THE ROLE OF THE DOCTOR STILL NEEDS IN THE DEVELOPMENT OF THE ARTIFICIAL INTELLIGENCE ERA

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ABSTRACT

The role of doctors is often questioned as a result of the development of the Artificial Intelligence Era as if the Artificial Intelligence Era will be able to replace the role of doctors. Based on this phenomenon, the research team wishes to conduct research on whether the role of doctors is still necessary in the development of the Artificial Intelligence Era. This research was conducted using qualitative research methods, namely by interviewing informants from several doctors, clinical and pre-clinical students. Data collection techniques by means of in-depth interviews. Sampling by means of purposive sample. This study aims to reveal that the role of doctors is still very important in the midst of the development of the Artificial Intelligence Era. The results show that the role of doctors in the development of the Artificial Intelligence Era has a positive role in that Artificial Intelligence is more sophisticated and makes it easier for doctors to carry out their duties. The Artificial Intelligence Era cannot replace the role of doctors, but the Artificial Intelligence Era supports the role of doctors in carrying out their duties.

Keyword: Artificial Intelligence, Doctor's Role

ABSTRAK

Peranan dokter sering di pertanyakan keberadaannya akibat dari perkembangan *Era Artificial Intelegence* seakan-akan *Era Artificial Intelegence* akan mampu menggantikan peran dokter. Berdasarkan fenomena tersebut maka tim peneliti berkeinginan melakukan penelitian tentang masih perlukah peran dokter dalam perkembangan *Era Artificial Intelegency*. Penelitian ini dilakukan dengan menggunakan metode penilitian kualitatif, yaitu dengan melakukan wawancara informan dari beberapa dokter, mahasiswa klinik dan pre-klinik. Teknik pengambilan data dengan cara wawancara mendalam. Pengambilan sampel dengan cara *purposive sample*. Penelitian ini bertujuan mampu mengungkap bahwa peran dokter masih sangat penting di tengah perkembangan *Era Artificial Intelegence*. Hasil penelitian menunjukkan bahwa peran dokter terhadap perkembangan *Era Artificial Intelegence* memiliki peranan positif bahwasanya *Artificial Intelegence* lebih canggih dan memudahkan dokter untuk melakukan tugasnya. *Era Artificial Intelegence* justru tidak bisa menggantikkan peran dokter namun *Era Artificial Intelegence* sebagai pendukung peran dokter dalam menjalankan tugasnya.

Kata Kunci: Artificial Intelligence, Peran Dokter

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PRELIMINARY

At this time the discussion about the Era of Artificial Intelligence (Artificial Intelligence) has been widely discussed in various fields of science. The era of Artificial Intelligence is not only discussed in other fields of science, but the discussion about it has penetrated into the field of medical science. Indeed, Artificial Intelligence cannot be denied that Artificial Intelligence offers many advantages for various professions and this includes medicine. Although, it cannot be separated from various unpleasant views and issues, including Artificial Intelligence about the doctor's

duties will be completely replaced by Artificial Intelligence. Indeed, the discourse is still a hot discussion by all parties, even some doctors are also busy discussing it. One of them is dr. Pukovisa Prawiroharjo, SpS as Secretary of the Honorary Council of Medical Ethics explained in the mediaAesculapius (2021) that Artificial Intelligence is analogous to the toll guard profession which has been replaced by electronic toll cards. He conveyed the same thing that it is possible that with the medical profession there are severalspecialistor competence will become extinct or irrelevant. However, on the other hand, it is possible that other specialists such as data supervisor doctors will also be born. He said it was a natural thing and instead suggested that the medical profession should be ready to adapt to technological developments. This is in line with opinionJose et al, (2020) who explain the emergence of data innovation has led to another trend in life known as e-life where everything we want has been completed electronically. This is evidenced by the usefulness of Artificial Intelligence in efforts to handle COVID-19 in the health sector, Artificial Intelligence innovation is used to recognize the side effects of COVID-19 and measure reasonable risks and can determine what to do (Fitri, 2021).

On the other hand, there is another opinion, which is related to how Artificial Intelligence works and its supervision. In the medicolegal aspect, Artificial Intelligence works without a doctor's supervision. What about the process, if a misdiagnosis occurs and who is responsible? Based on this, it shows that there is disagreement about Artificial Intelligence will replace the role of doctors.

Based on the above phenomenon aboutArtificial Intelligencewhich became a discourse to replace the conflicting roles of doctors, the researchers wished to conduct research, namely revealing opinions from various perspectives aboutIs the Role of Doctors Still Needed in the Development of the Artificial Intelligence Era?

RESEARCH METHODS

The type of research used is qualitative research. The justification for choosing qualitative research is that the researcher wishes to provide a careful description of certain individuals or groups with the conditions and symptoms that occur or what is experienced by the research subject. This refers to the opinion of Koentjaraningrat (1993) and Moleong (2007) which explains that in research that uses qualitative methods, namely research that provides a careful description of certain

individuals or groups with conditions and symptoms that occur or what is experienced by research subjects, for example behavior , perception, motivation, action and others.

Researchers after choosing the type of research, will then choose the type of paradigm. Therefore, researchers choose the type of research paradigm that is critical, as for the reason that research is not enough to only interpret the meaning behind what the research subjects have done, but researchers also criticize and provide solutions to problems that occur. This is in accordance with the definition of the critical paradigm which explains that critical views are the views of theories that openly support certain values and use these values to evaluate and criticize the status quo providing alternative ways to interpret the role of social media (Baran and Davis, 2010). This research was conducted in the city of Ambon .

Qualitative research does not use the term population, but uses the term informant in research. In selecting the informants of this research by using a purposive sample technique. Purposive sampling is a technique for determining samples or informants with certain considerations (Sugiyono, 2012:85). The considerations used in the selection of informants are informants who really know exactly about the development of Artificial

Intelligence. Based on these considerations, those who can become informants are:

1. Doctor
2. Clinical student
3. 8th semester medical student

The type of data used is qualitative data. This refers to the opinion of Miles and Huberman (2009) which explains that: "Qualitative data is the source of a broad and well-based description, and contains an explanation of the processes that occur in the local scope. While the types of data that will be used in the research are:

a. Primary data. The researcher refers to Arikunto (2010) who explains that qualitative research data is usually in the form of verbal or spoken words, gestures or behavior carried out by trustworthy subjects, namely research subjects or informants regarding the variables studied or data obtained from informants directly.

b. Secondary Data. The researcher also refers to Arikunto (2010) who explains that qualitative research data can also be taken from data obtained from data collection techniques that support primary data such as from observations, literature studies, also from documents such as archives, agendas, tables. , notes, photos and more.

The data collection method in this study refers to the opinion ofSugioyono

(2012:402) which explains that in general there are four kinds of data collection techniques, namely observation, interviews, documentation and combination/triangulation. In this study, researchers used the four methods.

This study in analyzing the data refers to the opinion of Miles and Hubberman (1992) which suggests that there are several stages in analyzing qualitative research data. Qualitative data analysis was carried out simultaneously with the data collection process taking place. This means that these activities are also carried out during and after data collection. The stages are:

a. Data reduction

Based on the results of research in the field, researchers will obtain data. Of course, there are data obtained that are needed or data that are not needed by researchers. The data must be reduced to be analyzed. The reduction process is done by grouping the topics according to the research problem. After that, the researchers searched for the themes and patterns formed. Based on these results will provide a clear and patterned picture.

b. Data Exposure

The stage after doing the reduction, the next step is to present the data. In presenting qualitative data, it can be done in the form of brief descriptions, charts, relationships between categories, flowcharts and so on. By presenting the data, it will make it easier for what happened, plan further work based on what has been understood (Sugiyono, 2013). In other words, the presentation of data is used to further improve understanding of the case and as a reference for taking action based on the analysis of the data presentation.

RESULTS AND DISCUSSION

The role of doctors in Artificial Intelligence is quite important, this is also conveyed from the results of interviews from several informants, namely several doctors. Doctor U explained that the role of the doctor is very important because to diagnose a disease from a patient really needs the art of a doctor. This is in line with the opinion of Doctor T who said that the role of a doctor cannot be replaced by a sophistication based on Artificial Intelligence because according to WHO the ideal doctor must fulfill a Five Star Doctor namely Care Provider (a doctor can consider the needs of his patients comprehensively), Decision Maker (a doctor is relied on to be the head), Communicator (a doctor can be a good communicator), Community Leader (a doctor is relied on to be a local or community innovator), and Manager (a

doctor is competent and has great administrative skills to complete the above capacities). Following are the results of interviews with informants.

"If you look at Ai from the positive side, Ai is more sophisticated and makes it easier for doctors to operate (operations) and minimizes invasiveness. if the negative side of each patient is different because medicine is an art, so if doctor A and doctor B it is impossible for the same therapy, for example, to diagnose a patient with artificial intelligence, it seems less effective than a human doctor." (Dr. U, Informant).

The results of the interview above show that the Artificial Intelligence used to diagnose a patient is less effective than a doctor. Artificial Intelligence is only a tool to assist doctors in carrying out their functions. This is in line with the opinion of Huang, MH, & Rust, RT (2018) which explains that there is a tendency for Artificial Intelligence to develop only as processing existing analytical data and being able to decide something according to the data that has been collected. This term is very different from the principle of human work which also considers hunches in making a decision. This is reinforced by the opinion of a doctor who is one of the research informants, namely R:

"Zinc can (can't) be replaced because the medical profession is not just about giving medicine, it's more complex."

It turns out that not only doctors, but also students have the same opinion. When we interviewed pre-clinical students, we gave the same answer, along with evidence from interviews with pre-clinical and clinical students."

"If (if) according to beta (me), all AI zinc can replace a doctor in conducting examinations or carrying out the medical profession. Because the touch of a human to a human feels much more different than the touch of an AI robot machine and a patient must also feel differently in that touch."

From various answers, informants basically have the same answer, namely that the role of doctors in the development of the Artificial Intelligence Era has a positive role in that Artificial Intelligence is more sophisticated and makes it easier for doctors to carry out their duties. This is in accordance with the opinion of Jose Manuel (2020) who explained that Artificial Intelligence is a technological development that has a role to assist doctors in their duties, not to negate their duties. Likewise, the opinion of Zhang, X, D., (2020) which explains that Artificial Intelligence is a form of technological development as a doctor's assistant. Thus, Artificial Intelligence cannot replace the role of doctors, but Artificial Intelligence can support the role of doctors in carrying out their duties.

CONCLUSION

Based on the description above, it can be concluded as follows:

1. The role of doctors is still very important in the midst of the development of the Artificial Intelligence era

2. *Artificial Intelligence*it will help the doctor's role in carrying out their duties

3. *Artificial Intelligence*it does not negate the role of doctors.

REFERENCES

1. Astuti FA. 2021. Utilization of Artificial Intelligence Technology for Strengthening Health and National Economic Recovery. 04(1):25-34.

2. Budiman JM, Yatson C, et al. 2020. The Concept of Technology Development in Health Assistant by Creating Holo Buddy for the Community. Journal of Information Systems and Technology. 01(02): 178-185

3. Barusman MY, Redaputri AP, Haninun, et al. 2020. The Impact and Handling of Covid-19 in a Multidisciplinary Perspective. National Library of Indonesia: KDT publication.

4. Diyanah I. 2021. Artificial Intelligence Will the Role of Doctors Be Replaced. Jakarta: Media Aesculapius. (15 January 2021), p. 1.