

Association between interprofessional collaboration readiness and clinical decision making ability of midwifery students

Bulan Kakanita Hermasari¹, Brian Sahar Afifah², Erindra Budi Cahya³

¹ Department of Medical and Health Profession Education, Universitas Sebelas Maret, Indonesia

² Midwifery Student, Universitas Sebelas Maret, Indonesia

³ Midwifery Study Program, Universitas Sebelas Maret, Indonesia

Article Info

Article history:

Received Jul 14, 2019

Revised Aug 12, 2019

Accepted Aug 22, 2019

Keywords:

Clinical decision-making
Interprofessional
Midwifery student
Readiness

ABSTRACT

Maternal mortality remains a major challenge to health system worldwide. This problem requires the attention of health practitioners and health professional educators including midwives. Effective clinical decision making is among the most important skills required by healthcare practitioners in the intra-profession and interprofessional context. This study aims to explore the midwifery student's clinical decision-making ability and attitude toward interprofessional learning. This study used quantitative design with cross-sectional approach. Subjects of research were 50 midwifery students. The instruments were The Readiness for Interprofessional Learning Scale (RIPLS) questionnaire; and an assessment rubric of the obstetric case study. Most of the students are not ready to collaborate with other health professions (68%), and have low and moderate clinical decision-making abilities (98%). There is a significant positive correlation ($p < 0.05$) between student readiness for inter-professional collaboration with clinical decision-making ability. This study emphasizes that the ability of a midwife in clinical decision making, especially in emergency cases, is related to their readiness or experience in collaborating with other health professionals.

Copyright © 2019 Institute of Advanced Engineering and Science.
All rights reserved.

Corresponding Author:

Bulan Kakanita Hermasari,
Department of Medical and Health Profession Education,
Universitas Sebelas Maret,
Jl. Ir. Sutami No.36A Kentingan, Jebres, Solo, Jawa Tengah, Indonesia.
Email: dr.bulan.kakanita@staff.uns.ac.id

1. INTRODUCTION

Maternal mortality remains a major challenge to health system worldwide. Since the Millennium Declaration in 2000 and the establishment of the Millennium Development Goals, the focus on improving maternal and newborn health has intensified. This is evidenced by the target of decreasing maternal and child mortality rates as a high priority for the international community, especially in view of the increased attention on the Millennium Development Goals 4 and 5 [1]. This problem requires the attention of health practitioners and health professional educators including midwives. This has been attributed to the swift and skilled multidisciplinary response to a mother's health problem once it has been recognised. This means that midwives and other health professionals need to be vigilant and highly skilled in identifying and managing the problem [2]. During managing the problem, midwives are constantly weighing the appropriate care for each individual woman, including when the assistance of specialised caregivers is needed. This assessment demands well-developed competencies for clinical decision-making.

Effective clinical decision making is among the most important skills required by healthcare practitioners [3]. One of the major challenges in teaching midwifery and advanced practice nursing is helping students develop the critical thinking and clinical decision-making skills needed for various situations encountered in practice that frequently change over time [4]. Decision-making within midwifery practice is

complex and challenging and is directly linked to the standard of care provided. Students need not only to master the core knowledge and skills required, but also need to assess, analyze, judge, decide on action, act, and evaluate their actions as the patient's condition or situation changes [5]. This clinical decision-making ability is needed not only in the intra-profession but also in the interprofessional context.

Interprofessional collaboration is intended to increase the affordability and coordination of health services, the appropriate use of specific clinical resources, chronic health outcomes, and patient care and safety in emergency cases [6]. Health professionals still tend to work individually and therefore need the initiative to develop an Interprofessional Education (IPE) curriculum as the foundation for pioneering collaborative practice [7], including in Indonesia. It is emphasized in the literature that all students in health care professions should be engaged in IPE as a component of their curriculum in order to be well prepared for professional work [6]. Nevertheless, one of the main barriers to the development of IPE is students' readiness toward the learning [8].

One of the learning methods used to improve clinical decision-making capabilities and facilitate collaborative learning is a case study [9]. Students are often given the patient's case and a set of questions to answer, drawing on their readings, lectures, and/or clinical experiences. Case studies usually present all of the scenario data at once, and students base their response on the given information, which requires them to analyze a problem and offer a solution or plan [4].

This study aims to explore the midwifery student's clinical decision-making ability and attitude toward interprofessional learning.

2. RESEARCH METHOD

This study used quantitative design with cross-sectional survey approach. This study was conducted in Midwifery Diploma Program of Faculty of Medicine Universitas Sebelas Maret (FM UNS) in December 2016-June 2017. The research population was the students of the 4th-semester students. The sampling technique used total sampling. Subjects of research as many as 50 student respondents

The instrument for measuring students attitude toward IPE was The Readiness for Interprofessional Learning Scale (RIPLS) questionnaire [10]. While the instrument to determine the clinical decision-making was a rubric that assesses the student's essay containing the problem-solving plan of the obstetric case study. Researchers used a scenario case from the Indonesian Young Health Professionals' Society [11]. From that case, the students were asked to analyze and solve the problem from the most critical (urgent) that needs to be done immediately in the form of plan of action. The case have been tested in the implementation of the NHC (Nusantara Health Collaborative) [11], a program enrolled by the Indonesian Government to encourage the implementation of collaborative and educational practices interprofessional in Indonesia. The plan of action assessment rubric was developed by researchers consisting of eight criterias: the agreeeness on a problem and propose a solution, sign up action for each goal, the timeliness of work plan preparation, the accuracy of the distribution of human resources, determination of possible problems that will arise, the accuracy and clarity of progress monitoring strategies, the accuracy of tasks distribution based on responsibility and competence, and implementation of the plan.

Data processing has been done using Statistical Product and Service Solution (SPSS) 20.0 for Windows. At last, we determine the correlation using The Spearman Correlation Test.

3. RESULTS AND DISCUSSION

The sample of research is all students of the 4th semester, consists of one class with a total of 50 students. Researchers distributed the RIPLS questionnaires as well as emergency midwifery scenario to students. All students have filled in RIPLS questionnaires and write plan of action from the scenario case. The characteristics of data about interprofessional readiness are in Table 1.

Most of the students (68%) are not ready to collaborate with other health professions. This is in line with [12] which stated that midwifery students have relatively low readiness to collaborate. There are several factors that affectt the readiness in collaboration: the involvement of professional educators and students in interprofessional learning from the beginning of educational time [13-16].

Table 1. Student's attitude toward interprofessional learning

Student's readiness	n	%
Not ready	34	68
Ready	16	32
Total	50	100

IPE is a process whereby a group of learners or health workers with different backgrounds learn together over a period of time during the educational period, with interaction as the primary goal, for collaboration in providing preventive, promotive, rehabilitative and other health services (6). This interprofessional learning has the effect to prepare students for clinical practice, to help improve professional relationships so as to enhance collaborative readiness between professions [17, 18]. Student's experiences in interprofessional learning nurture the development of communication skills, leadership skills and collaborative skills [12]. This experiences can develop positive attitude towards teamwork and collaboration, as well as towards interprofessional education in general. Hence, involvement in multi-professional student activities will increase students' readiness for collaborative learning.

The lecturer as a role model is defined as a lecturer to be an example, motivating and inspiring students, so that lecturers applying inter-profession collaboration will be imitated by students in collaboration between professions [19]. Students will also be motivated and inspired to collaborate between professions. The existence of faculty factors exposed to collaborative education between professions and become role models should be supported by a learning system that supports collaboration between professions in FK UNS. In this study, the respondents have not yet got the implementation of interprofessional learning. IPE in FM UNS is newly implemented for incoming students by year of 2017.

Most students (98%) have low and moderate clinical decision-making abilities with approximately the same amount as shown in Table 2. It is influenced by several factors, including knowledge and skills of students [20]. Midwives provide evidence-based care, using the best available clinical evidence, their own clinical expertise and experiences, and the situation and values of the pregnant women [2]. Therefore, the previous actual experience with regard to the case context greatly affects the student's analytical and problem solving skills. Case study include more complex competencies, such as differential diagnosis, diagnosis, management/appropriate interventions, specific psychomotor skills, and/or recognition of the need for consultation [4]. The students must know and be able to analyze what knowledge and/or skill is needed to manage the case. In this study, with the context of collaborative clinical cases, students have no experience of interacting with other professional students so that they have not been able to identify the knowledge, skills, roles and responsibilities of other health professions in solving cases. The next influencing factor is the students' perception of other unsuitable health professionals, which makes the students unable to reflect on the knowledge, skills, and ability of themselves and other health workers who are invited to collaborate [21].

Table 2. Student's clinical decision-making ability

Student's clinical decision-making ability	n	%
Low	23	46
Moderate	26	52
High	1	2
Total	50	100

There is a significant positive correlation ($p < 0.05$) between student readiness for inter-professional collaboration with clinical decision-making ability as presented in Table 3. It is influenced by several factors, including knowledge and skills of students [20]. Midwives provide evidence-based care, using the best available clinical evidence, their own clinical expertise and experiences, and the situation and values of the pregnant women [2]. Therefore, the previous actual experience with regard to the case context greatly affects the student's analytical and problem solving skills. Case study include more complex competencies, such as differential diagnosis, diagnosis, management/appropriate interventions, specific psychomotor skills, and/or recognition of the need for consultation [4]. The students must know and be able to analyze what knowledge and/or skill is needed to manage the case. In this study, with the context of collaborative clinical cases, students have no experience of interacting with other professional students so that they have not been able to identify the knowledge, skills, roles and responsibilities of other health professions in solving cases. The next influencing factor is the students' perception of other unsuitable health professionals, which makes the students unable to reflect on the knowledge, skills, and ability of themselves and other health workers who are invited to collaborate [21].

Table 3. The relationship between student's readiness for interprofessional learning and clinical decision-making ability

Variable	Clinical decision-making	
	Spearman's correlation coefficient	p
Student's readiness	0.561	0,000

4. CONCLUSION

There is a positive relationship between the readiness in inter-professional collaboration with the clinical decision making ability of midwifery students. It is necessary to implement interprofessional and collaborative learning from the beginning of study period that use variety of instructional designs including case studies with collaborative clinical context to develop clinical shared decision-making capabilities. Further studies on how to improve student's readiness toward interprofessional learning and clinical-decision making ability have to be carried out.

ACKNOWLEDGEMENTS

The authors would like to thank the IPE team of Faculty of Medicine University Sebelas Maret as well as students who have participated actively and helped the research process.

REFERENCES

- [1] Bhandari N, Mazumder S, Taneja S, Sommerfelt H, and Strand TA. "Effect of implementation of Integrated Management of Neonatal and Childhood Illness (IMNCI) programme on neonatal and infant mortality: cluster randomised controlled trial," *THE BMJ*, vol. 344(mar21 1) pp. e1634–e1634, 2012. [Online]. Available: <http://www.bmj.com/content/344/bmj.e1634?tab=related#webextra>. [Accessed Oct 8, 2018]
- [2] Scholes J, Endacott R, Biro M, Bulle B, Cooper S, Miles M, et al., "Clinical decision-making: midwifery students' recognition of, and response to, post partum haemorrhage in the simulation environment," *biomedcentral*, 2012. [Online]. Available: <http://www.biomedcentral.com/1471-2393/12/19>. [Accessed 2018 Nov 19].
- [3] Parker-Tomlin M, Boschen M, Morrissey S, Glendon I., "Cognitive continuum theory in interprofessional healthcare: A critical analysis," *J Interprof Care*, vol. 31, no. 4, pp. 446-454, 2017.
- [4] Carr KC. "Using the Unfolding Case Study in Midwifery Education," *J Midwifery Women's Heal*, vol. 60, no. 3, pp. 283-290, 2015.
- [5] Smith J. "Decision-making in midwifery: A tripartite clinical decision," *Br J Midwifery* vol. 24, no. 8, pp. 574-80, 2016. [Online]. Available: <http://www.magonlinelibrary.com/doi/10.12968/bjom>.
- [6] World Health Organization. "Framework for Action on Interprofessional Education & Collaborative Practice" 2010. [Online] Available: http://www.who.int/hrh/nursing_midwifery/en/ Geneva. [Accessed Oct 8, 2018].
- [7] Interprofessional Education Collaborative Expert Panel. *Core Competencies for Interprofessional Collaborative Practice: Report of an expert panel*, Washington DC : Interprofessional Education Collaborative, 2011. [Online] Available: <http://www.ncbi.nlm.nih.gov/pubmed/22030650>
- [8] Al-Qahtani MF. "Measuring healthcare students' attitudes toward interprofessional education," *J Taibah Univ Med Sci*, vol. 11, no. 6, pp. 579-85, 2016.
- [9] Carr KC. "Using the Unfolding Case Study in Midwifery Education," *J Midwifery Womens Health*, vol. 60, no. 3, pp. 283-90, May 2015. [Online] Available: <http://doi.wiley.com/10.1111/jmwh.12293>. [Accessed 2018 Oct 8].
- [10] McFadyen AK, et al., "The readiness for interprofessional learning scale: A possible more stable sub-scale model for the original version of RIPLÉ," *J Interprof Care*, vol. 19, no. 6, pp. 595-603, 2005.
- [11] Nusantara Health Collaborative, *Handbook of Introduction to Interprofessional Collaboration and Education Practices for Young Students and Health Professionals* (in Bahasa), Jakarta, 2014.
- [12] Lestari E, Stalmeijer RE, Widyandana D, Scherpbier A. "Understanding students' readiness for interprofessional learning in an Asian context: A mixed-methods study," *BMC Med Educ*, vol. 16, no. 1, pp. 1-11, 2016.
- [13] Sevin AM, Hale KM, Brown N V, and McAuley JW. "Assessing Interprofessional Education Collaborative Competencies in Service-Learning Course," vol. 80, no. 2, pp. 1-8, 2016.
- [14] Herbert CP, Bainbridge L, Bickford J, Baptiste S, Brajtman S, Dryden T, et al., "Factors that influence engagement in collaborative practice. *Can Fam Physician*," *NCBI* vol. 53, pp. 1318-25, 2007. [Online] Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1949257/pdf/0531318.pdf>. [Accessed 2018 Nov 22];
- [15] Mulvale G, et al., "'Gearing Up" to improve interprofessional collaboration in primary care: a systematic review and conceptual framework," National Center for Biotechnology Information, 2016. [Online] Available: www.ncbi.nlm.nih.gov/pmc/articles/PMC4955241/pdf/12875_2016_Article_492.pdf. [Accessed 2018 Nov 22]
- [16] Tapper G. "Interprofessional working: factors that contribute in practice," *Int J Ophthalmic Pract*, vol. 2, no. 2, pp. 63-68, 2011.
- [17] Housley CL, Neill KK, White LS, Tedder AT, Castleberry N, Housley CL, et al., "An evaluation of an interprofessional practice-based learning environment using student reflections student reflections," *J Interprof Care*, vol. 00(00), pp. 1-3 2017.
- [18] Russell L, Nyhof-young J, Abosh B, and Robinson S. "An exploratory analysis of an interprofessional learning environment in two hospital clinical teaching units," 20(January), pp. 29-39, 2006.
- [19] Chen A and Brodie M. "Resisting Outdated Models of Pedagogical Domination and Subordination in Health Professions Education Commentary," *AMA J Ethics*, vol. 18, no. 9, pp. 903-9, 2016. [Online] Available: www.amajournalofethics.org. [Accessed 2018 Nov 22]
- [20] D'Amour D and Oandasan IVY. "Interprofessionalism as the field of interprofessional practice and interprofessional education : An emerging concept," *J Interprof Care*, Supplement, pp. 8-20, 2005.
- [21] Stone J. "Moving interprofessional learning forward through formal assessment," *Med Educ.*, vol. 44, no. 4, pp. 396-403. 2010