



Interprofessional Learning: the Attitudes of Medical, Nursing and Pharmacy Students to Shared Learning at Tehran University of Medical Sciences

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ABSTRACT

Background: Current evidence supports the idea of including interprofessional learning (IPL) in healthcare students curriculum. Thereby, shared learning at an undergraduate level has been supported as an interprofessional initiative in healthcare education.

Objectives: The aim of this research was to determine the attitudes of nursing, pharmacy and medical students studying in the clerkship phase toward IPL and shared learning at Tehran University of Medical Sciences (TUMS) in Tehran, Iran.

Materials and Methods: We applied the Readiness for Interprofessional Learning Scale (RIPLS) questionnaire consisted of 19 item scale and three subscales, labeled by the original researchers as team work and collaboration, professional identity, and roles and responsibility to assess the readiness of the students in interactive engaging with other students and shared learning. The RIPLS was delivered to 150 fourth year medical, nursing and pharmacy students within clerkship phase. SPSS software was used to save and analyzed the data. The Chi-square test was performed to assess the possible differences between groups. **Results:** One hundred and thirty students returned the questionnaires and therefore the response rate was 86%. The majority of TUMS students reported positive attitudes toward shared learning. The benefits of shared learning including the acquisition of team working skills were recognized to be beneficial in patient care and likely to enhance professional working relations. However, professional groups did not show any significant difference in the perceived outcomes of shared learning.

Conclusions: The results of this study indicated that there was willingness and a need to share knowledge and skills with other undergraduates as a way of resolving clinical problems at TUMS. Thus, implementing shared learning programs could promote the quality of provided patient care via increasing the teamwork and communication skills of the undergraduate students.

► Implication for health policy/practice/research/medical education:

This article is recommended for medical, nursing, pharmacy and any other undergraduate students who want to provide some insights into the IPL at this level, and applicable in the health care services through additional knowledge of the roles of other profession.

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1. Background

Improved teamwork of professions is an important factor to achieve effective health care. Such goal may be accomplished by including interprofessional learning (IPL)-learning together to promote collaborative practice- in the undergraduate medical curriculum (1-3). Shared learning at the undergraduate level has been supported as a possible strategy for enhancing interprofessional working and, as a result, there has been an increase in inter-professional initiatives in health care education (4).

Current evidence supports that undergraduate medical, nursing and pharmacy students have positive attitudes toward shared learning (5). However, a mutual understanding and effective perception of each role as well as respect for other professions might be necessary to improve interprofessional relations (6-10). Thus, providing high quality healthcare requires close collaboration between a range of professionals, who have to be both multi-skilled and collaborative (11).

Since IPL provides opportunities for sharing knowledge and creating respect, its introduction early in the curriculum may reduce the tendency to stereotype professional groups (12-13). On the other hand, it should be introduced when students have a clear understanding of their own professional roles within the healthcare system (12).

Some schools have demonstrated their commitment to IPL either by becoming joint faculties, where schools of medicine, dentistry and nursing are managed centrally, or by naming themselves as integrated institutions (14). Nevertheless, in order to maximize students' understanding of each others' professional roles, IPL opportunities should reflect the essence of healthcare practice (15). However, the success of such interprofessional initiatives at undergraduate level highly depends on the participants having equal status, positive expectations and institutional support (16).

To date, a growing body of evidence has explored the role of IPL in preparing healthcare professionals to work as teams; while most encouragingly, it has been found that IPL could be effective in addressing negative stereotyping which impedes successful collaboration in clinical settings (17-18). Furthermore, it has been found that IPL might enhance students' teamwork skills and pose positive impacts on their professional practice and patient care (19-22).

2. Objectives

This paper was conducted to assess the attitudes of medical, nursing and pharmacy students toward IPL at Tehran University of Medical Sciences (TUMS), Tehran, Iran.

3. Materials and Methods

The study population was comprised of 150 fourth year medical, nursing and pharmacy students at TUMS in Teh-

ran, Iran. Participants were asked to answer the Readiness for Interprofessional Learning Scale (RIPLS) questionnaire. Developed in the context of undergraduate education, this questionnaire aims to assess the readiness of students in interactive engaging with other students and shared learning. With an overall three subscales, this questionnaire is consisted of 19 items. The subscales include teamwork and collaboration, professional identity, and roles and responsibilities. A brief instruction for completion and definition of shared learning were also included to ensure that respondents understood the measured concepts. RIPLS has been previously applied and seems to be a valid tool for measuring attitudes toward IPL in the undergraduate context (23); However, its content validity was established by a panel of parts who confirmed the relevance of each item, clarity, format and ease of completion of the questionnaire and integer responses ranged between one (strongly disagree) to five (strongly agree). A pilot study was performed which yielded a high internal consistency of the RIPLS questionnaire (Cronbach's alpha = 0.81). Data were analyzed using the SPSS software for windows.

4. Results

Among the study population, 20 refused to complete the questionnaire and 130 students returned the questionnaire. Therefore, the response rate was 86%, including 51 (40%) medical students, 33 (26%) nursing students and 46 (34%) pharmacy students. Fifty two percent of the respondents were male and 48% were female.

The majority of the students at TUMS responded positively to the nine statements contained in teamwork and collaboration subscale. The items in this subscale are clustered into two groups: effective team working and relation with other professionals. The corresponding responses to this subscale were "agreement" and "strongly agreement". In addition, there was not a significant difference in the responses to the nine questions of this subscale among medical, nursing and pharmacy students or between male and female students.

As the second subscale, professional identity embraces both positive and negative aspects and therefore can be clustered into two groups of negative and positive professional identity. In negative professional identity group, most of the respondent disagreed or strongly disagreed with the three statements in this section, while in positive professional identity group, over two third of the respondents from each profession agreed or strongly agreed with the four items of this section.

Three items made up the roles and responsibilities as the third subscale. Less than 50% of the respondents agreed or strongly agreed with "the function of nurses and pharmacist is mainly to provide support for doctors". Also, only one third of the respondents agreed or strongly agreed with "I am not sure what my professional role will be". But, most of the medical, pharmacy and

Table 1. RIPLS Questionnaire Results in Tehran University of Medical Sciences

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Total |
|---|-------------------|----------|---------|-------|----------------|-------|
| Subscale 1 : Teamwork and collaboration | | | | | | |
| a) Effective team-working | | | | | | |
| Shared learning with other students will help me to become a more effective member of a health care team | 1 | 9 | 16 | 35 | 69 | 130 |
| Patients would ultimately benefit if health care students worked together to solve patient problems | 3 | 2 | 14 | 47 | 64 | 130 |
| Shared learning with other health care student will increase my ability to understand clinical problem | 3 | 4 | 16 | 52 | 55 | 130 |
| Communication skills should be learned with other health care students | 1 | 6 | 16 | 47 | 60 | 130 |
| Team - working skills are essential for all health care students to learn | 2 | 3 | 17 | 51 | 57 | 130 |
| Shared learning will help me to understand my own professional limitations | 1 | 2 | 26 | 40 | 61 | 130 |
| b) Relationship with other professionals | | | | | | |
| Learning between health care students before qualification would improve working relationships after qualification | 3 | 6 | 21 | 43 | 57 | 130 |
| Shared learning will help me think positively about other health care professionals | 3 | 5 | 19 | 43 | 60 | 130 |
| For small - group learning to work, students need to trust and respect each other | 1 | 2 | 16 | 45 | 66 | 130 |
| Subscale 2 : Professional identity | | | | | | |
| a) Negative professional identity | | | | | | |
| I don't want to waste my time learning with other health care students | 32 | 61 | 22 | 4 | 11 | 130 |
| It is not necessary for undergraduate health care students to learn together | 19 | 49 | 42 | 6 | 14 | 130 |
| Clinical problem-solving can only be learnt effectively with students from their own profession | 10 | 43 | 28 | 17 | 32 | 130 |
| b) Positive professional identity | | | | | | |
| Shared learning with other health care professionals will help me to communicate better with patients and other professionals | 3 | 7 | 13 | 39 | 68 | 130 |
| I would welcome the opportunity to work on small group projects with other health care students | 4 | 13 | 23 | 34 | 55 | 130 |
| Shared learning will help to clarify the nature of patient problems | 2 | 5 | 25 | 43 | 51 | 130 |
| Shared learning before qualification will help me to become a better team - worker | 4 | 6 | 26 | 43 | 51 | 130 |
| Subscale 3 : Roles and responsibilities | | | | | | |
| The function of nurses and pharmacists is mainly to provide support for doctors | 23 | 35 | 26 | 29 | 17 | 130 |
| I am not sure what my professional role will be | 23 | 47 | 26 | 17 | 17 | 130 |
| I have to acquire much more knowledge and skills than other health care students | 4 | 6 | 24 | 46 | 50 | 130 |

nursing students agreed and strongly agreed with “I have to acquire much knowledge and skill than other health care students” (*Table 1*).

5. Discussion

We assessed nursing, pharmacy, and medical students' attitudes toward IPL at TUMS and overall, all three groups of students were positive about the benefits of shared learning. The result of our study also indicated that the

willingness and a need to share knowledge and skills with other undergraduates would be a way of understanding clinical problems in the workplace. Therefore, the majority of students recognized the benefits of shared learning and agreed that the acquisition of teamwork skills is useful for their careers and could likely enhance the quality of provided patient care.

Parsell & Bligh recognized IPL as an effective strategy in achieving best possible clinical outcomes as well as

developing beneficial teamwork skills (10). The effective role of IPL in increasing knowledge and skills of health care professions as well as providing opportunities for working as a multidisciplinary team has been well established (24-27). Consistent with previous studies, our results showed that TUMS students think positive about the expected benefits of shared learning.

In a previously conducted study, nursing students more strongly indicated that "learning with other students will help me to become a more effective member of a health care team" while medical students were least likely to consider "shared learning with other health care students will increase my ability to understand clinical problems" (28). However in our study, we found that there was no significant difference between professions in responses to the two above items.

There is an inconsistency among reports in the timing of initiating shared learning. Harden et al, suggested that what matters most is an approach that is adopted and is appropriate for the phase or stage of the students' learning (29). Other reports suggested that the most appropriate time for initiating shared learning would be when students have the possibility of undertaking shared clinical practice (30). On the other hand, there is a tendency that initiating shared learning would prevent the formation of negative attitudes and stereotyped views which would eventually lead to a more effective teamwork and close collaboration (31). In this regard, encouraging social interactions between students would be another consideration (32). Such belief is compatible with our research method, as we administered the questionnaires among three groups of undergraduate students who were studying within clerkship phase.

Much of the literature on teamwork and collaboration focuses on the relations between doctors and nurses with little about other health professionals (30). For example, Horsburgh et al. sought to determine the attitudes, beliefs and values toward clinical work organization of students entering undergraduate medicine and nursing (27, 33, 34). The results of our research supported the view of the medical students in this study: the tendency to view doctors as having predominance over other health professionals. Meanwhile, more than 50% of our respondents as nursing and pharmacy students did not support the idea that doctors have predominance over other professions. Current professional practice reinforces the idea that some health care roles should be subservient to others, most notably that the doctor is undisputedly the team leader in the patient management (35). TUMS medical students in this study confirmed this belief. Moreover, it has been previously reported that both nursing and medicine need to change if a collaborative model is to work (25). In this regard, a shift is occurring toward a belief that the team leader should be dictated by the context in which the team operates and this may not necessarily be the doctor (36).

The perceptions of university entry medical students in respect to the characteristics of nurses and doctors were generally demonstrated positive (4). However, similar to our findings, this group of students considered nurses to be inferior to their own profession in respect to several characteristics (33).

All participants of a previous study recognized the importance of interprofessional teamwork in patient care and agreed that healthcare education should include opportunities for students to develop the required skill, behaviors and attitudes for interprofessional collaboration (37). Similar to the statements of TUMS students, several papers have also addressed the theme of interprofessional education in developing a more communicative workplace (38). Providing a balanced membership in the team and ensuring that the course is attractive to learners through its contact and relevance are effective factors that should be considered prior to implementing shared learning programs. The prestige, status and experience of participants should also be taken into account (39).

The findings of this study have provided the grounds for planning and conducting of IPL schedules within TUMS educational curriculums. By including such programs regarding shared learning and increased teamwork, the students would be aware of their professional priorities and involvement of other professions, which would eventually result in high quality healthcare services throughout nation.

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