students' accurate formulation of AHP roles?
2. What do lecturers require to know about the roles of other AHPs?
3. What are your experiences of integrating professional groups?
4. How effective is IPL at integrating AHPs?

These relatively broad questions identified the initial focus of inquiry and aimed to attain depth of understanding. To achieve this, information was gathered to inform these broad questions. The broad questions were then refined using more specific questions, which led to more focused information-gathering as the study progressed. This meant that the research questions evolved in a cyclical manner rather than following one after another in a stepwise sequence. The aim and objectives created the starting point from which evidence in the report showed what was learned from the research encounter. Questions were asked and prompts given. For example: Can you provide an example? How would you go about this? Could you elaborate on that? Participants could make as many (or as few) comments as they liked.

Data analysis

Interviews were transcribed verbatim. All transcripts were read in entirety to assist engagement and generate interpretation from an initial sense of participants' stories. The rationale was to identify preliminary codes. The coding procedure was based on that developed by Charmaz, who suggests that open coding line by line, which, although rigorous, helps to reduce researcher influence and bias. Short descriptive labels were allocated to sections of the text, following which labels expressing similar concepts were grouped together to form themes. Labels and themes were then compared across transcripts. The allocated codes enabled the researcher to summarize and synthesize the data. During the writing process, literature was used to support the allotted labels and their properties. The selected quotes reflect themes that

unravel the unaffected understandings of the interviewed IPL lecturers' of teaching strategies that enhance or inhibit students' formulation of multidisciplinary roles.

Trustworthiness

To establish trustworthiness of the study, three issues are considered important: credibility, transferability, and dependability [22,23]. Inter-rater reliability was confirmed by the two researchers who carried out the data analysis to reduce the potential for researcher bias during theme development. The final category system produced was agreed by both researchers and accepted as being representative of the data. All data collected remained confidential and anonymity was imposed at the point of transcription. Researcher impartiality was clarified from outset, with biases or assumptions that may impact on inquiry established. The third researcher acted as an external auditor.

Findings and discussion

Five themes emerged from the data (see Table 1).

TABLE 1: Understandings of teaching strategies perceived by IPL lecturers to enhance students' formualtion of multidisciplinary roles

Themes
1. IPL lecturers hold contrasting viewpoints about the need for IPL
2. Improved understanding of roles is directly proportional to time spent with AHP
3. Perspectives differ about when and where IPL should be taught
4. Stereotyping and negative attitudes inhibit accurate role construction
5. Positive role modelling by lecturers is important

The themes have been constructed by the researchers in order to describe the lecturers' understandings of teaching strategies that enhance or inhibit students' formulation of multidisciplinary roles. Findings are not intended to be representative or generalizable; rather, due to their subjective nature, the aim is to make more explicit and open up for analysis areas of lecturers' thinking about methods of teaching IPL. It became obvious that experiences and understandings were sometimes duplicated by more than one participant. Although the data source is limited, this article has practical implications in that it highlights the opinions of four experienced lecturers about methods used for teaching IPL. Findings may be used to raise

awareness of areas for further research on approaches, methods, and strategies for delivering IPL aims and objectives. The first theme generated revealed contrasting viewpoints about the need for IPL in undergraduate curricula. Findings and discussions are as follows.

IPL lecturers hold contrasting viewpoints about the need for IPL

Three participants expressed contrasting viewpoints about the need for IPL in undergraduate curriculum. Participant 4 commented that IPL lecturers themselves need to have accurate insight into AHP roles:

> Yes I think you need [IPL lecturers] to have some understanding about other people's profession. (P4)

We each bring our backgrounds, beliefs, values, talents, and behaviour standards to work. Taken together, these define how we treat others and how we expect to be treated. They define what makes each group unique. To respect diversity is to recognize each health or social care discipline for its unusual and unique talents. Learning how to deal with diversity involves acquiring some new skills. In fact, succeeding at work is very difficult for those who are unable to collaborate with a diverse group of people. Diversity by itself does not make an organization strong or successful. Dealing with diversity in a healthy productive and proactive manner, however, can help an organization succeed. The following participant advocated that mutual respect for each other's roles was a precondition to developing quality and effectual relationships between professionals:

> Being able to work in a team, being respectful of other people's professions, being sensitive to other people's views and opinions. (P2)

Appropriate behaviour includes refraining from disrespectful treatment of the AHP group and acting only in particular ways in connection with it; that is, in ways that are regarded as fitting, deserved by, or owed to the AHP group. There are very many ways to afford respect. These include letting the AHP do their job, assisting where needed, abiding by their instruction, and not violating their professional action or talking about them in ways that deflect their worth or status. To express respect, behaviour has to be motivated by acknowledging the necessity of skill base. IPL should work towards orientating beliefs and perceptions about the necessity and purposes of each AHP role. To achieve this, it is key that lecturers clearly understand IPL modular learning objectives. The following informant articulated misunderstandings as such, in that they perceived the goal of IPL was to provide education about core generic skills encompassing all AHP disciplines:

> I don't think it gives them [students] an understanding of specific AHP roles. IPL is more about … we have commonalities within our job, so instead of teaching them all separately, just teach them collectively. (P3)

Deficient understanding of each other's professional roles has been identified as a structural barrier to the growth of mutual respect [8,9,24]. Parsell and Bligh [2]

define IPL as an educational process intended to equip students with the appropriate knowledge, skills, and attitudes required for effective interprofessional working. As such, this requires time to familiarize students with differing AHP roles.

Improved understanding of roles is directly proportional to time spent with AHP

Participant 3 articulated that appreciation of specific roles was directly proportionate to the IPL lecturer having direct contact with named professionals in a clinical context, in keeping with the views of Jacobsen et al. [7]:

> If that were to be the case [lecturers not having an overall understanding of AHP roles], it's probably because some of the lecturers at … have come straight into/stayed in academia. I would say, yeah, lack of workplace experience for an AHP. (P3)

Given that IPL is a relatively new concept [15], more mature lecturers will have gained interdisciplinary understandings within a historical clinical context. In the absence of contemporary practice, the evolution of professional roles may outdate prior understandings of working boundaries. This perspective endorses that IPL lecturers maintain some form of ongoing clinical contact to keep them up-to-date with AHP roles and responsibilities. Views about IPL teaching strategies were also specified.

Two participants confessed that on occasion a salient professional role was omitted during scenario analysis, consistent with the expressions of Gilbert [24]:

> I might leave somebody out if I'm not so familiar with them. Yeah, yeah, I mean, I'm more likely to remember the ones [professions] I'm more familiar with. That's absolutely true. (P1)

IPL lecturers' deficient understandings of particular roles may hinder integration and potentially disintegrate respectful relationships with students from the omitted profession.

> Probably if you didn't have a full appreciation of their roles and responsibilities, you'd maybe fail to understand really everything that the students were needing you to and it probably would be a barrier to integrating fully with them. (P4)

To sharpen proficiency, students are required to rehearse roles within multidisciplinary teams [25]. This may be accomplished by simulating situations in which students can identify the skills required and the fitting professional for effective delivery of care. It is important for lecturers to assess student understandings of interdisciplinary roles, with assessments implemented both before and after delivery of education, which incorporate analysis and assimilation of allied professional roles. Success may be measured through written assessment and/or dissemination of knowledge to others in classroom scenarios [26]. In addition, institutions ought

to provide IPL lecturers with the opportunity for update themselves on unfamiliar AHP roles.

Perspectives differ about when and where IPL should be taught

Three participants expressed views about the positioning of IPL modules within the educational curriculum and the suitability of venues for delivering IPL education. According to Pecukonis et al. [15], valid representations of roles are founded in clinical practice. Participants 2 and 3 agreed with this perspective:

> I do find that when you go into workplace and start working. That's when you very quickly find out who your colleagues are. Who your team are [interdisciplinary team] and what they do. (P3)

> I think the next place it [IPL] has to go to contextualise it, is out into practice. Work together in a much more integrated fashion. (P2)

The following participant expressed that IPL taught in university is ineffectual:

> Not quite making its mark. (P1)

These three participants stand in agreement and appear to hold understandings that the most ideal setting for IPL is in the clinical area. Whether taught in university or the clinical area, amongst other objectives, one focus of IPL is for students to gain an understanding of AHP roles so that contextual relationships can develop [8,9]. Within the classroom, students may engage in profession specific role-play as part of a multidisciplinary team, which explores and fosters understanding and rehearsal of appropriate communication. During clinical placements, students may experience interprofessional working within the practice setting. Further enhancement of IPL learning can be achieved through joint tutorials with AHPs, multifaceted case studies, journal clubs, and, where possible, clinical skills laboratories.

Two participants criticized early introduction of IPL into curriculum, claiming that students' inadequate comprehension of their own profession inhibited them from viewing a global picture:

> I think it's the wrong way round. I think IPL is a fine goal to bring altogether. But the point is, that you have to know who you are first, in order to know what you can contribute. (P1)

Before an individual AHP group attempts to embrace other AHPs, they need to know the basics of their own role. This involves knowing "who you are" and, more importantly, "who you are not." Whether this education takes place in the university or hospital, it is the foundation of how role relationships are formed, nurtured, maintained, or lost. The ability to relate to patients, co-workers, and managers in meaningful ways requires proficient communication skills.

> Students get a bit frustrated because what they want to do in level one is come in and be an OT or be a Physio or be a Podiatrist. They want to work for their exact group. (P2)

Nisbet et al. [6] identified that outcomes are more positive when IPL is introduced in the latter half of undergraduate curriculum because evolved understandings of one's own professional role promotes more accurate contribution to scenario analysis. In contrast, early introduction of IPL in curriculum may work towards eradicating inaccurate stereotyping of AHP roles [8].

Effective interprofessional working is influenced by the attitudes of healthcare professionals towards their own and other professional groups [26]. Hind et al. [26] found positive statistically significant correlations between stereotypes, professional identity, and readiness for interprofessional learning. As predicted, students identified strongly with their own professional group at the start of pre-registration education, with the consequent potential benefits of introducing operational IPL activities in the early stage of professional preparation, as it capitalizes on students' positive attitudes towards their own and other professional groups [26,27].

Stereotyping and negative attitudes inhibit accurate role construction

There are subtle cognitive processes that contribute to stereotypes and prejudices [26]. A stereotype is a popular belief about specific social groups or types of individuals, with stereotyping involving thought processes that organise beliefs about one group of people and their adopted values. As such, inaccurate input during stereotype development can create an inaccurate group profile [26]. IPL mechanisms should work to overcome ineffective, cognitive, and behavioural reactions to other AHPs. Two participants articulated that stereotyping of their own and other professional groups on occasion transpired during IPL, consistent with the Hind et al. [26] findings that this sometimes raised antagonism. Participant 1 expressed that competition between the professions can be a hindrance:

> They haven't actually got a sense of their own identity anyway. So their rivalry or whatever that might come up, comes out of ignorance. (P1)

The following participant understood that strategies should be implemented within the IPL curriculum to overcome students' existing negative stereotypes.

> There isn't any vehicle for actually tackling negative stereotypes. (P1)

Collaborative respectful interactions based on trust promote practitioner competence [28], with strategies required to evade tension when students fail to recognise the value of allied team members are required [27]. Students who have assembled professional hierarchies with variations in levels of respect [12,13] may transport their pre-conceived hierarchical frameworks into the classroom [12]. As such, broadcastings of flawed understandings may hamper AHP integration [8]. The following participant articulated that students afford some professions more respect than others:

> Certain ones [professions] are higher profile because they are better known. Some of the smaller professions, the public generally don't

> know what they do. So therefore they can't hold them in any regard. (P4)

Expressing unfavourable attitudes may initiate communication difficulties between AHP student groups [29-31] and as such inhibit cooperation [27].

Positive role modelling by lecturers is important

Effective teaching and role modelling are not separate entities. The differences are that role modelling requires a more expansive skill set [32]. A lecturer is someone who teaches and facilitates learning, while a role model is a person who has the power to convey particular attributes and values [32]. Informant one recognised that role modelling is a powerful teaching tool for communicating knowledge, skills, and professional values, in keeping with the findings of Cruess et al. [32]:

> All you have to do is snigger when another profession is mentioned and that is absolutely picked up, and if the teacher is doing it then the students learn that this is something to be sniggered at. (P1)
>
> Are you aware of lecturers sniggering or pulling faces? (Interviewer).
>
> Yes I am aware of lecturers doing that and not being as open or enthusiastic about a group. … Can impact on the learning of those students. (P1)

Highly regarded role models possess positive personal qualities, teaching abilities and exceptional clinical skills. Positive attributes of role models represent behaviours that can be modified or skills that can be acquired. A role model is a person who others look up to and admire. A role model provides inspiration and motivation to seek out accomplishments. Role models send messages about their beliefs by what they do and say. Traits of positive role models include being self-assured and happy with one's social identity, being able to handle stress positively, being trustworthy, showing respect for others, and delivering on promises. In this regard, IPL lecturers require self awareness of what they model to students [32]. Successful assimilation of AHP roles is, in part, attributable to IPL lecturers ascribing equal weighting to individual professional inputs [12,13].

Discussion

This article acts in a conscience-raising manner that extends IPL lecturers' understandings of strategies that enhance or inhibit students' accurate assimilation of AHP roles. Although the qualitative approach introduces study limitations, with the study group unable to represent the larger population as a whole—the small number of informants allowed greater in-depth analysis. Whilst this limits being able to make generalizations from the study findings, it has allowed the researchers to identify areas of IPL that merit further research attention. Policy changes are driven by initiatives; one example is the Scottish Common Core Curriculum (ScCore) Project [33], which identifies a need to improve relationships between education and healthcare

providers. The global aim of all IPL curriculum is to produce an education based curriculum that overcomes challenges faced by IPL lecturers and measures success at delivering module objectives [33]. Specific IPL training for lecturers may enhance understandings of how best to deliver education. As individuals dedicated to student learning, lecturers should work toward overcoming barriers and taking advantage of opportunities that improve the environment in which IPL teaching and learning takes place. Methods for doing so include reinforcing the strengths of current methods, pointing out weaknesses, and working to improve institutional culture.

The IPL lecturers' understandings identified in this exploratory study are thoroughly intertwined with the social psychology of organizations and inequality [34], social identity theory [35], group dynamics [36], and stereotyping [37]. A nurtured awareness and understanding of associated predicaments may facilitate the development of skills among IPL lecturers with developing skills to overcome obstacles to teaching and learning that prior research has identified. In 2008, the Scottish Government Health Department commissioned a project that evaluated a common shared learning program that involved 7,000 healthcare professionals. Findings showed that effective teamworking amongst AHPs can improve the quality of patient care; therefore, it is logical to suggest that if people are expected to work in teams, they should also be educated in teams [38].

Conclusion

Findings highlight the limited considerations of how to effectively deliver IPL. Nonetheless, developing evidence that helps lecturers understand how to effectively deliver IPL is a crucial part in promoting the delivery of quality education. From the five themes generated, the following interventions may be considered potential topics for future research:

1. Measure student classroom and clinical contact time with other AHPs and compare progress in achieving IPL modular learning objectives.
2. Omit/incorporate salient AHP roles into embedded case studies and measure the effects on students' levels of learning.
3. Compare and contrast students' stereotypes of AHP roles before and after their first clinical placement.
4. Measure the impact of IPL lecturers' positive role modelling on student attitudes toward AHP.
5. Assess effectiveness of workshops that prepare staff for the IPL lecturer role.

Results from appropriate, well designed research studies should work toward increasing understandings about how to deliver IPL aims and objectives.

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