

Examination of the factors affecting the acceptance and use of health information technologies in HIMSS public hospital enterprises from the perspective of Unified Technology Acceptance and Use Theory

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Abstract

Feasibility studies conducted in Turkey on 9 March 2003, implemented on Public-Private Partnership public private partnerships (PPP) model under Health city hospitals ,as the third phase of the Health Transformation Programme has been in operation. HIMSS (Healthcare Information and Management Systems Society) has Stage 6-7 certification in Turkey, working with the vision of improving patient-employee safety and health care quality by making better use of technology and knowledge 1.3 in Europe. Yozgat Public Hospital and Isparta Public Hospital are the first city hospitals where the study was applied.

This study, conducted between July and September 2017 in the HIMSS Stage 6-7 Yozgat and Isparta public hospital under the authority of the Ministry of Health – Department of Public Hospitals, involved the participation of 1000 health personel and included 50 questions with dependent and independent variables concerning the acceptance and usage of health related technology.

In this study, two health care workers in a city hospital with a certificate of HIMSS, the use of technology within the framework of the unified theory of adoption and use of technology on the effect of factors on intention to use it to analyse, and Health Information Technology

(HIT) is ready, whether it has been revealed. Improving the quality and effectiveness of HIT services of both hospital health workers and using health technologies to improve services, performance expectation of users, expectation of effort, It shows that Social Impact and confidence perception ($p < 0.05$) are positively affected.

In our study, it is stated that HIT is ready to use, will help facilitate the service and that its businesses will care about the service guided by technology. Although employees were concerned about problems with using HIT, it was announced that it would not take long to learn how to use the technology and that integration into the system would be rapid as users were licensed at training levels. In the study, it is seen that the attitudes and facilitating factors that support the use of information technologies are approved by the participant.

Key messages

- Unified Technology Acceptance and Use Theory (UTAUT) provides a good framework for understanding the factors behind the adoption of health information technologies to access and use information in medical settings*
- Performance Expectation ,Trust Perception, Risk Perception, Effort Expectation, Social Impact, Facilitating Conditions, Behavioral Attitude, Intended Use, are the main factors that predict a health information technology attitude to access and use information in medical settings.*

Keywords: *Health Information Technology, Information Technologies, Acceptance Technologies.*

Introduction

HIMSS, which works with the vision of improving patient safety and health care quality by providing better use of technology and Information, measures with different

evaluation models for this purpose and offers hospitals the opportunity to compare themselves with similar institutions in national and international fields. Thus, by prioritizing the personal information security of hospitals, registration, processing and evaluation of their electronic data according to an internationally applicable standard is provided. Established in 1961; he established the EMRAM (Electronic Medical Health Record adaptation model) scoring, which is headquartered in Chicago, America, Europe and Asia and is known as a not-for-profit organization, rating and accrediting HIMSS from 0 to 7 to establish the international standards of digital hospitals.

EMRAM (Electronic Health Record Adoption Model)

CCMM (Maintenance Continuity Adoption Model)

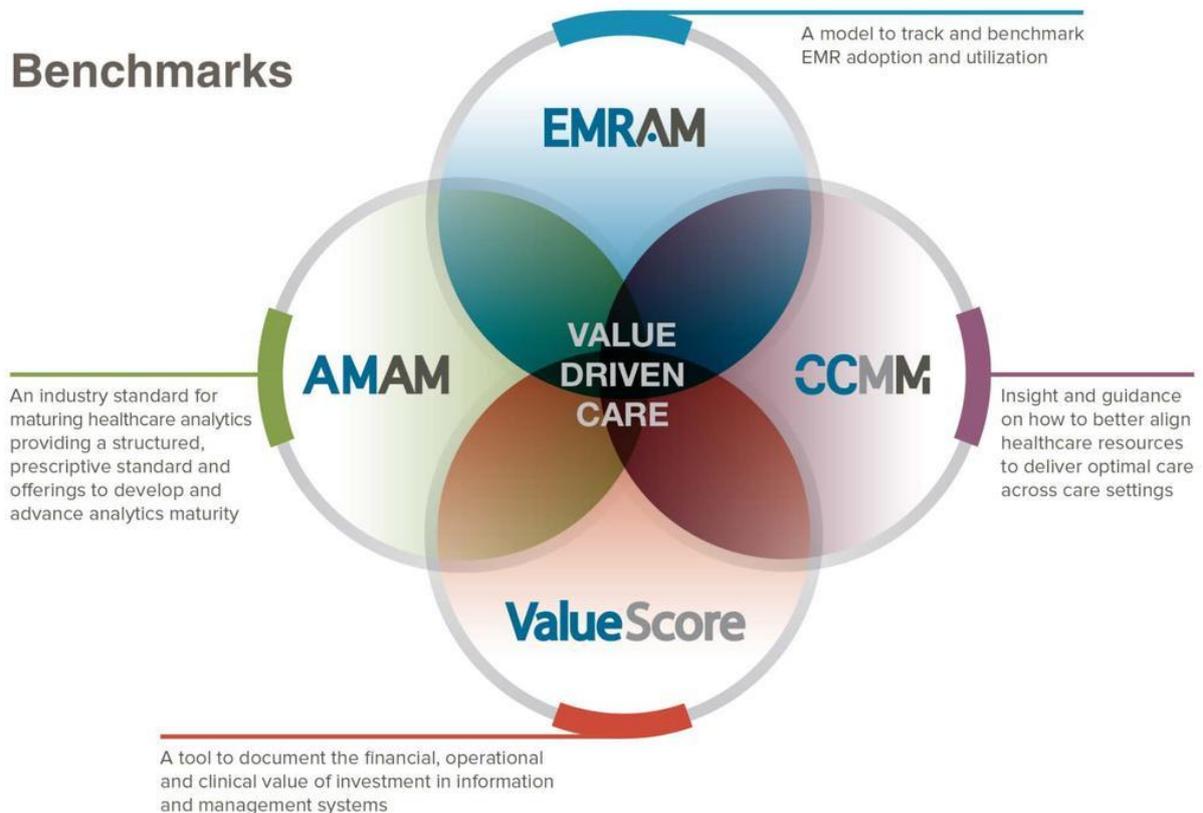
O-EMRAM (Ambulatory Treatment Model)

AMAM (Analytical Maturity Adoption Model)

DIAM (Digital Imaging Adaptation Model)

INFRAM (Subroutine Acceptance Model) (HIMSS Turkey.2017, 0825).

Benchmarks



2018 HIMSS EMRAM targets and Road Map 2018 workshop presentation Dr. Ilker KÖSE
Istanbul Medipol University.

2019 "HIMSS'19 Eurasia Health Informatics and Technologies Conference and Yozgat hospital, which served as HIMSS Stage 6 during its operation, became Europe's first HIMSS Stage 7 area hospital in 2018. The study questions were prepared accordingly, but the participants were not asked HIMSS to be able to determine the level of HIMSS preparation.

It has been known that strategic Information Technology (IT) such as Information technology studies related to investments "Enterprise Resource Planning (ERP)" provide managers of business investments with opportunity to improve tangible and intangible long-term operational effectiveness (Nicolaou, A. ve Bchattacharya, S.2006). The development of health practices and the integration of IT into these institutions enables an increase in the activities. The success of any process in the 21st century, especially with regard to information and knowledge searching, acquisition, processing, storage and transfer, is strongly based on the adoption, utilisation and effectiveness of these tools (SA Fari, 2015).

In addition to advances in health practices, IT have been developing day by day and hence have been a triggering factor in the realization of public reforms in many countries. (Kavuncubası, S. 2000). One of the most important problems encountered at this stage is the acceptance and adoption of these systems by healthcare professionals. The importance of user adoption of IT systems in Management Information Systems is highlighted (Bandyopadhyay, K. 2010). In practice, it is suggested that success levels of users and managers are limited to the level of knowledge and experience, no matter how powerful the software is, and that one of the obligatory areas of improvement in health is effective use of IT (Ak, B.2009). Technological advancements have accelerated the deployment of healthcare information systems (HIS) with the potential to enhance productivity, lower costs, reduce medication errors, and ease the manpower strain on the healthcare industry (Yang, Z. Kankanhalli, A. , Ng, B.Y. , & Lim, J.T.Y.2013). Adoption of new understanding along with reforms in healthcare and quality improvement in health care institutions with the use of a variety of HIT systems aims to increase the quality of health services and to reduce the costs to minimal levels. The inclusion of new practices in IT into healthcare institutions is a positive practice along the fact that there is less than needed detailed information about these systems is becoming a significant

problem. Moreover, it is evident that the sustainable success of innovative medical technologies in practice e.g., new products, re-organized workflows or disruptive procedures, depends on the acceptance-to-work of the employees working in the re-organized process. And this acceptance is heavily influenced by the impact of the innovative technology on procedure handling, costs, workflow efficiency, and patient safety. All these aspects are a direct result of the nature of design of an innovative technology (Von Eiff MC, von Eiff W, Roth A and Ghanem M. 2019).

IT are used to minimize uncertainties. It also guarantees the responsiveness of IT to the environmental flexibility and the demands of external environmental factors (Koza, M. (2010). Furthermore, information and knowledge sharing can only be hassle-free, timely and effective with the application of the necessary technology (ICTs) (SA Fari, 2015). UK, Australia and Canada related health information technology workforce EMRAM scoring which is the analysis of HIMSS Analytical Database system. In this study, unlike other studies, a successful the importance of adequate and well-trained staff for technology integration (Hersh, W. (2010).

It shows the highest adoption rate of basic Electronic Health Record (ECHR) systems in the United States as of 2014 (63.3%). Using the certified 'ECHR definition', the ECHR admissions rate was close to 96% in U.S. hospitals as of 2016 (Kanakubo, Takako; Haciraz, Hadi 2019). Based on Isiyaku etc. (2015), in his study in the field of Education, concluded that teachers 'perceived tastes of bits affect their intention to use BIT, while teachers' attitude to BIT affects their intention to use BIT (Dauda Dansarki Isiyaku, Ahmad Fauzi Mohd Ayub, Suhaida Abdulkadir, (2015) Phichitchaisopa, Nisakor ve Thanakorn Naenna.(2013), Bennani, AE (Bennani, Az-Eddine); Oumlil, R (Oumlil, Rachid) (2013), Kim, Seok ve ark.(2016), Jang, Sung Hee, Rachel H. Kim ve Chang Won Lee. (2016), Kijisanayotin, Boonchai, Supasit Pannarunothai, and Stuart M. Speedie. (2009), Hsieh, Hui-Lung (2016). In their own study; they aimed to examine the factors affecting the use of use HIT by implementing and testing the UTAUT. In the same research, it was revealed that individual differences, especially age and gender, directly affect the use of technology (Yi Y., Wu Z. and Tung L. L.2006). The study provides healthcare decision makers and policy makers with information that will aid them in planning and implementing systems for long-term care. As a result of parallel data

analysis in our study, it has been found that factors that have a significant effect are performance expectation, effort expectation and facilitating conditions. The best predictor of behavior is intent. Intent is a cognitive indicator that indicates that the individual is ready to exhibit behavior. (Alajmi, B. (2008).

IMIA recommends that all health professionals should be acquainted with ICT and be able to use technology responsibly in their daily work.(IMIA. 2000).Nowadays especially with the fast processors, emerging database softwares and internet technologies have significant impact on the strategic decisions of management levels. Strategic Management of Information Systems in Healthcare explores how healthcare organizations can use information technology to achieve better operational performance and strengthen their market position(Brown, G.D. , Stone, T.T., & Patrick, T. B. 2005) Managers responsible for IT applications should be aware of this situation and should be included in the decision-making process before determining technical preferences in organizational practices (Rodríguez, C., & Pozzebon, M.2011).Otherwise, individual problems by the use of IT cannot be detected and instant problems will not be taken into consideration and more complicated problems may arise in later processes. Correct and appropriate use of HIT seems to have positive results such as improving productivity, reducing costs, reducing drug errors and alleviating manpower burden in the health sector. UTAUT working model, which was developed by Venkatesh, considers three variables to determine the intent behavior. These are; performance expectation, effort expectation and social impact. The UTAUT model including health sector technologies such as information and information systems, healthcare facilities and tele-health care services has been successfully implemented. The UTAUT model has proven to have good predictability (Venkatesh, V., Morris, M.G., & Davis, G.B. 2003). The integration of ICT in teaching and learning (IITL) brings about powerful learning environments and helps students to deal with knowledge in active, self-directed and constructive ways(Bir Luhama, FEK Bakkabulindi, PB Muyinda,2017).

Methods

This study, Health tourism, which contributes to the rate of foreign patients with 0.67% (551,748/ 82300822x100) compared to the population of Turkey, has infrastructure and information technology equipment, conducted between July and

September 2017 in the HIMSS Stage7 Yozgat (capacity of 475 beds, 1100 personnel) and HIMSS Stage 6Isparta (capacity of 780 beds and 2687)public hospital under the authority of the Ministry of Health – Department of Public hospital, had participation of 1000 health personnel and included 50 questions (5 expectation of performance - 4 expectation of Safety - 3 perception of risk - 6 expectation of effort - 8 Social Impact - 10 facilitating conditions-3 behavioral attitude -5 intention to use) with dependent and independent variables concerning health related technology acceptance and usage. In the questionnaire, there are 50 questions related to the personal information of (hospital managers-doctor - nurse - midwife - medical secretary – laborant – anaesthetist - X-ray technician) health workers. Data were analyzed by using SPSS 23 package program and its reliability was calculated according to Cronbach Alpha coefficient. Chi-square test, T test and variance analysis were used to analyze the relationship between dependent and independent variables. For independent variables such as socio-demographic variables, t-test for continuous variables, one-way analysis of variance, post-hoc tests for determining meaningfulness of significant results were applied. $P < 0.05$ was considered statistically significant in all analyzes. Since the researcher is the director of Health Care Services, he / she has experience in measuring the sensitivity and approaches of all health workers to the subject.

The study examines the variables of performance expectancy, effort expectation, social impact and facilitating conditions that affect the use and acceptance of existing information systems by users of information systems. The research model presented was based on UTAUT. According to UTAUT, the models incorporated within the UTAUT framework include determining factors that directly affect its intent or use. These determining factors are namely performance expectations, expectation of effort, social impact and facilitating conditions. These factors play a prominent role as direct determinants of user acceptance and use behavior. The aim of this study is to try to estimate the intentions of the individual to adapt to a specific system or technology, considering the above-mentioned factors (Venkatesh, V., Morris, M.G., & Davis, G.B. 2003).

Results

Our study shows that increasing HIT service quality and efficacy and using health technologies to improve services are positively affected by the users' performance

expectation, expectation of effort, social impact and trust perception .It demonstrates an expressed satisfaction that HIT would be helpful and the importance given to business management technology guided services. While there is concern about the problems in using HIT, it is stated that due to the competent user education level learning to use technology and integration into the system will be fast.

Yozgat province hospital provides health services to 418,650 inhabitants;

In Yozgat Public Hospital; a questionnaire was given to a total of 500 users, 73.4% of whom were women and 26.6% of them were male, 55.6% were 18-30 years old, 31% were 31-40 years old, 12.6% 41-50 years and 0.8% are 50 years and over. In addition, 52% of the participants had undergraduate level and 70.6% were nurses-midwives and health officers. When the experience of using health information technology system is examined, it was seen that 41% had used information technology system for 6 years and less and 39.4% for 7 months-1 year (table 1).

Isparta Provincial Hospital provides health services to 433,830 inhabitants

In Isparta Public Hospital; a total of 500 users were surveyed, of which 47% were Male and 53% were female, %57,6% were aged between 31-40, 33,2% between 18-30, 8,6% between 41-50 and 0,6% aged 50 years old and over. Moreover, 77.8% of the participants had undergraduate education level and 52.2% of them were Nurse-midwife-health officers.

When the experience of using health information technology system is examined, it was seen that 29,8% had used information technology system between 6-7 years and less and 16,6% for a period between 4 and 5 years (table1).

Discussion

In this study included both literature review and research of IT use in health sector with the participation of healthcare professionals who provide health services in urban hospitals, which are defined as a new health model, are based on the latest technological systems and labor-intensive enterprises.

The literature suggests that health information technology could improve the efficiency and quality of health care (Chaudhry B, Wang J, Wu S, Maglione M, Mojica W, Roth E, et al 2006). Our study concluded that HIT improve the quality and efficiency of the service offered and that by using these technologies, the service is expected to be better and the data provided in parallel with these technologies is reliable. Furthermore, the

satisfaction is expressed that HIT will help facilitate the service and that their businesses care about the service driven by the technology. While employees are concerned about frequent problems using HIT, it is revealed that it will not take long to learn how to use technology, and integration into the system will be rapid, as the majority of users are licensed at educational levels.

Conclusions

As a result, health professionals generally believe in the importance of information systems and they receive training in information systems, especially in the form of in-service training, and consider themselves sufficient in the use of information technologies.

However, in recent years the development of health services in parallel with the ability of health workers to use IT to the growing importance of the use of IT in the delivery are also of great importance.

It aims to ensure the optimal use of IT in the provision and development of health services, and facilitates compliance with international standards for the processes and the accrediting systems that control the level of using information technologies in the functioning of the health institution. We believe that, this study will guide who are willing to continue on further studies on behalf of.

Abbreviations

HIMSS: (Healthcare Information and Management Systems Society)

HIT: (Health Information Technology)

IT: (Information Technology)

HIS: (Healthcare Information Systems)

UTAUT: (Unified Technology Acceptance and Use Theory)

ECHR: (Electronic Health Record)

ICT: (Information and Communication Technology)

ITIL: (Information Technology Infrastructure Library)

EMRAM: (Electronic Health Record Adoption Model)

CCMM: (Maintenance Continuity Adoption Model)

O-EMRAM: (Ambulatory Treatment Model)

AMAM: (Analytical Maturity Adoption Model)

DIAM: (Digital Imaging Adaptation Model)

İNFRAM: (Subroutine Acceptance Model)

ERP: (Enterprise Resource Planning)

REFERENCES

1. Ak, B. (2009). Health Informatics in Turkey, a Personal Evaluation and International Success Story: Corta tex. Academic Informatics'09 - XI. Academic Informatics Conference Proceedings. February 11-13, Sanliurfa: Harran University
2. Alajmi, B. (2008). Understanding Knowledge-Sharing Behavior: A Theoretical Framework. USA: Rutgers -The State University of New Jersey.
3. Ankara: Siyasal Kitapevi.
4. Bandyopadhyay, K. (2010). User acceptance of ERP systems in the United States, http://www.swdsi.org/swdsi2010/SW2010_Precee
5. Bennani, A.E., & Oumlil, R. (2013). Factors fostering IT acceptance by nurses in Morocco: Short paper. IEEE 7th International Conference on Research Challenges in Information Science (RCIS), Paris, pp. 1-6. <https://doi.org/10.1109/RCIS.2013.6577708>
6. Bir Luhanya, FEK Bakkabulindi, PB Muyinda,(2017) Integration of ICT in teaching and learning: a review of theories Makerere Journal of Higher Education Journal Home > Vol 9, No 1 (2017)
7. Brown, G.D., Stone, T.T., & Patrick, T. B. (2005). Strategic management of information systems in healthcare. Chicago: Health Administration Press.
8. Chaudhry B, Wang J, Wu S, Maglione M, Mojica W, Roth E, et al. Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. *Ann Intern Med.* 2006;144(10):742–52.
9. Dauda Dansarki Isiyaku, Ahmad Fauzi Mohd Ayub, Suhaida Abdulkadir, (2015),
10. [dings/papers/PA139.pdf](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=19139), (Erişim: 03.01.2011)

11. Empirical modeling of information communication technology usage behaviour among business education teachers in tertiary colleges of a developing country South African Journal of Education Journal Home > Vol 35, No 4 (2015)
12. Hersh, W. (2010). The Health Information Technology Workforce. Applied clinical informatics,197-212.
13. HIMSS Turkey. (2017, 0825). ABOUT HIMSS / HIMSS EMRAM. Himms Turkey: <http://himssturkiye.com/tr/anasayfa/#himss-hakk>
14. Hsieh, H.L., Kuo, Y.M., Wang, S.R., Chuang, B.K., & Tsai, C.H. (2016).A study of personal health record user's behavioral model based on the pmt and utaut integrative perspective. Int J Environ Res Public Health, 14 (1).
15. IMIA. Recommendation on education in medical informatics. Methods of Information in Medicine, 2000, 39, 267–77.
16. Kanakubo, Takako; Haciraz, Hadi (2019) 2. Comparison of the tendencies of the acceptance of electronic health records between USA and Japan hospitals. The Journal of Medical Systems Volume: 43 Subject: 7 Article number: 224
17. Kavuncubası, S. (2000). Hospital and Health Institutions Management
18. Kijisanayotin, B., Pannarunothai, S., & Speedie, S.M. (2009). Factors influencing health information technology adoption in Thailand's community health centers: Applying the UTAUT model. International journal of medical informatics,78(6), 404-416. <https://doi.org/10.1016/j.ijmedinf.2008.12.005>
19. Kim S., Lee K.H., Hwang H. and Yoo S. (2016). Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. BMC Med Inform Decis Mak, 16 (12), <https://doi.org/10.1186/s12911-016-0249-8>
20. Koza, M. (2010)"Using Information Correctly "Knowledge Management.2nd Edition. Istanbul: Hourglass Publications.
21. Nicolaou, A. ve Bchattacharya, S. (2006). Organizational performance effects of ERP systems usage: The impact of post implementation change, International Journal of Accounting Information Systems, 7:18-35.

22. Phichitchaisopa, N., & Naenna, T. (2013). Factors affecting the adoption of healthcare information technology. *EXCLI Journal*, 12, 413-436. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4566918/>
23. Rodríguez, C., & Pozzebon, M. (2011). Understanding managerial behaviour during initial steps of a clinical information system adoption. *BMC Medical Informatics and Decision Making*, 11 (42), <https://doi.org/10.1186/1472-6947-11-42>
24. SA Fari, (2015) Applying Social Capital Theory and the Technology Acceptance Model in information and knowledge sharing research *Inkanyiso: Journal of Humanities and Social Sciences* JournalHome>Vol7, No1(2015)
25. Venkatesh, V., Morris, M.G., & Davis, G.B. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478.
26. Von Eiff MC, von Eiff W, Roth A and Ghanem M (2019) Employee Acceptance of Use: A Precondition for Enhancing Therapy Effectiveness, Patient Safety, and Economic Efficiency. *Front. Public Health* 7:353. doi: 10.3389/fpubh.2019.00353
27. Yang, Z., Kankanhalli, A., Ng, B.Y., & Lim, J.T.Y. (2013). Examining the pre-adoption stages of healthcare IT: A case study of vital signs monitoring systems. *Decision Support Systems*, 55 (3), 764-776. <https://doi.org/10.1016/j.im.2015.01.00>
28. Yi Y., Wu Z. and Tung L. L. (2006) How Individual Differences Influence Technology Usage Behaviour? Toward an Integrated Framework *Journal of Computer Information Systems* 46(2): 52-63.

Table: 1

		ISPARTA		YOZGAT	
		N	%	N	%
Gender	Male	235	47	133	26.6
	Woman	265	53	367	73.4
	Total	500	100	500	100
Age	18-30 years	166	33.2	278	55.6
	31-40 years	288	57.6	155	31
	41-50 years	43	8.6	63	12.6
	50 years and older	3	0.6	4	0.8

	Total	500	100	500	100
Education	High school	32	6.4	57	11.4
	College	62	12.4	161	32.2
	University	389	77.8	260	52
	Master's	14	2.8	16	3.2
	Doctorate	3	0.6	6	1.2
	Total	500	100	500	100
Hospital working time	1-3 years	96	19.2	210	42
	4-7 years	127	25.4	95	19
	7-10 years	236	47.2	68	13.6
	11 years and more	41	8.2	127	25.4
	Total	500	100	500	100
Title	Hospital manager	-	-	1	0.2
	surgeon general	1	0.2	1	0.2
	Deputy Chief Physician	-	-	1	0.2
	Administrative and financial services manager	2nd	0.4	1	0.2
	Deputy Director of Administrative and Financial Services	-	-	1	0.2
	Health care services manager	-	-	1	0.2
	Deputy Director of Health Care Services	-	-	1	0.2
	Patient Services and Health Hotel Manager	2nd	0.4	1	0.2
	Physician	23	4.6	16	3.2
	Nurse - Midwife - Health Officer	261	52.2	353	70.6
	X-ray Technician	93	18.6	49	9.8
	Anesthesia Technician	47	9.4	21	4.2
	Lab technician	46	9.2	30	6
	Medical secretary	25	5	23	4.6
	Total	500	100	500	100
Duration of experience in using health information technology system	6 months and under	59	11.8	205	41
	7 months - 1 year	72	14.4	197	39.4
	2-3 years	72	14.4	85	17
	4-5 years	83	16.6	-	-
	6-7 years	149	29.8	8	1.6
	8-9 years	54	10.8	4	0.8
	10 years or more	11th	2.2	1	0.2
	Total	500	100	500	100

Table: 2

	ISPARTA		YOZGAT	
	Cover.	SS	Cover.	SS
Performance Expectation (PE)				
HIT helps speed up the business process.	4.3	0.9	4.00	0.96
HIT increases patient / customer satisfaction.	4.0	0.7	3.97	0.80
HIT increases the quality and efficiency of your service.	3.8	0.9	4.04	0.80
HIT improves accessibility and communication with patients / clients.	3.7	0.8	3.99	0.82
HIT makes me make fewer mistakes.	4.0	0.8	3.97	0.82
Trust Perception(TP)				
I think the data provided by the health information system is reliable .	3.9	0.9	3.83	0.79
I believe that using the health information system is risk-free .	3.7	0.9	3.52	0.98
I have a clear understanding of the functions of health information systems .	3.7	0.8	3.46	0.84
I think that the safety and privacy of those who use and use the health information system are protected .	3.8	0.9	3.52	0.88
Risk Perception(RP)				
I am concerned about the technical problems in the health information system .	3.8	0.8	3.89	0.97
I am afraid of making an error that cannot be corrected when using the IT system .	3.6	1.0	3.49	1.06
I'm worried it'll take me a long time to learn how to use the health information system .	3.5	1.0	2.99	1.14
Effort Expectation(EE)				
HIT is easily available .	3.7	0.7	3.80	0.81
HIT helps make your service easier .	3.8	0.8	3.85	0.75
HIT bug / malfunction can easily fix.	3.9	1.0	3.19	0.88
Your HIT is always updated .	3.9	0.8	3.54	0.79
HIT resolves itself when an error occurs .	3.6	1.1	2.79	1.05
Complying with Computer Security rules (passwords, backups, access restrictions) puts me on extra charge .	3.8	0.9	3.61	1.08
Social Impact(SI)				
Your colleagues expect your service to be better by using the technology system.	3.8	0.8	3.87	0.79
Your colleagues think you can use technology efficiently.	3.9	0.8	3.79	0.81
Patients and their relatives believe that the technology system is very useful	3.7	0.9	3.43	0.89

for your organization.				
Your healthcare company hires IT staff to look at the IT system.	3.7	0.9	3.24	0.87
There are enough staff in your healthcare service to take care of IT experts and related staff.	3.5	1.0	2.92	0.92
Your managers support training and participation in training and seminars on new technologies.	3.7	0.8	3.54	0.85
Your HIT specialist has a high level of experience.	3.5	0.9	3.09	0.90
If you have a HIT problem, your IT specialist can solve it.	3.7	0.9	3.42	0.84
Facilitating Conditions(FC)				
Your healthcare business attaches importance to technology-driven service.	3.8	0.8	3.73	0.82
The healthcare business always develops and raises the IT system .	3.7	0.8	3.57	0.76
Your healthcare business has an IT department .	3.7	0.8	3.7	0.86
Your health care facility provides training for every employee who is important on the system / technology.	3.9	1.0	3.54	0.81
Your healthcare business supports training for new employees who are run by a professional trainer.	3.8	0.9	3.68	0.74
Your healthcare business supports capital investment in systems and technology.	3.6	0.8	3.38	0.64
Your healthcare business takes care of bringing new technology.	3.6	0.8	3.48	0.77
When other healthcare tools bring new technology, your health care will pay special attention.	3.8	0.9	3.52	0.67
When there is new technology, your healthcare business always decides to try and buy the new technology.	3.6	0.9	3.26	0.78
You believe that the technology used in your healthcare business is better than other healthcare systems.	3.6	0.8	3.31	0.85
Behavioral Attitude(BA)				
I prefer to use the IT system even if it is not compulsory.	3.6	0.9	3.24	1.03
I have difficulty using health information technologies.	3.6	1.1	2.93	1.14
Health IT increase the speed and quality of my service.	3.6	0.9	3.47	0.95
Intended Use(IU)				
You want to take advantage of new health IT to serve your patients / customers.	3.9	0.8	3.84	0.8
I believe that the use of new technologies is necessary to increase efficiency by providing better quality service to your patients / customers.	3.9	0.9	3.82	0.82
It is good to use IT in the health system.	3.8	0.7	3.74	0.75
I believe that the scope of HIT should be expanded.	3.8	0.8	3.99	0.75
I believe that I will use HIT in the future.	3.9	0.7	3.88	0.8

Average evaluation ranges:

1.00-1.80: Strongly disagree;

1.81-2.60: Disagree;

2.61-3.40: Unstable;

3.41-4.20: Agree

4.21-5.00: Strongly agree

2004	• Turkey health information plan of action
2006	• National health data dictionary
2006	• Core resource management system
2008	• National health information Health-Net
2010	• Central physician appointment system
2010	• Uniform accounting system
2012	• Drug tracking system
2015	• Health information network
2015	• e-Pulse personal health system
2015	• Telemedicine system
2016	• Unhindered health communication center
2016	• Spatial business intelligence
2016	• Public health management system
2017	• White code mobile
2017	• Emergency health automation system
2017	• e-Prescriptions
2018	• Central laboratory operating system
2018	• 2018 Integrated institutional operating platform
2018	• e-Report
2018	• Disease management system
2018	• Specialization training tracking system
2018	• Health tourism portal