



Executive and financial manager's awareness of economic issues in private and public hospitals in Shiraz

Tayebe Hoseinpur¹, Nahid Hatam², Abdoslaeh Jafari^{2*}, Maryam Najibi¹, Hajar Dehghan¹, Rita Rezaee³

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ABSTRACT

Introduction: Managers, as the members of decision making team in hospitals, are required to understand economic issues In order to increase their knowledge, make better decisions making, and bring about economic growth in hospitals. Thus by measuring the managers' level of economic knowledge and understanding their weaknesses at this field, we can take an important step in line with this transcendental target.

Method: This was an analytical- descriptive study conducted in 2013. In this study, the views of 30 hospital executives and financial managers about various aspects of hospital economy including payment methods, techniques of economic evaluation, hospital income, and cost and subtractions were studied using questionnaires and interviews. SPSS 18 was used to analyze the collected data. $P < 0.05$ was considered statistically significant.

Results: None of the studied managers had a good level of knowledge and most managers (80.7%) had an undesirable level of knowledge, and few of them had a moderate level of knowledge.

The administrators' average knowledge of the ways to reduce the cost and increase the income of private hospitals was more than that of hospital administrators; as to the economic evaluation techniques and methods of payment, hospital administrators had more knowledge than managers of private hospitals.

Conclusion: The managers' low level of economic knowledge can be enhanced by more selective appointment of individuals for these sensitive positions and also increased by their participation in workshops and training courses.

Keywords: Hospital economics, Economic attitude, Economic concepts

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Introduction

Increases in government expenditures caused governments and related organizations to seek for solutions to tackle them (1). Factors such as increasing people's wealth so that they can pay more for services, aging populations, and technological advancements led to the rapid growth of health care costs (2). As viewed by economics experts, due to the definite and important impact of healthcare on human health, productivity of employees and the interplay of these two forces, it is necessary to allocate the resources of this sector optimally (3).

According to WHO, hospitals in developing countries spend half of the costs of health care (4). Despite this and also shortage of resources, the efficiency of hospitals is not more than 40-50%, one of the reasons of which might be weakness or disability of hospital managers, especially

in the field of economy. In this regard, for optimal use of resources, especially financial ones, awareness about economic laws can be useful (5-7).

The basis of economic efficiency of any organization is based on economic thinking of members of its decision-maker team (8). Hospitals are one of the vital social resources, the management of which must benefit the society (8). Thus, hospital administrator is responsible for providing health care services with high quality and the lowest possible cost imposed on people (8). Lack of an economic approach in the management of hospitals has led to checking of cost price of care, analyzing the market conditions and determining the share of each hospital, and analyzing the methods and financial resources and their impact on the performance of hospitals (9).

According to Haribnsoon, in developing countries, the human capital rather than physical resources is the origin

¹School of Management and Medical Information, Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran

²Health Human Resource Research Center, School of Management & Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

³Quality Improvement in Clinical Education Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

*Corresponding Author: A Jafari, Almas build., 29 valley Ghasr dasht St., School of Management and Medical Information Sciences, Department of Health Care Management, Shiraz, Iran, P.O.COD: 71336-54361, Tel: +989171458141, Email: abdosaleh.jafari@gmail.com.

of developments, so if a country is not able to develop the skills and knowledge of its people and does not take advantage of them in economy, that country will not be able to develop in any other field (10). By improving the managers' level of knowledge about how to use resources, the possibility of achieving goals increases. Therefore the optimal use of human and financial resources in order to produce the health requires extensive managerial efforts to improve the quality (11). Effective analysis and identification of training needs is the first step in planning for training people and its initial factor in effective warranty of training and development. If this is accomplished, the probability of its compliance with organizational needs, scopes of work and staff and ultimately its effectiveness will be enhanced. On the other hand, training is expensive, so it should be planned when there is an urgent need and it is the best solution to the existing problems (12).

According to the assumptions of dissonance theory, if we are aware of people's attitude about the subject, we can predict their behavior (13). Inefficiencies in hospitals and severe wasting of resources there are the causes for determining the position of economic thought among hospitals managers (3). Also one of the contributing factors in enhancing productivity is improving the quality of work factor especially the hospital board, and the factors that promote it, the acquisition of new skills and upgrading the expertise through educational programs (14). Therefore, this study was conducted to assess the level of financial knowledge of financial and administrative managers of hospitals with the aim of training on needs assessment and providing guidelines for development of knowledge of hospital management for hospital administrators.

Method

This was an analytical – descriptive study conducted in 2013. The study population consisted of managers of Shiraz hospitals. The samples were selected among the financial and executives managers of public and private hospitals by using a combination of cluster and stratified sampling methods. At first, several public and private hospitals were randomly selected by using cluster sampling. The number of samples was calculated 30 by using the following formula. (Accurately rate 0/03, standard deviation 0/05, and significance level 0.05).

$$n = (z_{1-\alpha/2} \times s / d)^2$$

The required data were collected using a researcher-made questionnaire. The validity was confirmed by respective teachers and the reliability was confirmed using the Retraining Test method.

The questionnaire used consisted of three parts. Its first part included 10 questions about demographic characteristics of the respondents; the second part had 6 questions about hospital characteristics, and the third one contained information about individual economic concepts, including ways to pay, indicators of economic evaluation, underlying factors of subtractions, hospital

indicators and strategies to reduce hospital cost. The Likert scale was used to assess their answers, 0 for wrong answers, 2 for the nearly correct answers and 4 for correct answers. Finally, the total score for economic knowledge was calculated by sum of the above items. Scores of knowledge were placed from 0 to 33 in the inappropriate category, 30 to 67 in the medium category and 67 to 100 in the appropriate category.

The data were analyzed in SPSS 18 using statistical tests including nonparametric, Mann-Whitney U, and Kruskal-Wallis H. . Pearson correlation test was used to evaluate the correlation between quantitative variables, and Chi-square to evaluate the correlation between qualitative variables. $p < 0.05$ was considered statistically significant.

Results

30 completed questionnaire were collected from all distributed questionnaires. The descriptive results of study are shown in Table 1.

Table 1. Descriptive statistics of the demographic variables

Variables		
Quantitative variable		Mean ± SD
Age		42.7±10.2
Duration of service		18.56±10.51
Approved hospital beds		172.33±113.91
Experience in current position		7.62±6.98
The number of hospital beds		152.36±107.37
The average patient stay		1.2± 0.61
The average occupancy rate of hospital beds		68.69±15.88
Qualitative variable		N (%)
Gender		
	Male	30(70)
	Female	9(30)
Education		
	Diploma / sup diploma	2(7)
	Bachelor	22(73)
	Master	5(17)
	Doctor	1(3)
Field		
	Accounting	10(33)
	Management	7(23)
	Etc	13(44)
	Position Manager	15(50)
	financial manager	15(50)
Economic participation in workshops		
	No	14(56)
	Yes	16(44)
Hospital type		
	Public	19(63)
	Private	11(37)

The mean age of the studied sample was $42/7 \pm 10/2$; job experience in this position was $98/6 \pm 7/62$ and their work experience was $51/10 \pm 56/18$. The average number of approved bed was $172/33 \pm 113/91$, number of beds was $152/36 \pm 107/37$, average length of stay was $1/2 \pm 0/61$ and the average of bed occupancy was $68/69 \pm 15/88$ %. Also, the results showed that most of the studied samples were men (70%), undergraduate (73%) and graduate in accounting (33%); they had executive management position (50%). 63% were employed in public hospitals and 56% did not participate in any economic workshop.

Among the studied variables, only the following cases were statistically significant:

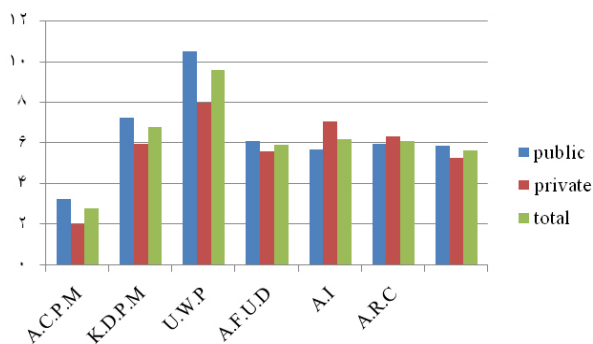
Relationships between field of study and level of knowledge about ways to reduce the costs ($p = 0.04$), the year of graduation and level of knowledge about the underlying factors of subtractions ($p = 0.026$), the average length of hospital stay and level of knowledge about underlying factors of subtractions ($p = 0.037$), bed occupancy and knowledge about factors affecting the hospital income ($p = 0.021$), organizational position and knowledge about factors affecting hospital income ($p = 0.014$), and also position and level of knowledge about factors affecting the hospital income ($p = 0.031$) (Table 2).

Table 2. The relationship between demographic variables and average levels of the managers and financial managers' economic knowledge in Shiraz hospitals

Concepts Variable	Understanding of the way payments (p-value)	Awareness of economic evaluation technique (p-value)	Awareness of factors affecting income (p-value)	Awareness of the factors reducing the cost (p-value)	Awareness of factors underlying deficits in hospital (p-value)	General awareness (p-value)	Type of test
Gender	0.701	0.907	0.678	0.837	0.711	0.375	Mann-Whitney U
Age	0.213	0.274	0.493	0.405	0.204	0.178	Pearson
Level of Education	0.418	0.728	0.6	0.249	0.818	0.332	Kruskal-Wallis H
Field	0.607	0.187	0.321	0.04	0.783	0.606	Kruskal-Wallis H
Year of Graduation	0.118	0.286	0.9	0.258	0.026	0.073	Kruskal-Wallis H
Duration of service	0.364	0.273	0.827	0.316	0.083	0.225	Pearson
Record the current post	0.955	0.511	0.759	0.768	0.875	0.743	Pearson
Number of active beds	0.77	0.273	0.272	0.408	0.565	0.624	Pearson
Average length of stay of patients	0.514	0.315	0.77	0.48	0.037	0.264	Pearson
Average bed occupancy Corporate	0.344	0.736	0.021	0.771	0.705	0.213	Pearson
Post	0.951	0.766	0.014	0.944	0.354	0.758	Kruskal-Wallis H
Evaluation Economic	0.297	0.499	0.138	0.906	0.532	0.85	Mann-Whitney U
participaion in workshops	0.659	0.266	0.34	0.916	0.58	0.738	Mann-Whitney U
Type of hospital (public or private)	0.103	0.674	0.245	0.948	0.791	0.436	Mann-Whitney U
Position (financing manager or executive manager)	0.933	0.593	0.031	0.85	0.538	0.338	Mann-Whitney U

The highest mean score of knowledge belonged to awareness about the factors affecting the cost (9.6); which was higher in public hospitals with the score of 10.52 as compared to private hospitals with the score of 8. The lowest mean score of knowledge belonged to the costs of payment methods (2.8), which was less in the private hospitals with the score of 2 as compared to public hospitals with the score of 3.26. (Figure 1)

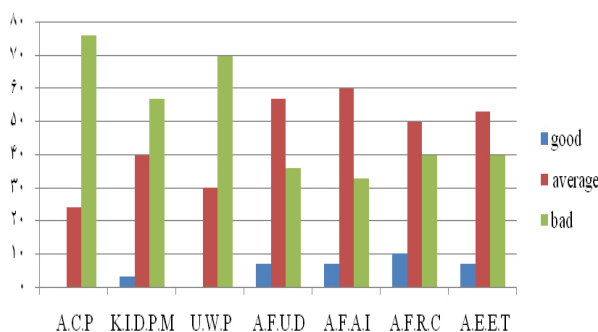
Figure 1. Distribution of the financial managers and executives' average knowledge about economic issues in Shiraz hospitals in to a breakdown of the type of hospital in 2012



A.C.P.M: Awareness of the costs of payment methods; K.D.P.M: Knowledge of demand payment methods; U.W.P: Understanding of the way payments; A.F.U.D: Awareness of factors underlying deficits
A.I: Awareness of income; A.R.C: Awareness of reducing the cost;
A.E.E.T: Awareness of economic evaluation technique

None of the managers had a good knowledge about payment methods, especially their costs in the field of knowledge. The most appropriate level of knowledge was related to the factors affecting costs and the most level of knowledge was related to factors affecting income (Figure 2).

Figure 2. Distribution of the frequency of absolute and relative case study examples based on the level of awareness about economic concepts



A.C.P: Awareness of the costs associated with payment methods
K.I.D.P.M: Knowledge about induced demand payment methods;
U.W.P: Understanding of the way payments; A.F.U.D: Awareness of factors underlying deficits in hospital; A.F.A.I: Awareness of factors affecting income; A.F.R.C: Awareness of the factors reducing the cost
A.E.E.T: Awareness of economic evaluation technique

Also, the results showed that there was no statistically significant relationship between the level of knowledge of managers and any demographic characteristics.(Table 3)

Table 3. ??????

Situation	Average		Bad		p-value
Awareness	N(%)		N (%)		
Demographic					
Variables					
Sex	19	63	11	37	0.282
Type of hospital	19	63	11	37	0.447
Workshop	19	63	11	37	0.510
Evaluation	19	63	11	37	0.954
Position	19	63	11	37	0.705

Discussion and conclusion

In order to achieve the motto “healthy person is the center of sustainable development”, hospitals played a vital role in health field. According to the limited resources and the large share of hospitals on the costs of health care, it’s essential to increase their effectiveness. Now in order to achieve it, hospitals’ decision makers must have good economic knowledge (5). The research performed in Iran and abroad have studied all economic indicators and ignored economic thought of managers, except a limited number of them (7). According to this issue and inefficiency of hospitals, this research examined the economic knowledge of key managers in private and educational hospitals in Shiraz.

The results of this study showed that administrators had poor or moderate level of knowledge about the economic concepts. Fahgir Mommen Saraeii (1381) in a study conducted on hospital administrators in Tehran concluded that the managers did not have a good level of economic knowledge or they had extremely poor knowledge (3).

Also, the results indicated that there was no significant relationship between gender and knowledge. While Shirdel (1389) in a study conducted in Tehran reported that the level of men’s knowledge is more than that of women (7). In Fahgir Mommen Saraeii’s study (1381), this relationship was significant (3). The reason for difference between the results of this study and those of the previous ones is that in this study only administrator and financial managers of hospitals were evaluated, rather than all administrators and most of the subjects were men and the number of women was limited, so the impact of gender on the level of knowledge cannot be determinant.

As to the relationship between age and level of knowledge,

there was a significant relationship only between age and level of knowledge about issues of insurance deductions; this level of knowledge was decreased by increasing age. Shirdel (1389) and Fahgir Mommen Saraeii (1381) concluded that there was a significant relationship between managers' age and level of economic knowledge. In other words, the knowledge about economic issues was increased by increasing age (7.3). There was a significant relationship between work experience and level of knowledge about insurance deductions; in other words, with increasing in work experience, the level of knowledge was decrease. The reasons of difference in the results of this study can be due to the fact that most cases were young and experienced and old people in this population were limited.

In the present study, there was no significant relationship between the education level and the level of economic knowledge of managers. In the study of Fahgir Mommen Saraeii (1381), there was a significant relationship only between the education level and knowledge level about the concepts of hospital economic, insurance concepts and economic dimensions of nosocomial infections (3). It was expected that the managers' level of economic knowledge increased with increasing the level of education but in general we can say that the level of education will not increase the level of knowledge and the field of education, experience in the field of economic affairs and other factors must be considered. On the other hand, appointment in the top level management requires higher degrees.

As to the field of study, the results showed that it has a significant relationship only with the level of knowledge of participants about factors affecting the cost reduction. Thus, the person with related fields (management and accounting) had a better knowledge about factors affecting the cost reduction compared to other fields. Also in a study by Shirdel (1389), individuals in the fields of management and medicine had more appropriate knowledge than other non-medical fields (7).

Unlike the results of the studies by Shirdel (1389) and Fahgir mommen saraeii (1381), the relationship between organizational position and the level of knowledge in this study was not significant (3.7) Of course, it was expected that financial managers have a greater knowledge. Difference between the results of this study and those of others may be due to the fact that position cannot be only effective on the level of knowledge. Maybe, a survey of the field of study considering the organizational position determines the relationship more clearly.

In general, it can be concluded that the studied managers didn't have desirable knowledge while their position required them to increase it. To improve their knowledge, we can consider the economic capabilities when selecting them for these positions. So, we can utilize other methods such as job training through workshops on economics, asking them to participate in discussions, and distributing pamphlets about the economic issues that they need.

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