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Impacts of Peer-Mentoring Program on Successful Clerkship Students in the First Taker of Computer-Based Competency Test

Shofiyah Latief¹, Sigit Dwi Pramono^{1,*}, Reeny Purnamasari¹, Nasrudin Andi Mappaware¹

¹Medical Faculty, Universitas Muslim Indonesia, Makassar City, Indonesia

*Corresponding author email: sigit.dwipramono@umi.ac.id

ABSTRACT

Background and Objectives: The competency test for prospective GP, Doctor Profession Program (UKMPPD), is obligatory for the Indonesian Doctor. However, the low-graduating rate has been an issue for years. Kemendikbud suggests peer-mentoring and UMI have been implementing it since 2017. Therefore, the researchers aimed to examine peer-mentoring program significance towards the successful rate of CBT first-taker participants.

Method: This research was conducted descriptively using a retrospective method in MPPD at Medicine Faculty of Universitas Muslim Indonesia (UMI) who took the Computer-Based Test UKMPPD exam (First Taker). The samples were collected from November 2014 to November 2020 using total sampling, which involved 980 participants. This study used the Independence Test T Sample to determine if there were average discrepancy grades of the UKMPPD Computer-Based Test. The research analysis was carried out using the Chi-Square Test to find out the relationship between the level peer mentor program and Computer-Based Test of Doctor Profession Program graduation rate.

Result: The first taker participants of the Computer-Based Test of Doctor Profession Program (UKMPPD) at the Medicine Faculty of Universitas Muslim Indonesia who participated in the peer mentor program involved 712 people in total. They consisted of 593 passed and 119 failed. Meanwhile, not-participating peer mentoring program were as many as 268 participants comprising 198 passed and 70 failed. The result of Mann-Whitney U test results from Sig value (2 tails) at 0.000. Then the analysis using Chi-Square reported the Asymptotic Significance value (2-sided) by 0.001.

Conclusion and Suggestion: There is a significant increase in Doctor Profession Program (UKMPPD) Computer-Based Test value on first taker participants at the Medicine Faculty of Universitas Muslim Indonesia. The difference occurred in those who receive peer mentor programs and do not register in peer mentor programs. The results confirmed a pivotal relationship in peer mentoring programs on Doctor Profession Program (UKMPPD) Computer-Based Test graduation rate of medicine faculty at Universitas Muslim Indonesia. The peer mentor program must remain to be implemented and improved to reach a better accomplishment rate.

Keywords: Peer-mentoring, Pass, Computer Based Test (CBT), Doctor Profession Program Student Competency Test (UKMPPD), First Taker.

1. INTRODUCTION

Based on the Law of the Republic of Indonesia Number 20 of 2013, it is stated that to complete a doctor or dentist Profession program, students must pass a national competency test before taking an oath as a doctor or dentist [1]. Initially in Indonesia, the competency test for prospective general practitioners was called the Indonesian Doctor Competency Test (UKDI) which was later changed to the Doctor Profession Program Student Competency Test (UKMPPD) which was an exit exam. This exam is held 4 times a year, namely in February, May, August, and November. This activity is carried out by the medical faculty as the organizer, and in collaboration with the Association

of Indonesian Medical Education Institutions (AIPKI), which coordinates with Profession organizations. The government, in this case, the Ministry of Research, Technology, and Higher Education only acts as a supervisor. Competency tests consist of two types of tests, namely Computer Based Test (CBT) and Objective Structured Clinical Examination (OSCE) [2]. The competency test aims to maintain the quality of medical education graduates and is a form of protection for the public and users of medical services [3].

Based on data obtained from the National Committee for the Profession Doctor Program Student Competency Test (PNUKMPPD), the number of UKMPPD participants passing in

November 2020 was 2.160 while those who did not pass were 2.264 [4]. This means that the number of participants who did not pass is more than those who passed. The passing rate for UKMPPD is always a problem every year. This is due to the small passing rate and there are still many UKMPPD retakers who have not passed and the number is increasing every year. UKMPPD first-taker refers to those who participate in the competency test for the first time are participants undergoing the competency exam more than once. The percentage of passing UKMPPD first takers varied from 2014 by 67%, 2015 by 71%, 2016 by 71%, 2017 by 73%, 2018 by 80% and decreased to 77% in 2019 [5].

A study conducted jointly by the Ministry of Research, Technology and Higher Education and medical education experts, based on the results of the 2017 cracker special guidance program, found several factors for the failure of UKMPPD participants. These factors include the presence of talents and abilities of students that do not meet the standard to become doctors according to the Indonesian Doctors Competency Standards (SKDI). In addition, the study confirms the discrepancy between material taught in education and material tested on the UKMPPD, medical faculty performance which affects the quality of student learning. Other mismatches reported consist of the lack of an incentive-based guidance process and inaccurate guidance methods, and the psychological condition of students facing exams, such as a panic attack [6].

Not a few prospective doctors have not passed the Profession Doctor Program Student Competency Test (UKMPPD), so they have to resit in the next year exam and become re-takers exam. In response to this case, the Ministry of Education and Culture (Kemdikbud) provides solutions for re-takers. The intervention program is divided into 2, namely the special guidance national program for the re-takers with the peer-mentoring method and the training program for the medical faculty which has the largest. Besides, other solution can be considered, such as policy. The policy is a mutual consensus in 2019. The consensus was agreed upon by the Ministry of Research, Technology and Higher Education (now the Director-General of Higher Education under the Ministry of Education and Culture), the Ministry of Health, medical stakeholders, and the deans of the Faculty of Medicine throughout Indonesia [7].

At the Faculty of Medicine, Universitas Muslim Indonesia has implemented a special guidance program with a peer-assisted study program for all prospective participants who will be participating in UKMPPD since 2017. This method is undertaken to boost UKMPPD successful rate. Mentoring origins from Greek mythology, the word mentor means to act as an adviser, role model, tutor, and/or teacher

counselor. Mentoring is a learning process, which the mentor can make mentees (mentoring participants) from dependent learners to become independent ones [8]. The mentoring program promotes more benefits to the mentee in the learning process. It offers not only benefits to the mentee but also to the mentors. The mentor will perceive satisfied from the results by assisting others, in which their free time is spent for alternative activities and receives recognition from the organization so that work performance increases [9].

Based on this, the researcher wanted to examine the effect of the peer mentor program on the passing rate of the Computer Based Test for the Profession Doctor Program Student Competency Test (CBT UKMPPD) in the first taker participants of the Faculty of Medicine, Universitas Muslim Indonesia.

2. METHOD

Special guidance activities using the peer mentor method at the Faculty of Medicine, Universitas Muslim Indonesia was conducted in small groups, each group consisted of a maximum of 5 people accompanied by 1 mentor. The mentoring activity discussed questions frequently tested in the UKMPPD according to the Indonesian Doctor Competency Standards (SKDI) 2012 within 2 hours every Monday-Friday. Monitoring and evaluation activities through test progress activities were carried out every 2 weeks with the same number of questions at UKMPPD as many as 150 numbers. The test progress was carried out 3 times before the UKMPPD.

This research analysis was conducted using descriptive-analytical method combined with a retrospective approach. The study involved all students of the Medical Profession Program (MPPD) medicine faculty, Universitas Muslim Indonesia participating in CBT UKMPPD (First Taker) exam for the first time from November 2014 to November 2020. This study used a total sampling method with a total of 980 people.

The normality test using the Kolmogorov – Smirnov test showed a result of 0.000. This means that the data is not normally distributed, so it uses the Mann-Whitney test for non-parametric tests.

This study utilised Mann-Whitney U test to find out whether there was a difference in the average CBT score of the UKMPPD first taker participants before peer mentor program held in 2014-2016 and after a peer-assisted study run in 2017-2020. Then, the use of the chi-square test was to determine the relationship between the peer-mentor program and the passing rate of CBT UKMPPD. Data on grades and passing UKMPPD CBT participants were obtained from PNUKMPPD. Besides, this research received permission from the ethics committee of

the Faculty of Medicine, Universitas Muslim Indonesia before conducting the research.

3. RESULTS

Students of the Profession Doctor Program (MPPD), Faculty of Medicine, Universitas Muslim Indonesia (FK UMI) joining the UKMPPD CBT First Taker for the first time from November 2014 to November 2016. 268 participants did not participate in peer-mentoring program taking exam in November 2014 to November 2016. While, the participants attending peer-assisted study were 712 people carrying out the exam from February 2017 to November 2020. The following is a graph of comparison percentage of successful UKMPPD CBT first takers between national participants and medicine students from Faculty of Medicine at the Universitas Muslim Indonesia.

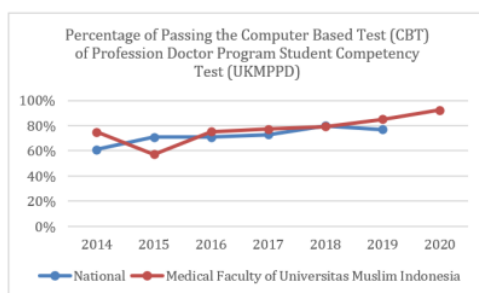


Figure 1. Comparison Graph of Passage Percentage of National UKMPPD CBT First takers and FK UMI[4]

A decline in percentage of first takers grade CBT UKMPPD FK UMI can be seen from figure 1 which was reported from 2014 to 2015. Then by 2015-2020, they saw an increase of successful rate. Meanwhile, the percentage of first takers for CBT National UKMPPD initially escalated from 2014 to 2018, then experienced a sudden decline between 2018 to 2019.

To confirm the difference in the average CBT score of UKMPPD first taker participants before peer-mentoring program in 2014-2016 and after peer-assisted program in 2017-2020 at MPPD FK UMI, an independent sample collection by t-test method took place indicating the following results:

Table 1. Mann-Whitney U Test Results Average CBT Value of the UKMPPD First Taker FK UMI Before the Peer mentor Program and After the Peer mentor Program

Peer Mentor Program	N	Mean	Std. Deviation	Std. Error Mean	p value
There is a Peer Mentor Program	712	74,0751	10,21793	0,38293	0,000
No Peer Mentor Program	268	70,3134	11,56704	0,70657	

Table 1 provides analysis results showing a value smaller than 0.05. It means that the study confirms an enormous difference on CBT UKMPPD scores of first-taker participants (medical students from UMI) between those receiving peer-mentoring program and not-participating in peer-assisted study.

Table 2. Chi-Square Test Results of CBT UKMPPD First Taker FK UMI Before There was a Peer mentor Program and After There was a Peer Mentor Program

Peer Mentor Program	UKMPPD CBT Results			Total	p value
	Pass	Not Pass			
There is a Peer Mentor Program	593	119	712	0,001	
No Peer Mentor Program	198	70	268		
Total	791	189	980		

A value less than 0.05 is shown table 2, which proves significance in relationship between the peer mentoring program and the UKMPPD CBT graduation from the FK UMI first taker participants. The Passing Limit (NBL) value set by PNUKMPPD is always the same every year, which is 66. The number of successful participants was much greater than those who did not participate in the peer mentor program.

4. DISCUSSION

The results of this study indicate a rise in the number of successful rate of UKMPPD CBT First Taker participants of Medicine Faculty, Universitas Muslim Indonesia in every year. This is in line with the national UKMPPD CBT passing rate which also increases every year.

Further, the results of this study demonstrating a crucial distinction in the CBT UKMPPD scores of first-taker participants from medical faculty, Universitas Muslim Indonesia between those

joining peer mentoring program and those not-attending peer-assisted program. The UKMPPD CBT scores of FK UMI first-taker participants who took part in the peer mentor program were on average higher than those who did not participate in the program. This result is following research conducted previously in 2019 at the Faculty of Medicine, the Islamic University of Malang, which showed an increase in post-test scores for UKMPPD participants during the tutoring process before the exam. The results were drawn from students who were given materials and exercises on CBT UKMPPD in multiple choices. Afterwards, they received feedback through explanations of answers to the questions given [10]. Research conducted at the University of Wilconsor in 2012 found that there was an improved in students achievement who undertook exercises. Additionally, several studies added that giving regular practice in questions form will boost memory of the material delivered and enhance student learning process [11].

Overall, the results of this study also confirmed a great relationship between the peer-assisted study program and CBT UKMPPD successful rate of medical students of UMI as first-taker participants. Particularly, this study proved that the peer mentoring program affected in increasing the accomplishment rate of CBT UKMPPD first-taker participants of medical students at UMI. These results are in line with prior research in 2018 at the medicine faculty, University of Muhammadiyah Malang, namely a mentoring model for UKMPPD crackers through mentoring and independent activities which employed mutual teaching and monitoring techniques. The research took place from the beginning of learning contract meeting to the end of the guidance and evaluation based on values. Test progress result was able to increase the percentage of passing UKMPPD [12].

Mentoring activities carried out lasting for 2 hours every Monday-Friday in 2 months before the implementation of the UKMPPD CBT, the study engaged active participants in discussing and teaching each other to other participants. This activity was carried out in group discussion consisting of 10 people in maximum and assigned 1 mentor. Besides, monitoring carried out by the mentor as the person in charge of the group can upgrade participant motivation through encouragement and enthusiasm as well as evaluation. The results of the test progress scores were used to measure the successful rate of the learning process of the peer mentor program participants.

The learning process through the peer mentor program is effective in improving student learning because the learning condition facilitated by friends will be more flexible to manage regarding learning time, learning objectives and comprehension target

of the expected material. Moreover, learning with peer mentors can encourage cooperative-learning groups rather than competitive ones. A mentor recruited has high academic performance, can communicate well, and has good interpersonal skills [13].

Through peer mentor program, participants are expected to carry out an independent learning process that is useful to raise their awareness. Likewise, it enhances students' motivation that learning is their responsibility. Independent learning through this peer mentor program can promote student activity, learning outcomes, and independence, and an increase in the average score of successful learning outcomes [14].

5. CONCLUSION

Therefore, it can be concluded that the efficacy of peer mentoring program shows an increase in successful rate of the Computer Based Test on Profession Doctor Program Student Competency Test (CBT UKMPPD) as the first taker participants of medicine faculty, Universitas Musli Indonesia.

The researchers suggest that future study in peer-assisted study program should be extended and enhanced to obtain a greater accomplishment rate. Additionally, it is necessary to undertake other study to analyse other factors playing a role in succeeding UKMPPD CBT.

AUTHORS' CONTRIBUTIONS

All authors contributed in research plan, data collection and interpretation, revised and approved the final version of this manuscript.

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