The Impact of e-Health for Cancer Patients

John Reimon Batmetan[1*], Yusnia Yusuf[2], Elyis Y. C. Idjie[2], Satin La Ruma[2]

Department of Informatics Engineering, Universitas Negeri Manado, Indonesia

Corresponding author: john.reimon@unima.ac.id

ABSTRACT

E-Health or Electronic Health is the use of information and communication technology including electronics, telecommunications, computers and informatics to process various types of medical information, to carry out clinical services (diagnose or therapy), administration and education. In E-health the distance factor is not an issue because all activities are carried out through a data connection and in real time. This study discusses the community's analysis of the use of e-Health. This study aims to analyze the impact and influence of convenience and benefit factors on cancer patients using the Technology Acceptance Model (TAM) method. The results of this study indicate that users show positive benefits when using e-health applications. The results of this study also show that e-health has these positive benefits for respondents so they want to continue to use e-health services. Users also get the ease of use which also affects the interest (behavioral intention) in using the E-Health application because the ease of use increases the effectiveness of users.

Keywords : E-Health, Usability, Technology Acceptance Model (TAM), easy of use, behavioral

INTRODUCTION

Along with the times, E-Health is one of the important solutions in improving health services while making it easier for users to find information and save costs so that they can improve public health services. In implementing the quality of public services that are effective and efficient, the government uses E-Health for electronic-based health services.

In Indonesia, the implementation of E-health has begun to be implemented in collaboration with hospitals, government, private sector, universities, and telecommunications service providers. The use of information technology in Indonesia for the health sector has been regulated in Law no. 36 of 2009 concerning Health. Since 1997 WHO has planned the use of information technology for health services and medical purposes, until 2005 in E-Health resolution number 58.28. At the 2003 World Summit held in Geneva, a declaration was made on utilizing the potential of information and communication technology to support the Millennium Declaration, one of which is to improve health services.

One of the services that is often considered bad by the community is health services. Problems such as long queues at the counter that are not conducive, differences in information between hospital staff that cause people to be confused in managing administrative requirements. By utilizing this E-Health facility, people are expected not to have to queue for long to get a queue number, but simply to connect to the internet and access the E-Health application to register or visit the E-Kiosk at a place that has provided these facilities.

METHOD

Technology Acceptance Model (TAM)

TAM was first developed by Davis (1986) and then used and redeveloped by several researchers such as Adam et al. (1992) Szajna (1994), Igbaria et al. (1995) and Venkatesh. And developed again by Davis (2000). Venkantesh (2002) modified the TAM model by adding a trust variable with the title: Trust enhanced Technology Acceptance Model, which examines the relationship between TAM and trust variables. Another TAM modification is the Trust and Risk in Technology Acceptance Model (TRITAM) which uses the trust and risk variables together with the TAM variable (Lui and Jamieson, 2003).

According to Davis, the behavior of using IT begins with a perception of perceived usefulness and a perception of the ease of use of IT. These two components when associated with TRA are part of belief. Davis defines this perception of usefulness based on the definition of the word useful, namely capable of being used advantageously, or can be used for profitable purposes. Perception of usefulness is the benefit that individuals believe can be obtained when using IT.

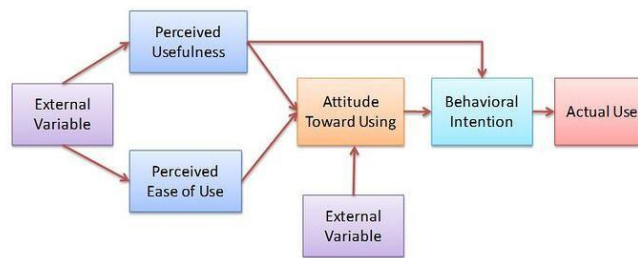In simple terms, TAM can be described as follows:

Figure 1 . TAM Model

So according to Davis (1989), there are five attitude formations that influence a person's behavior in the use of information technology:

1. Perceived Ease of Use, Ensuring that information technology will be easy to use.

2. Perceived Usefulness, Ensuring that the information technology used will provide benefits.

3. Atitude Toward Using, Ensuring the attitude of users to use information technology.

4. Behavioral Intention of Use, Improving user behavior to continue to use information technology.

5. Actual System Usage, Stating that the user has fully used information technology based on the benefits obtained

The type of research used in this research is quantitative research. Where according to Sugiyono (2000:7) quantitative research is research whose type of data is in the form of numbers or qualitative data that is numbered. The reason why the researcher uses this type of quantitative research is related to the purpose of this research, which is to describe the usefulness of E-Health for cancer patients based on the respondents' answers to the questionnaires distributed.

This research uses a questionnaire (questionnaire) as a data collection technique. While the data analysis technique used is quantitative data analysis. This is in accordance with the aim of the researcher to describe the results of research on the usefulness of E-Health to cancer patients based on EHealth services. In terms of analyzing research quantitative data, the researcher uses three stages, namely: data collection, data processing, and loading research results.
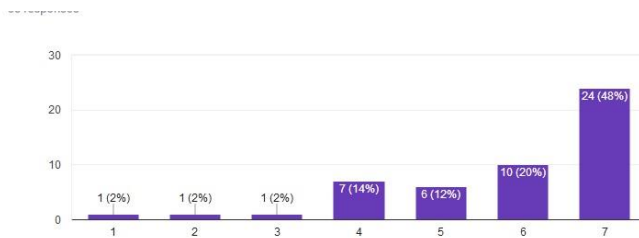
RESULTS AND DISCUSSION

The results of data collection using 50 respondents who were given a questionnaire and obtained the following data:

i can use without written instructions
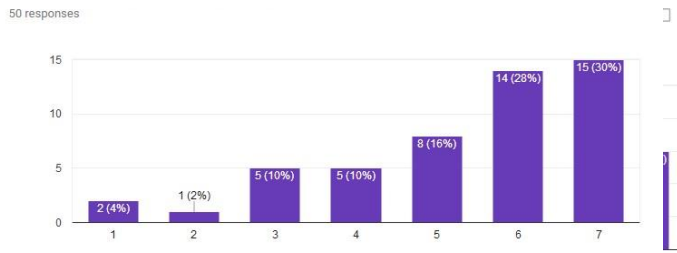
application is very easy to use

appropriate when used
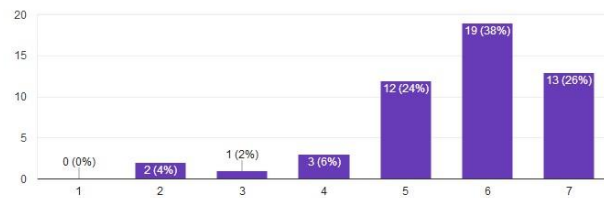
can meet the needs
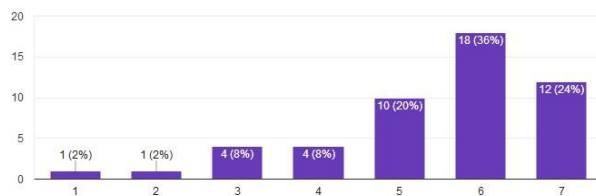
save time in use
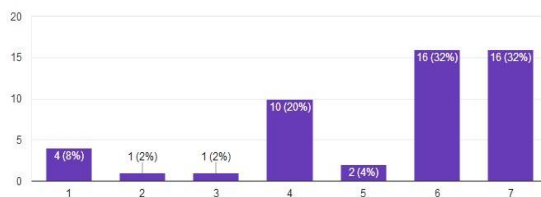
this application understands user needs

50 responses
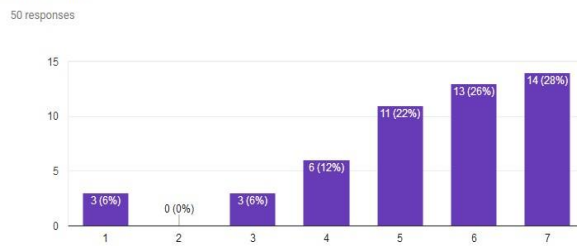
this app is useful for me
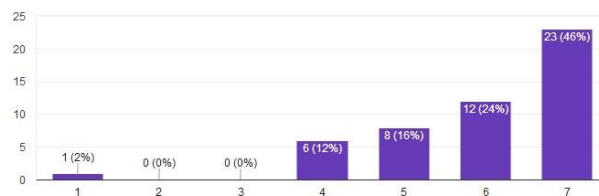
this app helps me to be more productive
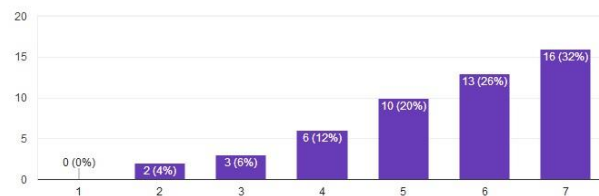
This app helps to be more effective
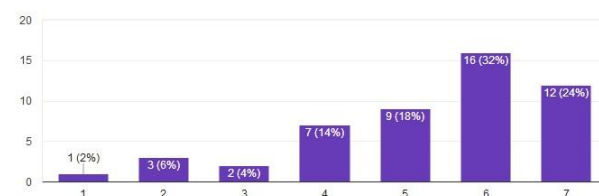
Respondents in this study were students and others. A total of 50 questionnaires were sent. In processing this data we use SPSS. The details of the questionnaire data in this study are as follows:

Respondent Mapping

54

Frequency Table

Respondent's gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pria	25	50.0	50.0	50.0
	Wanita	25	50.0	50.0	100.0
	Total	50	100.0	100.0	

Respondent's job

|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lainnya	1	2.0	2.0	2.0
	Mhs	46	92.0	92.0	94.0
	Pelajar	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Frequencies

Statistics

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
N	Valid	50	50	50	50	50	50	50	50	50	50
	Missing	0	0	0	0	0	0	0	0	0	0

→ Frequencies

[DataSet0]

Statistics

		Jenis Kelamin Responden	Kategori Pekerjaan Responden
N	Valid	50	50
	Missing	0	0

Mapping Respondents' Answers

Frequency Table

Q1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	2.0	2.0	2.0
	2.00	3	6.0	6.0	8.0
	3.00	2	4.0	4.0	12.0
	4.00	7	14.0	14.0	26.0
	5.00	9	18.0	18.0	44.0
	6.00	16	32.0	32.0	76.0
	7.00	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Q2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	4.0	4.0	4.0
	3.00	3	6.0	6.0	10.0
	4.00	6	12.0	12.0	22.0
	5.00	10	20.0	20.0	42.0
	6.00	13	26.0	26.0	68.0
	7.00	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Q3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	2.0	2.0	2.0
	4.00	6	12.0	12.0	14.0
	5.00	8	16.0	16.0	30.0
	6.00	12	24.0	24.0	54.0
	7.00	23	46.0	46.0	100.0
	Total	50	100.0	100.0	

Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	3	6.0	6.0	6.0
	3.00	3	6.0	6.0	12.0
	4.00	6	12.0	12.0	24.0
	5.00	11	22.0	22.0	46.0
	6.00	13	26.0	26.0	72.0
	7.00	14	28.0	28.0	100.0
	Total	50	100.0	100.0	

Q5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	8.0	8.0	8.0
	2.00	1	2.0	2.0	10.0
	3.00	1	2.0	2.0	12.0
	4.00	10	20.0	20.0	32.0
	5.00	2	4.0	4.0	36.0
	6.00	16	32.0	32.0	68.0
	7.00	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Q6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	2.0	2.0	2.0
	2.00	1	2.0	2.0	4.0
	3.00	4	8.0	8.0	12.0
	4.00	4	8.0	8.0	20.0
	5.00	10	20.0	20.0	40.0
	6.00	18	36.0	36.0	76.0
	7.00	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Q7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	4.0	4.0	4.0
	3.00	2	4.0	4.0	8.0
	4.00	2	4.0	4.0	12.0
	5.00	12	24.0	24.0	36.0
	6.00	19	38.0	38.0	74.0
	7.00	13	26.0	26.0	100.0
	Total	50	100.0	100.0	

Q8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	2.0	2.0	2.0
	2.00	1	2.0	2.0	4.0
	3.00	1	2.0	2.0	6.0
	4.00	7	14.0	14.0	20.0
	5.00	6	12.0	12.0	32.0
	6.00	10	20.0	20.0	52.0
	7.00	24	48.0	48.0	100.0
	Total	50	100.0	100.0	

Q9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	2.0	2.0	2.0
	2.00	4	8.0	8.0	10.0
	4.00	2	4.0	4.0	14.0
	5.00	8	16.0	16.0	30.0
	6.00	20	40.0	40.0	70.0
	7.00	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Q10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	4.0	4.0	4.0
	2.00	1	2.0	2.0	6.0
	3.00	5	10.0	10.0	16.0
	4.00	5	10.0	10.0	26.0
	5.00	8	16.0	16.0	42.0
	6.00	14	28.0	28.0	70.0
	7.00	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

The results obtained above have shown that in appearance, e-health acceptance has had a good appearance and is quite liked by many respondents. In terms of usability, the acceptance of e-health has been sufficient to meet the needs of e-health users, although it is still not significant. In terms of convenience, several functions in e-health have been able to function according to their purpose, but there are still certain functions that have not been used by users according to their designation so that they are still not useful enough. While the level of satisfaction, the majority of users have expressed satisfaction with e-health so that it can continue to be used properly and is expected to continue to be used in the future.

CONCLUSION

In this study, it can be seen that the research model has a good match with the research data so that the model is valid and can explain the relationship between variables. In addition, the factors that influence the interest in using the e-Health application will have a direct effect on the patients or application users. Respondents from this study indicated that they felt positive benefits when using this application. By obtaining these positive benefits, respondents want to continue to use this service so that it can simplify the required process. Ease of use also affects behavioral intention to use the E-Health application because ease of use increases user effectiveness.

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