

Percieved Utilization of Cloud Computing Towards Acceptance of Employees in Medical Records Department of King Khalid General Hospital in Hafar Al-Batin

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Abstract

Introduction: Cloud computing is an innovative paradigm that provides users with on-demand access to a shared pool of configurable computing resources such as servers, storage, and applications. **Objectives:** This study aimed to evaluate the acceptance of employees in the medical records and E-health departments to cloud computing in King Khalid General, Hafar Al-Batin, Saudi Arabia. Further, it determined their perceived level of understanding and knowledge to this technology especially on its utilization in safely accessing and securing personal health record of patients. **Method:** A total of 53 participants filled-up and completed the survey questionnaire that measures their level of knowledge and understanding to cloud technology. A descriptive cross-sectional design was utilized for this study. **Results and Discussion:** From the results of the survey, a general mean of 3.72 and standard deviation of 1 having a verbal interpretation of 'agree' were obtained. These results translates to an acceptable level of utilizing cloud computing in the hospitals. **Conclusion:** Cloud computing creates an efficient management of patient health records making it more accessible and secured. It is an innovative management approach of record databases in a Saudi hospital with a promising future to be adopted by other hospitals in Saudi Arabia.

Keywords: Cloud computing; E-health; privacy; medical record.

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INTRODUCTION

A cloud service provider presents an opportunity in managing complex information technology in the most effective way without lapsing the essence and quality of information (Kathleen, 2016, 3).

Cloud computing found its purpose among government agencies, health research institutes and authorized private companies such as insurance companies and other hospitals. In the healthcare field, this technology made significant impact in ensuring the quality of care provided while maintaining the confidentiality of patient's record despite possible internal and external threats (Kaletsch *et al.*).

Threats include social functions that users could choose to be anonymous; they can easily expose their personal information or identity. Another threat is about selling the medical information as simple personal information may not be clear enough to be reviewed before the sale. And the threat posed by analytics of Web done by third parties - whose using any available data for user profiling on the Web to target advertising. The cloud computing main role is remarkable and it is one of the necessary technologies in the computer world. It is a better way to run your business instead of having your resource you can use resources as services (Khaled, 2013, 5).

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These threats can range from simple personal information to as crucial as medical information or web analytics that would involve larger data files hacked by third party systems. Given these possible risks, the cloud computing's role in data security is becoming more in-demand to ensure a secured business platform (Khaled, 2013, 5).

Cloud can work virtually in almost all devices and can do computing tasks in fields like education entertainment, medical, military operations, business, and finance. However, this paper focused specifically on the role of cloud computing in the health sector and its influence over the Kingdom of Saudi Arabia (Assad, 2015, 3).

REVIEW OF LITERATURE

The healthcare landscape underwent major development in the past years owing to an excellent healthcare delivery system. Institutions like hospitals, research clinics, private health care institutions, and doctors continuously searched for solutions to address the emerging needs of patients. With the birth of cloud computing technology, healthcare services efficiency has seen advances like never before. Patients data have become more secured and yet retrievable in a single snap (Sunil, 2011, 3).

The Ministry of Health (MOH) of the Kingdom of Saudi Arabia relied on cloud computing in delivering its services to the people. With the utilization of cloud technology, MOH's 1,200 primary health clinics and 255 hospitals across the country served the Saudi citizen and residents efficiently well (Emna, 2017, 12).

A further 120 hospitals and 1,000 clinics are currently under construction. Alongside the physical expansion, the health Ministry looks forward to ensuring a world-class level of the link between locations. Effective work the primary healthcare clinics must be connected to specialist centers. Clinicians want to have the ability to share patient data, seamlessly and securely, because they deal with 130 million patients a year (Emna, 2017, 12).

Health care services are a priority in Saudi Arabia has been given by the government. Health has invested greatly in terms of quality and quantity during the past few decades, as evidenced facilities by health availability throughout the Kingdom. The sector of Saudi healthcare is structured to encourage a basic platform of healthcare and the government is managing it through the health ministry and a lot of semi-government organizations that operate medical services and hospitals for their employees. The private sector operators are also playing a key role in providing quality healthcare services in the Kingdom (Emna, 2017, 12).

Many studies have also been conducted to determine the challenges accompanying the implementation of cloud computing in hospitals. These studies have reported a lack of data security is the main challenge of using the technology. Mehraeen *et al.*, (2017, 45) stated that health records contain very sensitive information that should only be accessed by relevant people such as health care providers. The author suggested that cloud computing increases data vulnerability to the security threat, affecting the privacy and confidentiality of patient's information. Mehraeen *et al.*, (2017, 45) recommended that health care providers should provide authentication that limits access to a cloud virtualized network. Security measures will ensure electronic media records of patients are protected.

Cloud computing contributes significantly to the health information system in the healthcare industry. Sadoughi & Erfannia (2017, 101) suggested that advancements in technology used in health care, such as cloud computing, improve health care provision in hospitals. The main aim of the study was to identify the benefits and negative effects of cloud computing technology. The results of the study indicated that cloud computing is associated with economic benefits and information management. Cloud computing reduces the cost of operation and allows the proper storage of large amounts of information. However, cloud computing is challenged by security issues and restrictions of people.

Cloud computing has been adopted in different health organizations. Many studies have also cited factors that limit other health facilities from employing the technology. A study by Almubarak (2018, 54) showed that many organizations are working towards implementing the technology so that they can improve the decision-making process. 50% of health organizations in Saudi Arabia are using cloud computing to store patient MR (Almubarak, 2018, p. 54). However, some organizations have not adopted the technology because of the security issues associated with it. There is a need for health organizations to make quality decisions regarding the implementation of cloud computing.

The importance of cloud computing in processing and storing a large amount of information has also been explored. According to Rajabion *et al.*, (2019, 280), health professionals recommend that organizations should adopt the use of cloud computing in storing MR because it ensures the safety of patient's information (Rajabion *et al.*, 2019, p. 280). The authors claimed that data security is one of the challenges that health organizations should prepare to address when they deploy cloud computing in their systems. Nevertheless, cloud computing improves remote access to patients' information, which facilitates the security and safety of patient information.

Research Question(s)

1. What is the level of utilization of cloud computing as perceived by Medical Records employees of King Khalid General Hospital in Hafar Al-Batin?
2. What is the level of understanding of Medical Records employees in King Khalid General Hospital in safely accessing personal health records of patients?

Statement of Objectives

This study aimed to measure and determined the 1) the extent of the participants level of knowledge and understanding towards cloud computing technology; and 2) determined its applicability and utilization in managing the health records of patients in King Khalid General Hospital, Hafar Al-Batin, Saudi Arabia.

MATERIALS AND METHODS**Research Design**

This study utilized a descriptive cross-sectional research design. The study's protocols were employed at King Khalid General Hospital in the city of Hafar Al-Batin, Kingdom of Saudi Arabia. This 300-bed capacity hospital is under the authority of the Kingdom's Ministry of Health. Both the hospital's department of Medical Record (MR) and E-health were the areas where the participants were recruited.

Participants

The study population is composed of 53 employees from the Medical Record and E-health department of the hospital. At the start, 60 questionnaires were distributed however only 53 of the questionnaires were completely and correctly answered. The eligibility criteria used in recruiting the sample are first, that they should be full-time employee of the MR and E-health departments; second, they are utilizing the cloud computing in their work in the department; and thirdly, they are familiar with the use of the cloud computing. The participants' age, gender and highest educational attainment were obtained. However, there was no prejudiced imposed with regards to these variables. A census sampling was employed in determining the number of participants. The personnel of both departments combined is sixty (60).

Instrument

Data were collected using the self-administered questionnaire. It has two main parts and the first part asked about the demographic profile of the participants and the second part consist of sixteen (16) statements on the use of cloud computing technology. The statements were worded in a manner that presumably represents the thoughts, ideas and attitude towards the use of cloud computing by the participants. To respond to each statement, the participants will choose from a 5-point Likert scale ranging from 1

(strongly disagree) to 5 (strongly agree). The statements were all worded positively.

The tool was validated through a series of steps. After its conception followed by organizing the statements and properly wording them, it was subjected to a review by a panel of experts. The Cronbach's alpha was derived and the questionnaire obtained an alpha level of 0.897 which is translated to "acceptable" as its internal consistency level.

Procedure

The data collection for this study commenced in February 2020 until March 2020. The permission was first obtained from the hospital director. After the hospital director provided permission, then I started the recruitment of participants by first determining the number of populations that qualifies based on the eligibility criteria. When it was determined, I provided the derived sample consent to participant. When all of the sample agreed to participate by filling-up the consent form, the questionnaire was distributed. The instructions in answering the questionnaire were provided to the participants and another appointment was set for those who preferred to have the questionnaire collected on a particular date.

Ethical Considerations

Ethical approval for this study was provided by the University Ethics Committee of the University of Hail, Saudi Arabia with Ethics Review Board Approval Number H-2020-045.

Data Analysis

Data were analyzed using SPSS version 11.5 (Chicago, IL, USA) and a statistician was consulted to validate the results derived. The demographic profiles of the participants such as age, gender and highest educational attainment were presented using frequency distribution percentage distribution. For the responses in the questionnaires, mean and standard deviation were used. For the inferential derivation of results, one-way ANOVA and Kruskal-Wallis tests were utilized. Tests results significance were set at $p < 0.05$ level.

STATISTICAL ANALYSIS

Data were analyzed using SPSS version 11.5 (Chicago, IL, USA) and a statistician was consulted to validate the results derived. The demographic profiles of the participants such as age, gender and highest educational attainment were presented using frequency distribution percentage distribution. For the responses in the questionnaires, mean and standard deviation were used. For the inferential derivation of results, one-way ANOVA and Kruskal-Wallis tests were utilized. Tests results significance were set at $p < 0.05$ level.

RESULTS

Table 1: Demographic Profile of the Participants, N= 53

Profile		Frequency Distribution	Percentage Distribution
Department	Medical record	45	84.9
	E-health	8	15.1
	Total	53	100
Age in years	19-24	3	5.7
	25-34	13	24.5
	35-44	34	64.2
	45-54	3	5.7
	Total	53	100
Gender	Male	38	71.7
	Female	15	28.3
	Total	53	100
Highest Educational Attainment	High School	1	1.9
	Diploma	25	47.2
	Baccalaureate	26	49.1
	Masters	1	1.9
	Total	53	100

Table 1 shows that out of the total 53 participants, 84.9% of them are in medical record and 15.1% are in the E-health in terms of the department variable. While for age in years distribution, most of the participants belong to the 35-44 years old bracket at 64.2% and the other age group in decreasing order are 25-34 years old at 24.5%; and age groups 19-24 years old and 45-54 years old at 5.7% each. In terms of

gender distribution, most of the participants are male comprising 71.7% while females are at 28.3%. For the highest educational attainment variable, the participants who have finished baccalaureate degree is at 49.1% which is just a percent higher than those diploma holders at 47.2%. High school and master's degree holders both have 1.9% each of the total participants.

Table 2: Responses of the Participants to the Questionnaire, N=53

	Statement	Mean	Standard Deviation	Rank	Verbal Interpretation
1	The administration encourages the hospital to use cloud computing services	3.30	1.324	14	Neutral
2	In general, my workplace gives importance and supports the use of cloud computing services	3.38	1.259	13	Agree
3	There is a great availability of quality cloud computing systems and applications	3.02	1.217	15	Neutral
4	I have the resources to use cloud computing services	3.64	.963	12	Agree
5	I can use cloud computing services in my workplace	2.91	1.043	16	Neutral
6	I hesitate to use cloud computing services for fear of making mistakes I can't correct	3.96	.980	6	Agree
7	Cloud computing services are useful in my workplace	4.17	.893	1	Agree
8	Cloud computing services enable me to do my job more quickly and save my time	3.74	.902	10	Agree
9	Cloud computing services are easy to use as working in medical records	4.02	.990	4	Agree
10	Hospital management provides patient privacy using the cloud computing	3.98	1.009	5	Agree
11	The hospital administrator advocates patient's privacy with the use of cloud computing	3.66	1.055	11	Agree
12	There is good cooperation between the hospital units to maintain patient privacy using cloud computing	3.83	.955	9	Agree
13	Patients should have control access to their personal health information	3.89	.870	8	Agree
14	Cloud computing protects healthcare information from damage, loss and unauthorized alteration	4.09	.966	2	Agree
15	The manager sees patient privacy issues with the standard rules and regulations of cloud computing.	4.08	.646	3	Agree
16	Hospital management procedures show that patient privacy is a top priority	3.91	.946	7	Agree
TOTAL		3.72	1.00	-	Agree

Table 2 summarizes the responses of the participants to the 16 statements of the questionnaire. With a general mean of 3.72 and standard deviation of 1.00, these values correspond to the verbal interpretation of Agree. It is fair to say that the participants agree in the use of cloud computing as represented by averaging their responses to the 16 statements.

As shown in table 2, statement numbers 1, 2, 3, 11, 5 and 10 are in the top five, respectively, when all statements are ranked from most responses to the least responses. On the other hand, the statements 9, 6, 14, 4, 12, 16, 8, 7, 13 and 15, respectively, were given the least responses.

The statement that obtained most responses is statement 7 which states that “Cloud computing services are useful in my workplace” having a mean of 4.17 and a standard deviation of 0.893 and a verbal interpretation of Agree. Statements 14 “Cloud computing protects healthcare information from damage, loss and unauthorized alteration” having a mean of 4.09 and standard deviation of 0.966 takes the second spot with a verbal interpretation of Agree.

At the most bottom spot among all the 16 statements is statement 5 “I can use cloud computing services in my workplace” with a mean of 2.91 and a standard deviation of 1.043 with a verbal interpretation of “Neutral.”

Table 3: Profile Variables and the Differences in Responses, N=53

Profile Variables		Sum of Squares	df	Mean Square	F	Sig.
Department	Between Groups	.508	2	.254	.557	.576
	Within Groups	22.761	50	.455		
	Total	23.269	52			
Age	Between Groups	1.135	3	.378	.837	.480
	Within Groups	22.134	49	.452		
	Total	23.269	52			
Highest Educational Attainment	Between Groups	4.919	3	1.640	4.378	.008
	Within Groups	18.350	49	.374		
	Total	23.269	52			

Table 3 shows the results on the difference between the attitude of the participants to the use of cloud computing when they are grouped according to department, age and highest educational attainment. A one-way ANOVA was used to derive the results.

In terms of the department variable, the results show that there is no difference whether the participants are in the E-health or medical record in the utilization of cloud computing. With an F value of 0.557, it shows that there is no difference when they are grouped according to the two departments at significant value of 0.576 which is higher than 0.05 level of significance, and is interpreted as having no significant difference.

On the same table, the results show that there are no significant difference in the utilization of cloud

of computing when the participants are grouped according to their age brackets With an F value of 0.837 and a significant value of 0.480 which is higher than 0.05 level of significance, this is interpreted therefore as having no significant difference in the age variable.

For the profile variable highest educational attainment, the results however manifest a different result compared to the two previously mentioned variables, age and department. This time it revealed that the highest educational attainment of the participants towards the utilization of cloud computing makes a significant difference. With an F value of 4.378 and a significant value of 0.008 which is lower than 0.05 level of significance, this is interpreted therefore as having a significant difference in the highest educational attainment variable.

Table 4: Attitude of Participants to Cloud Computing According to Educational Attainment, N= 53

Level of education	N	Mean Rank	Chi-Square	df	Sig.
High School	1	5.00	12.696	3	0.005
Diploma	25	34.38			
Baccalaureate	26	21.50			
Master	1	7.50			
Total	53				

Table 4 shows the results on the difference between the attitudes of the participants to the utilization of cloud computing when they are grouped

according to their highest educational attainment. A Kruskal-Wallis test was used to derive the results.

The results convey that there is a significant difference in the use of cloud computing when grouped according to this profile variable. Diploma degree

holders obtained the highest mean with 34.38 while those who finished high school had the lowest mean rank of 5.

Table 5: The differences between the answers according to gender, N=53

Gender	N	Mean	Std. Deviation	Std. Error Mean	Sig	T
Male	38	3.5789	.69388	.11256	0.111	-1.622
Female	15	3.9048	.55504	.14331		
Total	53					

Table 5 demonstrates that there is no difference between responses to the questionnaire of the participants when grouped according to their gender. With a significant value of 0.111 which is more than 0.05 level of significance. This indicates that there are no statistically significant differences between their attitude towards the use of cloud computing.

DISCUSSION

Many countries in the world are now utilizing cloud computing as their primary database in the management of their health systems. The European Union countries are facing the challenges of innovations in healthcare services. These innovations in areas of economy, politics, health, and human resource are being connected to digital platforms like cloud technology (Aarestrup *et al.*, 2020). Baillie (2014) emphasized the very significance of using medical records contemplated with technologies to speed the process of managing information in the hospitals (Baillie 2014). One example of this is India. The Indian government initiated an enormous public health innovation that targets the importance of creating a management system that allows medical records to become accessible whenever they are needed (Balsari *et al.*, 2018). In Saudi Arabia, social media platforms have enabled information-sharing across many pathways. This process has connected people through a large network of electronic media platforms. This same system is being utilized in hospitals across the Kingdom (Al-Muhtadi *et al.*, 2019). One identical program of cloud computing introduces in Saudi Arabia is the mHealth which enables a framework that helps catalyze an operation called gig economy. This gig economy, in turn, allows the sharing of medical information across many channels within different hospital systems. This new system like cloud computing integrates technology to the world of health care services making it more advanced and innovative (Alanezi and Alanzi 2020).

Saudi Arabia has one of the most advanced monitoring registry systems of implantable biomedical devices. The national standardized policies and regulations that govern the functionality of this system made the goals of cloud-based Implantable Medical Device Registry (IMDR) successful. The system is now being implemented at a national level across the Kingdom (Alshagathrh *et al.*, 2018). In other parts of the world, the USA for instance, a body sensor network is used to collect personal health records. From the

device, this will be encoded in a cloud-based data system. This system promotes optimal health services without the risk of committing an error and breaching ethical protocols (Bao, Chen, and Yang 2017). This technology is comparable to the use of robotics that helps the surgeon's hands target proper and accurate actions during actual surgeries. With the aid of human-initiated actions, the robot functions under the control of a human brain. This is the same mechanism that supports cloud computing in managing the health records of patients. It is still manned by a human decision yet the precision and speed of processing the tasks are done through the help of technology (Bhandari, Zeffiro, and Reddiboina 2020).

One of the ways cloud computing manages health records is through what is called OAIS or Open Archival Information System. This is a model used to organize data and at the same time a resource system for care centers like hospitals and primary health centers. This archival storage system is being utilized in some different hospitals in Saudi Arabia (Celesti *et al.*, 2018). Almost ninety-percent of the participants in this study have either finished diploma or baccalaureate degrees and within the age bracket of thirty-five to forty-four years old. It is necessary to determine the readiness of the employees who will be utilizing cloud computing technology since it requires a high level of thinking and command of many procedural codes. Cloud computing itself is governed as well by ethical rules. However, the nature of the ethicality of cloud computing may be different in some ways. The bottom-line of this nature is that cloud computing in itself is a form of a business platform that operates within; prescribed rules (de Bruin and Floridi 2017).

In rural China, a cloud-based electronic health record or EHR was adopted by village doctors and health personnel. The approach had been proven efficient for the care providers to properly determine the needs of their patients and help them track the recovery of each one. It also helped them discover factors in the environment that may have an indirect impact on the health and well-being of the villagers (Alshagathrh *et al.*, 2018; Lin *et al.*, 2014). The results of this study convey that the responses of the participants are very much aligned with other hospitals in the world. For instance, the five top responses to the questionnaire illustrate the '*the administration encourages the hospital to use cloud computing services*' along with

other statements like ‘my workplace gives importance and supports the use of cloud computing services’, ‘there is a great availability of quality cloud computing systems and applications’, ‘hospital management provides patient privacy using the cloud computing’ and ‘The hospital administrator advocates patient’s privacy with the use of cloud computing.’ Several studies (Liu *et al.*, 2018; Liu *et al.*, 2020; Low and Hsueh Chen 2012; Miras *et al.*, 2018; Wu *et al.*, 2017; Mirza and El-Masri 2013) concur with these statements.

In relation to table 3 showing the difference in the responses of the participants in the use of cloud technology when they are grouped according to gender, highest educational attainment, and age which conveys the results having no significant difference. These results are supported by a number of studies (Chung and Fong 2014; Ermakova, Fabian, and Zarnekow 2016; Lucas *et al.*, 2015; Melillo *et al.*, 2015). One unique system adopted in Japan in 2017 which is similar to cloud-based technology allows patients to have a centric system. This further enables the health staff to provide a sense of security to patients at the same time understand the patient’s condition before making a necessary home visit. It helped the elderly population compared to other types of patients at a different age bracket (Nomoto *et al.*, 2017).

In terms of educational attainment, the level of education determines the extent of understanding and proper utilization of cloud-based technology. While this is a fact, several programs and activities in the baccalaureate degree of students especially those in nursing and allied health courses understood the need to integrate courses in their courses and academic degrees (Abell and Jones 2010; Karasik, Maddox, and Wallingford 2004; Larsen *et al.*, 2018). Thus, the results are shown in table 5 only provides a perspective with a great deal of analyzing the impact of education as a requisite in the implementation of cloud computing technology.

CONCLUSIONS

In this study, many elements and factors have shown to be affecting the way and processes how cloud technology should be adopted and used in hospitals. Variables such as age, gender and highest educational attainment should be considered in determining the ability of an employee the utilize cloud-based technologies.

Though in the study it showed no significant difference when it comes to these variables when considering them to become a measure of one’s success in cloud technologies. On the other hand, these considerations can become effective means to further enhance the need of the employees to advance further their knowledge to this innovative software. The challenges and predicaments of organizing and managing data in the workplace are essential things to be scrutinized. Much have been known about this promising technology and yet there is still a lot to learn from it. Since technology is in a continuous change of modification, innovation and perfection, the people using it and benefitting from must proceed towards the same pattern.

Lives have changed dramatically because of technologies, not only cloud computing innovations but in a general sense. However, there had been no disadvantages and pitfalls that came with these advancements. It also has its probable harm and drawbacks. This is a truth that should be known to all. Yet, during all these years of continuous improvement in the healthcare industry to make healthcare services efficient, accessible, safe and secure, it also comes with a great price. Nonetheless, hospitals in Saudi Arabia perceive cloud computing as innovation and a promising tool that will better enhance the services for the sick and well citizens of the country.

List of Abbreviations

Table 6: List of abbreviations

Abbreviations	Meaning
EHR	Electronic Health Record
SPSS	Statistical Products and Services Solution Program
ANOVA	Analysis of Variance
EMR	Electronic Medical Record
MOH	Ministry of Health
MR	Medical Record
IMDR	Implantable Medical Device Registry
OAIS	Open Archive Information System
mHealth	Mobile Health

Appendix

Reliability Test

❖ Cronbach Alpha

For the purpose of checking the reliability of the tool, I used the equation Cronbach Alpha, and the value of the reliability factor of the total degree

according to the equation Cronbach Alpha (0.800), which is a high value. The objective of this analysis is to obtain the same data when re-studying, using the same study tool under the same conditions.

Tool reliability

Tool domain		No of tool phrases		Cronbach Alpha value			
		20		0.800			
phrase	Correlation	phrase	Correlation	phrase	Correlation	phrase	Correlation
1	0.241	6	.346*	11	.343*	16	.785**
2	.493**	7	.503**	12	.330*	17	.674**
3	.576**	8	.491**	13	0.156	18	.489**
4	.390*	9	.584**	14	.538**	19	.588**
5	0.065	10	.381*	15	.594**	20	.417**

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Phrases no (1, 5, 13) are not significant

Department	<input type="checkbox"/> Medical record <input type="checkbox"/> E-health
Age	<input type="checkbox"/> 19-24 <input type="checkbox"/> 25-34 <input type="checkbox"/> 35-44 <input type="checkbox"/> 45-54 <input type="checkbox"/> 55 or older
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Nationality	<input type="checkbox"/> Saudi <input type="checkbox"/> Non-Saudi
Level of education	<input type="checkbox"/> High School <input type="checkbox"/> Diploma <input type="checkbox"/> Bachelor <input type="checkbox"/> Master <input type="checkbox"/> Other

7.1 Appendix A: Questionnaire (if applicable)

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The administration encourages the hospital to use cloud computing services	<input type="checkbox"/>				
2	In general, my workplace gives importance and supports the use of cloud computing services	<input type="checkbox"/>				
3	There is a great availability of quality cloud computing systems and applications	<input type="checkbox"/>				
4	I have the resources to use cloud computing services	<input type="checkbox"/>				
5	I can use cloud computing services in my workplace	<input type="checkbox"/>				
6	I hesitate to use cloud computing services for fear of making mistakes I can't correct	<input type="checkbox"/>				
7	Cloud computing services are useful in my workplace	<input type="checkbox"/>				
8	Cloud computing services enable me to do my job more quickly and save my time	<input type="checkbox"/>				
9	Cloud computing services are easy to use as working in medical records	<input type="checkbox"/>				
10	Hospital management provides patient privacy using the cloud computing	<input type="checkbox"/>				
11	The hospital administrator advocates patient's privacy with the use of cloud computing	<input type="checkbox"/>				
12	There is good cooperation between the hospital units to maintain patient privacy using cloud computing	<input type="checkbox"/>				
13	Patients should have control access to their personal health information	<input type="checkbox"/>				
14	Cloud computing protects healthcare information from damage, loss and unauthorized alteration	<input type="checkbox"/>				
15	The manager sees patient privacy issues with the standard rules and regulations of cloud computing.	<input type="checkbox"/>				
16	Hospital management procedures show that patient privacy is a top priority	<input type="checkbox"/>				

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