

THE IMPLEMENTATION OF MINI-CEX ON SELF-EFFICACY AMONG MIDWIFERY STUDENT OF SARI MUTIARA INDONESIA UNIVERSITY

Siska Evi Martina 1 , Eva Hotmaria Simanjuntak 2

1 Department of Bachelor Nursing, Faculty of Pharmacy and Health Sciences, Sari Mutiara Indonesia University, Medan, Indonesia

2 Department of Bachelor Midwifery, Faculty of Pharmacy and Health Sciences, Sari Mutiara Indonesia University, Medan, Indonesia

1 siskaevi21@gmail.com

2 evahotmaria@gmail.com

Abstract

During clinical practice in hospital, several evaluation method were adopt to support student achieve their competency. Mini Clinical Evaluation Exercise (MiniCEX) is a Workplace-Based Assessment (WPBA) that requires the examiner to observe the student performing a focused task within 15–20 minutes at the clinic or ward with compulsory immediate feedback. This study aim to identify the differencies of self-efficacy after implementation mini-CEX amongmidwifery students. The design of this study was quasi experiment design with control group. This study were consist of 2 group, 32 students were an intervention group and 30 students were control group. The total sampling applied to get the sample who met with inclusion criteria. General Self-efficacy was applied to measure mean score of self-efficacy. The study found the self-efficacy among both group before implementation mini-CEX were low. However, this study found differences of self-efficacy before and after mini-CEX (11.40). The t-test analyzed shows the mini-CEX was significant effective improving self-efficacy (p value: 0.000). In conclusion the implementation mini-CEX was effective to improve self-efficacy among midwifery student during clinical practice. The Mini-CEXcould be effective assessment method for improving the self-effiacy of students.

Key word: Midwifery students; Mini-CEX; Self-efficacy

I. INTRODUCTION

Many assessment tools were applied to assess the competency of students. MiniClinical Evaluation Exercise (Mini-CEX) is one of the work-placed based assessment vehicles. The Mini-CEX was first developed by the American Board of Internal Medicine in 1972 ^[1]. The Mini-CEX assessment is one of the assessment tools could used to evaluate midwifery students anyt time and in any setting.

Nowadays, midwifery lecturers are increasingly interested in the motivational beliefs of students. In particular, interest in learning and how self-efficacy of health students is related to learning and development during the clinical stage process^[2]. Self-efficacy is an initiator and an important factor in the occurrence of learning motivation, that could be influence to carry out of processes that lead to success in doing assignments, quizzes, or exams. Self-efficacy is a belief in one's own abilities and competences in doing a task, achieving goals, and producing something^[3].

However, self - efficacy is still not understood by some of the midwifery students program. Midwifery student should be able doing clinical skills or achieve the competencies as a professional midwife^[4]. Therefore, self-efficacy gives influence in the performance of the process of practice in gently practice. Self efficacy of a person to contribute on their motivation in some way define the purposes for which they are set; the disabilities that they produce; how long they last; and their resistance to failure^[2]. Even though skills and knowledge support the success of midwifery students in the college, belief in ability to use opportunity is a thing that it's important to distinguish succeed or fail. Self- efficacy of a person is contribute on their motivation.

Pevious studiesfocusing on self-efficacy among the medical students building understanding of student choice, level of seriousness, and the presence and potential to carry out a good practices^[5]. Whereas, supervisorshave to build understanding of why some students able to carry out a good practice, while some are very difficult to achieve the competencies for practice clinic the final stage^[6]. A person with a higher self-efficacy are high are more likely to see challenges in every situation compared as trials, this is a very positive thing^[7]. Students with higher self-efficacy endeavor, adapt better and persist to achieve better academic performance than students with low self-efficacy^[7]. Therefore, this study was conducted to examine effective mini-CEX to improve self-efficacy of midwifery students of Universitas Sari Mutiara Indonesia.

II. RESEARCH METODOLOGY

This study design was a quasi-experimental. There were two groups in this study, the number student who were joint in intervention mini-CEX was 32 third- year midwifery student and 30 students were a group control carried out an assessment as usual. The sample selected in this study were midwifery students of the Sari Mutiara Indonesia University. The inclusion criteria were: 1) Students who carry out practical learning with 100% attendance, 2) Have passed the exam theory and laboratory, 3) agreed to participate in the study. The sampling technique used was total sampling. This study was conducted between February to March because of pandemic situation this study was continued from July to August 2020.

In this study the authors applied the General Self-efficiency Scale that consist of 38 items with 4 likert scale. Before using the questionnaire, the authors emailed the questionnaires and the request permission to apply and they replied that they agreed. The score ≥ 121 was determine as a higher self-efficacy and < 121 was a lower self- efficacy. The General Self-efficiency Scale was free to use in the website and the authors found the scale in the website.

The author process for getting permission from the Director of Sari MutiaraLubukPakam General Hospital, after obtaining permissionfrom the Director of Sari MutiaraLubukPakam General Hospital. This study was approved by Ethic Review Board (ERB) Committee Study Involving Human StudySubjects, Medicine Faculty of North Sumatera Muhamadiyah University,Medan, Indonesia (ERB No. 406 / KEPK / FKUMSU / 2020.

III. RESULT

1. Characteristic of Midwifery Students

Tabel 1. Characteristic of midwifery students (N=62)

Variable	Intervention Group		Control Group		
	N (f)	%	N	%	
Age	20 years	6	18.8	9	30
	21 years	11	34.4	11	36.6
	22 years	15	46.9	10	33.4

Because the participants of this study was midwifery students, all participants were women. Table 1 shows the majority of participants were in late adolescence 22 years (46.9%), 34.4 % was 21 years,and 20 tahun (18,8 %). Whereas, in control group, the majority participants were 21 years (36.6%), 33.4 % was 21 years and 30 % was 20 years.

Tabel 2.Distribution and Frequency of Mini-CEXamong Intervention group (N= 32)

Variable	N	%
Satisfaction of Mini-CEX		
Satisfied		
Superior Satisfied	19	59.4
Total	13	40.6
	32	100
Overall clinical skills		
Unsatisfied	6	18.8
Satisfied	23	71.9
Superior Satisfied	3	9.4
Total	32	30

Table 2 shows 59,4 % participants were satisfied with implementation of mini-CEX and 40.6 % was superior satisfied. Whereas,overall clinical skills performance among participants were satisfied (71.9 %) and only 18.8% participants were unnsatisfied perform their clinical skills.

2. Self-efficacy among midwifery students

Tabel 3. Self Efficacy level among midwifery students before implementation of Mini-CEX (N=62)

<i>Self efficacy</i>	Intervention		Control	
	F (32)	%	F (30)	%
<i>Lower Self efficacy</i>	20	62.5	17	56.7
<i>Higeher Self efficacy</i>	12	37.5	13	43.3

Based on table 3, the majority of participants who have lower self efficacy in intervention group and control group is almost same. 62.5 % participants from intervention group have a lower self-efficacy and 56.7 % participants from control group have a lower self efficacy.

Tabel 4. Analysis of differences *Self Efficacy* before and after implementation Mini-CEX among midwifery students (N=32)

Variable	Intervention	Mean ± Std. Deviasi	diff mean	T	p value
<i>Self Efficacy</i>	Pre-intervention	109.84± 5.28	-11.40	9.88	0.000*
	Post intervention	121.25± 4.43			

*t-Test

The following table presents the results of data analysis the differences total score of self-efficacy score with mean values and t-test. Based on table 4, shows there were significant improve mean value of self-efficacy before implementation of mini CEX and after implementation mini-CEX (11.40). This result follow by analysis *Paired t-test* with *p values* = 0,000 ($p < 0,05$, there means the self-efficacy level has significant different before implementation mini-CEX and after implementation mini-CEX. In conclusion, implementation mini-CEX improves self-efficacy significantly.

IV. DISCUSSION

The average self-efficacy score of third-year midwifery students before implementation mini-CEX were lower, both among intervention group and control group. Intervention group shows that 62.5 % participants have a lower self-efficacy and 56.7 % participants have a lower self-efficacy of control group. This study close to result of previous study by Jun Yifan and Lv Xiahoan (2018)^[8]. which found the average self-efficacy score of third-year nursing students were in low level. Consistently with study by Henderson et al (2016)^[9]. shows that the low level of self-efficacy in students is because of students consider themselves to have small roles in providing health care. The reason why this study found lower self-efficacy among midwifery students might be due to the learning environment before implementation mini-CEX did not support the learning process and the students have no idea what they should do if have no pregnant women in charge to hospital at their duty time.

The objective of this study was to identify the differences of self efficacy before and after implementation of mini-CEX. Therefore, this study also found there were significant

improve mean value of self-efficacy before implementation of mini CEX and after implementation mini-CEX (11.40). This result followed by analysis *Paired t-test* with p values = 0,000 ($p < 0,05$, there means the self-efficacy level has significant different before implementation mini-CEX and after implementation mini-CEX.

There were limited study that specific about mini-CEX influencing self-efficacy. The most study about mini-CEX was considered to clinical skills. Mini-CEX requires the students to demonstrate either one or more cognitive, psychomotor (patient's examination skill) or soft skills (communication skill) related to the task. The study by Jun Yifan and Lv Xiaohan (2018)^[8]. close to result of this study which mentioned that successful experience can improve self-efficacy and the experience of failure reduces the sense of self-efficacy. As result of this study, before implementation mini-CEX the students have a lower self-efficacy. Then, during the clinical practice in hospital they deserved feedbacks from supervisor. Based on those experiences the student improve their self-efficacy. The study by Awang Besar MN et al. (2018)^[8] found that the majority of students (46.8%) implement self-reflection during the mini-CEX process. This may happened because mini-CEX is an active evaluation method for students. Students will get feedbacks by open-ended questions and the students able to evaluate themselves. There means, when they face the new challenges and overcome those challenges, successful experiences will give them more confidence and improve their sense of self-efficacy. It also bring them positive emotions and motivates them to continue learning. Therefore, based on this study, mini-CEX was effective to improve self-efficacy among midwifery students.

V. CONCLUSION

This study found that the mini-CEX was significant improve the self-efficacy among midwifery students of Sari Mutiara Indonesia University. There were significant improve the mean score of self-efficacy before implementation and after implementation mini-CEX. In conclusion, the mini-CEX should be applied during the clinical practice for midwifery students.

This study have some limitation such as this study conducted during the pandemic, the limited sample and time. Therefore, this study might be could not be generalized to other group or situation.

VI. ACKNOWLEDGEMENT

The authors are grateful Directorate General of Higher Education, Ministry of National Education, Indonesia for funding this study and Sari Mutiara Indonesia University for supporting this study. We are also appreciate to participants for willingness joined in this study.

REFERENCES

- [1] J.J. Norcini, L.L. Blank, D. Duffy, G.S. Fortna, The Mini CEX: a method for assessing clinical skills, *Ann. Intern. Med.*, 138 (2003), 476-81.
- [2] George, L. E., Locasto, L. W., Pyo, K. A., & W. Cline, T. (2017). Effect of the dedicated education unit on nursing student self-efficacy: A quasi-experimental research study. *Nurse Education in Practice*, 23, 48–53. <https://doi.org/10.1016/j.nepr.2017.02.007>.

- [3] Bandura, A. (1994). *Bandura Self-efficacy defined*. Encyclopedia of Human Behavior. Retrieved from <http://www.uky.edu/~eushe2/Bandura/BanEncy.html>.
- [4] Abdal M, Masoudi AN, Adib-Hajbaghery M. Clinical Self Efficacy in Senior Nursing Students: A Mixed- Methods Study. *Nurs Midwifery Stud*. 2015, 4(3): e29143
- [5] Partiprajak S , Thongpo P. Retention of basic life support knowledge, self-efficacy and chest compression performance in Thai undergraduate nursing students. *Nurse Education in Practice*. 2016,16: 235-241.
- [6] Jun WH. Anger expression, self-efficacy and interpersonal competency of Korean nursing students. *International Nursing Review*. 2016, 63, 539–546.
- [7] Betoret FD, Rosello LA, Artiga AG. Self-Efficacy, Satisfaction, and Academic Achievement: The Mediator Role of Students' Expectancy-Value Beliefs. *Front Psychol*. 2017;8:1193.
- [8] Jun Yi Fan & Lv Xiahuan. (2018). Self-Efficacy among Third-Year Nursing Students: A questionnaire study. Bachelor Thesis, Nursing Department, Medicine and Health College, Lishui University China and University of Galve.
- [9] Henderson, A., Rowe, J., Watson, K., & Holmes, D. H. (2016). Graduating nurse self-efficacy in palliative care practice. *Nurse Educational Today*, 139-146: doi: <http://dx.doi.org/10.1016/j.nedt.2016.01.005>.
- [10] Awang Besar MN, Kamruddin MA, Siraj HH, Yaman MN, Bujang SM, Karim J, Jaafar AS. Evaluation of lecturer's feedback in mini clinical evaluation exercise assessment (Mini-CEX). *Education in Medicine Journal*. 2018;10(4):31–41. <https://doi.org/10.21315/eimj2018.10.4.4>