



Perceptions of Consumer Acceptance of the Application of Personal Health Records in America

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ABSTRACT

Many countries in the world have implemented personal health records, especially in developed countries. In 2006 91% of Americans still had negative perceptions of personal health records, especially in the health status of health information (Endsley, Kibbe, Linares, & Colorafi, 2006). People in developed countries like America, who also should have a more advanced level of thinking than other countries, apparently most people still have negative perceptions of personal health records. This underlies the author's curiosity to further examine how acceptance of the application of personal health records in America. The research method with systematic review by looking at the journals of 2006-2019, amounting to 25 journals related to personal health records. However, only 7 appropriate journals based on criteria regarding the description of user characteristics and perceptions of consumer acceptance of personal health records. The results of the study are based on a systematic literature review of 7 journals with user characteristics including age (35-64 years), gender (female), education (students up to graduate), race/ethnicity (white), economics (100,000 \$ 100,000), and status work (work). Whereas based on the average acceptance of 57% with a range of revenue percentage of 17-76%. As many as 43% on average do not accept, a percentage range of 24-83%. The reason for acceptance is because it can control the health services provided, such as chronic diseases and preventive services such as screening, immunization/vaccination,

can monitor the status of one's own and family's health, be comprehensive treatment, and facilitate communication with doctors. Negative acceptance is subject to not being willing to pay more for the use of personal health records, lack of understanding of medical language, and difficulty of use in old age.

Keywords: Personal Health Record, Acceptance, medical record

I. INTRODUCTION

Along with the times, documenting health services or what is commonly called medical records has begun to develop from conventional to electronic. In the 21st century, other forms of documenting medical history in the form of personal health records have begun to develop. Personal health records are sources of health information that are available both manually and electronically and are required by individuals to make health decisions. Individuals can own and manage information in PHR, which comes from health care providers and individuals. PHR is confidential and must be stored safely. Access to health information in PHR must be approved by the owner of the PHR. Personal health records are not the same as Electronic Health Records (EHR) or Electronic Medical Records (EMR), or Medical Records, which are designed for



use by health care providers where they are managed and stored by the health care provider for the benefit of their patients.

Personal health records are the key to successful community health empowerment where each individual will play an active role in the health services provided to him / her. With personal health records, each individual will be able to see the medical history and services he has received from various health care providers who have handled it. This will make it easier for him to communicate with doctors regarding his condition. Patients who manage and use personal health records will be well educated patients where doctors will easily communicate with these patients.

Personal Health Records are currently not widely implemented in Indonesia, however, several developed countries have implemented this personal health record. Many countries in the world have implemented personal health records, especially developed countries, but it is undeniable that some developing countries have also started to apply it. Some of these countries include the United States, San Francisco, Massachusetts, England, Australia, Portugal, Taiwan, and Iran [1].

In some developed countries, the development of electronic health records has increased, such as in New York, which has developed electronic maternity care records [2]. Whereas in Zambia, Sub-Saharan Africa has implemented comprehensive prenatal care and childbirth with a recording model called the Zambia Electronic Perinatal Records System (ZEPRS) from 2007–2010 [3]. [4] The use of RME in Australia was researched by the use of a Personal Digital Assistant (PDA) as an interactive tool for antenatal electronic maternity records through the Object Mate system. At the end of 2010 Australia developed another special health record in the maternity area, namely the Mater Shared Electronic Record for maternity

patients and newborns as a development of the PCEHR (Personally Controlled Electronic Health Record) application [5]

Science and technology are two powerful drivers of responding to the problems of developing countries. Scientific research plays an important role in creating economic growth [6], while technological innovation is also a major source of increased productivity, the main means of economic competition in world markets [7]. In other words, advances in science and technology are the main drivers of a nation to survive in global competition. Overall, Indonesia is in the middle position among ASEAN countries in terms of competitiveness. Another aspect that is quite low is the aspect of technological readiness, the value is 3.9. This shows that Indonesia still needs to increase technology development through the support of universities and research institutions, as well as support to the industrial sector [8].

However, in the implementation of this personal health record, of course there are several obstacles, especially with regard to user acceptance. Personal health records are not only for fulfilling the benefits of organizer vendors. However, there is something more important than that, namely convincing consumers of the importance of personal health records themselves, along with the security of data confidentiality in their medical history. Quoted from a study conducted by the Markle Foundation in 2006, it was found that 91% of American citizens still have negative perceptions of personal health records, especially on the status of health information security [9].

From the results of this study, it can be seen that people in developed countries like America, which should also have a more advanced level of thinking than other countries, in fact most of the people still have negative perceptions of personal health records. In this case, perception becomes important and is closely related in

making a decision. With the formation of a positive perception of a object, then someone can easily make decisions. Likewise, the negative perception.

Based on the above background, consumers' perceptions of the application of personal health records still need to be studied. Therefore the authors are interested in conducting research related to consumer acceptance of personal health records in one of the developed countries, namely America with the title "Perceptions of Consumer Acceptance of the Application of Personal Health Records in America"

II. METHOD

The method used in this study is a systematic review to describe the characteristics of the user and the perception of consumer acceptance of the application of personal health records in the United States. Data collection techniques were carried out by searching journals related to perceptions of personal health records from 2008-2019.

Obtained 25 journals related to personal health records. However, only 7 journals were suitable based on the criteria regarding the description of user characteristics and the perception of consumer acceptance of personal health records. Data analysis was performed using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyzes).

III. RESULTS AND DISCUSSION

A. CHARACTERISTICS OF PERSONAL HEALTH RECORD USERS IN AMERICA

Based on a systematic literature review that has been carried out on 7 journals that examine the characteristics of users of personal health records in the United States against age, sex, education, race / ethnicity, economy, and work status, the following results are found:

a. Age

Based on the characteristics of users of personal health records in the United States, it was found that most of the users of personal health records were between the ages of 35 - 64 years.

b. Gender

Based on the characteristics of users of personal health records in the United States according to the sex description above, it was found that most of the users of personal health records in the range of 47% -63% were female.

c. Education

Based on the characteristics of users of personal health records in the United States according to the educational description above, it was found that most of the users of personal health records were American citizens with at least some college to postgraduate level of education. Where in the standardization in Indonesia, some colleges can be defined as a group of students and undergraduate (S1), while postgraduate is postgraduate (S2). The percentage range for High School education is 9-28%, postgraduate 26-36%, some colleges 55-79%.

d. Profession

Based on the characteristics of users of personal health records in the United States according to the job description above, it was found that users of personal health records were people with a work status of 61-68%, 18-31% unemployed, 14% retired, 7% layoffs.

e. Race / ethnicity

Based on the characteristics of users of personal health records in



the United States according to the description of race / ethnicity, it was found that users of personal health records had 41-96% white race, 7-49% black race and 4-33% other ethnicity.

f. Economic level

Based on the characteristics of users of personal health records in the United States according to the economic, it was found that the majority of users of personal health records had an economic rate of <\$ 100,000 per year [10] - [16].

Based on the results of the age description study, the respondents selected by the researcher had a minimum age of 18 years. Then it was found that the most respondents using personal health records were 35-64 years old. During the birth period, it can be categorized as generation x (1965-1980) and generation y / millennial (1981-2000), in which people in that birth period tend to be more flexible and like new things, for example, such as technological updates [17]. It is also confirmed that the age of 35-64 years is quite dominant in America \pm 36.5% of the total American citizens [18].

Apart from age, in the results of this study, the female gender was more dominant than the male. According to Henry J Kaiser Family Foundation (2017) this is because the majority of the American population \pm 51.5% are women [19]. Another thing that also supports that women feel more necessary in adopting personal health records is because women tend to have more doctor visits, so it will be easier for women to manage their health status if they apply personal health records [20].

America itself is a developed country, quoted from the U.S. The Census Bureau (2019) with an average level of education

is quite high, which is equivalent to higher education institutions of 48.2% [21]. The higher a person's education, will affect the mindset. This is also in line with one of the factors that affect the mindset, namely the level of education [22]. Where in the application of personal health records to people who have an education level equivalent to higher education, it shows that their mindset has begun to open up with the existence of personal health records as a new form of documenting health records that are more efficient and integrated.

Judging from the results of research related to the characteristics of personal health record users based on race / ethnicity, the users are white. This is also based on a survey that states that the majority of American citizens are white, as many as 76.5% [23].

In the study, it was found that the economic level of the respondents was <\$ 100,000 per year. This is based on the official notification of the Bureau of Labor Statistics (BLS), which is the American labor statistics agency, which states that the average income of Americans starting from 2019 is \$ 47,060 per year. This income is said to be 2.7% higher than the previous year [22].

From the research, it was also found that most Americans are recorded as having jobs. Quoted from Trading Economics (2019) in June 2019 the unemployment rate in the United States is quite low, namely 3.7%, where this figure includes people who do not work because they have retired or who have been laid off. Thus the recorded per capita income of the United States in 2017 was \$ 59.48-4,000 [24].

B. CONSUMER ACCEPTANCE PERCEPTION ON THE IMPLEMENTATION OF PERSONAL HEALTH RECORDING IN AMERICA

Based on a systematic literature review that has been carried out on 7 journals related to consumer perceptions of consumer acceptance of personal health records in the United States, 5 out of 7 journals accepted it, while 2 out of 7 other journals stated that they did not accept the existence of personal health records. With data, the highest percentage of receiving is 76% with the lowest percentage is 17%. Meanwhile, those who did not receive had the highest percentage at 83% with the lowest percentage at 24%. [10] - [16].

Thus, it shows that more respondents have decided to accept the existence of personal health records in America. However, this is in contrast to research conducted by the Markle Foundation in 2006 which stated that 91% of American citizens still have negative perceptions of personal health records. According to (Haroen, 2014) perceptions and behavior can change over time by involving interests, interests, habits, and constants [25]. Behavior is an individual's response to a stimulus or action that can be observed and has goals, whether consciously or not. Behavior can be influenced by genetic factors or heredity and environmental factors. The learning process is a meeting between heredity and environmental factors to influence a person's behavior [28]. This is also the reason why the perceptions and behavior of American citizens are gradually changing and starting to accept personal health records.

With the receipt of personal health records, communication between patients and health service providers will be more

consistent and integrated. Patients also have more access to monitoring any chronological history of their illness, especially for chronic diseases. In addition, the application of personal health records can also train patients to be more aware of their own health status [26].

Through the application of personal health records that are carried out as early as possible can help reduce medical costs. This means that consistent and integrated communication and sensitivity to the importance of health status will be an effort to detect early health problems in a person. So that if a person has a certain disease it can be detected immediately and can follow up on the health problems experienced before it gets worse [27]

IV. CONCLUSIONS AND SUGGESTIONS

Based on a systematic literature review of 7 journals related to the characteristics of users of personal health records in the United States, it is known that the average age of users is 35-64 years, where users are dominated by women with an average education of users being students to postgraduate. For racial / ethnic characteristics, users are white with the economic level of users being <\$ 100,000 per year and more than 50% of users have jobs.

Based on a systematic literature review of 7 journals related to consumer perceptions of consumer acceptance of personal health records in the United States, it was found that 5 out of 7 journals accepted, while 2 out of 7 other journals stated that they did not accept personal health records. With data the percentage of acceptance is 17% - 76% While those who do not receive a percentage range of 24% -83%.

V. ACKNOWLEDGMENT

Thanks to Universitas Esa Unggul and the 2020 ISMOHIM committee for organizing



international conference activities so that this article can be published.

VI. REFERENCES

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