

BMJ Open Another look at what teachers and students think about interprofessional learning as a shared experience in Iran: a qualitative research

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ABSTRACT

Objectives To explore experiences of interprofessional learning (IPL), and how faculty and students might want to participate in IPL opportunities as a form of shared learning.

Design Qualitative study.

Setting The Ministry of Health and Medical Education which is accountable for rendering service to the public, providing healthcare needs and improving the quality of medical education was established in Iran in 1985, to integrate medical education with healthcare services.

Participants A sample of six faculty members and seven students, purposively sampled for demographic characteristics and their experience regarding shared learning.

Methods A descriptive qualitative study using thematic analysis of content was conducted. Data were obtained using semistructured interviews and then analysed thematically. Data collection and analysis were concurrent.

Results Three categories were identified: the role of prologues in IPL, the role of structured IPL, and the role of context and structure in such a system for learning, representing seven subcategories.

Conclusion The findings indicate that experiences of learning with different professionals are complex, and these experiences shape their present and future workplace relations. Matching the existing educational context and structure with IPL and providing planned interaction and reflection among professionals are necessary to support IPL.

INTRODUCTION

Evidence indicates that teamwork and communication skills are not necessarily personal skills nor are they learnt ‘on the job’. Therefore, in recent years shared learning activities have entered the healthcare curricula in order to prepare students to be able to collaborate with colleagues and patients.¹ The appealing premise of interprofessional education (IPE) is that once healthcare professionals begin to work together, the team functions in a more efficient way and the quality of multidisciplinary patient care improves.² The Centre for the Advancement

Strengths and limitations of this study

- This is among the few studies that have explored interprofessional learning (IPL) as shared learning among those who have different experiences in the integrated medical education and healthcare systems.
- The qualitative design and use of semistructured interviews allowed for exploration of the complex factors underlying experiences of different professions.
- The transcription and interpretation of interviews has been checked by an independent researcher. Any points of disagreement were discussed and consensus was reached.
- Managers and curriculum planners were not included in this study, therefore their influence on conducting and providing shared learning including IPL remains to be investigated.
- Finally, a developing country such as Iran, with the integrated system of medical education and healthcare services has a very specific context. Study findings can only be interpreted within the context of those characteristics. So, there is a possible lack of generalisation of findings to the medical education system in other countries.

of Interprofessional Education has defined IPE as follows: when two or more professions ‘learn with, from and about each other in a way that helps to improve collaboration and quality of care’.³

The recent studies have mentioned the importance of delivering perfect health care using IPE because of its team working nature.⁴ There is a strong relationship between IPE and the resulting capabilities of the practitioners who collaborate.⁵ Guraya and Barr report that a positive impact and effectiveness of educational intervention has been achieved by the IPE programme in various disciplines of healthcare.⁶ Hence, it is hoped that early introduction of IPE in the curriculum may reduce the tendency to stereotype professional groups and will enable them to

collaborate effectively to improve health outcomes.^{7 8} Dhaliwal has commented on the importance of IPE in the development and sustenance of interprofessional collaboration and he believes that positive outcomes can be acquired through integrating IPE into the health education curricula.⁹

IPE is now becoming a permanent component of medical education all over the world. In USA, IPE has been highlighted as an approach that helps to achieve a 'triple aim'. This aim includes improving the care experience and health, and reducing per capita healthcare costs.^{10 11} In Australia, although there is growing effort to incorporate interprofessional learning (IPL) and IPE in professional health education, the meaning of full implementation remains to be debated.¹² Also, Iranian literature indicates that more students are interested in shared learning for healthcare professionals in the country.¹³ Irajpour's findings in 2010 showed that IPE is more widespread now than it was earlier.¹⁴

Although there is a growing tendency towards IPL as a key strategy to improve health outcomes leading to enhanced efficiency of the healthcare system,¹⁵ studies show that most of the health professionals' education happens individually. In fact, the curricula differ across disciplinary education training programmes, and even when students are learning common skills and content, they usually do so without interacting with their peers.¹⁶ Additionally, there are many challenges to design the purposeful and structured shared learning programme, and to practice collaboration and teamwork. Thus, absence of IPL results in a lack of interaction between different health professions. Page and Meerabeau point out a paradox that suggests this: on one hand, IPE is proposed as a solution to fix the shortcomings that differences created by the separate socialisation of health professionals have caused. The importance of these differences is that they cause collaboration and teamwork skills to be inadequate. On the other hand, these differences make it difficult to deliver effective IPL experiences.¹⁷

Despite an extensive search of the literature in developed countries, there are very few studies in developing countries like Iran.¹⁸ According to Cant *et al* IPL should be integrated in professional health education in the future.¹⁹ So, this article explores experiences of shared learning with other professions in an integrated system of medical education and healthcare services,²⁰ and how faculty members and students might want to participate in IPL opportunities as a form of shared learning in such a system.

METHODS

A descriptive qualitative study using thematic analysis of content was conducted. The aim of the study was to understand live experiences of students and faculty members of IPL and other form of shared learning. We conducted interviews because multiple perspectives and perceptions of a variety of people were sought to enable

Table 1 Description of demographic characteristics of participants

Participants	Characteristics	Number
Faculty members	Gender	Female: 3 Male: 3
	Discipline/field	Medicine: 2 Dental: 1 Nursing: 2 Hygiene: 1
	Teaching experience	Between 5 years and 10 years: 1 Between 10 years and 20 years: 4 More than 20 years: 1
Students	Gender	Female: 5 Male: 2
	Discipline/field	Medicine: 1 Midwifery: 1 Nursing: 2 Operating room: 1 Anaesthesia: 1 Physiotherapy: 1
	Clinical setting	Between 3 and 5 terms: 2 Between 5 years and 8 years: 5

better interpretations of the meanings of the phenomenon under study.

Setting

The Ministry of Health and Medical Education was established in Iran in 1985, to integrate medical education with healthcare services.²¹ This ministry is accountable for rendering service to the public, providing healthcare needs and improving the quality of medical education.²² It seems that changes in the structure and nature of the Iranian integrated medical education and healthcare system provide some opportunities for collaboration between various professions.^{23 24} It is believed that IPL as a form of shared learning is a way to improve collaboration between health professionals.²⁵ Hence, it could be advised that steps should be initiated to insert IPL into formal Iranian medical curricula.

Participants

The characteristics of the participants are shown in [table 1](#). The invited participants had didactic or clinical experiences and experienced joint training with other professions. The faculty members had teaching experience or educational activities in the Education Development Centre or Education Development Office for at least 5 years and students had spent more than three terms in clinical settings. Therefore for maximum variation in sampling, students and faculty members of different professions were purposefully recruited.

Box 1 Questions used in the interview guide

Q 1: Interprofessional learning (IPL) or other forms of shared learning processes

- ▶ Have you been involved in IPL or other forms of shared learning?
- ▶ (How) was your experience?
- ▶ What was your experience? Please explain.

Q 2: Reasons for participating in IPL or other forms of shared learning

- ▶ Why did you desire to participate in shared learning?
- ▶ What other reasons inspired you to participate in shared learning?
- ▶ What factor is most important to you for participating in shared learning? Why?

Q 3: Factors involved during IPL or other forms of shared learning

- ▶ How are you encouraged to actively participate?
- ▶ What factors contribute to this?
- ▶ Which factors made/make it difficult to participate in shared learning?
- ▶ Which factors made/make it easier to participate in shared learning?

Q 4: Closing question

- ▶ What has not been discussed but is deemed relevant by the participant?

Procedure

In this descriptive qualitative study, content analysis was applied.^{26–28} A purposive sampling and semistructured individual interviews were conducted to collect data. Semistructured interviews were conducted individually. The time and place were determined based on the participant's preference. Approximate duration of interviews was 30–50 min depending on the interaction between the participant and the interviewee. Interviewers were not known to the interviewees. All participants received a copy of the interview guide and their informed consent was secured prior to interview. Using an interview guide can help keep interactions with interviewees more focused, systematic and comprehensive. The interview guide consisted of general questions, and participants had the opportunity to express their perspectives in detail (box 1).

We believe that the interview questions in our interview guide probed into the participants' motivation and helped find answers to all the questions. The content of the interviews were recorded and transcribed one by one. Data collection and analysis were concurrent. Data collection was continued till data saturation (no new data emerged).

In this study, trustworthy findings were presented in terms of dependability, conformability, credibility and transferability. Accordingly, to increase the credibility of the data, expert participants were selected through purposive sampling, consecutive data collection and data analysis immediately after the interviews, and modification of interview questions following each interview. In addition, the study participants checked the data (member check). Moreover, to secure data dependability, the researchers

carefully recorded all interviews and to ensure data accuracy, the initially encoded primary analysis was sent to some selected participants. To ensure data conformability, all manuscripts and memos were checked by two coders. Finally, to ensure transferability and relevance of the data, data collected from the key informants and data from different phases of the study were presented in detail.

Data analysis

We acknowledge that using conventional content analysis allowed for a deeper understanding of participants' perception.²⁸ We tried to keep this to a maximum by keeping notes and memos, which seemed relevant for understanding the experiences. There were two coders. MKM read and reread and familiarised with the data. The first interview was coded together with a second researcher, SA. Further in the coding process, other interviews were independently coded by MKM and SA. Whenever there were disagreements in coding, these were discussed until consensus was reached. We had also invited an expert to check the coding process. During the coding process, factors identified in quotations were first categorised as key factors in such a system; next the factors were identified according to the topic. Their experiences in the form of quotes were taken care of during the data analysis and this has been described in detail. So the data analysis was inductive; codes were generated from the data, rather than prearranged. Meaning units were identified, condensed and coded. These condensed meaning units were then carefully scrutinised, reflected upon and assessed in order to detect new, more abstract dimensions and to organise them further into subcategories and aggregate into categories to describe the perceptions of participants about shared learning. The extracted codes, categories and subcategories were examined and revised by a researcher. Finally, the research categories were formulated by analysing the extracted subcategories.

Ethical considerations

Participation was voluntary. All participants were informed about the purpose of the study and assured of anonymity prior to participating in the study. Later they signed an informed consent form. Interviews were tape recorded with participants' permission and were transcribed with a code determined by the participants.

Patient and public involvement

Patients and or public were not involved.

RESULTS

A total of 13 participants contributed to this study. These categories are explained using quotes derived from the data.

The role of prologues in IPL

Interaction versus reaction

The tendency to strengthen the sense of collaboration among different professions is stronger if there is high interaction between professionals and this acts as a facilitating factor for the implementation of these programmes. This interaction was mentioned in terms of individuals among different professionals and between educational and clinical practice settings in an integrated system. Almost all of the students had believed that if the interaction between individuals who come from different health professions is not considered, most IPL opportunities may be missed. In terms of participants, the experiences that are appreciated most provide more interactions.

One participant said:

“When we go to teaching hospitals for learning clinical courses, our interactions with various professions are close... It was a good experience for collaboration!” (male nursing teacher)

Furthermore, some participants stated that high interaction between educational and clinical practice settings can lead to deliver different IPL programmes which range from shared ward rounds, common morning reports, to joint bedside teaching.

I have attended several shared ward rounds and I really can remember whatever I saw and heard ... professors taught us the issues from the perspective of different professions ... explained and demonstrate all the cases to us, he assisted us the same as his students. (female midwifery student)

Ward round is a good place to learn inter-professional skills, we learn how different professions communicate with patients and others in a real situation. (female nursing student)

Reflection versus action

Along with training opportunities, students can observe and reflect on the healthcare team performance in interdisciplinary placements. They believe that this can certainly facilitate and improve their learning with other professionals through observation and reflection. This reflection helps students to shape their attitudes about interprofessional collaboration in the workplace.

When I see the team, I am just learning how to have a relationship with other disciplines and how do I do it in a team. (male operation room student)

However, some students have experienced a challenging situation in which they encounter with the poor collaboration in and action among health professionals. This situation may change student's attitude. If this is the case, reflection on undesirable behaviours plays important role for shared learning.

Readiness versus unwillingness

Welcoming the opportunity for IPL may be a vital prerequisite for sustainable shared learning in the sense that it

seems to facilitate interaction as well as reflection among professionals in health education. So preparedness for IPL was one of the issues brought up by students. Some students mentioned that their engagement in IPL opportunities have been guided by a readiness to learning with other students nicely, that will make a sense to be a more effective member of a healthcare team, to improve their communication skills in their team, and to cause to understand patients' problems.

One of the students expressed:

...Teacher had wanted to take the LP and taught his students, which then we told him we have a great eager and readiness to be involved in his training... (male anaesthesia student)

Another student added:

It's nice to have a nurse get a joint tutorial with a doctor in the same team. Perhaps a nurse can learn how to do something, or a doctor can learn to do what he has to do individually but maybe they do not know what to do with each other! Doctors and nurses are trained when they prepare to be with other, so they can communicate with each other indeed. (female nursing student)

The role of structured IPL

Accidental versus intentional learning

As expected, participants had very different experiences of shared learning during their training, but most believed that the closeness of educational and clinical practice settings can provide diverse opportunities for learning from other professions through delivery of natural shared learning opportunities. However, some participants said that despite the availability of such opportunities for learning with other students, due to the closeness of educational and clinical environment, IPL mostly happens through haphazard and random events. This leads to unequal experiences for students.

When I am being trained with other professions, I would like to ask a question of myself... then, I would like to have the opportunity to exchange ideas and experiences with other students ... But in practice this does not happen (female nursing student)

The collaboration of different professions would be better established... if they interact with each other during the training sessions, but a good planning is required. (male medical teacher)

Unpurposeful versus purposeful IPL

The results indicate that the mere presence of the learners of various disciplines may not be that effective. The statement illustrates that without having some specific objective and conscious activity, IPL will not be achieved. Participants clearly stated that IPL should be considered in the curricula of every health profession as a purposeful and planned programme. To motivate

teachers and planners to use structured opportunities, one of the participants suggested that:

Teachers, who try to promote interaction among students from different professions, should be encouraged in festivals and as an indicator of the premier could be considered in universities (female public health teacher)

Also, a small number of participants stressed that the best solution for reinforcing positive outcomes gained through IPL should be part of formal curricula as a systematic approach.

... It would be really good to have some kind of programme that underlies interprofessional skills. It is needed for a formal training in curricula. (female medicine teacher)

The role of context and structure in a system for learning

Although there are good opportunities for observing, reflecting and practising collaboration in the integrative system, a number of students and faculty members noted several challenges in this setting. According to the participants of this study, compression of training programmes, high workload of students in clinical settings, centralisation of the current educational programmes and resistance of different specialised departments to shared learning were factors that fuelled difficulties to implement IPL.

Specialised training versus general training

Some students expressed difficulties in adjusting their professional responsibilities with educational programmes because their main priorities in wards are clients first and then education.

It happens too often that we want to go to a joint morning report with other disciplines, but.... We find no time to attend, because to take care of the clients' needs and wants, is prioritised. (female nursing student)

Moreover, some participants believed that most of the teachers focus on discipline-specific teaching and assessing approaches in their educational process, so that they evaluate and value their students' competencies based on the use of specialised knowledge and skills in providing services to patients, without any attention to improving interprofessional skills.

To be honest with you, what is important for us is our professional theoretical knowledge because our teacher assesses us accordingly; I never experienced their assessment of my interprofessional skills (male anaesthesia student)

Students identified that this condition received negative messages from the educational system; and, unconsciously gave the message that education is not a priority, and the main goal of medical education is to just train

specialised experts to meet the needs of patients. These messages given by a system increases the risk of perpetuating negative stereotypes in students who will work as professionals in the healthcare team.

Uniprofessional education versus IPE

A small number of participants identified that difficulty in coordinating training programmes is the result of centralisation of the current educational programmes. Importantly, due to the lack of interprofessional content in the traditional centralised curricula, most teachers and managers did not feel the necessity of reinforcing interprofessional knowledge and skills in their students.

There is a fact that our educational system is a highly centralised one; since it is centralised, there is not any defined position for interprofessional education in educational programmes of various fields! (male dentist teacher)

The centralised structure of educational administration and curriculum planning as a challenging factors may cause inhibition for sharing experiences of schools, department and even faculty members. In addition, the diversity of health professional curricula to some extent brings a level of resistance climate. This resistance depends on variety of factors such as cultural factors, degree of complexity of interactions, cost and so on.

To me, one of the challenges in IPL in Iran is the resistance of departments..., head of departments and managers not only do not consider IPL as a constructive approach, but also deliberately consider it as a threat for their programmes (female nursing teacher)

Also, the varying timetables and the different programme agendas and calendars for each of the health professional curricula impact on the scheduling of IPL. The difficulty of setting the schedules arises from the compression of educational programmes, and from the problems associated with coordinating the curricula of different professions in this field.

When we decide to set up our own class schedule, we have many problems, without any doubt coordinating a joint training schedule for different disciplines is a complex task... (female physiotherapy student)

DISCUSSION

Participants struggled to explore their perception of IPL with other professions. Most of the study participants considered IPL as an essential component for teaching health professionals who work in the educational system and later on rendering services as part of a complex healthcare team. This is also highlighted by Lavender *et al*²⁹ who suggested that IPL seems to provide an enhanced educational experience both in regard to the

shared knowledge and in building a sense collaboration and communication.²⁹

The results indicate that the incorporation of IPL into the health professionals' curriculum in Iran might pose some challenges such as different degree timetables, varying schedules, and centralisation of health profession curriculum and domination of specialisation. This finding corroborates the ideas of Kreitner and Kinicki (2008), who suggested that making changes into the curriculum is often associated with a high level of resistance.³⁰

All students involved in this study supported shared learning with other professions regardless of the opportunities. They mentioned that a close relationship between service provider milieus and the educational system could be a facilitator for teaching interprofessional knowledge and skills if there is a structured plan for IPL. The findings show that students are enthusiastic about learning with other professions and welcome opportunities to participate in shared learning opportunities—even the haphazard ones. It seems possible that this result is due to the lack of structured IPL programmes as core learning units in allied health curricula in Iran. Although, this result differs from some published studies,³¹ which concluded that engagement of students in IPL electives or extracurricular activities would be less and their non-commitment is longer perceived as an issue. It would appear that without having an defined structure, unified goals and specified activities, they are likely to miss valuable opportunities for IPL, especially if interprofessional knowledge and skills have not be considered as a criteria for assessing students' competencies. Eilertsen *et al* indicated that it is most certainly difficult to make interprofessional experiences successful, unless there are clear goals and a defined structure.³²

The findings also show that to overcome the current challenge, it is not enough to specify precisely the shared objectives and activities; rather, more coordinated interprofessional experiences require significant changes in the structure of curriculum in colleges and universities. It seems that the support of policy makers, university deans, department heads, curriculum committees, and educational administrators and their shared commitments are absolutely needed to reform the existing curricula. Thus, creating a context consistent with IPL is an important issue that is mentioned in almost all the related literature.^{33–35}

Despite all the current challenges, considering factors such as a close relationship between service provider milieus and the Iranian educational system, the possibility to run different types of IPE programmes (eg, shared workshops, teaching theoretical courses, joint training rounds, continuing medical education (CME), etc), and the opportunities to observe and collaborate in the universities affiliated with teaching hospitals may help facilitate the implementation of such programmes in the current Iranian situation. From the researchers' point of view, a close relationship between medical education and the healthcare system provides more suitable conditions for the transmission of values associated with shared learning,

specially IPL, because the students observe, practise and reflect on interprofessional collaboration and interaction in a tangible manner prior to entering the workplace. Several studies also emphasise the significance of reinforcing interprofessional skills as an important competency for members of health teams prior to entering the workplace.^{36–38} When students observe and reflect on how to work interprofessionally, they prepare themselves to work as members of a collaborative practice team in the future. Moreover, the provision of shared educational programmes such as IPL, even as accidental, informal and extracurricular activities in the current context, has helped the students to recognise different professional responsibilities and roles and to improve their communication skills. It can still be assumed that the most important characteristic of these programmes, which is improving the interaction of students in different professions, has remained untouched. In order to obtain the best shared learning outcomes, some studies emphasised the importance of providing interaction opportunities.³⁹

Finally, it is worth saying that one of the limitations of this research was that the points of view of managers and curriculum planners were not included in this study, therefore their influence on conducting and providing shared learning including IPL remains to be investigated. Using qualitative research with small and purposefully selected samples has been considered non-representative of the population and its findings are not generalisable. Furthermore, although selection of the participants from different educational backgrounds had some advantages, it reduces the chance to deeply investigate views of all professionals. Finally, Iran, as a developing country with the integrated system for medical education and healthcare services has a very specific context. The findings of this study can only be interpreted within the context of those characteristics. So, there is a possible lack of generalisation of findings to the medical education system in other countries. It is suggested that considering managers and planners' concerns will improve the recognition of the current situation and help design and offer suitable shared programmes. In addition, in this descriptive qualitative study we found experiences for differences between students due to their backgrounds. In future research, the findings with regard to gaining shared experiences and the extent to which the identified factors inhibit and motivate students could be compared for students with different background characteristics.

CONCLUSION

This study reveals that experiences of learning with different professionals are complex, and these experiences shape workplace relations of the professionals in the present and future. Results show that the development of purposeful and intentional shared programmes is essential to support IPL. Matching the existing educational context and structure with IPL and providing planned interaction and reflection

and readiness among professionals can solve problems related to implementation of interprofessional training programmes in integrated systems of medical education and healthcare services in a developing country such as Iran.

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