

Interprofessional Education for Elderly Home Care by Mahasarakham University, Thailand: The 2018 Academic Year

Chanuttha Ploylearmsang, Sirinart Tongsir, Thanapong Poophalee, Wiravan Kumvan, Umaporn Pupphachai, Suntaree Toogjit, Natapol Pumipuntu, Phuangchomphu Chaiala Sangrungruengroj, Angkana Promruksa
(Faculty of Pharmacy, Mahasarakham University (MSU), Thailand)

Abstract: Interprofessional Education (IPE) in Mahasarakham University is a collaboration among 6 faculties: Medicine, Pharmacy, Nursing, Veterinary Science, Informatics, and Architecture, with the aim of improving elderly patient care at home. 492 second-year-MSU students have learnt the concept of holistic healthcare for the elderly, including the adjustment of housing conditions and environment through the Universal Design (UD) concept and the communication media construction. Students visited the elderly in 50 households. It was found that the students involved have gained an improved attitude towards IPE. The assessment results with regard to student's behaviour in interprofessional work during home visits have also been good. Elderly patients are highly satisfied with the students' work. 50 innovative ideas to improve the quality of life of the elderly have been created. Improvements of the elderly's home environment have also been planned, in order to increase safety levels.

Key words: interprofessional education (IPE), patient, elderly, home care, innovation

1. Background and Importance

Interprofessional Education (IPE) is a learning management system which combines 2 or more professions together in order for students to: gain different perspectives on providing healthcare services, apply their working skills together, exchange knowledge and information, listen to others' opinions, respect one another, and apply their existing knowledge to the process of advancing their patients' best interests. The patient-centred approach means understanding of the patients and their communities is further improved, and that services may be tailored to suit the appropriate environment, and the needs of the patients, their carers, and their families. The collaborative learning which is undertaken by students helps them with the process of building up their experience, and allows students to truly apply their knowledge to real life situations in their future work.

Mahasarakham University (MSU) is a public university whose emphasis is on social development, with "Public Devotion Is a Virtue of the Learned" as the underlying philosophy, where students identify themselves as "those who assist their society and communities". Since B.E. 2558 (2015), lecturers who are experienced in interprofessional work between 3 faculties: Medicine, Pharmacy, and Architecture, Urban Design and Creative Arts, have extended their programme for interprofessional education in order to widen the students' perspectives towards healthcare, with beneficial results to patients in the community. Between B.E. 2559–2560 (2016–2017), 3 more

Chanuttha Ploylearmsang, Ph.D., Assistant Professor, Faculty of Pharmacy, Mahasarakham University; research areas: elderly medication, polypharmacy, opinion survey, quality use of medicine. E-mail: chanuttha.p@msu.ac.th.

faculties: Nursing, Informatics, and Veterinary Sciences, have joined such programmes. In the B.E. 2561 (2018) academic year, there was a programme of collaboration between all 6 faculties in order to organise interprofessional education that supports the development of holistic healthcare for elderly patients in the community. The aim of this is to understand the lives of, and the reality faced by, the elderly, in order to: find the best methods to support, prevent, treat, and care for various conditions relating to healthcare; alter behaviour with regard to the maintenance of health; conduct research into aspects of nutrition and medication; utilise appropriate media while improving the effectiveness of communications between interdisciplinary students, and between students and elderly patients, as well as their families. Appropriate design of housing and the environment in order to best suit the patients and their community may also be improved through the internationally recognised Universal Design concept, as supported and publicised by the United Nations, as a means for persons with disabilities and the elderly to access facilities necessary for living within their buildings and environment. Students are given the opportunity to adapt the knowledge gained in class to real life situations within the relevant communities, with the intention for new generations of students to possess a positive attitude towards interprofessional learning and work, and for them to be able to undertake real and practical work within their communities. With these objectives in mind, the interprofessional programme was created as a form of multidisciplinary education, including directly and indirectly related health and non-health professionals who are spread between 6 or more faculties. The main theme of the programme is the concept of holistic and humanized elderly patient home care, using the principle of INHOMESSS, which is part of the idea of family medicine. The students together undertake their practical training in communities, in collaboration with the relevant community's leaders and volunteers, by carrying out home visits for elderly patients. The aims of such a process are for the students to learn to identify the difficulties faced by the elderly patients ("Por Hug Mae Hug"), find solutions for and provide assistance to them, create health care innovations, adjust housing conditions and environments, or give advice to their own Por Hug Mae Hug in order to improve their quality of life. Students who visit each house shall also have opportunities, through activities, to present their work and innovation which are part of their interprofessional education, allowing the students to improve their professional skills and advance their learning in the 21st century.

2. Relevant Literatures

From the process of literature reviews, various studies from different countries of inter-professional education have been found. The results, or learning outcomes, of them are shown to be beneficial to the students, the patients, the elderly, and the communities involved. An example may be seen in the interprofessional education (IPE) programme of Sapporo University, Japan (Sohma et al., 2010), whose integrated strategy means that education also has a role in community healthcare. Such management of education systems allows the students to provide services to the population of the Northern part of the island of Hokkaido, where there are communities with large numbers of elderly inhabitants. The IPE programme provides integrated practical education for the relevant professions by combining community-residential internships, and team-based training, as the Team-based Residential Community Internship Programme, under a combined programme managed and supervised by the Faculty of Medicine, and the Faculty of Health Sciences. The students receive training in order to provide them with skills and make them become more conscious of their mission to provide health care for the community. Better understanding within the community is also gained by strengthening good relationships between students and residents of the relevant areas.

There was also a study in 2010 (Haruta, 2011) on the community-participatory postgraduate interprofessional education programme (community-participatory postgraduate IPE programme — The Health Class). The programme is for students at postgraduate level, and has been developed in order to promote co-operation in inter-professional work for public health and community elderly care in Japan. The participants in the programme are members of 5 main professions, which are: doctors, nurses, physiotherapists, pharmacists, and nutritionists. They work with people who are members of suitable communities. Each of the participants plays a part in creating the material and the subject matters, and provides healthcare knowledge for the communities, as well as making decisions together in order to create a real learning process which is then applied during meetings of focus groups, between individuals, and for mutual discussions through electronic mails. For every different subject matter that is created, reviews are carried out in order to receive feedback from other academic participants, in order to further develop and improve upon the topic. The assessment of the programme is done through a group meeting and the observation of field activities by 2 external assessors. The quality assessment was done through analysis of 3 main points, which are: commitment to the community, building relationships, and understanding other healthcare professions. The result of the study shows that the practitioners who participate in the study have learnt not only how to effectively disseminate healthcare information to the community, but also the roles of other practitioners, and that they have acquired more respect for the opinions of those in the communities in which they worked.

In another study in Denmark in 2009 (Jakobsen et al., 2009), Holsterbro hospital established an interprofessional training unit (ITU) for students of Occupational Therapy, Physical Therapy and Nursing. Later on, students from the Faculty of Medicine from Aarhus University in Sweden also joined in, in order to exchange their experiences. The ITU is responsible for 8 patients on the orthopaedic ward, which is a 30-bed-capacity ward. The interprofessional students are from 4 professions whose members contribute to the provision of care and support by the hospital personnel. Their responsibility involved looking after the ward during the changes of shifts during the day. The students had the opportunity to develop their professional skills in the form of teamwork.

Jefferson Health Mentors' Interprofessional learning experience programme (Collins et al., 2009) is organized by the Association of American Medical Colleges. It is a 2-year programme which has been organized in order to permit students from the fields of Medicine, Nursing, Pharmacy, Physical Therapy, Occupational Therapy and Family Therapy to work in a team. The students pair up and work together under the supervision of lecturers who are health professionals. Most of them undertake care work for the elderly with chronic illnesses in the community. The objectives of this programme of interprofessional learning are for the students to understand the thought process of other members of the team in caring for the patient, and to be collaboratively inventive in their work. From the point of view of inter-professional capacity building, the programme helps the inter-professional students to focus on their goals, and to see their patients as the centre of their work. It also allows the community to participate. Students see and understand the different roles of a range of practitioners. They support each other's capacity building process, improve their communication skills, and strengthen their team building experience.

According to the survey of the Bureau of Empowerment for Older Persons, the number of elderly people in Thailand, in B.E. 2555 (2012) was 8,170,909 (Bureau of Empowerment for Older Persons, B.E. 2555). This is classed as Population Ageing (UN 2002). It is predicted that by B.E. 2573 (2030), the number of elderly people in Thailand will increase by 25 per cent, or approximately 17.8 million (Foundation of Thai Gerontology Research and Development institute (TGRI)). The survey states that the number of elderly persons living alone in a household is likely to increase in number to 7.7 per cent of the population in B.E. 2550 (2007). When a person enters old age, his or her body changes. Bones and joints deteriorate. Muscles weaken and balances are off. Walking cannot be

done quickly or smoothly. Eyesight becomes poorer and senses become slower. If an elderly person is living alone in unsuitable housing, accidents may occur, leading to incapacity or disability.

From such a situation of an aging society, and the difficulties faced by the elderly at home, together with the interprofessional education that can be of assistance to the elderly, the researcher, in the capacity of the lecturer in charge of the management of education, therefore applies the concept of interprofessional education to 6 professions, or 6 faculties. The aims of the programme are the learning results that students are expected to experience. These are that students can apply their knowledge to the concept of home care for the elderly, effectively communicate with the patients, possess an understanding of the notion of adjustment of housing conditions and environment in order to improve the standard of living for elderly persons who are house-bound, and undertake interprofessional work together as a team.

3. Research Methodology

The research was conducted using a combination of quantitative and qualitative methods, in order to conduct interprofessional education between 6 faculties, including activities which allowed students to engage in home visits for the elderly. This was necessary in order to identify problems and to plan, devise or create innovations that improved the quality of life for elderly patients or their carers. The main assessments were carried out on the 2nd year students from 6 faculties.

The sample groups were students who participated in interprofessional education. These were students from the faculties of Medicine, Pharmacy, Nursing, the Faculty of Architecture, Urban Design and Creative Arts and the Faculty of Informatics of Mahasarakham University. The total number of 2nd year students registered for the second term of the B.E. 2561 (2018) academic year was 492. The students were divided into 50 groups, with 9–10 students per group. The group's members were from all 6 faculties. The elderly patients and/or their carers or their family members totalled 50 persons from 50 households in the areas of Nak Wichai community, city municipality, Maha Sarakham Province. The selection of these households was done by the home-visit team of the Burapha primary care unit (PCU) and the public health volunteers of Nak Wichai community.

Table 1 Detail of Interprofessional Education Collaboration in MSU

No.	Faculty	Number of Students (persons)	Subject (TQF 3)	Co-ordinating lecturers	Percentage of scores for each subject of the IPE
1	Faculty of Medicine	58	Family Medicine 1	Asst. Prof. Dr. Sirinart Tongsiri	20%
2	Faculty of Pharmacy	96	Public Health Pharmacy	Asst. Prof. Dr. Thanapong Poophalee	15%
3	Faculty of Nursing	107	Foundation Nursing Practice	Dr. Wiravan Kumvan	5%
4	Faculty of Architecture, Urban design and Creative Arts	44	Principles and Concepts of Urban Design and Product Design	Miss Umaporn Pupphachai Miss Suntaree Toogjit	15% 15%
5	Faculty of Veterinary Science	35	Veterinary Immunology	Dr. Vet. Med. Natapol Pumipuntu	20%
6	Faculty of Informatics	150	Community Communication	Asst. Prof. Phuangchomphu Chaiala Sangrungruengroj Miss Angkana Promruksa	30%
	Total students	492			

Table 2 Four Activities for the Interprofessional Education in MSU

No.	Activities	Objectives
1	Activity for capacity building and preparation for the interprofessional education of lecturers from all 6 faculties	To brainstorm for opinions to develop the educational methods for the students from all relevant persons, consisting of lecturers from all 6 faculties, student representatives, community representatives (municipality and the chairperson of public health volunteer group) in order to find the method which is most beneficial to the learning experience of the students
2	Activity to create team learning atmosphere of interprofessional education and to plan home visits based upon INHOMESSS concept I = Immobility - movement and basic personal care N = Nutrition - local food and herbal usage H = Housing - home condition, living conditions, house and environment (Universal design) O = Other people (Genogram) - Family tree M = Medication - the use of medicine, and the use of herbs as medications E = Physical Examination S = Spiritual health S = Safety - safety and security in life S = Services (health services) - existing health service	To allow students from different professions to have the opportunity to exchange information and together assess the patients, using the INHOMESSS concept, and apply the information to the planning, innovation building, and guidelines in order to manage the conditions of the home and the environment, in order to improve the quality of life for elderly patients at home Students learn from 7 learning bases: 1st base: INHOMESSS 2nd base: approaching elderly patients and their family 3rd base: Universal Design at UDC 4th base: medicine management at home 5th base: media awareness and communication with elderly person 6th base: transmittable disease from animal to human 7th base: IPE experience from previous class
3	Home visit activity for elderly patients in the area of Nak Wichai 1 (2 days)	To conduct group activities, practical field work in the community, and feedback for each other
4	Activity to present innovations or new inventions to improve quality of life of patient at home	To allow students to adapt their knowledge and information concerning the patients, which is obtained during the home visits, to the planning and creation of innovations or new inventions to improve quality of life at home, while using presentation skills via appropriate technology

4. Assessment

- 1) Methods: Students shall conduct a before-and-after self-assessment on their attitude towards interprofessional work, 10-item rating scale (1–5 scale) and behavioural assessment during home visits with 7-item rating scale (1–5 scale) through direct observation by lecturers of each house. Patient satisfaction assessment, with 10-item rating scale, shall also be done on the work of the interprofessional team and the home visits.
- 2) Tools: Google form Questionnaire on attitude towards the work of the inter-professional team before-and-after conducting home visits, and the Google form Assessment by lecturers, on the work of the interprofessional team while conducting home visit at each house. Patient satisfaction was assessed after home visit by using paper questionnaire through interviewing patient.

This research project has been approved by the Ethics Committee for Human Research, Mahasarakham University.

5. Results Analysis

The assessment shows that the students' attitude towards interprofessional education, on average (mean±SD), has increased in a statistically significant manner from 3.60±0.45 to 4.25±0.48 (full score: 5) shown in Figure 1. The behavioural assessment, by direct observation of lecturers from 6 faculties, of the students' interprofessional

work during home visits shows average scores of 70 per cent upwards (Figure 2). The elderly patients and their carers are also largely satisfied with the students for each part of their work, and have given them scores of 80 per cent upwards (Figure 3).

50 innovations have been created in order to improve the quality of life of the elderly. Improvements of the environment in the homes of the elderly have also been implemented in order to increase the safety of their households, in accordance with the individual problems found. From interviews with and feedback by students, it was found that the students have made new friendships, learnt more about different practices, and got to know friends from different professions. They have also learnt from real life situations, and experienced gratitude from friends of different professions, their patients, and the community. Students state that they have been inspired to strive for better results in their studies in their respective professions. They have learnt to systematically work in a team and adapt the knowledge that they have learnt in order to help each other to holistically create innovations which improve the quality of life for the patients and their families. Students realised their self-worth and the value of their work for the elderly and the community.

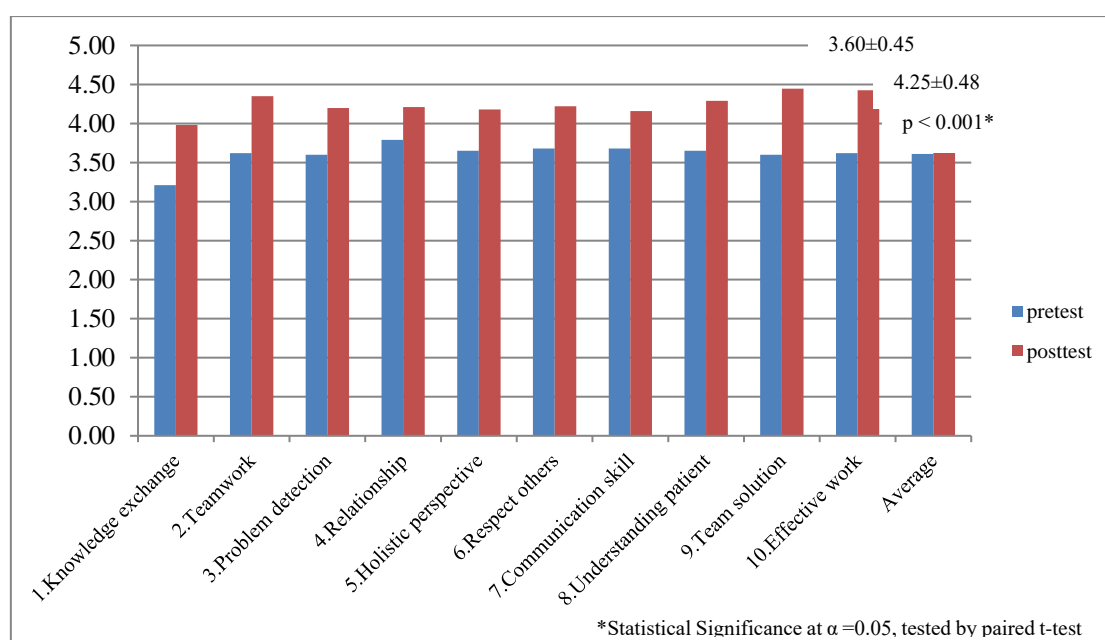


Figure 1 Students' Attitude Towards Interprofessional Education

Conclusion of the research: IPE helps to enhance good attitudes towards inter-professional work and improve behaviour within teams. Students' feedback for IPE also demonstrates that they have gained new friendships, new outlooks, better communications skills for inter-professional work, and the ability to plan together for providing help to elderly patients.

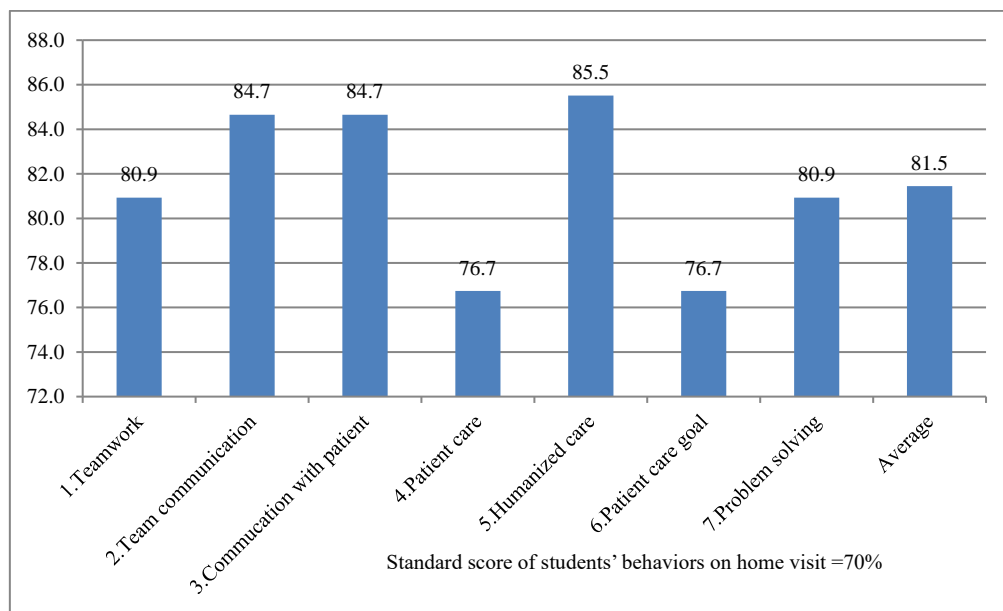


Figure 2 Students' Behaviour During Interprofessional Home Visits

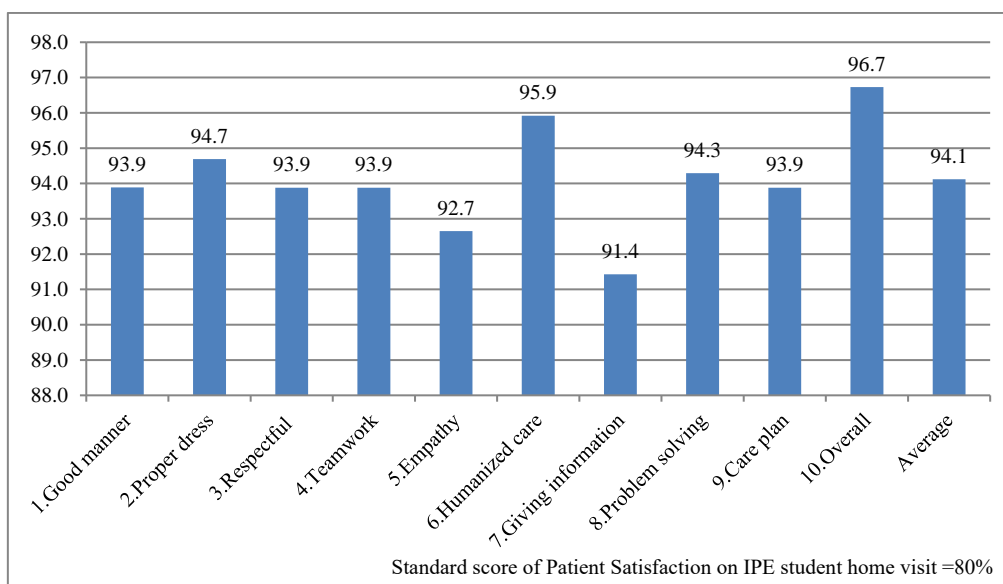


Figure 3 Patient Satisfaction on Interprofessional Home Visits

6. Suggestions

Interprofessional education is useful for the students, lecturers, patients, and the community. It is suggested that it should be a policy matter to ensure IPE is conducted in educational establishments. Additionally, if communities are given more opportunity to be a part of Interprofessional education, further innovations may be created by the student's work, and from the lecturer's advice. It may be used to benefit the development of the community itself, resulting in further community engagement, with mutual benefits in the future.

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