



Study of Level of users' Satisfaction with Hospital Information System in Doctor Gholipur and Emam Ali Hospital in Boukan city in 2016-2017

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Abstract

Introduction: The users' satisfaction with hospital information system (HIS) entails the progression of this system in the hospitals that the development of hospital information system and use of it result in the presentation of qualified services by the presenters of hygiene and therapy services and the reduction of treatment costs which itself results in the patients' satisfaction. In present research, the level of users' satisfaction with hospital information system was studied Doctor Gholipur and Emam Ali Hospital of Boukan city. **Research method:** The present study is an applied descriptive- analytical research. The research population consisted of all the employees of department of hospital information system Doctor Gholipur and Emam Ali Hospital of Boukan city. The tools of collecting data were the same as the ones of similar articles questionnaire. The descriptive and analytical statistics such as One- Way Analysis of Variance and Independent T- test were used for the purpose of analyzing data. **Findings:** According to the research findings, the level of users' satisfaction with hospital information system in the software dimension at the average level was (40/7%), in the dimension of quality of information and data at the average level (51/5%), and in the function dimension at the average level (46/3%). **Conclusion:** According to the accomplished research, it can be said that the level of users' satisfaction with quality of software of hospital information system in the dimensions of software, information and data quality and function has been at the average level. But, to reach a favorable degree, a special attention should be paid to the users' expectations.

Key words: Hospital, Hospital Information System, User, Satisfaction

INTRODUCTION

The manpower as the most important and valuable capital of organization can make a powerful and dynamic organization by the optimum use of the other recourses. It is obvious that all the software and hardware and advanced technology are the tools that having an educated, interested and undertaker manpower is the main condition of efficient use of them. Providing the users' satisfaction has an unavoidable effect on the efficiency of organizations (Abadifardazar F, Ansari H, Zohouri A, Marashi S., 2009).

The information technologies have been known as a valuable tool for the publication of information. The researches show the high potency of new information technologies in the increase of knowledge levels related to the health of individuals (Ahmadi et al., 2011).

The existing information in any country is considered as one of the national reservoirs of that country and the access to that has been changed to a subject of international competition at global scene. The computer-based hospital information system provides a situation in which the hospital management can have access to necessary information for making decision any place any time and make decision according to the actual information of its work environment. The decision-making of management with regard to the actual information results in increasing its efficiency and developing its function and ultimately the efficiency and proficiency of the hospital. The lack of accommodation in the functions of hospital information system and the existing processes can affect the costs and quality of health care. So, with regard to the purposes of information system and for the avoidance of reworking and the development of cares and the reduction of costs, the software of hospital information system should be continuously evaluated (Ahmadi et al., 2004).

The system of hospital information management is a set of related components that should collect, process, save and distribute the clinical, management and technical information for the purpose of supporting the planning activities, decision-making, coordination and controlling the hospital services. Although the first purpose of information systems in the health department is to help the management to access the final purpose namely improving the level of society health, but increasing the accuracy and facility and speed of access to the clinical data in treatment field is of special importance in the hospital information systems (Asefzadeh S., 2012).

In the design and development of information systems, this should be noticed that the employees are the key elements who manage these kinds of systems (Abadifardazar et al., 2009). Many researches have been accomplished about the importance of the users' role in the success of information systems. In the most of these studies, the human factor either individually or in a group has been evaluated to be of much and determinant significance. In fact, the inattention or lack of enough attention to the human factors that results in the reversal in proper communication with the users and the inability to develop a sense of ownership toward a system in the user, have been known as the reasons why the information systems don't success in the access to their purposes (Ayatollahi et al., 2007).

The satisfaction of end users is the most important criterion in the evaluation of efficiency of information systems and the end users' opinions can be used in the improvement of quality of information systems (Azizi et al., 2011).

The quality of hospital information system can be improved and subsequently the quality of treatment cares can be increased by identifying the reasons of users' dissatisfaction with quality of information of this system and analyzing them (Azizi et al., 2012).

Among the service departments, the Hygienic Department has a special station. In this department, the small mistakes can be even irreparable. So, in this department, the presentation of services with favorable quality and with regard to the professional standards is very important (Kymyafr et al., 2008).

The hospital information system is a computer-based system which is used as an electronic tool for the patient's information management and plays an important role in the presentation of qualified health care. So, the users' satisfaction with quality of hospital information system is greatly significant and is so proper for the development and evolution of the system (Abadifardazar et al, 2009).

The most important component of information systems is the users and individuals whose function is affected by these systems. For this reason, the activities and purposes of a system should be regulated according to the information needs and the users' expectations. On the other side, the satisfaction of end users is the most important criterion in the evaluation of efficiency of information systems and the end users' opinions can be used for the improvement of quality of information systems. Among different departments which deal with the hospital information system, the department of nursing services with different duties related to the other departments is one of the departments that have been enormously affected by applying the information technology. Whereas the nurses constitute the most of manpower in the hospitals and deal with the patients' information and dossiers in comparison to the other groups, their opinions have a special station in the process of reception of hospital information system (Azizi et al, 2011).

The user's satisfaction is considered as the guarantee of successful performance of information system. It is not worth evaluating the hospital information system without regard to the kinds of users and their computer experiences. The users' positive opinion toward the hospital information system is the guarantor of success of this system (Parasuramanvalarieet al., 1985).

METHODOLOGY

Research Procedure

This study was an applied descriptive-analytical research which was accomplished in 2014-15. The research population consisted of all the employees of departments using hospital information system Doctor Gholipur and Emam Ali Hospital of Boukan city. In this research, 155 members of Doctor Gholipur Hospital and 80 members of Emam Ali Hospital were studied by the use of Random Stratified Sampling with proportional allocation that these sample members were evaluated by using Gerjsi and Morgan table with the determined 600 members (Sample Size). The two Library and Field research methods were used for collecting data and also the Library method was used to formulate the theoretical fundamentals and literature review of the research; and for the purpose of collecting data of statistic population, questionnaires were given to the individuals of population and the results were collected. The questionnaire was used for the purpose of measuring research indexes and collecting necessary data and information. The questionnaire is the same as the one of similar articles' that consists of four parts: the first part includes the demographic information of respondents such as sex, age, position, major and employment background; the second part consists of 11

question that studies the level of the users' satisfaction with quality of hospital information system; in this part, the lowest score and the most one were respectively 11 and 55 and the Likert Scale was used with the format of five response choices per statement, reflecting a favorable attitude, was scored 5 for Very much, 4 for Much, 3 for Undecided, 2 for A little and 1 for Little; the third part was related to the study of level of the users' satisfaction with quality of information and data in the hospital information system and consisted of 6 questions; the lowest score and the most one were respectively 6 and 30; the fourth part is related to the study of level of the users' satisfaction with functions of hospital information system that consisted of 10 questions. In this part, the lowest score and the most one were respectively 10 and 50. The questions in all parts were in the multi-choice form. The validity of questionnaire was determined according to the content validity, the facts and concepts discussed in the authentic scientific texts (similar studies, internal articles, scientific-research journals) and the opinions of clear-sighted persons and respective professors. Also, the content and reliability of the intended questionnaire was determined 85 by the use of the internal correlation of Cronbach's Alpha. The Spss-18 software and descriptive ascites (in the form of tables) were used for analyzing the results of this research. In the process of analyzing, the One-Way Analysis of Variance and independent T- test were applied (the Significance Level was considered $P < 0/05$).

On different weekdays and work shifts, the researcher went to the departments of hospital in which the users of hospital information system were working and gave the questionnaire them to fill it out.

FINDINGS

According to the accomplished studies about the users' satisfaction with software of hospital information system, the results reveal that the users' satisfaction with software has been at the average level (40/7%). In a similar study which had been done for the purpose of comparison of the nurses' expectations and satisfaction with hospital information system in two selected educational- clinical centers in Tehran city, the expectations of majority of nurses about the accommodation of system with daily activities of nurses had been estimated (75/9%) in Emam Ali Hospital and (64/2%) in Firoozgar hospital.

Lee. F et all in a research titled" Use of system of entrance of doctor's orders with regard to users' satisfaction and applied pattern presented by users" concluded that the users generally have been satisfied with this kind of system. The level of satisfaction of individuals was so related to their deduction from the effects of system in the efficiency, facility in use and speed of the system and the results of this research generally showed that with the use of this system, in comparison to the past, the efficiency and facility in fulfillment of activities have been considerably increased.

Tale1: level of users' satisfaction with software of hospital information system

Dimensions of satisfaction	Number	Mean	Standard deviation	Maximum	Minimum
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Software	230	30.72	9.87	11	52
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In the subject of the users' satisfaction with quality of information and data of hospital information system, the obtained results reveal that the users' satisfaction with quality of information and data has been at the average level (51/5%).

In a research which was done by Azizi et al about the users' satisfaction with quality of hospital information system in the educational hospitals subordinate to Medical Science University of Kermanshah, the results showed the satisfaction of 39/3 percent of users with guidelines of hospital information system, 36/9 percent of users with quality of duties of hospital information system, and 38/2 percent of them with quality of information of hospital information system and also, 30/4 percent of users were some deal satisfied with function of hospital information system and in general, 34/9 percent of users were satisfied with quality of hospital information system.

Generally, the deficiency or lack of instructing hospital information system to the users, the lack of treatment cadre in the support team of hospital information system, and the imperfect deletion of manual processes or perfect fulfillment of some processes in a manual form were the reasons of less satisfaction of users (34/9%) with quality of hospital information system (Abadifardazar F, Ansari H, Zohouri A, Marashi S., 2009).

In the research which was done by Gadelha. S. N. for the purpose of determining the level of satisfaction with hospital information system in Brazil, the results revealed that in the last years, the considerable investments have been done in Brazil for the fulfillment of this system to be specified that whether or not the fulfillment of this system is beneficial to the organization and to be sure that whether the use of this system results in the users' satisfaction or not. In this research, 393 users were evaluated and the results showed that this system improves the level of quality of variable services and the quality of information that all these factors have been resulted in the users' satisfaction with this system, although the planning and control processes are random in the hospitals of Brazil and more consist of loss of generality and abundance of purposes. The use of hospital information system is progressing and there exists more in State and non-State hospitals and generally in the department of hygiene and therapy in Brazil (Roozbehani R, Mozaffarian M, kazempourdizaji M., 2012).

Table2. Level of users' satisfaction with quality of information and data of hospital information system

Dimensions of satisfaction	Number	Mean	Standard deviation	Maximum	Minimum
Quality	230	16.74	5.57	6	30

According to the accomplished studies about the users' satisfaction with the function and duties of hospital information system, the results shows that the users' satisfaction with function and duties of hospital information system has been at the average level (46/3%).

In the research which was done by Ebadifard et al with the title of " users' opinions on computer- based system of hospital information system in Tehran hospitals in 2005, the results revealed that the facility of learning, efficiency of maintenance services and facility of working with program, independent of the users' role and responsibility, are the most effective factors in the users' satisfaction. The further material, human and technical investments were developed to be more close to the level of expectations and needs of organizations and users (Ayatollahi et al., 2007).

In the research which was done by Palm. J. M. et al for the purpose of identifying the level of users' satisfaction with medical information system, the results showed that considerable investments have been made during the past decade in Greece for the purpose of fulfillment of hospital information system in the new hospitals; and some studies were done to be sure of effectiveness of these systems. With regard to these studies, the end users' satisfaction with hospital information system was the most important determinant factor in the success of this system. Measuring the users' satisfaction with system has a long standing in the users' appointment and working discipline; and the users' satisfaction is an important factor in the evaluation and analysis of hospital information system, too (Sadooghi et al., 2013).

Table3. Level of users' satisfaction with function and duties of hospital information system

Dimensions of satisfaction	Number	Mean	Standard deviation	Maximum	Minimum
Function	230	26.91	9.13	10	53

CONCLUSION

The purpose of present research was the study of level of users' satisfaction with quality of software of hospital information system in Doctor Gholipour and Imam Ali hospitals in Boukan city. As the results revealed, the level of users' satisfaction with quality of software of hospital information system in three dimensions of software, quality of data and information, and duties and function is evaluated to be at the average level. So, with regard to the results of present research, it can be said that the users on average were satisfied with the quality of software of hospital information system. One of the reasons of the users' less satisfaction with hospital information system was that the support team of this system had only computer-based literacy and had no academic hygiene and therapy literacy specially of applied kind. The second reason of this less satisfaction was that the manual processes still were not deleted perfectly; it means that some processes were carried out either manually or by computer or some processes were perfectly manual and were not considered in HIS.

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