

# Effect of Education Programs Specialist Doctors to Changes Behavior Of Students In The Pandemic Covid-19

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**Abstract**—Health is the most important thing in human life, but what happened at the end of 2019, there was a Covid-19 pandemic caused by the corona virus which was capable of causing death. The role of specialist education plays an important role in shaping the competence and character of residents who take specialist medical education programs. The main purpose of this study is to determine the effect of the role of specialist education components on changes in resident behavior during the Covid-19 pandemic. The standard components for specialist doctor education include the competency content of graduates, lecturers, advice and infrastructure, management, financing and evaluation of the educational process. The research method used was analytic observational through a cross sectional approach. The research subjects were residents in the specialist doctor education program who met the inclusion criteria. Subjects were selected by consecutive sampling. Data were collected by filling out a questionnaire. Data analysis was performed using the Spearman test using SPSS 23 with a p value <0.05. The results of data analysis showed that the specialist education component showed a significant relationship with changes in resident behavior: competency of graduates = 0.001, lecturers = 0.023, financing = 0.015 and evaluation of the educational process = 0.025. While the components of facilities and infrastructure = 0.074 and management = 0.083, so it does not show a significant relationship with changes in resident behavior. Based on the results of this analysis, it can be concluded that the competence of graduates, lecturers, financing, and evaluation of the education process has an effect on changes in resident behavior in the learning process during the Covid -19 pandemic, while the facilities and infrastructure, as well as specialist education management, do not show a significant relationship.

**Keywords:** Specialist Education, Pandemic, Covid-19, Behavior, Resident

## I. INTRODUCTION

The main objective of medical education is to improve the quality of health for all people. The competence of specialist doctor education graduates throughout Indonesia must continue to be improved,

so that they have a quality that is able to answer the challenges of health problems in the future (Medical Council, 2006). In professional education there must be an integration between health services and the education process (Depdiknas, 2003). Various forms of available clinical services must continue to run optimally accompanied by an increase in the quality of services during the educational process. Medical Service Standards are a meeting point between health services and educational activities (WFME Office, 2003).

Coronavirus 2019 (COVID-19) is an infectious disease caused by SARS-CoV-2, a type of coronavirus. This disease resulted in the 2019–2020 coronavirus pandemic. People with COVID-19 can experience fever, dry cough and difficulty breathing. Sore throat, runny nose, or sneezing are less common. In the most susceptible sufferers, this disease can lead to pneumonia and multi-organ failure (ecdc.europa.eu, 2019). Apart from the SARS-CoV-2 virus or the Corona virus, viruses that are also included in this group are the viruses that cause Severe Acute Respiratory Syndrome (SARS) and the viruses that cause Middle-East Respiratory Syndrome (MERS). Even though it is caused by a virus from the same group, namely the coronavirus, COVID-19 has its own differences with SARS and MERS, including in terms of speed the spread and severity of symptoms.

The COVID-19 pandemic is a global emergency that occurs due to COVID-19 infection around the world. Based on data dated March 20, 2020, the total number of patients with confirmed positive tests worldwide is 246,275. A total of 10,038 patients died (Case Fatality Rate (CFR) 4%) and the latest data shows a cure rate of 86,036 (34.9%). Symptoms of the disease caused by COVID-19 are similar to those of influenza and consist of fever, coughing, shortness of breath and can end in respiratory failure (ARDS). Compared to influenza, COVID-19 provides more varied symptoms due to both its virulence and the immune reactions it causes (Lau et al., 2020).

The Covid-19 outbreak which has been going on for more than three months in Indonesia has really disturbed people both physically and mentally. In addition to concerns about family members who contract Covid-19, the community is also very worried about economic problems, especially related to food prices and employment (Qiu et al., 2020). Recently, there has been a significant change in people's behavior, the change was triggered by more time spent at home. Changes in behavior can be seen mainly from changes in the behavior of communication, shopping, and social life in their communities (Sani et al., 2020). The use of video conferencing and doing online shopping related to food is starting to increase in the community (Kriyantoro., 2007). Changes in communication behavior, changes in eating behavior and healthy living have also changed. The spread of the covid-19 virus can be stopped depending on two things, first the accuracy and firmness of government policies, secondly discipline and active participation of the community in changing behavior to implement health protocols that have been given by the government. These health protocols include the use of masks, maintaining distance, washing hands or using hand sanitizers (Gugus Covid., 2020).

It is hoped that education in Indonesia at all levels will run a large-scale capacity building program as soon as possible in order to carry out a better distance learning process in all regions. These efforts require strategies and supervision in all aspects of education, increasing the capacity and competence of educators and education personnel, as well as giving the widest possible permission for them to gain wider autonomy in each educational unit, institution or educational institution.

Increasing the education of doctors, including specialist doctors, is of particular concern from various groups. The emergence of a Draft Law on medical education shows that improving the quality of medical education must be immediately regulated by regulations. Specialist medical education has been going on for a long time and continues to develop, even leading to sub-specialist education, in line with advances in science and technology in the medical field which are increasingly difficult to follow. Scientific improvement is often an indicator of the success of education, so it often forgets the quality of patient care. The competition between the rapid advancement of science and technology and the slow improvement in the quality of patient care is a dilemma for education and service providers, both doctors / lecturers and residents.

Based on data taken on April 17, 2020, 91.3% or around 1.5 billion students worldwide cannot attend school due to the Covid-19 pandemic (UNESCO, 2020). In the data, this includes approximately 45 million students in Indonesia or about 3% of the total student population affected

globally (Badan Pusat Statistik, 2020). The increasingly widespread spread of Covid-19 has forced the government to close schools and encourage the implementation of distance learning. Various initiatives were undertaken to ensure learning activities continued even though there were no face-to-face sessions. Likewise with higher education, especially specialist doctor education programs.

The use of Technology, Information and Communication is encouraged to be widely applied to support distance learning. One of the largest telecommunications service providers in Indonesia recorded a 16% increase in broadband flows during the Covid-19 crisis, due to the sharp increase in the use of distance learning platforms.

Changes in the implementation of the fundamental learning process, from face-to-face methods in classrooms to distance learning at home also show the need for increasing the capacity of educators and education personnel, as well as increasing the capacity of the education system in each education unit. Several studies show that the information, communication, and technology (ICT) competencies of Indonesian teachers are not evenly distributed across regions (Widodo & Riandi, 2013 quoted from Koh et al, 2018). Moreover, there are gaps in the quality of education across regions in Indonesia, especially between Java and outside Java, and between socio-economic conditions (Azzizah, 2015; Muttaqin 2018). Unequal internet access, gaps in teacher qualifications, and quality of education, as well as a lack of ICT skills are vulnerabilities in distance learning initiatives in Indonesia.

Medical education is a professional academic education

held at the university level. Medical education is formal education which consists of the academic and professional education stages as a unit at the higher education level organized by an accredited Medical Faculty to produce graduates who have competence in the medical field. Medical education students are hereinafter referred to as Medical Students as students who take part in the process of academic, professional, residency, internship education to achieve the required competency of doctors, specialists, subspecialists (Law No.20, 2013). This education is different from other higher education because of the distinctive characteristics of its graduates, which must combine knowledge, skills, ethics, morals, law and culture. For that we need teaching staff who have the ability to develop curriculum and education science (Anonymous, 2014).

The student approach to learning has been a topic of interest for medical educators for many years. This is not surprising as the ability to study is essential to becoming a doctor. During the undergraduate period, medical students must be lifelong learning and flexible individuals, able to

collect and organize information from multiple sources and ready to apply relevant knowledge for patient problem solving in a health context (Bitran et al., 2012).

Students have needs that continue to grow and develop in accordance with their nature and characteristics as humans. Characteristics of students as the overall abilities and behaviors that exist in their personal as a result of their relationship between innate and social environment that can determine in realizing the hope of achieving the future. Law Number 20 of 2003, states that the National Education System states a commitment to character education as stated in Article 3, that "National education has the function of developing capabilities and shaping dignified national character and civilization in order to educate the nation's life, aimed at developing potential participants. educated to become human beings who believe in and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. " Implementation in education is learned and developed through learning experiences and learning processes that shape students' personalities through the process of culture and empowerment, so that they become experiences from the results of learning and learning interactions designed to achieve character building goals.

Based on the description above, the education and learning process during the Covid-19 pandemic needs special attention for all parties, because the implementation of the learning process has a direct effect on changes in behavior. The formation of behavior can occur due to the process of maturity and from the process of interaction with the environment. This interaction process with the environment has the greatest influence on human behavior. The formation and behavior change is due to the interaction process between individuals and the environment through a process, namely the learning process.

Specialist doctor education program, Faculty of Medicine, Diponegoro University and Dr. Kariadi Semarang, also applies a learning process that is adapted to environmental conditions when the Covid-19 pandemic occurs. Changes in resident behavior, it is important to research which is the result of the specialist doctor education system applied. The component of the specialist education system, which is the main system for implementing education programs, does it directly affect resident behavior as a result of the learning process carried out.

## II. METHODS

The implementation of this research used analytic observational research method with cross sectional approach. Based on the results of the

calculation of the number of samples, the number of respondents was 40 people. Respondents must meet the inclusion criteria, namely general practitioners who are taking the Specialist Doctor Education Program, are willing to be research subjects and are willing to fill out a questionnaire. The exclusion criteria were cooperative respondents. The number of respondents fulfilled the minimum number of samples, namely 40 people, taken by consecutive sampling. The independent variables of this study are components of specialist education, namely: 1) competence of graduates; 2) lecturers; 3) advice and infrastructure; 4) management; 5) financing and 6) evaluation of the education process. The dependent variable is the attitude and behavior of the resident towards the specialist education component. The relationship between components of the specialist education system and changes in respondent behavior was analyzed using the Spearman test. Decision making is based on a significance value of  $p < 0.05$ . Data processing was performed using SPSS 23.

## III. RESULT AND DISCUSSION

Based on the results of data analysis from 40 respondents in various specialist fields, a clear picture of the suitability / approval of the specialist education component is obtained. In the graduate competency component, 70% of respondents stated that the education system implemented during the pandemic was appropriate and significantly affected resident behavior ( $p = 0.015$ ). In the lecturer component, 80% of respondents stated that this component was in accordance with the learning conditions during the pandemic and had a significant effect on changes in resident behavior ( $p = 0.023$ ). In the components of suggestions and infrastructure, as many as 67.5% of respondents stated that this component did not significantly influence changes in behavior towards learning patterns during the pandemic ( $p = 0.074$ ). In the management component, 67.5% of respondents stated that they had no effect on changes in resident behavior, due to the learning system during the pandemic ( $p = 0.083$ ). As many as 95% of respondents stated that the financing component influenced the resident's behavior towards the learning process during the pandemic ( $P = 0.015$ ). In the evaluation component of the education process, as many as 87.5% of respondents stated that they had a significant effect on changes in learning behavior during the Covid-19 pandemic.

Data analysis shows that there is a significant relationship between the components of the implementation of specialist education and changes in resident behavior, namely: 1) competence of graduates; 2) lecturers; 3) financing; and 4) evaluation of the educational process. Meanwhile, the facilities and infrastructure and management

components did not show a significant relationship with changes in resident behavior towards the learning process during the Covid -19 pandemic.

The Specialist Education Standards are outlined in order to be applicable to all existing specialist medical education courses and consultant specialists. The substance of detailed and measurable education standards for each study program will be developed by the respective colleges concerned. Mission and Educational Objectives, among others. Mission: 1. Each IPDS must have and define educational missions and objectives. 2. The mission is structured according to educational goals. 3. The mission statement and educational objectives should include a practice-based specialist education process, produce competent specialist doctors, and include general and specific issues in accordance with national and regional policies. 4. In general, the mission of education states that education is able to increase the learning innovation of students to achieve competencies that can increase service effectiveness. Education can provide opportunities for students to be able to become experts in the medical field they choose. Education can prepare students to be able to learn continuously independently and or to be ready to take part in continuing medical education and continuous professional development. Specific education goals consist of general goals and specific objectives. The general objective of specialist medical education is to produce specialist doctors with the academic ability and clinical expertise of a professional. The special purpose of specialist medical education is to produce specialist doctors who have special competences in certain medical disciplines. The process of specialist doctor education is a continuation of medical education with the aim of increasing the quality of higher professionalism in certain disciplines. Education must be able to increase professional independence so that specialist doctors are able to provide the best service for patients and the community (Konsil, 2020).

#### IV. CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the competence of graduates, lecturers, financing, and evaluation of the education process has an effect on changes in resident behavior in the learning process during the Covid -19 pandemic, while the facilities and infrastructure, as well as the management of specialist education, do not show a strong relationship. significant.

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