A single learning activity for large interprofessional group can boost the perception of value of interprofessional education

Anna Marchetti[1], Anna Teresa Giallonardo[2], Antonella Conestà[3], Fabrizio Consorti[4]

[1] *RN, MSN, PhD, Campus Bio Medico University, Rome, Italy, e-mail: a.marchetti@unicampus.it*

[2] *MD, Sapienza University, Rome, Italy, e-mail: annateresa.giallonardo@uniroma1.it*

[3] *RN, Ped, Sapienza University, Rome, Italy, e-mail: antonella.conesta@uniroma1.it*

[4] *MD, Sapienza University, Rome, Italy, e-mail: fabrizio.consorti@uniroma1.it*

ABSTRACT

Introduction. The interprofessional education activity consisted in a single 4 hours meeting and it was built on three theoretical pillars: the framework of Core Competencies for Interprofessional Collaborative Practice (IPEC), Kolb's model of experiential learning, and Vygotsky's concept of social learning. The objectives of the activity were to enable students to identify the elements of IPEC framework in a healthcare situation and to show awareness of the value of interprofessional collaborative practice.

Materials and methods. The meeting was composed by different phases: introduction and sharing of objectives and methods, followed by two cycles of short lecture, small group activity and large group discussion. At the beginning and at the end of the meeting, a questionnaire with items exploring students' attitude on interprofessional collaboration was administered. A questionnaire of satisfaction was also administered at the end of the meeting. Eighty-four students at the last year of different degree course of health care professions (nursing, midwifery, psychiatric rehabilitation) joined the meeting.

Results. The pre-post test mean values for the items of the questionnaire of assessment significantly increased for all students. The Cronbach alpha value of the questionnaire was 0.75, indicating an acceptable level of internal reliability. The scores of the satisfaction questionnaire were largely positive.

Conclusion. This study shows that single learning activity for a large interprofessional group can be effective in increasing a positive attitude and provides some data on students' perceptions on interprofessional learning in an Italian context.

Keywords. Practice educator, collaborative practice, interprofessional education, students' attitudes.

BACKGROUND

The World Health Organization (WHO) advocates for healthcare professional students have to engage in Interprofessional education (IPE) to develop Interprofessional collaboration (IPC) competencies useful in real-world practice [1]. Therefore, Interprofessional Education within healthcare professional programs is an expectation within the curriculum [2,3]. The international literature supports the effectiveness of IPE in healthcare professional programs to prepare new graduate professionals able to participate effectively as members of interprofessional healthcare teams [4]. Moreover, students seem to value early exposure to the roles of other healthcare professionals [5]. In fact, learning within interprofessional student teams provides students with the opportunity to experience how healthcare professionals learn collaboratively within and across professions in order to improve patient care [6].

INTERVENTION

This learning activity for large interprofessional group consists in a single 4 hrs meeting and it is built on three theoretical pillars: the framework of Core Competencies for Interprofessional Collaborative Practice [7], Kolb's model of experiential learning [8], and Vygotsky's concept of social learning. The Interprofessional Education Collaborative (IPEC) framework is arranged according the four domains of values and ethics, roles and responsibilities, interprofessional communication, team and teamwork [9]. These elements were taken into account in designing the activity and the instrument of assessment. In greater detail, Kolb's model inspired the sequence of learning activities, which started with a visual experience and with the recall of a lived experience (see the activity description section and Figure 1 and 2 for details), followed by a socially shared construction of meaning and was concluded by a theoretical synthesis by one of the teachers. The social dimension of learning was activated both by dividing the whole group in small groups for part of each activity and by a shared feedback from the large group about the product of the small groups' activity.

The activity is addressed to any group of interprofessional students, and it is particularly suited to start an interprofessional

program, with a special focus on interprofessional collaboration during clinical internship. It requires that the students already have a certain amount of clinical experience.

This first test of the activity was held on April 2018 in Viterbo, where one of the peripheral university campuses of Sapienza University of Rome is located and where some of the three years long curricula for healthcare professions are held. Students from the third year of the curricula of nursing, midwifery and assistants for psychiatric rehabilitation were gathered in a lecture hall and a 4 hours meeting was conducted. The specific learning objectives of the activity were to make students able:

- to identify the elements of IPEC framework in a healthcare situation;
- to show awareness of the value of interprofessional collaborative practice.

To accomplish these learning objectives, we aimed to make students able to use the IPEC framework and the critical incident technique to interpret and give a meaning to their clinical experience.

Activity description

The whole meeting was composed by:

- introduction and setting of objectives and methods;
- a warm-up activity with large group discussion;
- a first short lecture;
- a second small group activity, followed by a large group discussion;
- a final short lecture.

The first warm-up activity started with the observation of two photographs, taken in real life situations (an operating room and an emergency room during a high-fidelity simulation), showing an interprofessional and interdisciplinary team in action. The following questions were asked:

What's happening in this photograph?

- Who are the actors?
- Which are their roles, scope and responsibility?

Figure 1. An example of photographs used in the warm-up activity

Figure 2. An example of photographs used in the warm-up activity

Participants were asked to briefly discuss with the student sitting near to them ("think-pair-share" technique) [10,11,12], then the answers were discussed in the large group.

After the discussion, a short oral presentation of the main concepts of interprofessional practice was given, the IPEC framework introduced and a handout distributed. The whole group was then divided in 10 interprofessional small groups of 8-9 components and a "critical incident" session was run. The critical incident technique is used to collect and analyze behaviors in defined situations [13]. The term "critical" indicates that the behavior described in the incident plays an important role in determining an outcome [14]. This technique has been effectively used by health services researchers in studies of health care quality [13]. The instructions for this session were:

1. Introduce yourself to the rest of the group and then choose a name for the group;
2. Individually, recall a significant situation in your clinical practice as a student, in which a problem in at least one of the four domain of the IPC framework arose;
3. Everyone shares a brief narrative of their episode. The group will then choose the one to be presented in the final plenary session;
4. Use the "Critical incident form" to describe in details what happened in the chosen situation (Table 1).

• Describe the context and the protagonists of situation • Reconstruct emotions, actions, climate and work modalities by providing clear and concrete examples of behaviors or words observed • Explain why the incident is critical from your point of view • Describe the feelings and thoughts of that moment What could be done different?

Table 1. Critical incident form

The ten narratives were shared in a final plenary session and freely commented by the participants. Academic staff joined the discussion and - when appropriate - recalled the IPC framework as the best context to give a meaning and interpret the situations. A final short lecture summarized and discussed the main emerged themes and their relationship with the IPC framework.

What could be done different?

Assessment and Evaluation

At the beginning and at the end of the meeting, a questionnaire was administered, with the following four statements:

1. I feel the need to meet and discuss with students from other healthcare professions to improve my proficiency in study and learning;
2. I feel the need to meet and work with students from other healthcare professions during my practice;
3. I have knowledge of the basics of interprofessional collaboration;
4. I have knowledge of the competencies of the other healthcare professions. Students graded the statements from 1 (complete disagreement) to 9 (complete agreement). A questionnaire of satisfaction was also administered at the end of the meeting (Table 2). It was derived from the standard questionnaire used at Sapienza University.

RESULTS

Eighty-four students at the last year of different degree course of health care professions (nursing,
midwifery, psychiatric rehabilitation) joined the meeting. Table 3 shows the distribution for sex and healthcare profession.

Table 4 shows the pre-post test mean values for the four items of the questionnaire of assessment.

The mean value significantly increased for all of them. The Cronbach alpha value of the questionnaire was 0.75, indicating an acceptable level of internal reliability. The scores of the satisfaction questionnaire were largely positive, showing interest and appreciation of the activities.

- Were you interested in the topic of this lesson?
- Was the lesson well organized?
- Were you involved in learning activities?
- Overall, were you satisfied with this lesson?

Table 2. Questionnaire of student's satisfaction, four grades from 1 (absolutely no) to 4 (absolutely yes).

Personal data (84 students)		**No. (% of total)**
Sex	F	57 (67.8)
	M	27 (32.2)
HC profession	Nursing	58 (69.0)
	Midwifery	13 (15.5)
	Psychiatric rehabilitation	13 (15.5)

Table 3. Composition of the sample

Items		Mean	Std. deviation	p value[1]
Item 1 meet and discuss with students from other professions	pre	5,45	2,17	< 0.001
	post	6,55	2,11	
Item 2 meet and work with students from other professions	pre	6,07	2,02	< 0.001
	post	7,19	1,71	
Item 3 Knowledge of basics of interprofessional collaboration	pre	4,42	2,33	< 0.001
	post	6,88	1,72	
Item 4 Knowledge of the competencies of other healthcare professions	pre	4,35	1,59	< 0.001
	post	6,13	1,76	

Table 4. Pre-post score of the questionnaire of assessment

DISCUSSION AND CONCLUSION

The assessed outcome of this learning activity was an increase in students' perception of the value of interprofessional collaboration for their development as future healthcare professionals. A systematic review of learning outcomes of IPE [15] classified the outcomes in six themes: teamwork, roles/responsibilities, communication, learning/reflection, the patient, ethics/attitudes.

The performed learning activity and its outcome fit mainly in the Roles/responsibilities theme, but also in the Ethics/attitudes theme, in considering the "Tolerate difference, misunderstandings and shortcomings in other professionals" subtheme. Recalling, narrating and discussing critical incidents is in fact in line with such an outcome. As already showed by other researchers [16,17,18], our experience showed also that active interprofessional learning activities for large group are feasible and effective.

Our experience does not confirm a decrease of some of the components of interprofessional learning, mainly in the area of professional image and attitude to teamwork after an IPE activity, observed in other studies [18,19]. We did not explicitly explore the areas of professional image and attitude to teamwork, with instruments like Readiness for Interprofessional Learning Scales

(RIPLS) questionnaire [20] but the post-assessment test showed an increase in the perceived usefulness of IPE activities, like in other studies [21]. Our sample was constituted by a group of the last year of the degree course. Probably they had an already developed professional identity [22].

They met for the first time in an IPE activity and we have no evidence that the described decrease in their attitude could not appear after other IPE activities in the future.

This reflection raises the importance of the curricular design and of timing of IPE activities [23].

Thistlethwaite et al. [24] classified 5 different types of curricular integration for IPE: one or more modules inserted into new or existing curricula, within clinical practice as one element, a common curriculum across all professions, eLearning in parallel with other courses, work-based [24]. Our test was meant to validate a possible module to be inserted in already existing curricula, as an introduction to IPE or an accompanying module during clinical practice.

The design and implementation of IPE is a challenge for all Italian healthcare curricula. The 2014 national healthcare plan [25] established interprofessional integration as one of the goals in human resources development. The Age.Na.S. - the national agency for continuous professional development - lists interprofessional collaboration as one of the national objectives of professional development [26].

IPE should start early and a variety of active-learning and small group pedagogies should be used [27] including simulation [28]. Research on IPE in Italy is still in a starting phase, with few published articles reporting on the effectiveness of IPE interventions [16,17], others reporting preliminary work about IPE on groups from the same professions [29,30] or instruments and theoretical premises [31,32,33].

Italian curricula of medicine and healthcare professions are often composed by large groups of students and lecture hall is still a pivotal component of the educational system. Hence, besides the use of simulation centers and small group activities, active pedagogies for IPE of large groups of students should be tested. If their effectiveness is proved, it may encourage a wider involvement of faculty members in IPE

programs with a cohesive efforts by administration and faculty [34].

Moreover, our results are coherent with the findings of a recent BEME systematic review [35]. The authors of this review organized their results according the 3P model of learning and teaching [36]: presage (the overall context of learning), process (methods and educational processes) and product (associated outcomes). Part of the success of our activity could be due to the location: for both the faculty and the students of a peripheral campus, located in a small town 80 km far from Rome, being the forerunners in an innovative learning activity could have been particularly motivating. As to the process component, we adopted a theory-based approach in which a particular emphasis was given to the shared interprofessional reflection. Also the role of teachers acting as facilitators during the discussion of the critical incidents was important, pushing the students to use the IPC model to interpret the reported events. Referring own reported experience to a theoretical position is in agreement with Kolb's experiential cycle [8].

This study has some limitations. Firstly, only three healthcare professions were represented. The study should be extended to students from other professions. Furthermore, the study involved only the students of a peripheral university campus of Sapienza University of Rome. To obtain greater completeness of data and a comparison between results, it could be interesting to involve the entire University and other Italian Universities.

Despite positive outcomes of the educational intervention of IPE courses in various disciplines of healthcare, more research is needed to explore other factors that may determine specific educational outcomes for health care professions students about the effectiveness of IPE programs. This study shows that single learning activity for a large interprofessional group can be effective in increasing a positive attitude and provides some data on students' perceptions on interprofessional learning in an Italian context.

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