

論文の内容の要旨

Evaluation of interprofessional learning in community-based health care for medical and health professional students in Indonesia

(インドネシアにおける医療系学生のための 地域基盤型多職種連携学習プログラムの評価)

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Introduction

As the complexity of health problems in Indonesia has led to a shift to community-based health care (CBHC), an educational program was needed to assure that students were given the opportunity to learn and practice collaboratively in community settings. Teamwork and collaborative practice are necessary tools in handling health problems, and the importance of interprofessional teamwork is becoming increasingly recognized. Interprofessional learning (IPL) in CBHC is a pilot model to promote inter-professional education in Indonesia and provide the opportunity for medicine, nursing, pharmacy, and public health students to acquire hands-on experiences of IPL in community settings. In addition, no instrument in Indonesian language has been developed to measure perceptions for IPL. This study conducted two studies. The aim of first study is to describe the process of cross-cultural adaptation of Readiness for Interprofessional Learning Scale (RIPLS), intragroup conflict and group atmosphere scale in Indonesian version including reliability and validity. The second study aimed to assess the effectiveness of IPL in community based health care by assessing the impact of this program toward achievement of student's interprofessional competencies and its implementation in community practice.

Methodology

Study I: First study was psychometric analysis and applied a cross sectional design. First study and was conducted on 2011 for validating of team performance scale (involved 302 students) and on 2012 for validating of

readiness for interprofessional learning scale (RIPLS, recruited 755 students). All scales were translated into Indonesian language through cross-cultural adaptation process. The psychometric properties were analyzed by both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

Study II: The study was conducted at the State Islamic University in Jakarta, Indonesia in 2012. Eighty 3rd year students participated in this program. Students attended a four-day workshop, a two-day simulation session and practiced IPL for two months. A mixed method design and Kirkpatrick's evaluation were implemented to evaluate the effectiveness of the program.

Result

Study I: The translation and adaptation of scales of the RIPLS, intragroup conflict and group atmosphere into the Indonesian language by a cross-cultural adaptation process was successful and the Indonesian version produced a valid and reliable scale. By using explanatory factor analysis and confirmatory factor analysis, all scales produced good internal consistency (Cronbach's alpha > 0.8), goodness of fit index more than benchmark and a good convergent validity (composite reliability > 0.7 and average variance extracted > 0.5).

The study of RIPLS psychometric analysis showed that EFA on the 18-items revealed three factors accounting for 54.3% of the total variance. Multiple CFA resulted in three-factor model over 16 items with satisfactory reliability (alpha coefficients > 0.7), construct validity and indices of goodness of fit (χ^2/df , GFI, TLI, CFI, SRMR, RMSEA). We conclude that Indonesian version of RIPLS with three factor models over 16 items is a validated tool to measure students' perceptions for IPL.

The study of psychometric analysis of both intragroup conflict scale and group atmosphere scale showed that CFA produced the three factor model. In intragroup conflict scale, the χ^2/df ratio was 3.06, the Goodness of Fit Index (GFI) for model was 0.94, the CFI was 0.038 and TLI was 0.95, whereas the RMSEA was 0.083. Likewise, group atmosphere scale, the χ^2/df ratio was 2.86, the Goodness of Fit Index (GFI) for model was 0.98, the CFI was 0.98 and TLI was 0.97, whereas the RMSEA was 0.078.

Study II: Only 62 students attended the whole of the program. The proportion of female participants (n=47, 75.8%) was higher than male participants. Students who participated in this study were from medicine (n=14), pharmacy (n=15), public health (n=16), and nursing (n=17) courses. Likewise, tutor (n=20), SP's (n=20) and real patient (n=15) were involved actively in accordance with their role in this program.

The study demonstrated a significant positive impact on the students' satisfaction (Level 1), knowledge, attitude, and skills (Level 2), and the ability to transfer the student's competency in practice (Level 3). Furthermore, all tutors agreed to integrate IPE into the curriculum and propose some recommendations for applying IPE in the future (Level 4A). Overall, an initiative model of IPL in Indonesia was successfully implemented and generated positive experiences for students and tutors.

Discussion

The COMIC program was constructed by integrating three components of the development of interprofessional teamwork including social, interprofessional and educational preparation for interprofessional team processes. For the educational program, various learning theories and social domains were utilized as well as multiple learning methods (interactive learning, problem solving, simulation and practice in real world settings). For social and interprofessional processes of group development, the program employed working in small group, ice-breaking activity, and reflection activity. This activity also built new knowledge and skills through exchange of information and experiences as well as shared learning. In addition, the effectiveness of the program was also supported by a non-classroom interaction with tutors, peer group interaction and extracurricular (non-scheduled) activities, and this was consistent with previous studies in which informal activities were an important factor for the success of the IPE program. The program yielded a satisfactory result, and opted only one method in the interprofessional program which will not be effective to achieve the interprofessional objectives due to the difficulty in responding to the diverse needs of students.

There are several factors that contributed to the effectiveness of this teaching project. First, ice-breaking activity proved to be the key tool in the development of the IPE foundation. Applying the ice-breaking activities yielded a satisfying atmosphere for further learning because these activities engaged the group and promoted interactions, built trust and respect, and fostered cooperation and teamwork. Second, the students work in a small group from the beginning. To become a practitioner who can work effectively in a team, a student should learn and be exposed to teamworking. By engaging in a small working group, each group has been capable of growing smoothly, facing a variety of obstacles, and solving problems or conflicts to find the best solution. Third, reflection activities in the debriefing session are also considered as a factor affecting the success of this program. Reflective activities in the debriefing process has assisted students to link theory to practice or otherwise connecting the

experience gained with the existing theory, critical thinking and discussing how to perform professionally in complicated conditions. Fourth, the role of tutor is an important factor. Aside from being tutors or facilitators, the educators also played roles as coaches and mentors to facilitate learning in practical settings and to provide the constructive understanding and the positive learning for collaborative practice is as role modeling.

Although the program is successfully implemented, this program has several limitations. First, many students withdrew from the program. It was a challenge to implement the IPE program in Indonesia when IPE modules are not integrated into the curriculum. Second, the emerging of bias in this study needs to be viewed as a concern because participants who took part in this program were volunteers and they have high positive motivation about the program. Third, there is no evidence from the patient and his/her family members about their responses related to the program and benefits for patients (level 4B).

Conclusion

Overall, IPL in CBHC was an initiative model in Indonesia and showed a significant improvement of students' interprofessional competencies and positive understanding about IPE among teaching staff. The success of the program was underpinned by an integrated program design based on theoretical grounds in the learning and social domains, applying the multi-method of teaching and evaluation, using small group learning techniques, practical-based learning and reflection activity, as well as implementing a supportive learning environment and informal (non-program) activities. Introducing the tutor team model into the IPE program has assisted the learning process for students and tutors, and yielded significant outcomes for the success of IPE program, although the application of this model needs to be studied further.